Original Application

Erlanger Sequatchie Valley Regional Hospital (Dunlap)

CN1709-027

SEP 11 '17 PM 12:00

September 11, 2017

Ms. Melanie M. Hill
Executive Director
State of Tennessee
Health Services & Development Agency
500 Deaderick Street, Suite 850
Nashville, TN 37243

RE: CON Application to Relocate Erlanger Bledsoe Hospital
d/b/a Erlanger Sequatchie Valley Regional Hospital

Dear Ms. Hill;

Enclosed is our CON application together with $95,000 application filing fee to relocate and replace Erlanger Bledsoe Hospital d/b/a Erlanger Sequatchie Valley Regional Hospital. Erlanger Bledsoe Hospital is an existing CAH with "necessary provider" status located in Pikeville, Bledsoe County. The existing hospital will be relocated and replaced in Dunlap, Sequatchie County. We are concurrently filing a companion CON to relocate and replace our provider based ED now located in Dunlap, Sequatchie County to Pikeville, Bledsoe County. Essentially, with the two companion CON's, we are switching the locations for the existing hospital and for the existing provider based ED.

From a CMS perspective, the hospital and the provider based ED are inseparable. The "system of care" established by Erlanger is key to the sustainability of the both projects; fostering access to medical care for those who reside in rural areas of the state, while also providing access to a comprehensive range of services, physicians and capabilities via the Erlanger Health System. As well, understanding the regulatory and reimbursement complexities in the provision of such a plan is vital as is the role of a health system that is committed to providing care to the underserved. Erlanger brings substantial expertise to the operation of a Critical Access Hospital not readily available to others who serve rural areas of the state. At a time when critical access hospitals are closing, we bring a proposal that will help insure access to care and sustainability of that care to those in need. As you may know, we have worked extensively with CMS and have gained a positive determination from them for the project, as proposed. See attached letter from CMS. Also, MEDPAC has recently visited with us to gain insight on how critical access hospital can be sustained going forward.

We look forward to working with you and your staff in the review of the proposed project. Thank you.

Sincerely,

Joseph M, Winick, FACHE
Senior Vice President, Planning, Analytics & Business Development

CC: Kevin M. Spiegel, FACHE
Stephanie Boynton, CEO

SEP 11 '17 PM 12:00

CERTIFICATE OF NEED APPLICATION

Chattanooga-Hamilton County Hospital Authority

D / B / A

Erlanger Sequatchie Valley Regional Hospital

Application To Relocate & Replace Existing

Inpatient Acute Medical / Surgical Services From

Erlanger Bledsoe Hospital
(Pikeville, Bledsoe County, TN)

To

Erlanger Sequatchie Valley Regional Hospital
(Dunlap, Sequatchie County, TN)

ERLANGER HEALTH SYSTEM
Chattanooga, Tennessee

Section A

APPLICANT PROFILE

Section A: APPLICANT PROFILE

1. Name of Facility, Agency, or Institution.

Chattanooga-Hamilton County Hospital Authority
D / B / A
Erlanger Sequatchie Valley Regional Hospital
17399 Rankin Avenue
Dunlap, Sequatchie County, Tennessee 37327

** Site information - Approximately 15.95 acres +/- located in Sequatchie County, Tennessee, which is shown as map 041, parcels 021.00 and 020.01, at the Sequatchie County Tax Assessor's Office.

The replacement hospital will also include a provider based Emergency Department, detailed in a companion CON application, concurrently filed, as follows:

Erlanger Sequatchie Valley Regional Hospital - Satellite Emergency Department
553 US Highway 127 Bypass
Pikeville, Bledsoe County, Tennessee 37367

** Site information - Approximately 10 acres +/- located in Bledsoe County, Tennessee, which begins at an iron rod set situated in the northeastern corner of the property at South 18 degrees 34 minutes 40 seconds West, 1,128.65 feet to a monument situated in the right of way of the U.S. Highway 127 Bypass; then South 17 degrees 4 minutes 0 seconds East 792.01 feet to an iron rod set; then North 17 degrees 4 minutes 0 seconds East 560.61 feet to the beginning.

Website Address - www.erlanger.org

Note: The facility's name and address **must be** the name and address of the project and **must be** consistent with the *Publication Of Intent*.

2. Contact Person Available For Responses To Questions.

Joseph M. Winick, Sr. Vice President
Planning & Business Development
Erlanger Health System
975 East 3rd Street
Chattanooga, TN 37403
(423) 778-8088
(423) 778-5776 -- FAX
Joseph.Winick@erlanger.org -- E-Mail

3. Executive Summary

A. Overview

Please provide an overview not to exceed three pages in total, explaining each numbered point.

Since 2010, a total of nine (9) rural hospitals in Tennessee have either closed outright, or, have discontinued inpatient services … including three (3) facilities in Southeast Tennessee, as follows: *(1)*

Parkridge West Hospital	Marion County
Copper Basin Medical Center	Polk County
Starr Regional (Etowah)	McMinn County

Rural populations are at risk due to limited, or no access, to essential healthcare services.

Erlanger Sequatchie Valley Regional Hospital seeks approval to relocate and replace an existing critical access hospital, from Pikeville, Bledsoe County, to Dunlap, Sequatchie County, and to relocate and replace a provider based ED in Dunlap, Sequatchie County, to Pikeville, Bledsoe County. With this CON application and the companion CON application, *Erlanger Sequatchie Valley Regional Hospital* seeks to reverse the current trend of hospital closures in Southeast Tennessee.

CMS has already approved this project and has recognized *Erlanger Sequatchie Valley Regional Hospital* as a "necessary provider CAH" (critical access hospital). *(2)* The letter from CMS recognizes that the replacement

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1 *Rural Hospitals Across Tennessee At Risk Of Closing – Emergency At The ER.* See article and TV news report by Chris Conte at Nashville TV station WTVF on Tuesday, July 27, 2017. Retrieved from … http://www.newschannel5.com/news/emergency-at-the-er.

2 See letter of June 14, 2017, from CMS attached to this CON application.

hospital to be constructed in Sequatchie County, and the provider based ED to be constructed in Bledsoe County, as replacements for existing facilities are configured as a single provider as proposed herein.*(3)*

It should be noted that members of the Medicare Payment Advisory Commission ("MedPAC") visited Erlanger Bledsoe Hospital in Pikeville, Tennessee, and it's provider based ED in Dunlap, Tennessee, on August 21-22, 2017. The purpose of the visit was to obtain a better understanding of how this critical access hospital and provider based emergency department can operate successfully when so many rural hospitals are closing. Potentially, this model may be suggested and/or extended to other critical access hospitals across the nation.

1.) *Description* - *Erlanger Bledsoe Hospital* was originally built in 1971 in Pikeville, Bledsoe County, Tennessee. At the present time, the hospital is forty-six (46) years old and in need of significant renovation and updates. Maintenance is ongoing and requires a significant effort to sustain operation of the hospital. The physical plant of the Erlanger Bledsoe Hospital has outlived it's useful life. It is time to replace this 25 bed critical access hospital, which has been designated by the State of Tennessee as a *necessary provider.*

The replacement facility, *Erlanger Sequatchie Valley Regional Hospital* will be located in Dunlap, Sequatchie County, Tennessee, about 20 miles south of *Erlanger Bledsoe Hospital*. The hospital based Emergency Department, described in the companion CON application, and currently located in Dunlap, Sequatchie County, which was opened in 2013, will be closed and relocated with the opening of *Erlanger Sequatchie Valley Regional Hospital*. *Erlanger Bledsoe Hospital* in Pikeville, Bledsoe County, Tennessee, will be closed and relocated with the opening of the *Erlanger Sequatchie Valley Regional Hospital - Satellite Emergency Department*.

The strategy for relocating the hospital from

3 See letter of February 24, 2017, to CMS from Ms. Stephanie Boynton, CEO of *Erlanger Bledsoe Hospital*, attached to this CON application.

Bledsoe County to Sequatchie County is to foster access by creating a centrally located "regional community hospital" for three (3) rural counties which are directly West of Hamilton County, Tennessee. These counties are Grundy, Sequatchie and Bledsoe. By relocating the hospital to Dunlap, in Sequatchie County, Tennessee, the population of the service area will have improved access with a more centrally located facility which is accessible by the entire Sequatchie Valley region. Thus, patients will not need to travel to Chattanooga, Tennessee, or elsewhere, for needed health services.

The service area for the hospital based ED in Pikeville, described in the companion CON application, will be primarily Bledsoe County, however, patients from other surrounding counties may utilize this facility as well.

Renovation of *Erlanger Bledsoe Hospital* was considered. However, the facility has outlived it's usefule life, the age and condition of the physical plant are such that it is simply not practical to renovate. Current standards for space requirements are significantly different than what was applicable in 1971. The facility is also located in a residential area and is not readily accessible.

Patients from Grundy County and Sequatchie County must travel a significant distance to Chattanooga, or some other location to access needed services. While patients in Bledsoe County have access to needed services in the current hospital, they don't currently have access to surgery, MRI and other services that are planned for *Erlanger Sequatchie Valley Regional Hospital*. Thus, the provision of effective hospital services are limited by accessibility and space, impacting continuity of care, quality, and cost.

2.) *Ownership Structure* - The hospital facility in Sequatchie County will be owned by *Sequatchie County* and leased to *Erlanger*. The hospital

based ED in Bledsoe County, describeded in the companion CON application, will be owned by *Bledsoe County* and leased to *Erlanger*. Both of these locations are linked together to provide needed healthcare services to the defined service area, and to provide a stable reimbursement structure to ensure sustainability. (See note 3)

3.) *Service Area* - *Erlanger Sequatchie Valley Regional Hospital* will foster access to a centrally located "regional community hospital" for three (3) rural counties … Sequatchie, Bledsoe and Grundy. The service area for the hospital based ED in Pikeville, described in the companion CON application, will be primarily Bledsoe County, however, patients from other surrounding counties may utilize this facility as well.

Patients from Grundy County and Sequatchie County must travel a significant distance to Chattanooga, or some other location to access needed services. While patients in Bledsoe County have access to needed services in the current hospital, they don't currently have access to surgery, MRI and other services that are planned for *Erlanger Sequatchie Valley Regional Hospital*. Thus, the provision of Effective hospital services are limited by accessibility and space, impacting continuity of care, quality, and cost.

4.) *Existing Similar Service Providers* - Within the defined service area of Sequatchie, Bledsoe and Grundy counties, there are no other existing service providers for either acute medical/surgical services, or for ED services.

5.) *Project Cost* - The total project cost for the replacement hospital and provider based emergency department is $ 36,988,230, with total construction cost of $ 22,411,900. The cost for the replacement hospital is $ 32,653,836, with construction cost of $ 19,958,999, which yields a construction cost per square foot of $324.52, which is above the

median SF cost of $289.85, but well below the 3rd Quartile SF cost of $395.94, for new construction.

6.) *Funding* - Funding for *Erlanger Sequatchie Valley Regional Hospital* will be provided by the Tennessee Municipal Bond fund through *Sequatchie County, Tennessee*.

7.) *Financial Feasibility (including when the proposal will realize a positive financial margin)* - The proposed project will have a positive financial margin beginning in year one. Please see the *Projected Data Chart*.

8.) *Staffing* - It is anticipated that there will be a small increase in the number of employees at *Erlanger Sequatchie Valley Regional Hospital*. All current employees of *Erlanger Bledsoe Hospital*, a total of one hundred seven (107) FTE's will be offered employment at the new hospital. A total of ten (10) new positions are expected to be created at *Erlanger Sequatchie Valley Regional Hospital*, as follows.

Surgical - First Assistant		2.0
Surgical - OR Tech		2.0
Surgical - Central Sterile		1.0
Surgical - Nurse Manager		1.0
Employed Physicians		4.0

B. Overview

A certificate of need can only be granted when a project is necessary to provide needed health care in the area to be served, can be economically accomplished and maintained, will provide healthcare that meets appropriate quality standards, and will contribute to the orderly development of adequate and effective health care in the service area. This section should provide rationale for each criterion using the data and information points provided in section B of this application. Please summarize in one page or less each of the criteria.

Since 2010, a total of nine (9) rural hospitals in Tennessee have either closed outright, or, have discontinued inpatient services … including three (3) facilities in Southeast Tennessee, as follows:

Parkridge West Hospital	Marion County
Copper Basin Medical Center	Polk County
Starr Regional (Etowah)	McMinn County

Rural populations are at risk due to limited, or no access, to essential healthcare services.

Erlanger Sequatchie Valley Regional Hospital seeks approval to relocate and replace an existing critical access hospital, from Pikeville, Bledsoe County, to Dunlap, Sequatchie County, and to relocate and replace a provider based ED in Dunlap, Sequatchie County, to Pikeville, Bledsoe County. With this CON application and the companion CON application, *Erlanger Sequatchie Valley Regional Hospital* seeks to reverse the current trend of hospital closures in Southeast Tennessee.

For long term planning pertaining to *Erlanger Sequatchie Valley Regional Hospital*, it should be of interest to know that we are evaluating the possibility of a second provider based emergency department which would be strategically located in Grundy County, Tennessee. The precise location is not yet known.

CMS has already approved this project and has recognized *Erlanger Sequatchie Valley Regional Hospital* as a "necessary provider CAH" (critical access hospital). The letter from CMS recognizes that the replacement hospital to be constructed in Sequatchie County, and the provider based ED to be constructed in Bledsoe County, as replacements for existing facilities are configured as a single provider as proposed herein.

It should be noted that members of the Medicare Payment Advisory Commission ("MedPAC") visited Erlanger Bledsoe Hospital in Pikeville, Tennessee, and it's provider based ED in Dunlap, Tennessee, on August 21-22, 2017. The purpose of the visit was to obtain a better understanding of how this critical access hospital and provider based emergency department can operate successfully when so many rural hospitals are closing. Potentially, this model may

be suggested and/or extended to other critical access hospitals across the nation.

1.) *Need* - According to the *Acute Care Bed Need Projections For 2017 and 2022* (based on 2015 Hospital JAR Reports), prepared by the *Tennessee Dept. of Health, Division of Health Statistics*, the bed need for the service area is eleven (11) acute care beds. This is due to the limitation of the Tennessee bed need methodology which allocates bed need by the county in which the hospital is located. Since *Erlanger Bledsoe Hospital* is located in Bledsoe County and no hospitals are located in either Grundy County or Sequatchie County, the Tennessee methodology only recognizes acute care bed need for Bledsoe County.

With the constraint imposed by the Tennessee methodology, in a telephone conversation with Mark Farber in February, 2017, it was agreed that we should prepare an acute care bed need estimate based on utilization data from the THA inpatient data.

It should be noted that *Erlanger Bledsoe Hospital* is a critical access hospital. As such, all twenty-five (25) beds may also be utilized as "swing beds", which can accommodate either acute care or skilled nursing patients. This is very beneficial to the hospital as well as community, and is not considered in the Tennessee bed need methodology. Further, the swing beds help to keep patients in the community and discharged home.

The following table shows the adjusted bed need for the three (3) county service area.

Summary Of Inpatient Utilization
For The Three (3) County Service Area
[*Excluding Pyschiatry, Substance Abuse & Rehabilitation*]

		========== CY ==========			Projected
		2014	2015	2016	2022
Total	Discharges	5,849	5,915	5,708	6,029
	Patient Days	27,521	28,761	27,705	29,035
	ALOS	4.7	4.9	4.9	4.8
Total	**Gross Bed Need**	75.4	78.8	75.9	79.5
	Occupancy Adjustment	80%	80%	80%	80%
	Adjusted Bed Need	94.3	98.5	94.9	99.4
	Est. % Pt. Days -- LOS 1-4 (*)	35.1%	35.1%	35.1%	35.1%
	Est. Pt. Days (LOS 1-4)	9,660	10,095	9,724	10,191
	Est. Service Area Population	42,102	42,364	42,626	44,200
	Growth Rate - Population		0.6%	0.6%	3.7%
	Est. Use Rate - Discharges	0.138925	0.139623	0.133909	0.136417
	Est. Use Rate - Patient Days	0.653674	0.678902	0.649955	0.651815
LOS 1-4	**Gross Bed Need**	26.5	27.7	26.6	27.9
	Occupancy Adjustment	80%	80%	80%	80%
	Adjusted Bed Need	33.1	34.6	33.3	34.9
EBH	Market Share Adjustment (50%)	4,830	5,048	4,862	5,096
Census	Population Growth Adjustment (3.7%)				189
Estimate	Swing Bed Adjustment (35%)	1,691	1,767	1,702	1,850
	Estimated Patient Days	6,521	6,815	6,564	7,135
	Estimated Beds	17.9	18.7	18.0	19.5
	Occupancy Adjustment	80%	80%	80%	80%
	Estimated Beds - Adjusted	22.3	23.3	22.5	24.4

(*) *NOTES* (1) Please note that for a critical access hospital, CMS requires that ALOS not be more than 4 days (96 hours).
(2) Estimated percent of patient days pertaining to LOS 1-4 is derived from the ratio in CY 2014 (9664/27521).
(3) Actual swing bed utilization for Erlanger Bledsoe Hospital in 2015 was 61%.
(4) Population data obtained from Tennessee Dept. of Health, *Tennessee Population Estimates 2017 and 2021*.

2.) *Economic Feasibility* - Economic feasibility for this project is demonstrated by the *Projected Data Chart* contained in this CON application. The project has a positive net income in both years 1 and 2.

3.) *Appropriate Quality Standards* - *Erlanger Bledsoe Hospital* and it's existing provider based ED are currently accredited by *The Joint Commission*. They also participate in quality reporting and monitoring, as evidenced by the quality information discussed previously and attached to this CON application. The quality reporting and monitoring will continue with *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED.

4.) *Orderly Development* - This projects represents orderly development of the healthcare system. It seeks to relocate an existing critical access hospital and it's provider based ED, which are linked to performance of the broader healthcare system of care delivery in such a manner, as to place each facility where maximum access can occur for the rural population which has the most need.

It will also provide healthcare facilities which meet "current" spatial requirements for the services to be offered. Please keep in mind that the facility for *Erlanger Bledsoe Hospital* was built in 1971 and is now forty-six (46) years old. The existing physical plant has outlived it's useful life as an acute care hospital.

Further, the facilities outlined in this and the companion CON application for a critical access hospital and provider based ED, demonstrates a sustainable model for rural healthcare delivery.

C.) Consent Calendar Justification

If Consent Calendar is requested, please provide the rationale for an expedited review.

A request for Consent Calendar must be in the form of a written communication to the Agency's Executive Director at the time the application is filed.

Response

*** Not Applicable. ***

4. A. Owner of the Facility, Agency, or Institution.

Chattanooga-Hamilton County Hospital Authority
D / B / A
Erlanger Health System
975 East 3rd Street
Hamilton County
Chattanooga, TN 37403

B. Type of Ownership or Control (*Check One*).

A.	Sole Proprietorship	
B.	Partnership	
C.	Limited Partnership	
D.	Corporation (For Profit)	
E.	Corporation (Not-for-Profit)	
F.	Governmental (State of TN or Political Subdivision)	X
G.	Joint Venture	
H.	Limited Liability Company	
I.	Other (Specify)	

ATTACH a copy of the partnership agreement, or corporate charter and certificate of corporate existence. Please provide documentation of the active status of the entity from the Tennessee Secretary of State's web-site at https://tnbear.tn.gov/ECommerce/Filingearch.aspx. **Attachment Section A-4A.**

Describe *the existing or proposed ownership structure of the applicant, including an ownership structure organizational chart. Explain the corporate structure and the manner in which all entities of the ownership structure relate to the applicant. As applicable, identify the members with 5% ownership interest (direct or indirect).*

5. Name of Management / Operating Entity (if applicable).

*** Not Applicable. ***

For new facilities or existing facilities *without a current management agreement, attach a copy of a draft management agreement that at least includes the anticipated scope of management services to be provided, the anticipated term of the*

agreement, and the anticipated management fee payment methodology and schedule. For facilities with existing management agreements, attach a copy of the fully executed final contract. **Attachment Section A-5.**

6. **A. Legal Interest in the Site of the Institution**
(*Check One*)

A.	Ownership	_____
B.	Option to Purchase	_____
C.	Lease of _____ Years	_____
D.	Option to Lease	X
E.	Other (Specify)	_____

Check appropriate line above: *For applicant or applicant's parent company/owner that currently own the building/land for the project location, attach a copy of the title/deed. For applicant or applicant's parent company/owner that currently lease the building/land for the project location, attach a copy of the fully executed lease agreement. For projects where the location of the project has not been secured, attach a fully executed document including Option To Purchase Agreement, Option To Lease Agreement, or other appropriate documentation. Option To Purchase Agreements* ***must include*** *anticipated purchase price. Lease/Option To Lease Agreements* ***must include*** *the actual/anticipated term of the agreement* ***and*** *actual/anticipated lease expense. The legal interests described herein* ***must be valid*** *on the date of the Agency's consideration of the certificate of need application.*

B. Attach **a copy of the site's plot plan, floor plan, and if applicable, public transportation route to and from the site** on an 8 ½" x 11" sheet of white paper, single or double sided. ***DO NOT SUBMIT BLUEPRINTS***. Simple line drawings should be submitted and need not be drawn to scale.

1.) Plot Plan **must include:**

a.) Size of site (**in acres**);

Response

The size of the hospital site in Dunlap, Sequatchie County, is approximately 15.95 acres. The size of the provider based ED site in Pikeville, Bledsoe County, as described in the companion CON

application is approximately 10 acres.

A copy of the site plan for *Erlanger Sequatchie Valley Regional Hospital* is attached to this CON application.

b.) Location of structure on the site;

Response

In Dunlap, the hospital will be placed on the Eastern portion of the site, nearest to Tennessee Highway 127 with direct access to Tennessee Highway 111. In Pikeville, the provider based ED, as described in the companion CON application, will be placed on the northeastern section of the site, nearest to Tennessee Highway 127.

c.) Location of the proposed construction / renovation; and

Response

** *Not applicable.* **

d.) Names of streets, roads or highway that cross or border the site.

Response

In Dunlap, the hospital will be located on Tennessee Highway 127 with direct access to Tennessee Highway 111. In Pikeville, the provider based ED, as described in the companion CON application will be located on Tennessee Highway 127.

2.) Attach a floor plan drawing for the facility which includes legible labeling of patient care rooms (noting private or semi-private),

ancillary areas, equipment areas, etc. On an 8 ½ by 11 sheet of paper or as many necessary to illustrate the floor plan.

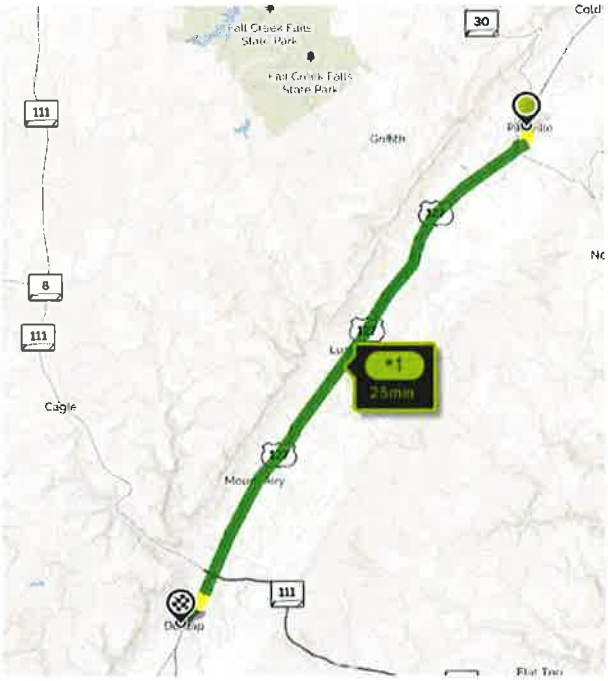
Response

Copies of the floor plans for *Erlanger Sequatchie Valley Regional Hospital* in Dunlap, Sequatchie County, and it's provider based ED in Pikeville, Bledsoe County, as described in the companion CON application, are attached to this CON application.

3.) Describe the relationship of the site to public transportation routes, if any, and to any highway or major road developments in the area. Describe the accessibility of the proposed site to patients/clients.

Response

Sequatchie County is the middle point of the defined service area, with Dunlap being the county seat. The travel distance from Pikeville (county seat), Bledsoe County, Tennessee, to Dunlap, Sequatchie County, Tennessee, is 20.2 miles for approximately 25 minutes, directly along Tennessee State Road 127.



The travel distance from Altamont (county seat), Grundy County, Tennessee, to Dunlap, Sequatchie County, Tennessee, is 33.1 miles for approximately 44 minutes, along Tennessee State 108 and 111.

There is no public transportation available in these rural Tennessee counties.

Attachment Section A-6A, 6B-1 a-d, 6B-2, 6B-3.

7. **Type of Institution**

(Check as appropriate - more than one response may apply)

A.	Hospital (Specify) *** General Medical/Surgical Acute Care - Critical Access	X
B.	Ambulatory Surgical Treatment Center (ASTC), Multi-Specialty	
C.	ASTC, Single Specialty	
D.	Home Health Agency	
E.	Hospice	
F.	Mental Health Hospital	
G.	Intellectual Disability / Institutional Habilitation Facility ICF / IID	
H.	Nursing Home	
I.	Outpatient Diagnostic Center	
J.	Rehabilitation Facility	
K.	Residential Hospice	
L.	Non-Residential Substitution-Based Treatment Center For Opiate Addiction	

M. Other (Specify) X
Provider Based Emergency Dept. (*)
(*) Described in companion CON application, concurrently filed.

8. Purpose of Review

(Check appropriate line(s) appropriate - more than one response may apply)

A. New Institution ____
B. Modifying an ASTC With Limitation Still Required Per CON ____
C. Addition Of MRI Unit X
D. Pediatric MRI ____
E. Initiation of Health Care Service As Defined In TCA § 68-11-1607(a)(4) (Specify) _____ ____
F. Change In Bed Complement ____
[*Please note the type of change by underlining the appropriate response:* Increase, Decrease, Designation, Distribution, Conversion, Relocation]
G. Satellite Emergency Dept. ____
H. Change Of Location X
I. Other (Specify) ____
_____

9. Medicaid / TennCare, Medicare Participation

MCO Contracts [Check all that apply]

X AmeriGroup X United Healthcare Community Plan
X BlueCare X TennCare Select

Medicare Provider Number 044-1306
Medicaid Provider Number 044-1306
Certification Type General Medical / Surgical

If a new facility, will certification be sought for Medicare and/or Medicaid/TennCare ?

Medicare ___ **Yes** ___ **No** X **N/A**
Medicaid / TennCare ___ **Yes** ___ **No** X **N/A**

10. Bed Complement Data

A. Please indicate current and proposed distribution and certification of facility beds.

		Current Licensed	*Beds Staffed*	*Beds Proposed*	*(*)Beds Approved*	*(**)Beds Exempted*	*TOTAL Beds at Completion*
1.)	Medical						
2.)	Surgical						
3.)	ICU / CCU						
4.)	Obstetrical						
5.)	NICU						
6.)	Pediatric						
7.)	Adult Psychiatric						
8.)	Geriatric Psychiatric						
9.)	Child / Adolescent Psychiatric						
10.)	Rehabilitation						
11.)	Adult Chemical Dependency						
12.)	Child / Adolescent Chemical Depend.						
13.)	Long Term Care Hospital						
14.)	Swing Beds	25	25	25			25
15.)	Nursing Home – SNF (Medicare only)						
16.)	Nursing Home – NF (Medicaid only)						
17.)	Nursing Home – SNF / NF (dually certified M'care/M'caid)						
18.)	Nursing Home – Licensed (non-certified)						
19.)	ICF / IID						
20.)	Residential Hospice						
	TOTAL	25	25	25			25

(*) Beds approved but not yet in service. (**) Beds exempted under 10% per 3 year provision.

B. Describe the reasons for change in bed allocations and describe the impact the bed change will have on the applicant facility's existing services. **Attachment Section A-10.**

Response

*** Not Applicable. ***

C. Please identify all the applicant's outstanding Certificate of Need projects that have a licensed bed change component. If applicable, complete chart below.

CON Number	CON Expiration Date	Total Licensed Beds Approved
CN1601-002A	July 1, 2019	10
CN1603-012A	Oct. 1, 2019	88

11. Home Healthcare Organizations - Home Health Agency, Hospice Agency (excluding Residential Hospice), identify the following by checking all that apply:

	Existing Licensed County	Patient Office County	Proposed Licensed County		Existing Licensed County	Patient Office County	Proposed Licensed County
Anderson	☐	☐	☐	Lauderdale	☐	☐	☐
Bedford	☐	☐	☐	Lawrence	☐	☐	☐
Benton	☐	☐	☐	Lewis	☐	☐	☐
Bledsoe	☐	☐	☐	Lincoln	☐	☐	☐
Blount	☐	☐	☐	Loudon	☐	☐	☐
Bradley	☐	☐	☐	McNairy	☐	☐	☐
Campbell	☐	☐	☐	Macon	☐	☐	☐
Cannon	☐	☐	☐	Madison	☐	☐	☐
Carroll	☐	☐	☐	Marion	☐	☐	☐
Carter	☐	☐	☐	Marshall	☐	☐	☐
Cheatham	☐	☐	☐	Maury	☐	☐	☐
Chester	☐	☐	☐	Meigs	☐	☐	☐
Claiborne	☐	☐	☐	Monroe	☐	☐	☐
Clay	☐	☐	☐	Montgomery	☐	☐	☐
Cocke	☐	☐	☐	Moore	☐	☐	☐
Coffee	☐	☐	☐	Morgan	☐	☐	☐
Crockett	☐	☐	☐	Obion	☐	☐	☐
Cumberland	☐	☐	☐	Overton	☐	☐	☐
Davidson	☐	☐	☐	Perry	☐	☐	☐
Decatur	☐	☐	☐	Pickett	☐	☐	☐
DeKalb	☐	☐	☐	Polk	☐	☐	☐
Dickson	☐	☐	☐	Putnam	☐	☐	☐
Dyer	☐	☐	☐	Rhea	☐	☐	☐
Fayette	☐	☐	☐	Roane	☐	☐	☐
Fentress	☐	☐	☐	Robertson	☐	☐	☐
Franklin	☐	☐	☐	Rutherford	☐	☐	☐
Gibson	☐	☐	☐	Scott	☐	☐	☐
Giles	☐	☐	☐	Sequatchie	☐	☐	☐
Grainger	☐	☐	☐	Sevier	☐	☐	☐
Greene	☐	☐	☐	Shelby	☐	☐	☐
Grundy	☐	☐	☐	Smith	☐	☐	☐
Hamblen	☐	☐	☐	Stewart	☐	☐	☐
Hancock	☐	☐	☐	Sullivan	☐	☐	☐
Hardeman	☐	☐	☐	Sumner	☐	☐	☐
Hardin	☐	☐	☐	Tipton	☐	☐	☐
Hawkins	☐	☐	☐	Trousdale	☐	☐	☐
Haywood	☐	☐	☐	Unicoi	☐	☐	☐
Henderson	☐	☐	☐	Union	☐	☐	☐
Henry	☐	☐	☐	Van Buren	☐	☐	☐
Hickman	☐	☐	☐	Warren	☐	☐	☐
Houston	☐	☐	☐	Washington	☐	☐	☐
Humphreys	☐	☐	☐	Wayne	☐	☐	☐
Jackson	☐	☐	☐	Weakley	☐	☐	☐
Jefferson	☐	☐	☐	White	☐	☐	☐
Johnson	☐	☐	☐	Williamson	☐	☐	☐
Knox	☐	☐	☐	Wilson	☐	☐	☐
Lake	☐	☐	☐				

12. Square Footage And Cost Per Square Foot Chart

Unit / Department	Existing Location	Existing SF	Temporary Location	Proposed Final Location	Proposed Final Square Footage		
					Renovated	New	Total
Emergency Dept.						11,200	11,200
Nursing – Medical/Surgical						13,750	13,750
Admin./Admiting						6,500	6,500
Imaging						6,500	6,500
Surgery						9,600	9,600
Pharmacy						800	800
Laboratory						1,600	1,600
Dietary						3,500	3,500
Respiratory & PT						2,400	2,400
Plant Ops/Circulation						5,650	5,650
Unit/Department GSF Sub-Total						61,500	61,500
Other GSF Total						-	-
GSF Total						61,500	61,500
(*) Total Cost						$ 19,958,500	$ 19,958,500
(**) Cost Per Square Foot						$ 324.52	$ 324.52
Cost Per Square Foot Is Within Which Range (*For quartile ranges, please refer to the Applicant's Toolbox On www.tn.gov/hsda*)					☐ Below 1st Quartile ☐ Between 1st And 2nd Quartile ☐ Between 2nd And 3rd Quartile ☐ Above 3rd Quartile	☐ Below 1st Quartile ☐ Between 1st And 2nd Quartile ☒ Between 2nd And 3rd Quartile ☐ Above 3rd Quartile	☐ Below 1st Quartile ☐ Between 1st And 2nd Quartile ☒ Between 2nd And 3rd Quartile ☐ Above 3rd Quartile

(*) The Total Construction Cost should equal the Construction Cost reported on line A5 of the Project Cost Chart.

(**) Cost Per Square foot is the construction cost divided by the square feet. Please do not include contingency costs.

13. **MRI, PET and/or Linear Accelerator**

1.) **Describe the acquisition of magnetic Resonance Imaging (MRI) scanner that is adding an MRI scanner in counties with population less than 250,000 or initiation of pediatric MRI in counties with population greater than 250,000, and/or**

Response

A Magnetic Resonance Imaging ("MRI") unit will be acquired for *Erlanger Sequatchie Valley Hospital*. This technology is consistent with the standard of care for hospital services.

2.) **Describe the acquisition of any Positron Emission Tomographer (PET) or Linear Accelerator if initiating the service by responding to the following:**

A.) **Complete the chart below for acquired equipment.**

☐ Linear Accelerator	MEV _____	Types:	☐ SRS ☐ IMRT ☐ IGRT ☐ Other _____
	Total Cost(*): _____		☐ By Purchase
	☐ New	☐ Refurbished	☐ By Lease -- Expected Useful Life (Yrs) ____
			☐ If not new, how old ? (Yrs) ____
☑ MRI	Tesla 3.0	Magnet:	☐ Breast ☐ Extremity
			☐ Open ☐ Short Bore ☐ Other _____
			☐ By Purchase
	Total Cost(*): $ 1,865,293		☑ By Lease -- Expected Useful Life (Yrs) 5
	☐ New	☐ Refurbished	☐ If not new, how old ? (Yrs) _____
☐ PET	☐ PET Only	☐ PET / CT	☐ PET / MRI
			☐ By Purchase
	Total Cost(*): _____		☐ By Lease -- Expected Useful Life (Yrs) ____
	☐ New	☐ Refurbished	☐ If not new, how old ? (Yrs) ____

(*) As defined by Agency Rule 0720-9-.01(13)

Response

The MRI unit will be a new Tesla 3.0 unit.

B.) In the case of equipment purchase, include a quote and/or proposal from an equipment vendor. In the case of equipment lease, provide a draft lease or contract that at least includes the term of the lease and the anticipated lease payments along with the fair market value of the equipment.

Response

A copy of the vendor quote is attached to this CON application.

C.) Compare lease cost of the equipment to it's fair market value. Note: Per Agency rule, the higher cost must be identified in the project cost chart.

Response

Capital cost of the equipment has been included in the *Project Cost Chart*.

D.) Schedule of Operations:

Location	Days Of Operation *(Sunday Through Saturday)*	Hours Of Operation *(Example: 8 am - 3 pm)*
Fixed Site (*Applicant*)		
Erlanger Sequatchie Valley Hosp.	Sunday - Saturday	7 am – 7 am (24 Hours)
Erlanger Bledsoe ED		
Mobile Locations		
(Applicant)	N / A	
(Name Of Other Location)		
(Name Of Other Location)		

E.) Identify the clinical applications to be provided that apply to the project.

Response

MRIs are administered to patients suffering from any of the following:

- Inflammation or infection in an organ
- Degenerative diseases
- Strokes
- Musculoskeletal disorders
- Tumors
- Other irregularities that exist in body tissue or organs

High-resolution images can be made without the need for using x-rays because MRI's use radio frequency (RF) light. Since they use RF light, MRI's do not present any known health risks to the patients. If a person's nervous system needs to be studied, an MRI image would be the best imaging method to use, especially if the brain or spinal cord need to be investigated.

F.) If the equipment has been approved by the FDA within the last 5 years, provide documentation of the same.

Response

MRI units are standard in the industry and have been in use for more than five (5) years.

Section B

GENERAL CRITERIA FOR CERTIFICATE OF NEED

Section B: GENERAL CRITERIA FOR CERTIFICATE OF NEED

In accordance with Tennessee Code Annotated § 68-11-1609(b), "no Certificate of Need shall be granted unless the action proposed in the application is necessary to provide needed health care in the area to be served, can be economically accomplished and maintained, will provide healthcare that meets appropriate quality standards, and will contribute to the orderly development of health care." Further standards for guidance are provided in the state health plan (Guidelines For Growth), developed pursuant to Tennessee Code Annotated § 68-11-1625.

The following questions are listed according to the four (4) criteria: (1) Need, (2) Economic Feasibility, (3) Applicable Quality Standards, and (4) Contribution to the Orderly Development of Healthcare. Please respond to each question and provide underlying assumptions, data sources, and methodologies when appropriate. *Please type each question and its response on 8 ½" x 11" white paper, single sided or double sided.* All exhibits and tables must be attached to the end of the application in correct sequence identifying the question(s) to which they refer, unless specified otherwise. **If a question does not apply to your project, indicate "Not Applicable (NA)".**

CONSTRUCTION, RENOVATION, EXPANSION, AND REPLACEMENT OF HEALTH CARE INSTITUTIONS

[Standards & Criteria, Effective - 2000, p. 23]

1. **Any project that includes the addition of beds, services, or medical equipment will be reviewed under those specific activities.**

Response

The standards and criteria for *Acute Care Bed Need Services* and *Magnetic Resonance Imaging*, are addressed following these criteria for construction, renovation, expansion and replacement.

2. **For relocation or replacement of an existing licensed**

health care institution:

a. The applicant should provide plans which include costs for both renovation and relocation, demonstrating the strengths and weaknesses of each alternative.

Response

Erlanger Bledsoe Hospital was originally built in 1971 in Pikeville, Bledsoe County, Tennessee. At the present time, the hospital is forty-six (46) years old and in need of significant renovation and updates. Maintenance is ongoing and requires a significant effort to sustain operation of the hospital. The physical plant of the Erlanger Bledsoe Hospital has outlived it's useful life. It is time to replace this 25 bed critical access hospital, which has been designated by the State of Tennessee as a *necessary provider.*

The replacement facility, *Erlanger Sequatchie Valley Regional Hospital* will be located in Dunlap, Sequatchie County, Tennessee, about 20 miles south of *Erlanger Bledsoe Hospital*. The hospital based Emergency Department, described in the companion CON application, in Dunlap, Sequatchie County, which was opened in 2013, will be closed and relocated with the opening of *Erlanger Sequatchie Valley Regional Hospital*. *Erlanger Bledsoe Hospital* in Pikeville, Bledsoe County, Tennessee, will be closed and relocated with the opening of the *Erlanger Sequatchie Valley Regional Hospital - Satellite Emergency Department*.

The objective for relocating the hospital from Bledsoe County to Sequatchie County is to foster access by creating a centrally located "regional community hospital" for three (3) rural counties which are directly west of Hamilton County, Tennessee. These counties are Grundy, Sequatchie and Bledsoe. By relocating the hospital to Dunlap, in Sequatchie County, Tennessee, the population of the service area will have improved access with a more centrally located facility which is accessible by the entire Sequatchie Valley region. Thus, patients will not need to travel to Chattanooga, Tennessee, or elsewhere, for needed health services.

The service area for the hospital based ED in Pikeville, described in the companion CON application, will be primarily Bledsoe County, however, patients from other surrounding counties may utilize this facility as well.

Renovation of *Erlanger Bledsoe Hospital* was considered. However, the facility has outlived it's usefule life, the age and condition of the physical plant are such that it is simply not practical to renovate. Current standards for space requirements are significantly different than what was applicable in 1971. The facility is also located in a residential area and is not readily accessible.

Patients from Grundy County and Sequatchie County must travel a significant distance to Chattanooga, or some other location to access needed services. While patients in Bledsoe County have access to needed services in the current hospital, they don't currently have access to surgery, MRI and other services that are planned for *Erlanger Sequatchie Valley Regional Hospital*. Thus, the provision of effective hospital services are limited by accessibility and space, impacting continuity of care, quality, and cost.

b. The applicant should demonstrate that there is an acceptable existing or projected future demand for the proposed project.

Response

According to the *Acute Care Bed Need Projections For 2017 and 2022* (based on 2015 Hospital JAR Reports), prepared by the *Tennessee Dept. of Health, Division of Health Statistics*, the bed need for the service area is eleven (11) acute care beds. This is due to the limitation of the Tennessee bed need methodology which allocates bed need by the county in which the hospital is located. Since *Erlanger Bledsoe Hospital* is located in Bledsoe County and no hospitals are located in either Grundy County or Sequatchie County, the Tennessee methodology only recognizes acute care bed need for Bledsoe County.

With the constraint imposed by the Tennessee methodology, in a telephone conversation with Mark Farber in February, 2017, it was agreed that we should prepare an

acute care bed need estimate based on utilization data from the THA inpatient data.

It should be noted that *Erlanger Bledsoe Hospital* is a critical access hospital. As such, all twenty-five (25) beds may also be utilized as "swing beds", which can accommodate either acute care or skilled nursing patients. This is very beneficial to the hospital as well as community, and is not considered in the Tennessee bed need methodology. Further, the swing beds help to keep patients in the community and discharged home.

Summary Of Inpatient Utilization
For The Three (3) County Service Area
[Excluding Pyschiatry, Substance Abuse & Rehabilitation]

		========== CY ==========			Projected
		2014	**2015**	**2016**	**2022**
Total	Discharges	5,849	5,915	5,708	6,029
	Patient Days	27,521	28,761	27,705	29,035
	ALOS	4.7	4.9	4.9	4.8
Total	**Gross Bed Need**	75.4	78.8	75.9	79.5
	Occupancy Adjustment	80%	80%	80%	80%
	Adjusted Bed Need	94.3	98.5	94.9	99.4
	Est. % Pt. Days -- LOS 1-4 (*)	35.1%	35.1%	35.1%	35.1%
	Est. Pt. Days (LOS 1-4)	9,660	10,095	9,724	10,191
	Est. Service Area Population	42,102	42,364	42,626	44,200
	Growth Rate - Population		0.6%	0.6%	3.7%
	Est. Use Rate - Discharges	0.138925	0.139623	0.133909	0.136417
	Est. Use Rate - Patient Days	0.653674	0.678902	0.649955	0.651815
LOS 1-4	**Gross Bed Need**	26.5	27.7	26.6	27.9
	Occupancy Adjustment	80%	80%	80%	80%
	Adjusted Bed Need	33.1	34.6	33.3	34.9
EBH Census Estimate	Market Share Adjustment (50%)	4,830	5,048	4,862	5,096
	Population Growth Adjustment (3.7%)				189
	Swing Bed Adjustment (35%)	1,691	1,767	1,702	1,850
	Estimated Patient Days	6,521	6,815	6,564	7,135
	Estimated Beds	17.9	18.7	18.0	19.5
	Occupancy Adjustment	80%	80%	80%	80%
	Estimated Beds - Adjusted	22.3	23.3	22.5	24.4

(*) *NOTES* (1) Please note that for a critical access hospital, CMS requires that ALOS not be more than 4 days (96 hours).
(2) Estimated percent of patient days pertaining to LOS 1-4 is derived from the ratio in CY 2014 (9664/27521).
(3) Actual swing bed utilization for Erlanger Bledsoe Hospital in 2015 was 61%.
(4) Population data obtained from Tennessee Dept. of Health, *Tennessee Population Estimates 2017 and 2021*.

3. For renovation or expansions of an existing licensed health care institution:

a. The applicant should demonstrate that there is an acceptable existing demand for the proposed project.

Response

*** Not applicable. ***

b. The applicant should demonstrate that the existing physical plant's condition warrants major renovation or expansion.

Response

*** Not applicable. ***

[End Of Responses To Construction, Renovation, Expansion, And Replacement Of Health Care Institutions, 2000, page 23]

ACUTE CARE BED NEED SERVICES

[Standards & Criteria, Effective - 2000, p. 14-15]

A. Need

1. The following methodology should be used and the need for hospital beds should be projected four years into the future from the current year:

Using the latest utilization and patient origin data from the Joint Annual Reports of Hospitals and the most current population projection series from the Department of Health, perform the following:

Step 1

Determine the current Average Daily Census (ADC) in each county.

$$ADC = \frac{\text{Patient Days}}{365 \text{ (366 in leap year)}}$$

Step 2

To determine the service area population (SAP) in both the current and projected year:

a. Begin with a list of all the hospital discharges in the state, separated by county, and showing the discharges both by the county where the patient actually lives (resident discharges), and the county in which the patient received medical treatment.

b. For the county in which the hospital is (or would be) located (service county), determine which other counties have patients who are treated in your county (resident counties). Treat all of the discharges from another state as if that whole state were a single resident county. The total discharges of residents from another state should be calculated from state population estimates and the latest National Center For Health Statistics southeastern discharge rates.

c. For each resident county, determine what percent of their total resident discharges are discharged from a hospital in your service county (if less than one percent, disregard).

d. For each resident county, apply the percentage determined above to the county's population (both projected and current). Add together the resulting numbers for all the resident counties and ad that sum to the projected and current population of your service county. This will give you the service area population (SAP).

Step 3

Determine projected Average Daily Census as:

$$\text{Projected ADC} = \text{Current ADC} \times \frac{\text{Projected SAP}}{\text{Current SAP}}$$

Step 4

Calculate Projected Bed Need for each county as:

$$\text{Projected Need} = \text{Projected ADC} + 2.33 \times \text{Projected ADC}$$

However, if projected occupancy:

$$\textbf{Projected Occupancy:} \quad \frac{\textbf{Projected ADC}}{\textbf{Projected Need}} \quad \textbf{x 100}$$

Is greater than 80 percent, then calculate projected need:

$$\textbf{Projected Need} = \frac{\textbf{Projected ADC}}{.80}$$

Response

The statistical procedure outlined in this criterion has been summarized by the Tennessee Dept. of Health - Bureau of Health Statistics ("TDH-BHS"). When the data for this procedure was requested from TDH-BHS, we were referred to the *Acute Care Bed Need Projections For 2017 And 2021 - Based On Final 2015 JAR Reports*. The reason being that they no longer make this detail data available to hospitals which request it.

According to the *Acute Care Bed Need Projections For 2017 and 2022* (based on 2015 Hospital JAR Reports), prepared by the *Tennessee Dept. of Health, Division of Health Statistics*, the bed need for the service area is eleven (11) acute care beds. This is due to the limitation of the Tennessee bed need methodology which allocates bed need by the county in which the hospital is located. Since *Erlanger Bledsoe Hospital* is located in Bledsoe County and no hospitals are located in either Grundy County or Sequatchie County, the Tennessee methodology only recognizes acute care bed need for Bledsoe County.

With the constraint imposed by the Tennessee methodology, in a telephone conversation with Mark Farber in February, 2017, it was agreed that we should prepare an acute care bed need estimate based on utilization data from the THA inpatient data.

It should be noted that *Erlanger Bledsoe Hospital* is a critical access hospital. As such, all twenty-five (25) beds may be utilized as "swing beds", which can accommodate either acute care or skilled nursing patients.

This is very beneficial to the hospital as well as community, and is not considered in the Tennessee bed need methodology. Further, the swing beds help to keep patients in the community and discharged home.

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(*) *NOTES* (1) Please note that for a critical access hospital, CMS requires that ALOS not be more than 4 days (96 hours).
(2) Estimated percent of patient days pertaining to LOS 1-4 is derived from the ratio in CY 2014 (9664/27521).
(3) Actual swing bed utilization for Erlanger Bledsoe Hospital in 2015 was 61%.
(4) Population data obtained from Tennessee Dept. of Health, *Tennessee Population Estimates 2017 and 2021*.

2. **New hospital beds can be approved in excess of the "need standard for a county" if the following criteria are met:**

a.) All existing hospitals in the projected service area have an occupancy level greater than or equal to 80 percent for the most recent Joint Annual Report. Occupancy should be based on the number of licensed beds that are staffed for two consecutive years.

Response

There are no other providers of acute hospital services in the defined service area. Further, this CON application does not seek approval of "new" hospitals beds, it seeks approval to relocate and replace currently existing hospital beds. For these reasons, Therefore, this criterion is not applicable.

b.) All outstanding CON projects for new acute care beds in the proposed service area are licensed.

Response

There are no CON projects for new acute care beds currently outstanding in the proposed service area.

c.) The Health Facilities Commission may give special consideration to acute care bed proposals for specialty health service units in tertiary care regional referral hospitals.

Response

*** Not applicable. ***

[End Of Responses To Standards & Criteria For Acute Care Bed Need Services, 2000, page 14-15]

MAGNETIC RESONANCE IMAGING

[Standards & Criteria, Effective - 2011, pp. 18-21]

1. **Utilization Standards For Non-Specialty MRI Units.**

a. **An applicant proposing a new non-specialty stationary MRI service should project a minimum of at least 2160 procedures in the first year of service, building to minimum of 2520 procedures per year by the second year of service,and building to a minimum of 2880 procedures per year by the third year of service, and for every year thereafter**

Response

It is estimated that the number of MRI procedures for the service area, along with estimated unit volumes, will be as follows.

Estimated MRI Utilization
For THE Three (3) County Service Area

CY	Pop.	Project Year	Est. Pop. MRI Proc's	Growth Rate MRI Proc's	Service Area MRI Proc's	Est. Unit MRI Proc's
2020	43,936	1	4,806	240	5,046	2,523
2021	44,198	2	4,835	242	5,077	2,539
2022	44,460	3	4,863	243	5,106	2,553

(*) *NOTES* (1) Estimated growth for MRI procedures is set 5%, compared to actual growth rate of 10%.
(2) Market share is assumed at 50% for the service area.

In year one (1) the estimated unit volume will be 363 procedures above the 2,160 threshold requirement, and in year two (2) the estimated unit volume will be 19 procedures above the 2,520 threshold requirement. It is noted that the estimated unit volume in year three (3) is anticipated to be below the threshold requirement of 2,880. However, we believe that the estimated volume is lower than it will actually be. This is due to the increase in MRI utilization assumption of 5%, but the actual growth rate in Southeast Tennessee is 10% in CY 2015.

Further, rural access to this modality of radiographic imaging is enhanced and provides the rural service area with what is now the standard of care.

b. **Provider proposing a new non-specialty mobile MRI service should project a minimum of at least 360 mobile MRI procedures in the first year of service per day of operation per week, building to an annual minimum of 420 procedures per day of operation per week by the second year of service, and building to a minimum of 480 procedures per day of operation per week by the third year of service and for every year thereafter.**

Response

*** Not applicable. ***

c. **An exception to the standard number of procedures may occur as new or improved technology and equipment or new diagnostic application for MRI units are developed. An applicant must demonstrate that the proposed unit offers a unique and necessary technology for the provision of health care services in the Service Area.**

Response

*** Not applicable. ***

d. **Mobile MRI units shall not be subject to the need standard in paragraph 1(b) if fewer than 150 days of service per year are provided at a given location. However, the applicant must demonstrate that existing services in the applicant's Service Area are not adequate and/or that there are special circumstances that require these additional services.**

Response

*** Not applicable. ***

e. **Hybrid MRI Units. The HSDA may evaluate a CON application for an MRI 'hybrid" unit (an MRI unit that is combined/utilized with another medical**

equipment such as a megavoltage radiation therapy unit or a positron emission tomography unit) based on the primary purposes of the unit.

Response

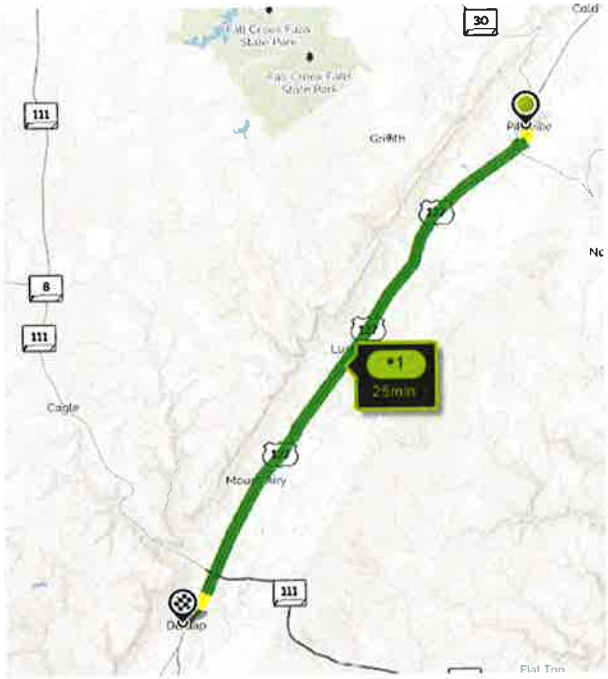
*** Not applicable. ***

2. **Access To MRI Units. All applicants for any proposed new MRI unit should document that the proposed location is accessible to approximately 75% of the Service Area's population. Applications that include non-Tennessee counties in their proposed Service Areas should provide evidence of the number of existing MRI units that service the non-Tennessee counties and the impact on MRI unit utilization in the non-Tennessee counties, including the specific location of those units located in the non-Tennessee counties, their utilization rates, and their capacity (if that data are available).**

Response

Sequatchie County is the middle point of the defined service area, with Dunlap being the county seat. We approximate that all of Sequatchie County, along with the Southern portion of Bledsoe County and the Eastern portion of Grundy County, comprises roughly 60% to 75% of the service area population.

The travel distance from Pikeville (county seat), Bledsoe County, Tennessee, to Dunlap, Sequatchie County, Tennessee, is 20.2 miles for approximately 25 minutes, directly along Tennessee State 127, which is a two (2) lane road.



The travel distance from Altamont (county seat), Grundy County, Tennessee, to Dunlap, Sequatchie County, Tennessee, is 33.1 miles for approximately 44 minutes, along Tennessee State 108 and 111, which are primarily two (2) lane roads.

3. **<u>Economic Efficiencies</u>. All applicants for any proposed new MRI unit should document that alternate shared services and lower cost technology applications have been investigated and found less advantageous in terms of accessibility, availability, continuity, cost, and quality of care.**

Response

There are currently no MRI units located within the service area. All patients from these three (3) counties must travel a significant distance to Chattanooga, or some other location to access this radiographic service. As such, all the elements of this criterion (accessibility, continuity, cost, and quality) are negatively impacted by this disparity in service availability.

4. Need Standard For Non-Specialty MRI Units.

A need likely exists for one additional non-specialty MRI unit in a Service Area when the combined average utilization of existing MRI service providers is at or above 80% of the total capacity of 3600 procedures, or 2880 procedures, during the most recent twelve month period reflected in the provider medical equipment report maintained by the HSDA. The total capacity per MRI unit is based upon the following formula:

Stationary MRI Units: 1.20 procedures per hour x 12 hours per day x 5 days per week x 50 weeks per year = 3,600 procedures per year.

Mobile MRI Units: Twelve (12) procedures per day x days per week in operation x 50 weeks per year. For each day of operation per week, the optimal efficiency is 480 procedures per year, or 80 percent of the total capacity of 600 procedures per year.

Response

It is estimated that the number of MRI procedures for the service area, along with estimated unit volumes, will be as follows.

Estimated MRI Utilization For THE Three (3) County Service Area						
CY	Pop.	Project Year	Est. Pop. MRI Proc's	Growth Rate MRI Proc's	Service Area MRI Proc's	Est. Unit MRI Proc's
2020	43,936	1	4,806	240	5,046	2,523
2021	44,198	2	4,835	242	5,077	2,539
2022	44,460	3	4,863	243	5,106	2,553

(*) *NOTES* (1) Estimated growth for MRI procedures is set 5%, compared to actual growth rate of 10%.

(2) Market share is assumed at 50% for the service area.

In year one (1) the estimated unit volume will be 363 procedures more than the threshold requirement, and in year two (2) the estimated unit volume will be 19 procedures more than the threshold requirement. It is noted that the estimated unit volume in year three (3) is anticipated to be below the threshold requirement. However, we believe that the estimated volume is lower than it will actually be. This is due to the increase in MRI utilization assumption of 5%, but the actual growth rate in Southeast Tennessee is 10% in CY 2015.

5. Need Standards For Specialty MRI Units.

a. Dedicated fixed or mobile Breast MRI unit. An applicant proposing to acquire a dedicated fixed or mobile breast MRI unit shall not receive a CON to use the MRI unit for non-dedicated purposes and shall demonstrate that annual utilization of the proposed MRI unit in the third year of operation is projected to be at least 1600 MRI procedures (.80 times the total capacity of 1 procedure per hour times 40 hours per week times 50 weeks per year), and that:

Response

*** Not applicable. ***

1. It has an existing and ongoing working relationship with a breast-imaging radiologist or

radiology proactive group that has experience interpreting breast images provided by mammography, ultrasound, and MRI unit equipment, and that is trained to interpret images produced by an MRI unit configured exclusively for mammographic studies;

Response

*** Not applicable. ***

2. **Its existing mammography equipment, breast ultrasound equipment, and the proposed dedicated breast MRI unit are in compliance with the Federal Mammography Quality Standards Act;**

Response

*** Not applicable. ***

3. **It is part of or has a formal affiliation with an existing healthcare system that provides comprehensive cancer care, including radiation oncology, medical oncology, surgical oncology and an established breast cancer treatment program that is based in the proposed service area.**

Response

*** Not applicable. ***

4. **It has an existing relationship with an established collaborative team for the treatment of breast cancer that includes radiologists, pathologists, radiation oncologists, hematologist/oncologists, surgeons, obstetricians/gynecologists, and primary are providers.**

Response

*** Not applicable. ***

b. Dedicated fixed or mobile Extemity MRI unit. An applicant proposing to institute a dedicated fixed or mobile Extremity MRI unit shall provide documentation of the total capacity of the proposed MRI unit based on the number of days of operation each week, the number of days to be operated each year, the number of hours to be operated each day, and the average number of MRI procedures the unit is capable of performing each hour. The applicant shall then demonstrate that annual utilization of the proposed MRI Unit in the third year of operation is reasonably projected to be at least 80 per cent of the total capacity. Non-specialty MRI procedures shall not be performed on a dedicated fixed or mobile Extremity Unit and a CON granted for this use should so state on its face.

Response

*** Not applicable. ***

c. Dedicated fixed or mobile Multi-position MRI Unit. An applicant proposing to institute a dedicated or mobile Multi-position MRI Unit shall provide documentation of the total capacity of the proposed MRI Unit based on the number of days of operation per week, the number of days to be operated each year, the number of hours to be operated each day, and the average number of MRI procedures the unit is capable of performing each hour. The applicant shall then demonstrate that annual utilization of the proposed MRI Unit in the third year of operation is reasonably projected to be at least 80 percent of the total capacity. Non-specialty MRI procedures shall not be performed on a dedicated fixed or mobile Multi-position MRI Unit and a CON granted for this use should so state on its face.

Response

*** Not applicable. ***

6. Separate Inventories For Specialty MRI Units And Non-Specialty MRI Units. If data availability permits, Breast, Extremity, and Multi-position MRI

Units shall not be counted in the inventory of non-specialty fixed or mobile MRI Units, and an inventory for each category of Specialty MRI Unit shall be replaced with non-Specialty MRI fixed or mobile MRI Units and a Certificate of Need granted for any of these Specialty MRI Units shall have included on its face a statement to that effect. A non-Specialty fixed or mobile MRI Unit for which a CON is granted for Specialty MRI Unit purpose use-only shall be counted in the specific Specialty MRI Unit inventory and shall also have stated on the face of its Certificate of Need that it may not be used for non-Specialty MRI purposes.

Response

*** Not applicable. ***

7. **Patient Safety And Quality Of Care. The applicant shall provide evidence that any proposed MRI Unit is safe and effective for its proposed use.**

   a. **The United States Food & Drug Administration (FDA) must certify the proposed MRI Unit for clinical use.**

   Response

MRI units are standard in the industry and have been in use for more than five (5) years.

   b. **The applicant should demonstrate that the proposed MRI Procedures will be offered in a physical environment that conforms to applicable federal standards , manufacturer's specifications, and licensing agencies' requirements.**

   Response

Please see attached Architect's letter stating that the physical environment will conform to applicable federal standards, manufacturer's specifications, and licensing agencies' requirements.

c. The applicant should demonstrate how emergencies within the MRI Unit facility will be managed in conformity with accepted medical practice.

Response

Please see attached policy for *Erlanger Health System* pertaining to *MRI Safety*. The emergency procedure is outlined in section IV of the policy.

d. The applicant should establish protocols that assure that all MRI Procedures performed are medically necessary and will not unnecessarily duplicate other services.

Response

Please see attached a copy of the policy for *Erlanger Health System* pertaining to medical necessity in the MRI Dept.

e. An applicant proposing to acquire any MRI Unit or institute any MRI service, including Dedicated Breast and Extremity MRI Units, shall demonstrate that it meets or is prepared to meet the staffing recommendations and requirements set forth by the American College of Radiology, including staff education and training programs.

Response

Erlanger currently operates five (5) MRI units at other locations and meets all of the staffing recommendations and requirements set forth by the American College of Radiology, including staff education and training. The same standards will be applicable to the MRI unit for *Erlanger Sequatchie Valley Regional Hospital*.

f. All applicants shall commit to obtain accreditation from the Joint Commission, the American College of Radiology, or a comparable accreditation authority for MRI within two years following operation of the proposed MRI Unit.

Response

Erlanger currently operates five (5) MRI units at other locations and is accredited by the Joint Commission. The same standards will be applicable to the MRI unit for *Erlanger Sequatchie Valley Regional Hospital*.

g. All applicants should seek and document emergency transfer agreements with local area hospitals, as appropriate. An applicant's arrangements with its physician medical director must specify that said physician be an active member of the subject transfer agreement hospital medical staff.

Response

Erlanger Sequatchie Valley Regional Hospital, as a member institution of *Erlanger Health System* will have a direct affiliation with *Erlanger Medical Center* in Chattanooga, for emergency transfers. The medical director for the MRI service at *Erlanger Sequatchie Valley Regional Hospital* will be Blaise Baxter, MD, and the radiology service contract with *Tennessee Interventional & Imaging Associates* ("TIIA") stipulates that all physicians must be an active member of the medical staff.

We have also attached a current list of hospital transfer agreements to this CON application.

8. The applicant should provide assurances that it will submit data in a timely fashion as requested by the HSDA to maintain the HSDA Equipment Registry.

Response

Erlanger Health System currently operates five (5) MRI units and reports utilization data to the HSDA Equipment Registry. The same standards will be applicable to the MRI unit which is the subject of this CON application.

9. In light of Rule 0720-11-.01, which lists the factors concerning need on which an application may be evaluated, and Principle No. 2 in the State Health Plan, "Every citizen should have reasonable access to

health care," the HSDA may decide to give special consideration to an applicant:

a. Who is offering the service in a medically underserved area as designated by the United States Health Resources And Services Administration;

Response

All three (3) counties in the service area have been designated by HRSA as being medically underserved. A copy of the HRSA designation is attached to this CON application.

b. Who is a "safety net hospital" or a "children's hospital" as defined by the Bureau of TennCare Essential Access Hospital payment program; or

Response

Erlanger Medical Center is classified by the Bureau of TennCare as a "safety net hospital" and also as a "children's hospital". *Erlanger* qualifies under this criterion as a "safety net hospital" because we serve all people regardless of their ability to pay for service. Further, we have the only children's hospital within 100 miles of Chattanooga, Tennessee.

Erlanger Sequatchie Valley Regional Hospital, as a member institution of *Erlanger Health System* will have a direct affiliation with *Erlanger Medical Center* in Chattanooga, which is an academic medical center affiliated with the *University of Tennessee - College of Medicine*. *Erlanger Medical Center* is the only tertiary service provider within 100 miles of Chattanooga, Tennessee.

Erlanger Health System is also a member of the *Vanderbilt University Medical Center - Health Network*. This affiliation will further enhance our ability to provide state of the art research, education and training programs. *Erlanger Health System* has also affiliated with *Technion Institute Of Technology*, in Haifa, Israel, for training of medical students, as well as graduate medical education, residency training and research. Increased opportunity exists in various medical specialties to

potentially add to *Erlanger's* growing portfolio of medical research and training programs.

Erlanger Health System also participates with numerous schools that provide advanced training in the areas of nursing and allied health.

c. Who provides a written commitment of intention to contract with at least one TennCare MCO and, if providing adult services, to participate in the Medicare program; or

Response

Erlanger Health System currently contracts with several TennCare MCO's, as follows.

-- BlueCare
-- TennCare Select
-- United Healthcare Community Plan
-- Amerigroup Community Care

Erlanger Health System also participates in the Medicare program.

d. Who is proposing to use the MRI unit for patients that typically require longer preparation and scanning times (e.g., pediatric, special needs, sedated, and contrast agent use patients). The applicant shall provide in its application information supporting the additional time required per scan and the impact on the need standard.

Response

Erlanger is classified by the Bureau of TennCare as a "safety net hospital" and also as a "children's hospital". *Erlanger's* experience is that it takes approximately 30 to 45 minutes longer in preparation time for children and patients that are sedated. This contributes to *Erlanger's* over capacity, however, we must serve these populations regardless of the patient's ability to pay for service. The suggested impact on the need standard may be to reduce the full need standard to something less than 3,600, when children are served.

[End Of Responses To Magnetic Resonance Imaging, 2011, pp. 18-21]

FREESTANDING EMERGENCY DEPARTMENTS

[Standards & Criteria, 2016 Update To Tennessee State Health Plan]

1. Determination Of Need: The determination of need shall be based upon the existing access to emergency services in the proposed service area. The applicant should utilize the metrics below, as well as other relevant metrics, to demonstrate that the population in the proposed service area has inadequate access to emergency services due to geographic isolation, capacity challenges, or low-quality of care. The applicant shall provide information on the number of existing emergency department (ED) facilities in the service area, as well as the distance of the proposed FSED from these existing facilities. If the proposed service area is comprised of contiguous ZIP Codes, the applicant shall provide this information on all ED facilities located in the county or counties in which the service area ZIP Codes are located. The applicant should utilize Centers for Medicare and Medicaid Services (CMS) throughput measures, available from the CMS Hospital Compare website, to illustrate the wait times at existing emergency facilities in the proposed service area. Data provided on the CMS Hospital Compare website does have a three to six month lag. In order to account for the delay in this information, the applicant may supplement CMS data with other more timely data. The applicant should also provide data on the number of visits per treatment room per year for each of the existing emergency department facilities in the service area. Applicants should utilize applicable data in the Hospital Joint Annual Report to demonstrate the total annual ED volume and annual emergency room visits of the existing facilities within the proposed service area. All existing EDs in the service area should be operating at capacity. This determination should be based upon the annual visits per treatment room at the host hospital's emergency department (ED) as identified by the American College of Emergency Physicians (ACEP) in Emergency Department

Design: A Practical Guide to Planning for the Future, Second Edition as capacity for EDs. The capacity levels set forth by this document should be utilized as a guideline for describing the potential of a respective functional program. The annual visits per treatment room should exceed what is outlined in the ACEP document. Because the capacity levels set forth in the Emergency Department Design: A Practical Guide to Planning for the Future, Second Edition are labeled in the document as a "preliminary sizing chart", the applicant is encouraged to provide additional evidence of the capacity, efficiencies, and demographics of patients served within the existing ED facility in order to better demonstrate the need for expansion.

ED-1 Median time from ED arrival to ED departure for ED admitted patients
ED-2 Median time from admit decision to departure for ED admitted patients
OP-18 Median time from ED arrival to ED departure for discharged ED patients
OP-20 Door to diagnostic evaluation by a qualified medical professional
OP-22 ED-patient left without being seen

Source:
https://www.medicare.gov/hospitalcompare/search.html
https://data.medicare.gov/data/hospital-compare

Note: The above measures are found in the category "Timely and Effective Care".

If the applicant is demonstrating low-quality care provided by existing EDs in the service area, the applicant shall utilize the Joint Commission's "Hospital Outpatient Core Measure Set". These measures align with CMS reporting requirements and are available through the CMS Hospital Compare website. Full details of these measures can be found in the Joint Commission's Specification Manual for National Hospital Outpatient Department Quality Measures. Existing emergency facilities should be in the bottom quartile of the state in the measures listed below in order to demonstrate low-quality of care.

OP-1 Median Time to Fibrinolysis
OP-2 Fibrinolytic Therapy Received Within 30 Minutes

OP-3 Median Time to Transfer to Another Facility for Acute Coronary Intervention
OP-4 Aspirin at Arrival OP-5 Median Time to ECG
OP-18 Median Time from ED Arrival to Departure for Discharged ED Patients
OP-20 Door to Diagnostic Evaluation by a Qualified Medical Personnel
OP-21 ED-Median Time to Pain Management for Long Bone Fracture
OP-23 ED-Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation With 45 Minutes of ED Arrival

Sources:

https://www.jointcommission.org/hospital outpatient department/
https://www.jointcommission.org/assets/1/6/HAP Outpatient Dept Core Measure Set.pdf
https://www.medicare.gov/hospitalcompare/search.html
https://data.medicare.gov/data/hospital-compare

Note: The above measures are found in the category "Timely and Effective Care".

The HSDA should consider additional data provided by the applicant to support the need for the proposed FSED including, but not limited to, data relevant to patient acuity levels, age of patients, percentage of behavioral health patients, and existence of specialty modules. These data may provide the HSDA with additional information on the level of need for emergency services in the proposed service area. If providing additional data, applicants should utilize Hospital Discharge Data System data (HDDS) when applicable. The applicant may utilize other data sources to demonstrate the percentage of behavioral health patients but should explain why the alternative data source provides a more accurate indication of the percentage of behavioral health patients than the HDDS data.

See Standard 2, Expansion of Existing Emergency Department Facility, for more information on the establishment of a FSED for the purposes of decompressing volumes and reducing wait times at the

host hospital's existing ED.

Note: Health Planning recognizes that limitations may exist for specific metrics listed above. When significant limitations exist (e.g. there are not adequate volumes to evaluate) applicants may omit these metrics from the application. However, the application should then discuss the limitations and reasoning for omission. Applicants are encouraged to supplement the listed metrics with additional metrics that may provide HSDA with a more complete representation of the need for emergency care services in the proposed service area.

Response

There will be no change in the availability of emergency services in Sequatchie County or Bledsoe County with approval of this CON application. *Erlanger Bledsoe Hospital* and its provider based emergency department in Dunlap, Sequatchie County, are the only existing providers of emergency medical care in the service area. The provider based emergency department is described here and in the companion CON application, concurrently filed.

The physical plant deficiencies at *Erlanger Bledsoe Hospital* necessitate that the facility be replaced. For 2016, the average number of emergency visits per room at *Erlanger Bledsoe Hospital* was 1,136 visits vs. the ACEP (American College of Emergency Physicians) low acuity standard (low range estimate) of 1,250 visits per room and the high acuity standard (high range estimate) of 909 visits per room. At the same time, the provider based emergency department in Sequatchie County has outgrown its facilities when utilization and capacity are compared to standards at 2,097 visits per room in 2016, compared to the low acuity standard of 1,250 visits per room and the high acuity standard of 909 visits per room.

For Sequatchie County, this application includes the physical integration of an existing provider based emergency department located in Dunlap, Sequatchie County, Tennessee, into a replacement hospital to be located in Dunlap, Sequatchie County, Tennessee, serving the same population. Further, a companion CON application describes a provider based emergency department in Pikeville, Bledsoe County, Tennessee. CMS has indicated that its approval

presumes that the replacement and relocation of the hospital and provider based emergency department will be the same as currently provided (copy of CMS letter attached to this CON application). The existing provider based emergency department in Sequatchie County will move less than ½ mile to the new hospital site. In Bledsoe County, the emergency department will move approximately 1.2 miles. No other changes are contemplated.

Metrics for *Erlanger Bledsoe Hospital* are attached to this CON application. As noted, metrics for *Erlanger Bledsoe Hospital* compare favorably with State and National averages, though in several instances *Erlanger Bledsoe Hospital* outperforms other hospitals at both the state and national level. For example, metrics related to communications with nurses and doctors. For emergency department specific metrics, *Erlanger Bledsoe Hospital* has better times on ED transfers and treatment. Although operating statistics for the provider based emergency department are operationally integrated into *Erlanger Bledsoe Hospital*, separate operating statistics are not maintained. CMS considers the hospital and provider based emergency department to be one in the same, effectively inseparable.

Pertaining to the operating metrics identified within this criterion, data is not available for many indicators on the *Medicare Hospital Compare* website. However, data is available for a few of the indicators, as listed here:

Ind.	*Description*	*Value*
OP-4	Aspirin At Arrival	99 %
OP-18	Median Time From ED Arrival To Departure For Discharged ED Patients	95 min.
OP-20	Door To Diagnostic Eval	25 min.
OP-21	Median Time To Pain Med	49 min.
OP-22	Left Before Being Seen	2 %

A copy of the Medicare Hospital Compare data is attached to this CON application.

2. Expansion of Existing Emergency Department Facility: Applicants seeking expansion of the existing host hospital ED through the establishment of a FSED in order to decompress patient volumes should demonstrate the existing ED of the host hospital is operating at

capacity. This determination should be based upon the annual visits per treatment room at the host hospital's emergency department (ED) as identified by the American College of Emergency Physicians (ACEP) in Emergency Department Design: A Practical Guide to Planning for the Future, Second Edition as capacity for EDs. The capacity levels set forth by this document should be utilized as a guideline for describing the potential of a respective functional program. The applicant shall utilize the applicable data in the Hospital Joint Annual Report to demonstrate total annual ED volume and annual emergency room visits. The annual visits per treatment room should exceed what is outlined in the ACEP document. Because the capacity levels set forth in the Emergency Department Design: A Practical Guide to Planning for the Future, Second Edition are labeled in the document as a "preliminary sizing chart", the applicant is encouraged to provide additional evidence of the capacity, efficiencies, and demographics of patients served within the existing ED facility in order to better demonstrate the need for expansion. See Standard 1, Demonstration of Need, for examples of additional evidence.

Additionally, the applicant should discuss why expansion of the existing ED is not a viable option. This discussion should include any barriers to expansion including, but not limited to, economic efficiencies, disruption of services, workforce duplication, restrictive covenants, and issues related to access. The applicant should also provide evidence that all practical efforts to improve efficiencies within the existing ED have been made, including, but not limited to, the review of and modifications to staffing levels.

Applicants seeking to decompress volumes of the existing host hospital ED should be able to demonstrate need for the additional facility in the proposed service area as defined in the application in accordance with Standard 1, Determination of Need.

Response

*** Not applicable. ***

3. **Relationship to Existing Similar Services in the Area: The proposal shall discuss what similar services are available in the service area and the trends in occupancy and utilization of those services. This discussion shall include the likely impact of the proposed FSED on existing EDs in the service area and shall include how the applicant's services may differ from existing services. Approval of the proposed FSED should be contingent upon the applicant's demonstration that existing services in the applicant's proposed geographical service area are not adequate and/or there are special circumstances that require additional services.**

Rural: The applicant should provide patient origin data by ZIP Code for each existing facility as well as the proposed FSED in order to verify the proposed facility will not negatively impact the patient base of the existing rural providers. The establishment of a FSED in a rural area should only be approved if the applicant can adequately demonstrate the proposed facility will not negatively impact any existing rural facilities that draw patients from the proposed service area. Additionally, in an area designated as rural, the proposed facility should not be located within 10 miles of an existing facility. Finally, in rural proposed service areas, the location of the proposed FSED should not be closer to an existing ED facility than to the host hospital.

Critical Access Hospitals (CAH): In Tennessee, certain CAHs are not located in rural areas according to the definition of rural provided in these standards. The location of the proposed FSED should not be closer to an existing CAH than to the host hospital.

Response

There are no other providers of emergency department services in Bledsoe, Sequatchie or Grundy counties. All areas to be served are classified as medically underserved. *Erlanger Bledsoe Hospital* has also received designation as a "necessary provider" from both the State of Tennessee and CMS. As part of a critical access hospital, the emergency department at *Erlanger Bledsoe Hospital* and its provider based emergency department in Sequatchie County, meets all

access and geographical standards as promulgated for critical access hospitals by CMS.

4. **Host Hospital Emergency Department Quality of Care: Additionally, the applicant shall provide data to demonstrate the quality of care being provided at the ED of the host hospital. The quality metrics of the host hospital should be in the top quartile of the state in order to be approved for the establishment of a FSED. The applicant shall utilize the Joint Commission's hospital outpatient core measure set. These measures align with CMS reporting requirements and are available through the CMS Hospital Compare website. Full details of these measures can be found in the Joint Commission's Specification Manual for National Hospital Outpatient Department Quality Measures.**

OP-1 Median Time to Fibrinolysis
OP-2 Fibrinolytic Therapy Received Within 30 Minutes
OP-3 Median Time to Transfer to Another Facility for Acute Coronary Intervention
OP-4 Aspirin at Arrival
OP-5 Median Time to ECG
OP-18 Median Time from ED Arrival to Departure for Discharged ED Patients
OP-20 Door to Diagnostic Evaluation by a Qualified Medical Personnel
OP-21 ED-Median Time to Pain Management for Long Bone Fracture
OP-23 ED-Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation With 45 Minutes of ED Arrival

Sources:

https://www.jointcommission.org/hospital outpatient department/
https://www.jointcommission.org/assets/1/6/HAP Outpatient Dept Core Measure Set.pdf
https://www.medicare.gov/hospitalcompare/search.html
https://data.medicare.gov/data/hospital-compare

Note: The above measures are found in the category "Timely and Effective Care".

Note: Health Planning recognizes that limitations may exist for specific metrics listed above. When significant limitations exist (e.g. there are not adequate volumes to evaluate) applicants may omit these metrics from the

application. However, the application should then discuss the limitations and reasoning for omission. Applicants are encouraged to supplement the listed metrics with additional metrics that may provide HSDA with a more complete representation of the need for emergency care services in the proposed service area.

Response

Pertaining to the operating metrics identified within this criterion, data is not available for many indicators on the *Medicare Hospital Compare* website. However, data is available for a few of the indicators, as listed here:

Ind.	*Description*	*Value*
OP-4	Aspirin At Arrival	99 %
OP-18	Median Time From ED Arrival To Departure For Discharged ED Patients	95 min.
OP-20	Door To Diagnostic Eval	25 min.
OP-21	Median Time To Pain Med	49 min.
OP-22	Left Before Being Seen	2 %

A copy of the Medicare Hospital Compare data is attached to this CON application.

Erlanger Bledsoe Hospital compares favorably with both state and national averages. Metrics for the provider based emergency department in Sequatchie County are combined with those of *Erlanger Bledsoe Hospital* as provider based emergency as specified by CMS. *Erlanger Bledsoe Hospital* and its provider based ED are both accredited by *The Joint Commission*. The replacement hospital in its provider based emergency department will also be accredited by *The Joint Commission*.

5. Appropriate Model for Delivery of Care: The applicant should discuss why a FSED is the appropriate model for delivery of care in the proposed service area.

Response

Erlanger Bledsoe Hospital has demonstrated that its provider based emergency department in Sequatchie County was the right model for the needs of the community as evidenced by the improvements in health status that have been realized since the emergency department was opened.

With the Sequatchie County EMS service and a helipad on-site, community residents have timely access to a full range of emergency medical services inclusive of Level I trauma services for both adults and children. As the only Level I trauma service provider, *Erlanger Medical Center - University Hospital* also provides medical supervisory oversight for the entire thirteen (13) county region to ensure access to timely medical care thru its regional operations center.

It should be noted that members of the Medicare Payment Advisory Commission ("MedPAC") visited Erlanger Bledsoe Hospital in Pikeville, Tennessee, and it's provider based ED in Dunlap, Tennessee, on August 21-22, 2017. The purpose of the visit was to obtain a better understanding of how this critical access hospital and provider based emergency department can operate successfully when so many rural hospitals are closing. Potentially, this model may be suggested and/or extended to other critical access hospitals across the nation.

As a safety net provider with six (6) helicopters, *Erlanger Health System* provides essential services to those in need. *Erlanger Health System* is the 7th largest public health system in the United States. For the proposed project, it is anticipated that the community benefit in Bledsoe County will be at least equal to that realized with the hospital, though likely greater given the improved facilities and accessible location. As integral providers of *Erlanger Health System*, the new hospital and its provider based emergency department will have access to highly specialized resources in emergency medicine, Level I trauma services for adult and children, a fleet of air ambulances and a graduate medical training program for Emergency physicians. *Erlanger's* reputation in emergency medicine is national in scope, with *Erlanger Medical Center - University Hospital* hosting national trauma meetings and associated educational and credentialing meetings. Erlanger is one of only a few hospitals in the country that have the ability to raise the standard of care in the delivery of emergency medicine.

6. Geographic Location: The FSED should be located within a 35 mile radius of the hospital that is the main provider.

Response

The provider based emergency department in Pikeville, Bledsoe County, as described in the companion CON application, will be located approximately twenty two (22) miles from *Erlanger Sequatchie Valley Regional Hospital*. Both of these sites meet CMS location standards and requirements for a critical access hospital.

7. **Access: The applicant must demonstrate an ability and willingness to serve equally all of the service area in which it seeks certification. In addition to the factors set forth in HSDA Rule 0720-11-.01(1) (listing factors concerning need on which an application may be evaluated), the HSDA may choose to give special consideration to an applicant that is able to show that there is limited access to ED services in the proposed Service Area.**

Response

Erlanger Health System is a safety net provider for Tennessee and has a demonstrated track record of serving all patients regardless of ability to pay. *Erlanger Health System* annually provides more uncompensated care than all other hospitals in the region combined, the annual cost of this care typically exceeds $100 million. *Erlanger Medical Center - University Hospital* is where community hospitals send their most difficult cases. *Erlanger Health System* also operates a "system of care" that facilitates access to a broad range of tertiary services including Level I trauma services for adults and children.

8. **Services to High-Need Populations: Special consideration shall be given to applicants providing services fulfilling the unique needs and requirements of certain high-need populations, including patients who are uninsured, low income, or patients with limited access to emergency care.**

Response

Erlanger Health System is a safety net provider for Tennessee and has a demonstrated track record of serving all patients regardless of ability to pay. *Erlanger Health*

System annually provides more uncompensated care than all other hospitals in the region combined, the annual cost of this care typically exceeds $100 million. *Erlanger Medical Center - University Hospital* is where community hospitals send their most difficult cases. *Erlanger Health System* also operates a "system of care" that facilitates access to a broad range of tertiary services including Level I trauma services for adults and children.

9. **Establishment of Non-Rural Service Area: The geographic service area shall be reasonable and based on an optimal balance between population density and service proximity of the applicant. The socio-demographics of the service area and the projected population to receive services shall be considered. The applicant shall demonstrate the orderly development of emergency services by providing information regarding current patient origin by ZIP Code for the hospital's existing ED in relation to the proposed service area for the FSED.**

   Establishment of a Rural Service Area: Applicants seeking to establish a freestanding emergency department in a rural area with limited access to emergency medical care shall establish a service area based upon need. The applicant shall demonstrate the orderly development of emergency services by providing information regarding patient origin by ZIP Code for the proposed service area for the FSED.

   Response

Erlanger Bledsoe Hospital is the only provider of emergency department services in Bledsoe County, Tennessee. *Erlanger Bledsoe Hospital*, through it's emergency department locations, currently provides 65.6% of all such services for Bledsoe County; and Erlanger Health System combined provides 76.5% of all emergency department services for Bledsoe County. See table of ED patient destination below.

ED Patient Destination From Bledsoe County, Tennessee [Bledsoe County = Zip Code 37367]			
	========== CY ==========		
	2014	2015	2016
Erlanger Bledsoe	4,109	4,212	4,322
Erlanger Med Cntr-Baroness Hosp	648	700	712
Erlanger Sequatchie Valley ED	174	373	359
Erlanger North Hosp	28	24	31
Erlanger East	22	14	18
Total - Erlanger Health System	4,981	5,323	5,442
Market Share	70.2%	76.1%	76.5%
CHI Memorial Hosp-Hixson	120	102	88
CHI Memorial Hosp-Chattanooga	78	75	65
Parkridge Med Cntr	64	49	22
Parkridge West Hosp	32	20	11
Parkridge East Hosp	22	15	21
Cumberland Med Cntr	873	559	631
Rhea Med Cntr	567	558	517
Cookeville Reg Med Cntr	108	94	95
Saint Thomas Highlands Hosp	102	75	76
Saint Thomas River Park Hosp	25	19	22
Other	128	109	124
Total - Bledsoe County	7,100	6,998	7,114

10. Relationship to Existing Applicable Plans; Underserved Area and Population: The proposal's relationship to underserved geographic areas and underserved population groups shall be a significant consideration.

Response

Erlanger Bledsoe Hospital is the only provider of emergency department services in Bledsoe County, Tennessee. Each of the emergency department sites will have a helipad that provides access, via Erlanger helicopter, to Level I trauma services for adults and for children. *Erlanger Medical Center – University Hospital* also provides emergency service oversight for the entire regional service area and is affiliated with the University of Tennessee – College of Medicine, to train emergency physicians,

including a fellowship in advanced emergency medicine. *Erlanger Health System* continuously demonstrates its commitment to the underserved. Its effort have had a direct impact in improving health status for rural underserved communities using independently collected metrics.

11. Composition of Services: Laboratory and radiology services, including but not limited to XRAY and CT scanners, shall be available on-site during all hours of operation. The FSED should also have ready access to pharmacy services and respiratory services during all hours of operation.

Response

As with existing ED services provided by *Erlanger Bledsoe Hospital* at both locations, the same services will be provided by *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED in Pikeville, Bledsoe County, as described in the companion CON application. Services will be inclusive of on-site X-Ray, CT, Laboratory and Respiratory Therapy. Also, emergency medical professionals will staff both ED locations twenty-four (24) hours per day.

12. Pediatric Care: Applicants should demonstrate a commitment to maintaining at least a Primary Level of pediatric care at the FSED as defined by CHAPTER 1200-08-30 Standards for Pediatric Emergency Care Facilities including staffing levels, pediatric equipment, staff training, and pediatric services. Applicants should include information detailing the expertise, capabilities, and/or training of staff to stabilize or serve pediatric patients. Additionally, applicants shall demonstrate a referral relationship, including a plan for the rapid transport, to at least a general level pediatric emergency care facility to allow for a specialized higher level of care for pediatric patients when required.

Response

Children's Hospital @ Erlanger, located in Chattanooga, Tennessee, is a state designated regional

pediatric center. Access via *LifeForce* helicopter can be accomplished in a matter of minutes from Bledsoe, Sequatchie or Grundy counties. The EMS service for Sequatchie County is also co-located with the emergency department. Staff from *Children's Hospital @ Erlanger* provide education and training on appropriate protocol and treatment of pediatric emergencies. The hospital and its provider based ED will each have a helipad to foster patient transfer as needed.

13. Assurance of Resources: The applicant shall document that it will provide the resources necessary to properly support the applicable level of emergency services.

Included in such documentation shall be a letter of support from the applicant's governing board of directors or Chief Financial Officer documenting the full commitment of the applicant to develop and maintain the facility resources, equipment, and staffing to provide the appropriate emergency services. The applicant shall also document the financial costs of maintaining these resources and its ability to sustain them to ensure quality treatment of patients in the ED continuum of care.

Response

A letter from the CFO for *Erlanger Health System* is attached to this CON application, and is also attached to the companion CON application. The letter assures our commitment to the provider based ED which will be part of *Erlanger Sequatchie Valley Regional Hospital*. This commitment will be to provide necessary resources, operate and staff the provider based ED sufficiently as to ensure high quality care, both within and along the ED continuum.

14. Adequate Staffing: An applicant shall document a plan demonstrating the intent and ability to recruit, hire, train, assess competencies of, supervise, and retain the appropriate numbers of qualified personnel to provide the services described in the application and that such personnel are available in the proposed service area. Each applicant shall outline planned staffing patterns including the number and type of

physicians and nurses. Each FSED is required to be staffed by at least one physician and at least one registered nurse at all times (24/7/365). Physicians staffing the FSED should be board certified or board eligible emergency physicians. If significant barriers exist that limit the applicant's ability to recruit a board certified or board eligible emergency physician, the applicant shall document these barriers for the HSDA to take into consideration. Applicants are encouraged to staff the FSED with registered nurses certified in emergency nursing care and/or advanced cardiac life support. The medical staff of the FSED shall be part of the hospital's single organized medical staff, governed by the same bylaws. The nursing staff of the FSED shall be part of the hospital's single organized nursing staff. The nursing services provided shall comply with the hospital's standards of care and written policies and procedures.

Adequate Staffing of a Rural FSED: An applicant shall document a plan demonstrating the intent and ability to recruit, hire, train, assess competencies of, supervise, and retain the appropriate numbers of qualified personnel to provide the services described in the application and that such personnel are available in the proposed service area. Each applicant shall outline planned staffing patterns including the number and type of physicians. FSEDs proposed to be located in rural areas are required to be staffed in accordance with the Code of Federal Regulations Title 42, Chapter IV, Subchapter G, Part 485, Subpart F - Conditions of Participation: Critical Access Hospitals (CAHs). This standard requires a physician, nurse practitioner, clinical nurse specialist, or physician assistant be available at all times the CAH operates. The standard additionally requires a registered nurse, clinical nurse specialist, or licensed practical nurse to be on duty whenever the CAH has one or more inpatients. However, because FSEDs shall be in operation 24/7/365 and because they will not have inpatients, a registered nurse, clinical nurse specialist, or licensed practical nurse shall be on duty at all times (24/7/365). Additionally, due to the nature of the emergency services provided at an FSED and the hours of operation, a physician, nurse practitioner, clinical nurse specialist, or physician assistant shall be on site at all times.

Source:

http://www.ecfr.gov/cgi-bin/textidx?rgn=div6&node=42:5.0.1.1.4.4#se42.5.485_1631

Response

Erlanger Bledsoe Hospital and its provider based ED have continuously operated without interruption and has maintained full accreditation for its services by *The Joint Commission*. *Erlanger Sequatchie Valley Regional Hospital* does not anticipate difficulties in staffing the proposed project. There will be essentially no change in ED services.

As a rural CAH, Erlanger Sequatchie Valley Regional Hospital will staff the provider based ED in Bledsoe County in compliance with the Code of Federal Regulations, Title 42, Chapter IV, Subchapter G, Part 485, Subpart F - Conditions of Participation: Critical Access Hospitals (CAHs). At all times of operation, a qualified and licensed medical professional will be on-site to render patient care … such medical professional will be either a physician, nurse practitioner, clinical nurse specialist, or physician assistant. Additionally, a registered nurse, clinical nurse specialist, or licensed practical nurse will also be on duty at all times of operation.

15. Medical Records: The medical records of the FSED shall be integrated into a unified retrieval system with the host hospital.

Response

Erlanger Health System is currently implementing a new EMR system which will be completed in November, 2017. This new EMR system is fully integrated and will serve as a unified retrieval system across all hospitals and ambulatory care sites, including *Erlanger Bledsoe Hospital* and it's provider based ED in Sequatchie County. Upon approval of this project, the same EMR system will be installed in *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED in Pikeville, Bledsoe County, a described in the companion CON application.

16. **Stabilization and Transfer Availability for Emergent Cases: The applicant shall demonstrate the ability of the proposed FSED to perform stabilizing treatment within the FSED and demonstrate a plan for the rapid transport of patients from the FSED to the most appropriate facility with a higher level of emergency care for further treatment. The applicant is encouraged to include air ambulance transport and an on-site helipad in its plan for rapid transport. The stabilization and transfer of emergent cases must be in accordance with the Emergency Medical Treatment and Labor Act.**

Response

Erlanger Health System prides itself on the "system of care" that it has developed across a four state area, which includes *LifeForce* air ambulance & helicopter transfer, co-located EMS partnerships, emergency medical oversight and supervision, and physician training in emergency medicine. The depth and breadth of emergency medical services are unmatched elsewhere, while being fully integrated across the healthcare delivery system and the entire four (4) state regional service area. Transfer agreements are in place for many community hospitals in the regional service area. Please see the list attached to this CON application.

The provider based ED in Pikeville, Bledsoe County, as described in the companion CON application, will have a helipad to accommodate LifeForce air ambulance and helicopter transfer. EMS services from Bledsoe County are located within ½ mile of the site for *Erlanger Sequatchie Valley Regional Hospital - Satellite Emergency Department*. The stabilization and transfer of emergent cases will be in accordance with the *Emergency Medical Treatment & Labor Act*. *Erlanger's* established "system of care" serves to offset the longer EMS express times typically found in a rural market (see attached article).

17. **Education and Signage: Applicants must demonstrate how the organization will educate communities and Emergency medical services (EMS) on the capabilities of the proposed FSED and the ability for the rapid**

transport of patients from the FSED 13 to the most appropriate hospital for further treatment. It should also inform the community that inpatient services are not provided at the facility and patients requiring inpatient care will be transported by EMS to a full service hospital. The name, signage, and other forms of communication of the FSED shall clearly indicate that it provides care for emergency and/or urgent medical conditions without the requirement of a scheduled appointment. The applicant is encouraged to demonstrate a plan for educating the community on appropriate use of emergency services contrasted with appropriate use of urgent or primary care.

Response

Erlanger Bledsoe Hospital and its provider based ED have worked extensively with communities to educate them on the provision of services. Signage and naming conventions for *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED, as described in the companion CON application, will meet all CMS standards and guidelines. In addition, "Erlanger Notes" are delivered live monthly via the County Commission to the community to insure community awareness of essential services. *Erlanger* attributes its success in delivering services to the community, in part, to its efforts to engage and educate the community. The health of the population has shown measurable improvement.

18. Community Linkage Plan: The applicant shall describe its participation, if any, in a community linkage plan, including its relationships with appropriate health and outpatient behavioral health care system, including mental health and substance use, providers/services, providers of psychiatric inpatient services, and working agreements with other related community services assuring continuity of care. The applicant is encouraged to include primary prevention initiatives in the community linkage plan that would address risk factors leading to the increased likelihood of ED usage. Rationale: The State Health Plan moved from a primary emphasis of health care to an emphasis on "health protection and promotion". The development of primary prevention initiatives for the community advances the mission of the State Health

Plan.

Response

As indicated, *Erlanger Health System* has worked extensively to ensure there are no gaps in the provision of needed services. It's "system of care" is well known to provide access to a broad based continuum of services, while ensuring continuity via an integrated EMR system. As a safety net, *Erlanger Bledsoe Hospital* and it's provider based ED assure access to all patients, regardless of their ability to pay. This assurance will remain in place with *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED, as described in the companion CON application. *Erlanger Bledsoe Hospital* has worked extensively with communities to educate them on the provision of services. In addition, "Erlanger Notes" are delivered live monthly via the County Commission to the community to insure community awareness of essential services. *Erlanger* attributes its success in delivering services to the community, in part, to its efforts to engage and educate the community. The health of the population has shown measurable improvement.

19. Data Requirements: Applicants shall agree to provide the Department of Health and/or the HSDA with all reasonably requested information and statistical data related to the operation and provision of services and to report that data in the time and format requested. As a standard practice, existing data reporting streams will be relied upon and adapted over time to collect all needed information.

Response

Erlanger Sequatchie Valley Regional Hospital and it's provider based ED, as described in the companion CON application, will provide all reasonably requested information and statistical data related to the operation and provision of services. Also, to report such data as requested.

20. Quality Control and Monitoring: The applicant shall identify and document its existing or proposed plan for data reporting, quality improvement, and outcome

and process monitoring system. The FSED shall be integrated into the host hospital's quality assessment and process improvement processes.

Response

Erlanger Bledsoe Hospital and it's provider based ED are accredited by *The Joint Commission*. They also participate in quality reporting and monitoring, as evidenced by the quality information discussed previously and attached to this CON application. The quality reporting and monitoring will continue with *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED.

21. **Provider-Based Status: The applicant shall comply with regulations set forth by 42 CFR 413.65, Requirements for a determination that a facility or an organization has provider-based status, in order to obtain provider-based status. The applicant shall demonstrate eligibility to receive Medicare and Medicaid reimbursement, willingness to serve emergency uninsured patients, and plans to contract with commercial health insurers.**

Response

Erlanger Sequatchie Valley Regional Hospital and it's provider based ED, as described in the companion CON application, have already received approval from CMS. A copy of the letter is attached to this CON application.

Erlanger Sequatchie Valley Regional Hospital will serve uninsured emergency patients. In addition, all commercial payors which have a contractual agreement with *Erlanger Health System* will be able to access all of these services.

22. **Licensure and Quality Considerations: Any applicant for this CON service category shall be in compliance with the appropriate rules of the TDH, the EMTALA, along with any other existing applicable federal guidance and regulation. The applicant shall also demonstrate its accreditation status with the Joint Commission or other applicable accrediting agency. The**

FSED shall be subject to the same accrediting standards as the licensed hospital with which it is associated.

Response

Erlanger Bledsoe Hospital and it's provider based ED are accredited by *The Joint Commission.*, and they are also in compliance with rules of TDH, EMTALA and other applicable Federal regulations. Such accreditation will be maintained by *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED, as described in the companion CON application, upon approval and implementation of this project. A copy of the letter from *The Joint Commission* is attached to this CON application.

[End Of Responses To Standards & Criteria For Freestanding Emergency Departments, 2016 Update To Tennessee State Health Plan]

GENERAL QUESTIONS CONCERNING NEED, ECONOMIC FEASIBILITY, APPLICABLE QUALITY STANDARDS & CONTRIBUTION TO THE ORDERLY DEVELOPMENT OF HEALTHCARE

(I.) *NEED*

1. **Provide a response to each criterion and standard in Certificate of Need Categories in the State Health Plan that are applicable to the proposed project. Criteria and standards can be obtained from the Tennessee Health services & Development Agency, or found on the Agency's website at http://www.tn.gov/hsda/article/hsda-criteria-and-standards.**

Response

Responses to the *CON Criteria & Standards* applicable to this project have been addressed.

- Construction, Renovation, Expansion, And Replacement Of Healthcare Institutions
- Acute Care Bed Need Services

- Freestanding Emergency Departments

2. Describe the relationship of this project to the applicant facility's long range development plans, if any, and how it relates to related previously approved projects of the applicant.

Response

Erlanger Health System currently holds a CON for *Erlanger East Hospital* to initiate a satellite radiation therapy service along with the relocation of a Linear Accelerator from *Erlanger Medical Center - University Hospital* (no. CN1412-048); a CON (No. CN1601-002) to transfer ten (10) medical/surgical beds from Erlanger Medical Center - University Hospital to Erlanger East Hospital and convert them to NICU beds, for initiation of a Level III NICU service. Further, a CON is outstanding for Erlanger Behavioral Health, LLC, for a new eighty eight (88) bed behavioral health hospital (no. CN1603-012).

Erlanger Health System prides itself on the "system of care" that it has developed across a four state area, which includes *LifeForce* air ambulance & helicopter transfer, co-located EMS partnerships, emergency medical oversight and supervision, and physician training in emergency medicine. The depth and breadth of emergency medical services are unmatched elsewhere, while being fully integrated across the healthcare delivery system and the entire four (4) state regional service area. Transfer agreements are in place for many community hospitals in the regional service area. Please see the list attached to this CON application.

The overall rank for health outcomes for each county in the service area, is as follows.

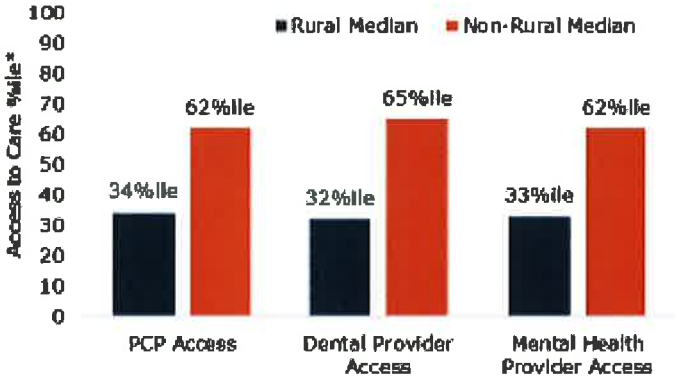
	=== Health Rank ====	
County	**2013**	**2017**
Sequatchie	91	68
Bledsoe	20	17
Grundy	95	95

As may be seen from this data, Sequatchie County was ranked 91st in Tennessee for health outcomes, and in

2017 it is ranked 68th; Bledsoe County improved to 17th in 2017 compared to 20th in 2013; and Grundy County ranks last in Tennessee, with no improvement in health outcomes over the study period.(4) These ranking are from the totalof ninety-five (95) counties in Tennessee. It should be noted that in 2013, *Erlanger Bledsoe Hospital* opened the first provider based emergency department in Tennessee which is part of a critical access hospital, in Dunlap, Sequatchie County, and we believe this ED, along with access to essential services, was instrumental to the improvement in health outcomes.

Further, the *Chartis Center For Rural Health* has illustrated the disparity of access to health services between rural and non-rural communities.(5)

Access to Healthcare in Rural Hospital Communities



***Population Health metrics are percentile ranked for all acute care rural and non-rural providers by hospital service area such that lower ranks indicate greater population challenges.**

Not surprisingly, access to care for rural areas is essentially equivalent to half of the availability for non-rural areas.

The goal for *Erlanger Health System* is to provide a comprehensive system of care comprised of unduplicated services while also serving those who are currently under served and/or those who do not have the ability to pay for their services. As such, *Erlanger Sequatchie Valley*

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4 County rank for health outcomes retrieved from … www.countyhealthrankings.org.

5 Chartis Center For Rural Health. *Rural Relevance for 2017: Assessing The State Of Rural Healthcare In America.* Retrieved from … https://www.chartisforum.com/wp-content/uploads/2017/05/The-Rural-Relevance-Study_2017.pdf, p. 6.

Regional Hospital is part of a long term plan to make services more accessible.

3. **Identify the proposed service and justify the reasonableness of that proposed area. Submit a county level map for the Tennessee portion of the service area using the map on the following page, clearly marked to reflect the service area as it relates to meeting the requirements for CON criteria and standards that may apply to the project. Please include a discussion of the inclusion of counties in the border states, if applicable.**
Attachment - Section - Need - 3.

Please complete the following tables, if applicable:

Service Area Counties	*Historical Utilization - County Residents*	*% Of Total Procedures*
County 1		
County 2		
Etc.		
Total		

Response

The objective for *Erlanger Sequatchie Valley Regional Hospital* is to foster access by creating a "regional community hospital" for three (3) rural counties which are directly West of Hamilton County, Tennessee. These counties are Grundy, Sequatchie and Bledsoe. By relocating the hospital to Dunlap, in Sequatchie County, Tennessee, the population of the service area will have improved access with a more centrally located facility which is accessible by the entire Sequatchie Valley region. Thus, patients will not need to travel to Chattanooga, Tennessee, or elsewhere, for needed health services.

Patients from Grundy County and Sequatchie County must travel a significant distance to Chattanooga, or some other location to access needed services. While patients in Bledsoe County have access to needed services in the current hospital, they don't currently have access

to surgery, MRI and other services that are planned for *Erlanger Sequatchie Valley Regional Hospital*. Thus, the provision of effective hospital services are limited by accessibility and space, impacting continuity of care, quality, and cost.

	===== I/P Admissions =======			======= % Of Total ========		
County	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**
Bledsoe	1,288	1,280	1,236	22.0%	21.6%	21.7%
Grundy	2,109	2,072	2,021	36.1%	35.1%	35.4%
Sequatchie	2,452	2,563	2,451	41.9%	43.3%	42.9%
Total	5,849	5,915	5,708	100.0%	100.0%	100.0%

The service area is reasonable and provides balance between population density and service proximity. A map showing the service area is attached to this CON application.

4-A 1) Describe the demographics of the population to be served by the proposal.

Response

For the defined service area, the general population is expected to grow 2.4% compared to 4.2% for Tennessee. Those enrolled in TennCare comprise 26.1% of the population compared to 20.5% for Tennessee. Those living below the poverty level is 23.6% compared to 16.7% for Tennessee. Those over age 25 with less than a high school diploma is 26.5% compared to 15.2% for Tennessee. The median household income is $33,425 compared to $45,247 for Tennessee. The minority population is 6.38% compared to 24.58% for Tennessee. The elderly (age 65+) comprise 21.5% compared to 17.5% for Tennessee. For each of these measures, the service area is in a position strikingly opposite that of Tennessee.

The overall rank for health outcomes for each county in the service area, is as follows.

County	=== Health Rank ==== 2013	2017
Sequatchie	91	68
Bledsoe	20	17
Grundy	95	95

As may be seen from this data, Sequatchie County was ranked 91st in Tennessee for health outcomes, and in 2017 it is ranked 68th; Bledsoe County improved to 17th in 2017 compared to 20th in 2013; and Grundy County ranks last in Tennessee, with no improvement in health outcomes over the study period. These ranking are from the totalof ninety-five (95) counties in Tennessee. It should be noted that in 2013, *Erlanger Bledsoe Hospital* opened the first provider based emergency department in Tennessee which is part of a critical access hospital, in Dunlap, Sequatchie County, and we believe this ED was instrumental to the improvement in health outcomes.

2) Using current and projected population data from the Department of Health, the most recent enrollee data from the Bureau of TennCare, and demographic information from the US Census Bureau, complete the following table and include data for each county in your proposed service area.

Projected Population Data:
http://www.tn.gov/health/article/statistics-population
TennCare Enrollment Data:
http://www.tn.gov/tenncare/topic/enrollment-data
Census Bureau Fact Finder:
http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

	Dept. Of Health / Health Statistics						Bureau Of The Census				TennCare	
Demographic Variable / Geographic Area	Total Population - Current Year	Total Population - Projected Year	Total Population - % Change	(*) Target Population - Current Year	(*) Target Population - % Change	(*) Target Population - Projected Year As % Of Total	Median Age	Median Household Income	Persons Below Poverty Level	Persons Below Level As % Of Total	TennCare Enrollees	TennCare Enrollees As % Of Total
County A												
County B, etc.												
Service Area Total												
State Of TN Total												

(*) Target Population is population that project will primarily serve. For example, nursing home, home health agency, hospice agency projects typically primarily serve the Age 65+ population; projects for child & adolescent psychiatric services will serve the population ages 0-19. Projected Year is defined in select service-specific criteria and standards. If Projected Year is not defined, default should be four years from current year, e.g., if Current Year is 2016, then default Projected Year is 202.

Response

As requested, the table has been completed.

	Dept. Of Health / Health Statistics						Bureau Of The Census				TennCare	
Demographic Variable / Geographic Area	Total Population - Current Year	Total Population - Projected Year	Total Population - % Change	(*) Target Population - Current Year	(*) Target Population - % Change	(*) Target Population - Projected Year As % Of Total	Median Age	Median Household Income	Persons Below Poverty Level	Persons Below Level As % Of Total	TennCare Enrollees	TennCare Enrollees As % Of Total
Bledsoe County, Tennessee	13,333	13,516	1.4%	13,333	1.4%	100.0%	43.1	$37,013	3,480	26.1%	3,048	22.9%
Grundy County, Tennessee	13,430	13,216	-1.6%	13,430	-1.6%	100.0%	42.6	$27,373	3,505	26.1%	4,449	33.1%
Sequatchie County, Tennessee	16,125	17,206	6.7%	16,125	6.7%	100.0%	42.3	$45,408	3,015	18.7%	3,698	22.9%
Service Area Total	42,888	43,938	2.4%	42,888	2.4%	100.0%	42.6	$36,598	10,122	23.6%	11,195	26.1%
State Of TN Total	6,887,572	7,179,512	4.2%	6,887,572	4.2%	100.0%	38.7	$45,219	1,150,225	16.7%	1,412,063	20.5%

B. Describe the special needs of the service area population, including health disparities, the accessibility to consumers, particularly the elderly, women, racial and ethnic minorities, and low-income groups. Document how the business plans of the facility will take into consideration the special needs of the service area population.

Response

For the defined service area, the general population is expected to grow 2.4% compared to 4.2% for Tennessee. Those enrolled in TennCare comprise 26.1% of the population compared to 20.5% for Tennessee. Those living below the poverty level is 23.6% compared to 16.7% for Tennessee. Those over age 25 with less than a high

school diploma is 26.5% compared to 15.2% for Tennessee. The median household income is $33,425 compared to $45,247 for Tennessee. The minority population is 6.38% compared to 24.58% for Tennessee. The elderly (age 65+) comprise 21.5% compared to 17.5% for Tennessee. For each of these measures, the service area is in a position strikingly opposite that of the Tennessee.

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5. Describe the existing and approved but unimplemented CON's of similar healthcare providers in the service area. Include utilization and/or occupancy trends for each of the most recent three years of data available for this project. List each provider and its utilization and/or occupancy individually. Inpatient bed projects must include the following data: Admissions or discharges, patient days, average length of stay, and occupancy. Other projects should use the most appropriate measures, e.g., cases, procedures, visits, admissions, etc. This doesn't apply to projects that are solely relocating a service.

Response

There are not currently any outstanding CON projects in the service area. The utilization for each county within the service area is below.

	===== I/P Admissions =======			======= % Of Total ========		
County	2014	2015	2016	2014	2015	2016
Bledsoe	1,288	1,280	1,236	22.0%	21.6%	21.7%
Grundy	2,109	2,072	2,021	36.1%	35.1%	35.4%
Sequatchie	2,452	2,563	2,451	41.9%	43.3%	42.9%
Total	5,849	5,915	5,708	100.0%	100.0%	100.0%

The utilization for *Erlanger Bledsoe Hospital* is as follows.

FY	Bed Type	Admits	Pt. Days	ALOS	% Occupancy
2014	Acute Care	217	561	2.6	6.1%
	Swing Beds	79	973	12.3	10.7%
	Total	296	1,534	5.2	16.8%
2015	Acute Care	293	783	2.7	8.6%
	Swing Beds	116	1,221	10.5	13.4%
	Total	409	2,004	4.9	22.0%
2016	Acute Care	229	652	2.8	7.1%
	Swing Beds	115	1,662	14.5	18.2%
	Total	344	2,314	6.7	25.4%

6. Provide applicable utilization and/or occupancy statistics for your institution for each of the past three (3) years and the projected annual utilization for each of the two (2) years following completion of the project. Additionally, provide the details regarding the methodology used to project utilization. The methodology must include detailed calculations or documentation from referral sources, and identification of all assumptions.

Response

The utilization for *Erlanger Bledsoe Hospital* is as follows.

FY	Bed Type	Admits	Pt. Days	ALOS	% Occupancy
2014	Acute Care	217	561	2.6	6.1%
	Swing Beds	79	973	12.3	10.7%
	Total	296	1,534	5.2	16.8%
2015	Acute Care	293	783	2.7	8.6%
	Swing Beds	116	1,221	10.5	13.4%
	Total	409	2,004	4.9	22.0%
2016	Acute Care	229	652	2.8	7.1%
	Swing Beds	115	1,662	14.5	18.2%
	Total	344	2,314	6.7	25.4%

Projected utilization for *Erlanger Sequatchie Valley Regional Hospital* is below.

FY	Bed Type	Admits	Pt. Days	ALOS	% Occupancy
Year 1	Acute Care	617	2,002	3.2	21.9%
	Swing Beds	225	3,482	15.5	38.2%
	Total	842	5,484	6.5	60.1%
Year 2	Acute Care	629	2,042	3.2	22.4%
	Swing Beds	230	3,552	15.4	38.9%
	Total	859	5,594	6.5	61.3%

(II.) *ECONOMIC FEASIBILITY*

1. **Provide the cost of the project by completing the Project Costs Chart on the following page. Justify the cost of the project.**

   A. **All projects should have a project cost of at least $ 15,000 (the minimum CON filing fee). (See application instructions for filing fee.)**

   B. **The cost of any lease (building, land and/or equipment) should be based on fair market value or the total amount of the lease payments over the initial term of the lease, whichever is greater. Note: This applies to all equipment leases including by procedure or "per click" arrangements.**

The methodology used to determine the total lease cost for a "per click" arrangement must include, at a minimum, the projected procedures, the "per click" rate and the term of the lease.

C. The cost for fixed and moveable equipment includes, but is not necessarily limited to, maintenance agreements covering the expected useful life of the equipment; federal, state and local taxes and other government assessments; and installation charges, excluding capital expenditures for physical plant renovation or in-wall shielding, which should be included under construction costs or incorporated in a facility lease.

D. Complete the Square Footage Chart on page 8 and provide the documentation. Please note the Total Construction Cost reported on line 5 of the Project Cost Chart should equal the Total construction Cost on the Square Footage Chart.

E. For projects that include new construction, modification, and/or renovation; documentation must be provided from a contractor and/or architect that support the estimated construction costs. Provide a letter that includes the following:

1.) A general description of the project;
2.) An estimate of the cost to construct the project;
3.) A description of the status of the site's suitability for the proposed project; and
4.) Attesting the physical environment will conform to applicable federal standards, Guidelines For Design & construction Of Hospital And Health Care Facilities in current use by the licensing authority.

Response

The *Project Cost Chart* has been completed on the next page, and the architect letter is attached to this CON application.

SEP 11 '17 PM12:09

PROJECT COST CHART

A. Construction And Equipment Acquired By Purchase.

1.	Architecural And Engineering Fees	1,115,500
2.	Legal, Administrative, Consultant Fees (Excluding CON Filing Fees)	
3.	Acquisition Of Site	1,500,000
4.	Preparation Of Site	1,259,000
5.	Total Construction Cost	19,958,500
6.	Contingency Fund	1,061,875
7.	Fixed Equipment (Not Included In Construction Contract)	2,708,327
8.	Moveable Equipment (List all equipment over $ 50,000 as separate attachments)	3,681,034
9.	Other (Specify) Signage, IT, etc.	1,254,600

B. Acquisition By Gift, Donation, Or Lease.

1.	Facility (inclusive of building and land)	0
2.	Building Only	0
3.	Land Only	0
4.	Equipment (Specify)	0
5.	Other (Specify)	0

C. Financing Costs And Fees.

1.	Interim Financing	0
2.	Underwriting Costs	0
3.	Reserve For One Year's Debt Service	0
4.	Other (Specify)	0

D.	Estimated Project Cost	(A + B + C)	32,558,836
E.	CON Filing Fee		95,000
F.	Total Estimated Project Cost	(D + E) **TOTAL**	32,653,836

2. Identify the funding sources for this project.

a. Please check the applicable item(s) below and briefly summarize how the project will be financed. (Documentation for the type of funding MUST be inserted at the end of the application, in the correct alpha/numeric order and identified as Attachment C, Economic Feasibility-2.)

___ A. Commercial Loan -- Letter from lending institution or guarantor stating favorable initial contact, proposed loan amount, expected interest rates, anticipated term of the loan, and any restrictions or conditions.

X B. Tax - Exempt Bonds -- Copy of preliminary resolution or a letter from the issuing authority stating favorable initial contact and a conditional agreement from an underwriter or investment banker to proceed with the issuance.

___ C. General obligation bonds -- Copy of resolution from issuing authority or minutes from the appropriate meeting.

___ D. Grants -- Notification of intent form for grant application or notice of grant award.

___ E. Cash Reserves - Appropriate documentation from Chief Financial Officer of the organization providing the funding for the project and audited financial statements of the organization; and/or

___ F. Other - Identify and document funding from all other sources.

Response

Erlanger Sequatchie Valley Regional Hospital in Dunlap, Tennessee, will be financed through the *Sequatchie County Industrial Development Authority* bond issuance occurring through the *Tennessee Municipal Bond Fund*.

3. **Complete Historical Data Charts on the following two pages - *Do not modify the charts provided or submit Chart substitutions*!**

Historical Data Chart represents revenue and expense information for the last three (3) years for which complete data is available. Provide a Chart for the total facility and Chart just for the services being represented in the proposed project, if applicable. Only complete on chart if it suffices.

Note that "Management Fees to Affiliates" should include management fees paid by agreement to the parent company, another subsidiary of the parent company, or a third party with common ownership as the applicant entity. "Management Fees to Non-Affiliate" should include any management fees paid by agreement to third party entities not having common ownership with the applicant.

Response

The *Historical Data Charts* for *Erlanger Bledsoe Hospital* and *Erlanger Bledsoe Hospital - Satellite ED* have been completed.

[X] Total Facility
[ ] Project Only

HISTORICAL DATA CHART

Give information for the last *three (3)* years for which complete data are available for the facility or agency. The fiscal year begins in July (Month).

		Year – 2014	Year – 2015	Year – 2016
A.	Utilization Data (Specify Unit Of Measure, e.g., 1,000 patient days, 500 visits) *Admissions*	296	409	344
B.	Revenue From Services To Patients			
	1. Inpatient Services	2,987,745	3,808,307	4,624,277
	2. Outpatient Services	13,491,463	18,308,976	15,919,874
	3. Emergency Services	6,575,324	17,545,948	27,779,684
	4. Other Operating Revenue (Specify) Cafeteria, POB Rent, etc.	556,272	493,437	553,936
	Gross Operating Revenue	23,610,804	40,156,668	48,877,771
C.	Deductions From Gross Operating Revenue			
	1. Contractual Adjustments	11,254,224	22,510,486	29,757,443
	2. Provision For Charity Care	1,499,303	2,396,456	2,557,237
	3. Provision For Bad Debt	1,514,369	2,687,029	3,146,065
	Total Deductions	14,267,896	27,593,971	35,460,745
	NET OPERATING REVENUE	9,342,908	12,562,697	13,417,026
D.	Operating Expenses			
	1. Salaries And Wages			
	a. Direct Patient Care	3,082,935	4,672,107	4,350,575
	b. Non-Patient Care	1,193,574	1,808,830	1,684,347
	2. Physician's Salaries And Wages			
	3. Supplies	437,579	679,720	737,275
	4. Rent			
	a. Paid To Affiliates			
	b. To Non-Affiliates	200,117	200,117	204,357
	5. Management Fees			
	a. Paid To Affiliates			
	b. To Non-Affiliates			
	6. Other Operating Exp. (Specify) Insurance, Purch. Svcs., etc.	3,677,760	4,543,188	4,924,723
	Total Operating Expenses	8,591,965	11,903,962	11,901,277
E.	**Earnings Before Interest, Taxes & Depr.**	750,943	658,735	1,515,749
F.	Non-Operating Expenses			
	1. Taxes	5,495	5,225	11,066
	2. Depreciation	142,626	163,585	174,263
	3. Interest			
	4. Other Non-Operating Expenses			
	Total Non-Oper. Exp.	148,121	168,810	185,329
	NET INCOME (LOSS)	602,822	489,925	1,330,420

G.	Other Deductions			
	1. Annual Principal Debt Repayment			
	2. Annual Capital Expenditure			
	Total Other Deductions			
	NET BALANCE	602,822	489,925	1,330,420
	DEPRECIATION	142,626	163,585	174,263
	FREE CASH FLOW (Net Balance + Depreciation)	745,448	653,510	1,504,683

☑ **Total Facility**
☐ **Project Only**

HISTORICAL DATA CHART -- OTHER EXPENSES

Other Expense Categories

		Year - 2014	Year – 2015	Year – 2016
1.)	Purchased Services	2,105,584	2,939,895	3,335,312
2.)	Utilities	189,480	227,272	286,483
3.)	Drugs	230,596	224,405	223,607
4.)	Insurance	9,859	9,375	19,848
5.)	Corporate O/H Allocation	1,142,241	1,142,241	1,059,473
6.)				
7.)				
	Total -- Other Expenses	3,677,760	4,543,188	4,924,723

[ ] Total Facility
[X] Project Only

HISTORICAL DATA CHART

Give information for the last *three (3)* years for which complete data are available for the facility or agency. The fiscal year begins in July (Month).

		Year – 2014	Year – 2015	Year – 2016
A.	Utilization Data (Specify Unit Of Measure, e.g., 1,000 patient days, 500 visits) *Admissions*	296	409	344
B.	Revenue From Services To Patients			
	1. Inpatient Services	2,987,745	3,808,307	4,624,277
	2. Outpatient Services	13,491,463	18,308,976	15,919,874
	3. Emergency Services	2,105,140	5,617,468	5,758,696
	4. Other Operating Revenue (Specify) Cafeteria. POB Rent, etc.	556,272	493,437	553,936
	Gross Operating Revenue	19,140,620	28,228,188	26,856,783
C.	Deductions From Gross Operating Revenue			
	1. Contractual Adjustments	9,123,485	15,823,779	16,350,770
	2. Provision For Charity Care	1,215,443	1,684,592	1,405,121
	3. Provision For Bad Debt	1,227,657	1,888,851	1,728,663
	Total Deductions	11,566,585	19,397,222	19,484,554
	NET OPERATING REVENUE	7,574,035	8,830,966	7,372,229
D.	Operating Expenses			
	1. Salaries And Wages			
	a. Direct Patient Care	2,499,250	3,183,338	2,246,719
	b. Non-Patient Care	967,597	1,232,446	869,829
	2. Physician's Salaries And Wages			
	3. Supplies	354,733	477,810	305,109
	4. Rent			
	a. Paid To Affiliates			
	b. To Non-Affiliates	57,714	57,714	61,954
	5. Management Fees			
	a. Paid To Affiliates			
	b. To Non-Affiliates			
	6. Other Operating Exp. (Specify) Insurance, Purch. Svcs., etc.	2,981,457	3,193,641	2,395,979
	Total Operating Expenses	6,860,751	8,144,949	5,879,590
E.	**Earnings Before Interest, Taxes & Depr.**	713,284	686,017	1,492,639
F.	Non-Operating Expenses			
	1. Taxes	4,455	4,185	10,026
	2. Depreciation	115,623	136,582	147,260
	3. Interest			
	4. Other Non-Operating Expenses			
	Total Non-Oper. Exp.	120,078	140,767	157,286
	NET INCOME (LOSS)	593,206	545,250	1,335,353

G. Other Deductions			
1. Annual Principal Debt Repayment			
2. Annual Capital Expenditure			
Total Other Deductions			
NET BALANCE	593,206	545,250	1,335,353
DEPRECIATION	115,623	136,582	147,260
FREE CASH FLOW (Net Balance + Depreciation)	708,829	681,832	1,482,613

☐ **Total Facility**
☑ **Project Only**

HISTORICAL DATA CHART -- OTHER EXPENSES

Other Expense Categories		Year – 2014	Year – 2015	Year – 2016
1.)	Purchased Services	1,706,938	2,066,604	1,622,698
2.)	Utilities	153,606	159,761	139,380
3.)	Drugs	186,938	157,746	108,789
4.)	Insurance	7,992	6,590	9,656
5.)	Corporate O/H Allocation	925,983	802,940	515,456
6.)				
7.)				
	Total -- Other Expenses	2,981,457	3,193,641	2,395,979

4. **Complete Projected Data Charts on the following two pages - *Do not modify the charts provided or submit Chart substitutions*!**

The Projected Data Chart requests information for the two years following the completion of the proposed services that apply to the project. Please complete two Projected Data Charts. One Projected Data Chart should reflect revenue and expense information for the *Proposal Only* (i.e., if the application is for additional beds, include anticipated revenue from the proposed beds only, not from all beds in the facility). The second Chart should reflect information for the total facility. Only complete one chart if it suffices.

Note that "Management Fees to Affiliates" should include management fees paid by agreement to the parent company, another subsidiary of the parent company, or a third party with common ownership as the applicant entity. "Management Fees to Non-Affiliate" should include any management fees paid by agreement to third party entities not having common ownership with the applicant.

Response

The *Projected Data Charts* for *Erlanger Sequatchie Valley Regional Hospital* and *Erlanger Sequatchie Valley Regional Hospital - Satellite ED* have been completed.

[X] Total Facility Project Only
[ ]

PROJECTED DATA CHART

Give information for the two years following the completion of this proposal. The fiscal year begins in July (Month).

		Year – 1	Year – 2
A.	Utilization Data (Specify Unit Of Measure, e.g., 1,000 patient days, 500 visits) *I/P Admissions*	842	859
B.	Revenue From Services To Patients		
	1. Inpatient Services	9,908,361	10,581,535
	2. Outpatient Services	15,907,398	17,329,219
	3. Emergency Services	36,450,179	39,055,348
	4. Other Operating Revenue (Specify) Cafeteria, POB Rent, etc.	506,981	522,190
	Gross Operating Revenue	62,772,919	67,488,292
C.	Deductions From Gross Operating Revenue		
	1. Contractual Adjustments	37,384,542	40,720,496
	2. Provision For Charity Care	3,087,411	3,362,912
	3. Provision For Bad Debt	3,798,317	4,137,254
	Total Deductions	44,270,270	48,220,662
	NET OPERATING REVENUE	18,502,649	19,267,630
D.	Operating Expenses		
	1. Salaries And Wages		
	a. Direct Patient Care	5,004,558	5,276,732
	b. Non-Patient Care	1,809,266	1,903,226
	2. Physician's Salaries And Wages	562,500	586,688
	3. Supplies	1,106,557	1,176,516
	4. Rent		
	a. Paid To Affiliates		
	b. To Non-Affiliates	2,301,268	2,301,268
	5. Management Fees		
	a. Paid To Affiliates		
	b. To Non-Affiliates		
	6. Other Operating Exp. (Specify) Insurance, Purch. Svcs., etc.	6,415,985	6,642,743
	Total Operating Expenses	17,200,134	17,887,173
E.	**Earnings Before Interest, Taxes & Depr.**	1,302,515	1,380,457
F.	Non-Operating Expenses		
	1. Taxes	5,500	5,500
	2. Depreciation		
	3. Interest		
	4. Other Non-Operating Expenses		
	Total Non-Oper. Exp.	5,500	5,500
	NET INCOME (LOSS)	1,297,015	1,374,957

G.	Other Deductions		
	1. Annual Principal Debt Repayment		
	2. Annual Capital Expenditure		
	Total Other Deductions		
	NET BALANCE	1,297,015	1,374,957
	DEPRECIATION		
	FREE CASH FLOW (Net Balance + Depreciation)	1,297,015	1,374,957

☑ Total Facility
☐ Project Only

PROJECTED DATA CHART -- OTHER EXPENSES

Other Expense Categories

		Year - 1	Year - 2
1.)	Purchased Services	2,400,258	2,485,467
2.)	Utilities	232,189	245,540
3.)	Drugs	288,719	298,923
4.)	Insurance	5,976	6,284
5.)	Other	627,830	631,235
6.)	Corporate O/H Allocation	2,861,013	2,975,294
7.)			
	Total -- Other Expenses	6,415,985	6,642,743

	Total Facility
X	Project Only

PROJECTED DATA CHART

Give information for the two years following the completion of this proposal. The fiscal year begins in July (Month).

		Year – 1	Year – 2
A.	Utilization Data (Specify Unit Of Measure, e.g., 1,000 patient days, 500 visits) *Admissions*	842	859
B.	Revenue From Services To Patients		
	1. Inpatient Services	9,908,361	10,581,535
	2. Outpatient Services	9,279,473	10,250,993
	3. Emergency Services	24,153,733	25,794,738
	4. Other Operating Revenue (Specify) Cafeteria, Gift Shop	337,987	348,127
	Gross Operating Revenue	43,679,554	46,975,393
C.	Deductions From Gross Operating Revenue		
	1. Contractual Adjustments	25,239,795	27,523,210
	2. Provision For Charity Care	2,084,434	2,273,011
	3. Provision For Bad Debt	2,564,395	2,796,393
	Total Deductions	29,888,624	32,592,614
	NET OPERATING REVENUE	13,790,930	14,382,779
D.	Operating Expenses		
	1. Salaries And Wages	3,409,646	3,621,175
	a. Direct Patient Care	951,654	1,010,693
	b. Non-Patient Care	562,500	586,688
	2. Physician's Salaries And Wages	886,261	943,847
	3. Supplies		
	4. Rent		
	a. Paid To Affiliates		
	b. To Non-Affiliates	1,779,822	1,779,822
	5. Management Fees		
	a. Paid To Affiliates		
	b. To Non-Affiliates		
	6. Other Operating Exp. (Specify) Insurance, Purch. Svcs., etc.	4,881,423	5,057,090
	Total Operating Expenses	12,471,306	12,999,315
E.	**Earnings Before Interest, Taxes & Depr.**	1,319,624	1,383,464
F.	Non-Operating Expenses		
	1. Taxes	4,400	4,400
	2. Depreciation		
	3. Interest		
	4. Other Non-Operating Expenses	4,400	4,400
	Total Non-Oper. Exp.		
	NET INCOME (LOSS)	1,315,224	1,379,064

G.	Other Deductions		
	1. Annual Principal Debt Repayment		
	2. Annual Capital Expenditure		
	Total Other Deductions		
	NET BALANCE	1,315,224	1,379,064
	DEPRECIATION		
	FREE CASH FLOW (Net Balance + Depreciation)	1,315,224	1,379,064

☐ **Total Facility**
☑ **Project Only**

PROJECTED DATA CHART -- OTHER EXPENSES

Other Expense Categories

		Year - 1	Year - 2
1.)	Purchased Services	1,938,441	2,007,256
2.)	Utilities	151,430	160,137
3.)	Drugs	219,664	227,569
4.)	Insurance	4,319	4,567
5.)	Other	493,133	495,297
6.)	Corporate O/H Allocation	2,074,436	2,162,264
7.)			
	Total -- Other Expenses	4,881,423	5,057,090

5. **A. Please identify the project's average gross charge, average deduction from operating revenue, and average net charge using information from the Projected Data Chart for Year 1 and Year 2 of the proposed project. Please complete the following table.**

	Previous Year	*Current Year*	*Year 1*	*Year 2*	*% Change -- Current Year To Year 2*
Gross Charge (Gross Operating Revenue / Utilization Data)					
Deduction From Revenue (Total Deductions / Utilization Data)					
Average Net Charge (Net Oper. Revenue / Utilization Data)					

Response

As requested, the table has been completed.

	Previous Year	*Current Year*	*Year 1*	*Year 2*	*% Change -- Current Year To Year 2*
Gross Charge (Gross Operating Revenue / Utilization Data)	9,311	13,442	11,768	12,318	32.3%
Deduction From Revenue (Total Deductions / Utilization Data)	6,754	9,750	8,298	8,687	26.8%
Average Net Charge (Net Oper. Revenue / Utilization Data)	2,557	3,692	3,470	3,631	42.0%

B. Provide the proposed charges for the project and discuss any adjustment to current charges that will result from the implementation of the proposal. Additionally, describe the anticipated revenue from the project and the impact on existing patient charges.

Response

Please see the list of average patient charges below, by service line for *Erlanger Bledsoe Hospital*. Applicant does revise it's patient charge structure on a periodic basis (i.e.-annually) during the budget cycle each fiscal year. However, applicant does not anticipate any changes to existing patient charges specifically as a result of this project.

Erlanger Bledsoe Hospital Acute Care Discharges -- 2016		
	Cases	Avg. Charge
ADVERSE EFFECTS	2	3,354
BACK & SPINE	2	8,432
DERMATOLOGY	19	8,023
ENDOCRINOLOGY	6	5,029
GASTROENTEROLOGY	18	9,601
GENERAL CARDIOLOGY	15	8,582
GYNECOLOGY	3	7,134
HEMATOLOGY	2	7,593
INFECTIOUS DISEASES	12	10,196
NEPHROLOGY	32	6,253
NEUROLOGY	4	12,113
ONCOLOGY	2	7,414
ORTHOPEDICS	6	14,612
PSYCHIATRY	2	7,422
PULMONARY MEDICINE	96	8,357
SIGNS & SYMPTOMS	7	5,843
VASCULAR DISEASES	1	6,448
Total	229	8,277

C. Compare the proposed charges to those of similar facilities in the service area/adjoining service areas, or to proposed charges of projects recently approved by the Health Services & Development Agency. If applicable, compare the proposed charges of the project to the current Medicare allowable fee schedule by common procedure terminology (CPT) codes(s).

Response

The average patient charge by inpatient service line for *Erlanger Bledsoe Hospital* and similar hospitals in Tennessee, for the calendar year 2016, is below.

Average Charge Per Inpatient -- 2016			
	Erlanger Bledsoe Hospital	Lauderdale Community Hopsital	Camden General Hospital
ADVERSE EFFECTS	3,354		
BACK & SPINE	8,432	15,041	
DERMATOLOGY	8,023	20,342	6,454
ENDOCRINOLOGY	5,029	17,603	6,993
GASTROENTEROLOGY	9,601	16,133	8,666
GENERAL CARDIOLOGY	8,582	19,570	7,523
GEBERAL SURGERY			5,457
GYNECOLOGY	7,134		
HEMATOLOGY	7,593	25,776	10,664
INFECTIOUS DISEASES	10,196	17,378	10,624
NEPHROLOGY	6,253	17,693	6,522
NEUROLOGY	12,113	18,550	8,486
ONCOLOGY	7,414	20,758	
ORTHOPEDICS	14,612	21,665	
PSYCHIATRY	7,422	9,262	
PULMONARY MEDICINE	8,357	23,282	8,910
SIGNS & SYMPTOMS	5,843	13,514	
THORACIC SURGERY			12,228
UROLOGY			8,098
VASCULAR DISEASES	6,448	5,278	6,547
Total	8,277	21,054	8,060

6. A. Discuss how projected utilization rates will be sufficient to support the financial performance. Indicate when the project's financial breakeven is expected and demonstrate the availability of sufficient cash flow until viability is achieved. Provide copies of the balance sheet and income statement from the most recent reporting period of the institution and the most recent audited financial statements with accompanying notes, if applicable. For all projects, provide financial information for the corporation, partnership, or principal parties that will be a source of funding for the project. Copies must be inserted at the end of the application, in the correct alpha numeric order and labeled as Attachment C, Economic Feasibility. Note: Publicly held entities only need to reference their SEC filings.

Response

As noted previously, the occupancy of *Erlanger Sequatchie Valley Regional Hospital* is projected to increase from 25.4% in 2016, to 60.1% in year 1. This will be due to the proximity of the hospital in the central location of the service area.

As per the *Projected Data Chart* for this project, the hospital will be financially viable in both years 1 and 2. The audited financial report for *Erlanger Health System* for FY 2016, and the interim financial report for *Erlanger Health System*, are attached to this CON application.

Erlanger Sequatchie Valley Regional Hospital in Dunlap, Tennessee, will be financed through the *Sequatchie County Industrial Development Authority* bond issuance occurring through the *Tennessee Municipal Bond Fund*. *Erlanger Sequatchie Valley Regional Hospital - Satellite Emergency Department* in Pikeville, Tennessee, will be financed through the *U. S. Dept. of Agriculture (USDA)*. Copies of the letters from these financing sources are attached to this CON application.

B. Net Operating Margin Ratio - Demostrates how much revenue is left over after all the variable or operating costs have been paid. The formula for this ratio is: (Earnings Before Interest, Taxes & Depreciation / Net operating Revenue).

Utilizing information from the Historical and Projected Data Charts please report the net operating margin ratio trends in the following table.

Year	*2nd Year Previous To Current Year*	*1st Year Previous To Current Year*	*Current Year*	*Projected Year 1*	*Projected Year 2*
Net Operating Margin Ratio					

Response

As requested, the table has been completed.

Year	2nd Year Previous To Current Year	1st Year Previous To Current Year	Current Year	Projected Year 1	Projected Year 2
Net Operating Margin Ratio	9.4%	7.8%	20.2%	9.5%	9.6%

C. Capitalization Ratio (Long Term debt to capitalization) - Measures the proportion of debt financiang in a business's permanent (Long-term) financing mix. This ratio best measures a business's true capital structure because it is not affected by short-term financing decisions. The formula for this ratio is: (Long-term debt / (Long-term debt/Total Equity (Net Assets)) x 100).

For the entity (applicant and/or parent company) that is funding the proposed project please provide the capitalization ratio using the most recent available from the funding entity's audited balance sheet, if applicable. The Capitalization Ratio's are not expected from outside lenders that provide funding.

Response

Erlanger Health System does not maintain a separate balance sheet for *Erlanger Bledsoe Hospital*. As such, the asset listing is maintained on the corporate schedules of *Erlanger Health System*. For this reason, the capitalization ratios pertaining to this question represent the financial status of *Erlanger Health System*.

Based on the audited financial statements for *Erlanger Health System* at June 30, 2016 (copy attached), the capitalization ratio is 46.8, calculated as follows.

1.)	Long Term Debt	$208,007,048
2.)	Total Equity (Net Assets)	$235,907,342
3.)	Long Term Debt + Total Equity	$443,914,390
	Ratio (Line 1 / Line 3) x 100	46.86

7. Discuss the project's participation in state and federal revenue programs including a description of the extent to which Medicare, TennCare/Medicaid, and

medically indigent patients will be served by the project. Additionally, report the estimated gross operating revenue dollar amount and percentage of projected gross operating revenue anticipated by payor classification for the first year of the project by completing the table below.

Applicant's Projected Payor Mix, Year 1

	Projected Gross Operating Revenue	*As A % Of Total*
Medicare / Medicaid Managed Care		
TennCare / Medicaid		
Commercial / Other Managed Care		
Self - Pay		
Charity Care		
Other (Specify _____)		
Total		

Response

As requested, the table has been completed below.

	Projected Gross Operating Revenue	As A % Of Total
Medicare / Mdcr Managed Care	11,662,441	26.7%
TennCare / Medicaid	15,200,485	34.8%
Commercial / Other Managed Care	10,701,491	24.5%
Self Pay	3,887,480	8.9%
Charity Care	2,140,298	4.9%
Other	87,359	0.2%
Total	43,679,554	100.0%

It should be noted that *Erlanger Health System* provides close to $ 100 million in uncompensated car per year.

8. Provide the projected staffing for the project in Year 1 and compare to the current staffing for the most recent 12-month period, as appropriate. This can be reported using full-time equivalent (FTE's) positions

for these positions. Additionally, please identify projected salary amounts by position classifications and compare the clinical staff salaries to prevailing wage patterns in the proposed service area as published by the Department of Labor & Workforce Development and/or other documented sources

Position Classification	*Existing FTE's*	*Projected FTE's*	*Average Wage (Contractual Rate)*	*Area Wide / State Wide Average Wage*
A. Direct Patient Care Positions				
Position 1				
Position 2				
Etc.				
Total - Direct Patient Care Positions				
B. Non-Patient Care Positions				
Position 1				
Position 2				
Etc.				
Total - Non-Patient Care Positions				
Total Employees *(A + B)*				
C. Contractual Staff				
Total Staff *(A + B + C)*				

Response

As requested, the table has been completed.

Erlanger Sequatchie Valley Regional Hospital
Position Listing

	Existing FTE's	Projected FTE's	EHS Avg. Wage	Area Avg. Wage
Direct Patient Care Positions				
LPN, Relief	0.6	0.6	17.00	18.24
LPN	3.7	3.7	14.51	17.75
MA-Physician Practice	1.0	1.0	14.15	11.85
Nurse Practitioner (Non Exepmt)	0.8	0.8	53.88	46.70
Nursing Asst, Cert	4.1	4.1	10.88	11.56
Patient Care Tech	1.2	1.2	11.35	13.02
Patient Service Rep	2.0	2.0	13.73	14.44
Pharm Tech CPht (Cert)	1.0	1.0	17.69	14.54
Pharmacist, Staff	1.0	1.0	62.97	53.95
Pharmacist/Prn	0.1	0.1	60.00	55.19
Rad Tech, Spec Proc	3.7	3.7	23.10	23.30
Radiology Supv.	1.1	1.1	31.43	31.45
Resp Ther	1.0	1.0	22.61	24.80
RN, Staff Relief	2.2	2.2	28.00	27.71
RN, Staff	9.5	9.5	29.89	27.50
Surgical - First Assistant		2.0	34.51	40.79
Surgical - OR Tech		2.0	18.38	20.00
Surgical - Central Sterile		1.0	14.50	14.81
Surgical - Nurse Manager		1.0	34.57	48.00
Employed Physicians		4.0	116.92	99.33
Total - Direct Patient Care Positions	33.0	43.0		
Non-Direct patient Care Positions				
Administrator / CEO	1.0	1.0		
Admitting/Reg. Supv.	1.0	1.0	20.59	25.08
Cook	4.5	4.5	9.80	9.22
Data Entry Clerk	1.0	1.0	14.46	15.72
Dietary Aide	5.1	5.1	8.39	10.35
Dietary Supv	1.1	1.1	15.07	15.54
Distribution Tech	1.0	1.0	14.42	12.63
ESA I	1.1	1.1	9.12	12.96
ESA II	1.9	1.9	8.39	12.23
Human Resources Site Coord	1.0	1.0	24.14	24.62
Imaging Chart Prep/Scan/In/Bld	1.1	1.1	12.49	12.72
Maintenance Supv	1.5	1.5	21.84	29.94
Med Lab Team Leader	1.0	1.0	39.08	27.07
Med Tech Lab	3.6	3.6	24.11	20.99
Med Technologist	1.4	1.4	33.02	22.86
Medical Office Supervisor	1.3	1.3	16.92	17.04
Nurse Manager	1.0	1.0	45.36	41.83
Registration Rep	4.4	4.4	9.12	16.34
RN, Supervisor	1.6	1.6	30.86	30.95
Secretary III	0.2	0.2	12.50	12.37
Unit Clerk	0.2	0.2	13.25	12.37
Total - Non Patient Care Positions	36.0	36.0		
Total Employees	69.0	79.0		
Contractual Staff	0.0	0.0		
Total Staff	69.0	79.0		

9. Describe all alternatives to this project which were considered and discuss the advantages and disadvantages of each alternative including but not limited to:

A. Discuss the availability of less costly, more effective and/or more efficient alternative methods of providing the benefits intended by the proposal. If development of such alternatives is not practicable, justify why not, including reasons as to why they were rejected.

B. Document that consideration has been given to alternatives to new construction, e.g., modernization or sharing arrangements.

Response

Renovation of *Erlanger Bledsoe Hospital* was considered. However, the age and condition of the physical plant are such that it is not practical to renovate, simply because it has outlived it's useful life as a hospital. For example, current standards for space requirements are significantly different than what was applicable in 1971. The facility is also located in a residential area and is not readily accessible.

(III.) *CONTRIBUTION TO THE ORDERLY DEVELOPMENT OF HEALTH CARE*

1. List all health care providers (e.g., hospitals, nursing homes, home care organizations, etc.), managed care organizations, alliances, and/or networks with which the applicant currently has or plans to have contractual and/or working relationships, e.g., transfer agreements, contractual agreements for health services.

Response

The most significant relationship between this proposal and the existing healthcare system is that it will be part of an existing health system and enhance *Erlanger*

Health System's ability to integrate its services within the regional service area as the safety net provider, trauma center and region's only academic medical center. A list of the patient transfer agreements, along with a list of the currently contracted payor organizations, is attached to this CON application.

By providing these services regardless of a patient's ability to pay, the regional healthcare delivery system is positively impacted by the services envisioned in the instant application.

The applicant will have transfer arrangements with the following hospitals which are owned by *Erlanger Health System*.

-- Erlanger Medical Center
-- Erlanger North Hospital
-- T. C. Thompson Children's Hospital
-- Erlanger Bledsoe Hospital

Further, Erlanger currently has patient transfer agreements in place with more than 70 hospitals and other providers in the four (4) state area. These providers refer patients to *Erlanger* because of the depth and breadth of its programs and services. A copy of the list of transfer agreements is attached to this CON application.

2. Describe the effects of competition and/or duplication of the proposal on the healthcare system, including the impact to consumers and existing providers in the service area. Discuss any instances of competition and/or duplication arising from your proposal including a description of the effect the proposal will have on the utilization rates of existing providers in the service area of the project.

A. Positive Effects

Response

The effects of this proposal will be positive for the healthcare system because it will deliver the most appropriate level of care for those who are in need of service regardless of ability to pay, and will also distribute needed services across the service area to

foster improved access to care by patients. The regional healthcare delivery system is positively impacted by serving those who are otherwise in need of these necessary services, regardless of their ability to pay for such services.

B. Negative Effects

Response

Applicant does not envision any negative effects of this proposal on the healthcare system. There are not any other providers in the service area, therefore, effects of competitive interest are not an issue.

3. A. Discuss the availability of and accessibility to human resources required by the proposal, including clinical leadership and adequate professional staff, as per the State Of Tennessee licensing requirements and/or requirements of accrediting agencies, such as the Joint Commission and Commission On Accreditation Of Rehabilitation Facilities.

Response

Staffing for the proposal is expected to be essentially the same as it is currently at *Erlanger Bledsoe Hospital*. All current staff will be offered their same position at *Erlanger Sequatchie Valley Regional Hospital*.

Erlanger Bledsoe Hospital and it's provider based ED are accredited by *The Joint Commission*, and they are also in compliance with rules of the Tennessee Dept. of Health, and other applicable Federal regulations. Such accreditation will be maintained by *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED, as described in the companion CON application, upon approval and implementation of this project. A copy of the letter from *The Joint Commission* is attached to this CON application.

B. Verify that the applicant has reviewed and understands all licensing and/or certification as

required by the State of Tennessee and/or accrediting agencies for medical/clinical staff. These include, without limitation, regulations concerning clinical leadership, physician supervision, quality assurance policies and programs, utilization review policies and programs, record keeping, clinical staffing requirements, and staff education.

Response

The Applicant has reviewed and intends to comply with all licensing and certification requirements imposed by applicable statutes, regulations, and accreditation standards.

C. Discuss the applicant's participation in the training of students in the areas of medicine, nursing, social work, etc. (e.g.-internships, residencies, etc.).

Response

Erlanger Health System, as the region's only academic medical center, has established strong long term relationships with the region's colleges, universities and clinical programs. *Erlanger* provides clinical sites for internships and rotation programs in nursing, radiology, respiratory, pharmacy and surgery technology, to name a few. It is also expected that *Erlanger Behavioral Health* will do so as well.

A number of regional universities offer Bachelor degree programs in nursing and physical therapy. *Erlanger* works closely with the *University of Tennessee at Chattanooga* to assist nurses transitioning from RN to BSN. Erlanger provides a teaching environment for staff as well with various on-the-job training opportunities (ex: CT for Radiologic Technologist, Certification for LPNs). Locally, two year degrees are available in many clinical allied health areas with additional programs offering advanced technical training in Radiological Imaging such as Nuclear Medicine, Diagnostic Ultrasonography, etc. *Erlanger Health System* participates with numerous schools that provide advanced training in the areas of nursing and allied health.

Erlanger has established strong long term relationships with the region's colleges, universities and clinical programs. *Erlanger* provides clinical sites for internships and rotation programs in nursing, radiology, respiratory care and pharmacy, to name a few. A number of regional universities offer Bachelor degree programs in nursing and physical therapy. Locally, two year degrees are available in many clinical allied health areas with additional programs offering advanced technical training in Radiological Imaging such as Nuclear Medicine and Diagnostic Ultrasonography.

The *University of Tennessee - College of Medicine* is co-located at *Erlanger* and includes training of senior medical students on clinical rotation as well as graduate medical education for training of residents and advanced fellowships in various medical specialties, including surgical specialties, as outlined below.

Residency Programs

- Emergency Medicine
- Family Medicine
- Internal Medicine
- Obstetrics & Gynecology
- Orthopedic Surgery
- Pediatrics
- Plastic Surgery
- Surgery
- Urology
- Transitional Year

Fellowship Programs

- Cardiovascular Disease
- Colon & Rectal Surgery
- Emergency Medicine
- Gastroenterology
- Gynecologic Surgery - Minimally Invasive
- Neuro-Interventional Surgery
- Orthopedic Trauma Surgery
- Surgical Critical Care
- Vascular Surgery
- Ultrasound
- Transitional Year

Erlanger Health System is also a member of the *Vanderbilt University Medical Center - Health Network*.

This affiliation will further enhance our ability to provide state of the art research, education and training programs. *Erlanger Health System* has also affiliated with *Technion Institute Of Technology*, in Haifa, Israel, for training of medical students, as well as graduate medical education, residency training and research. Increased opportunity exists in various medical specialties to potentially add to *Erlanger's* growing portfolio of medical research and training programs.

Erlanger Health System also participates with numerous schools that provide advanced training in the areas of nursing and allied health.

4. Identify the type of licensure and certification requirements applicable and verify the applicant has reviewed and understands them. Discuss any additional requirements, if applicable. Provide the name of the entity from which the applicant has received or will receive licensure, certification, and/or accreditation.

Licensure: State of Tennessee, Dept. of Health

Certification Type (e.g. Medicare SNF, Medicare LTAC, etc.):

** Not applicable to this project. **

Accreditation: Joint Commission on Accreditation of Healthcare Organizations

A. If an existing institution, please describe the Current standing with any licensing, certifying, or accrediting agency or commission. Provide a copy of the current license of the facility.

Response

Erlanger Bledsoe Hospital and it's provider based ED are accredited by *The Joint Commission*, and are also licensed by the Tennessee Dept. of Health and are in compliance with current rules. They are also in compliance with applicable Federal regulations. Such accreditation and licensure will be maintained by *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED, as

described in the companion CON application, upon approval and implementation of this project. A copy of the letter from *The Joint Commission* and the license for Erlanger Bledsoe Hospital are attached to this CON application.

B. For existing providers, please provide a copy of the most recent statement of deficiencies/plan of correction and document that all deficiencies/findings have been corrected by providing a letter from the appropriate agency.

Response

As requested, a copy of the most recent *Statement Of Deficiencies & Plan Of Correction*, is attached to this CON application.

C. Document and explain inspections within the last three survey cycles which have resulted in any of the following state, federal, or accrediting body actions: suspension of admissions, civil monetary penalties, notice of 23-day or 90-day termination proceedings from Medicare/Medicaid/TennCare, revocation/denial of accreditation, or other similar actions.

Response

Erlanger Bledsoe Hospital, in the last three (3) survey cycles, has not had any results leading to suspension of admissions, civil monetary penalties, or notice of termination proceedings.

1.) Discuss what measures the applicant has or will put in place to avoid similar findings in the future.

Response

*** Not applicable. ***

5. **Respond to all of the following and for such occurrences, identify, explain and provide documentation:**

A. Has any of the following:

1.) Any person(s) or entity with more than 5% ownership (direct or indirect) in the applicant (to include any entity in the chain of ownership for applicant);

Response

Erlanger Bledsoe Hospital, and it's successor *Erlanger Sequatchie Valley Regional Hospital*, if approved, are currently and will be a member of *Erlanger Health System*, which is a governmental unit authorized by an act of the *Tennessee General Assembly* in formation of the *Chattanooga-Hamilton County Hospital Authority*. As a governmental unit, with "public ownership" by the people of the State of Tennessee, no person or entity owns more than 5%, either directly or indirectly.

2.) Any entity in which any person(s) or entity with more than 5% ownership (direct or indirect) in the applicant (to include any entity in the chain of ownership for the applicant) has an ownership interest of more than 5%; and/or

Response

Erlanger Bledsoe Hospital, and it's successor *Erlanger Sequatchie Valley Regional Hospital*, if approved, are currently and will be a member of *Erlanger Health System*, which is a governmental unit authorized by an act of the *Tennessee General Assembly* in formation of the *Chattanooga-Hamilton County Hospital Authority*. As a governmental unit, with "public ownership" by the people of the State of Tennessee, no person or entity owns more than 5%, either directly or indirectly.

3.) Any physician or other provider of healthcare, or administrator employed by any entity in which any person(s) or entity with more than 5%

ownership in the applicant (to include any entity in the chain of ownership for applicant) has an ownership interest of more than 5%.

Response

Erlanger Bledsoe Hospital, and it's successor *Erlanger Sequatchie Valley Regional Hospital*, if approved, are currently and will be a member of *Erlanger Health System*, which is a governmental unit authorized by an act of the *Tennessee General Assembly* in formation of the *Chattanooga-Hamilton County Hospital Authority*. As a governmental unit, with "public ownership" by the people of the State of Tennessee, no person or entity owns more than 5%, either directly or indirectly.

B. Been subjected to any of the following:

1.) Final Order or Judgment in a state licensure action;

Response

Erlanger Bledsoe Hospital has not been subject to a final order or judgment in any licensure action.

2.) Criminal fines in cases involving a Federal or State health care offense;

Response

Erlanger Bledsoe Hospital has not been the subject of any criminal fines involving a Federal or State healthcare offense.

3.) Civil monetary penalties in cases involving a Federal or State health care offense;

Response

Erlanger Bledsoe Hospital has not been the subject of any civil monetary penalties involving a Federal or State healthcare offense.

4.) Administrative monetary penalties in cases involving a Federal or State health care offense;

Response

Erlanger Bledsoe Hospital has not been the subject of any administrative monetary penalties involving a Federal or State healthcare offense.

5.) Agreement to pay civil or administrative monetary penalties to the federal government or any state in cases involving claims related to the provision of health care items and services; and/or

Response

Erlanger Bledsoe Hospital has not been the subject of any administrative monetary penalties involving the Federal or State in cases involving claims related to the provision of health care items and services.

6.) Suspension or termination of participation in Medicare or Medicaid/TennCare programs.

Response

Erlanger Bledsoe Hospital has not been the subject of any suspension or termination of participation in Medicare or Medicaid/TennCare programs.

7.) Is presently the subject of/to an investigation, regulatory action, or party in any civil or criminal action of which you are aware.

Response

Erlanger Bledsoe Hospital has not been the subject of/to an investigation, regulatory action, or party in any civil or criminal action.

8.) Is presently subject to a corporate integrity agreement.

Response

Erlanger Bledsoe Hospital is not presently subject to a corporate integrity agreement.

6. Outstanding Projects

A. Complete the following chart by entering information for each applicable outstanding CON by applicant or share common ownership; and

Outstanding Projects					
			(*) Annual Progress Report(s)		
CON Number	*Project Name*	*Date Approved*	*Due Date*	*Date Filed*	*Expiration Date*

(*) Annual Progress Reports - HSDA Rules require that an Annual Progress Report (APR) be submitted each year. The APR is due annually until the Final Project Report (FPR) is submitted (FPR is due within 90 days of the completion date and/or implementation of the project). Brief progress status updates are requested as needed. The project remains outstanding until the FPR is received.

Response

Outstanding Projects					
CON Number	Project Name	Date Approved	(*) Annual Progress Report(s) Due Date	Date Filed	Expiration Date
CN1601-002	Erlanger East Hospital – Level III NICU	04/27/2016	04/27/2017	04/24/2017	07/01/2019
CN1412-048	Erlanger East Hospital – Cancer Center & Linear Accelerator	03/25/2015	03/25/2017	04/17/2017	05/01/2018
CN1603-012	Erlanger Behavioral Health, LLC	08/24/2016	10/01/2017	07/03/2017	10/01/2019

B. Provide a brief description of the current progress, and status of each applicable outstanding CON.

Response

CN1601-002 Erlanger East Hospital is in process of implementation, providing education to staff and medical professionals, as well as evaluating minimum cost options to complete the project..

CN1412-048 A request for extension has been filed with HSDA.

CN1603-012 Construction has begun and is currently on schedule.

7. Equipment Registry - For the applicant and all entities in common ownership with the applicant.

A. Do you own, lease, operate and/or contract with a mobile vendor for a Computed Tomography scanner (CT), Linear Accelerator, Magnetic Resonance Imaging (MRI), and/or Positron Emission Tomographer (PET) ?

Response

Erlanger Health System, through it's member hospitals including Erlanger Bledsoe Hospital, owns and operates several pieces of major medical equipment, including Computed Tomography, Linear Accelerator, Magnetic Resonance Imaging, and Positron Emission Tomography.

B. If yes, have you submitted their registration to HSDA ? If you have, what was the date of submission?

Response

Registration was submitted on January 24, 2017.

C. If yes, have you submitted your utilization to Health Services & Development Agency ? If you have, what was the date of submission ?

Response

Utilization data was submitted on February 9, 2017.

(IV.) *QUALITY MEASURES*

Please verify that the applicant will report annually using forms prescribed by the Agency concerning continued need and appropriate quality measures as determined by the Agency pertaining to the certificate of need, if approved.

Response

Erlanger Sequatchie Valley Regional Hospital will report annually using forms prescribed by the *Agency* concerning continued need and appropriate quality measures, if approved.

(V.) *STATE HEALTH PLAN QUESTIONS*

T.C.A. § 68-11-1625 requires the Tennessee Department of Health's, Division of Health Planning, to develop and annually update the State Health Plan (found at http://www.tn.gov/health/topic/health-planning). The State Health Plan guides the State in the development of health care programs and policies and in the allocation of health care resources in the State, including the Certificate of need program. The 5 Principles For Achieving Better Health

are from the State Health Plan's framework and inform the Certificate of Need program and its standards and criteria.

Discuss how the proposed project will relate to the 5 Principles For Achieving Better Health found in the State Health Plan.

1. The purpose of the State Health Plan is to improve the health of the people of Tennessee.

Response

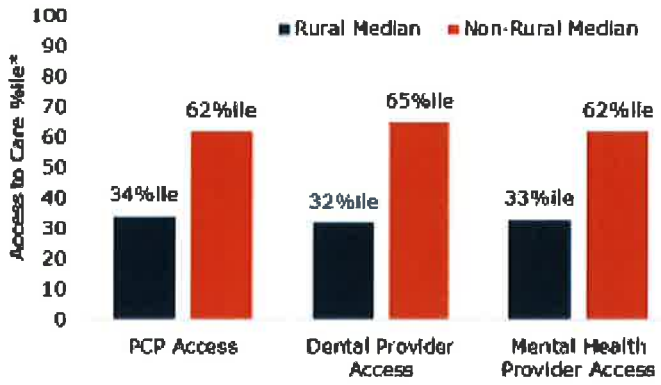
As mentioned previously, the overall rank for health outcomes for each county in the service area, is as follows.

County	=== Health Rank ==== 2013	2017
Sequatchie	91	68
Bledsoe	20	17
Grundy	95	95

As may be seen from this data, Sequatchie County was ranked 91st in Tennessee for health outcomes, and in 2017 it is ranked 68th; Bledsoe County improved to 17th in 2017 compared to 20th in 2013; and Grundy County ranks last in Tennessee, with no improvement in health outcomes over the study period. These ranking are from the totalof ninety-five (95) counties in Tennessee. It should be noted that in 2013, *Erlanger Bledsoe Hospital* opened the first provider based emergency department in Tennessee which is part of a critical access hospital, in Dunlap, Sequatchie County, and we believe this ED was instrumental to the improvement in health outcomes.

Further, the *Chartis Center For Rural Health* has illustrated the disparity of access to health services between rural and non-rural communities.

Access to Healthcare in Rural Hospital Communities



*Population Health metrics are percentile ranked for all acute care rural and non-rural providers by hospital service area such that **lower ranks indicate greater population challenges.**

Not surprisingly, access to care for rural areas is essentially equivalent to half of the availability for non-rural areas.

The goal for *Erlanger Health System* is to provide a comprehensive system of care comprised of unduplicated services while also serving those who are currently under served and/or those who do not have the ability to pay for their services. As such, *Erlanger Sequatchie Valley Regional Hospital* is part of a long term plan to make services more accessible, and to ultimately improve the health of Tennesseans.

2. People in Tennessee should have access to health care and the conditions to achieve optimal health.

Response

Erlanger Sequatchie Valley Regional Hospital will be the first critical access hospital in Tennessee to serve as a "community regional hospital". The overarching goal of this project is to locate the full range of services for a community hospital where it will be most accessible in a rural service area. It will be centrally located to all three (3) counties which comprise the service area. Also, it will be part of the "system of care" which *Erlanger Health System* has developed.

3. **Health resources in Tennessee, including health care, should be developed to address the health of people in Tennessee while encouraging economic efficiencies.**

Response

As stated previously, the relocation and replacement of *Erlanger Bledsoe Hospital* with *Erlanger Sequatchie Valley Regional Hospital*, is simply more efficient than to renovate the current physical plant. Also, it places the hospital in a central location within the service area that will enable greater access to healthcare services for the rural population.

4. **People in Tennessee should have confidence that the quality of health care is continually monitored and standards are adhered to by providers.**

Response

Erlanger Bledsoe Hospital, as a member facility of *Erlanger Health System*, has access to quality monitoring activities which most critical access hospitals do not. The applicant is accredited by *The Joint Commission* and is licensed by the *Tennessee Dept. of Health*. This monitoring consists of periodic review of quality indicators which are part of a robust program of quality improvement.

5. **The state should support the development, recruitment, and retention of a sufficient and quality health workforce.**

Response

Erlanger Health System, as the region's only academic medical center, has established strong long term relationships with the region's colleges, universities and clinical programs. *Erlanger* provides clinical sites for internships and rotation programs in nursing, radiology, respiratory, pharmacy and surgery technology, to name a few. It is also expected that *Erlanger Behavioral Health* will do so as well.

A number of regional universities offer Bachelor degree programs in nursing and physical therapy. *Erlanger* works closely with the *University of Tennessee at Chattanooga* to assist nurses transitioning from RN to BSN. Erlanger provides a teaching environment for staff as well with various on-the-job training opportunities (ex: CT for Radiologic Technologist, Certification for LPNs). Locally, two year degrees are available in many clinical allied health areas with additional programs offering advanced technical training in Radiological Imaging such as Nuclear Medicine, Diagnostic Ultrasonography, etc. *Erlanger Health System* participates with numerous schools that provide advanced training in the areas of nursing and allied health.

Erlanger has established strong long term relationships with the region's colleges, universities and clinical programs. *Erlanger* provides clinical sites for internships and rotation programs in nursing, radiology, respiratory care and pharmacy, to name a few. A number of regional universities offer Bachelor degree programs in nursing and physical therapy. Locally, two year degrees are available in many clinical allied health areas with additional programs offering advanced technical training in Radiological Imaging such as Nuclear Medicine and Diagnostic Ultrasonography.

The *University of Tennessee - College of Medicine* is co-located at *Erlanger* and includes training of senior medical students on clinical rotation as well as graduate medical education for training of residents and advanced fellowships in various medical specialties, including surgical specialties, as outlined below.

Residency Programs

- Emergency Medicine
- Family Medicine
- Internal Medicine
- Obstetrics & Gynecology
- Orthopedic Surgery
- Pediatrics
- Plastic Surgery
- Surgery
- Urology
- Transitional Year

Fellowship Programs

Cardiovascular Disease
Colon & Rectal Surgery
Emergency Medicine
Gastroenterology
Gynecologic Surgery - Minimally Invasive
Neuro-Interventional Surgery
Orthopedic Trauma Surgery
Surgical Critical Care
Vascular Surgery
Ultrasound
Transitional Year

Erlanger Health System is also a member of the *Vanderbilt University Medical Center - Health Network*. This affiliation will further enhance our ability to provide state of the art research, education and training programs. Further, *Erlanger Health System* has also affiliated with *Technion Institute Of Technology*, in Haifa, Israel, for training of medical students, as well as graduate medical education, residency training and research. Increased opportunity exists in various medical specialties to potentially add to *Erlanger's* growing portfolio of medical research and training programs.

Erlanger Health System also participates with numerous schools that provide advanced training in the areas of nursing and allied health.

PROOF OF PUBLICATION

Attach the full page of the newspaper in which the notice of intent appeared with the mast and dateline intact or submit a publication affidavit from the newspaper that includes a copy of the publication as proof of publication of the letter of intent.

Response

Attached is a copy of the *Letter Of Intent* which was filed with the *Tennessee Health Services & Development Agency*. The original publication affidavit is also attached to this CON application.

NOTIFICATION REQUIREMENTS

(Applies only to Non-Residential Substitution-Based Treatment Centers For Opiate Addiction)

Note that T.C.A. § 68-11-1607(c)(9)(A) states that "… Within ten (10) days of the filing of an application for a nonresidential substitution-based treatment center for opiate addiction with the agency, the applicant shall send a notice to the county mayor of the county in which the facility is proposed to be located, the state representative and senator representing the house district and senate district in which the facility is proposed to be located, and to the mayor of the municipality, if the facility is proposed to be located within the corporate boundaries of a municipality, by certified mail, return receipt requested, informing such officials that an application for a nonresidential substitution-based treatment center for opiate addiction has been filed with the agency by the applicant."

Failure to provide the notifications described above within the required statutory timeframe will result in the voiding of the CON application.

Please provide documentation of these notifications.

Response

*** Not applicable. ***

DEVELOPMENT SCHEDULE

T.C.A. § 68-11-1609(c) provides that a Certificate of Need is valid for a period not to exceed three (3) years (for hospital projects) or two (2) years (for all other projects) from the date of its issuance and after such time shall expire; provided, that the Agency may, in granting the Certificate of Need, allow longer periods of validity for Certificates of Need for cause shown. Subsequent to granting a Certificate of Need, the Agency may extend a Certificate of Need for a period upon application and good cause shown, accompanied by a non-refundable reasonable filing fee, as prescribed by rule. A Certificate of Need which has been extended shall expire at the end of the extended time period. The decision whether to grant such an extension is within the sole discretion of the Agency, and is not subject to review, reconsideration, or appeal.

1. **Complete the Project Completion Forecast Chart on the next page. If the project will be completed in multiple phases, please identify the anticipated completion date for each phase.**

   Response

   The *Project Completion Forecast Chart* has been completed and appears on the following page.

2. **If the response to the preceding question *indicates that the applicant does not anticipate completing the project within the period of validity as defined in the preceding paragraph*, please state below any request for an extended schedule and document the "good cause" for such an extension.**

   Response

   *** Not Applicable. ***

PROJECT COMPLETION FORECAST CHART

Assuming the CON approval becomes the final Agency action on the date listed in item 1 below, indicate the number of days from the HSDA decision date to each phase of the completion forecast.

PHASE		Days Required	Anticipated Date (MONTH / YEAR)
1.	Initial HSDA decision date.		12 / 17
2.	Architectural and engineering contract signed.	15	01 / 18
3.	Construction documents approved by the *Tennessee Dept. Of Health.*	285	11 / 18
4.	Construction contract signed.	30	12 / 18
5.	Building permit secured.	30	01 / 19
6.	Site preparation completed.	60	03 / 19
7.	Building construction commenced.	-	03 / 19
8.	Construction 40 % complete.	150	08 / 19
9.	Construction 80 % complete.	150	01 / 20
10.	Construction 100 % complete (approved for occupancy.	120	05 / 20
11.	*Issuance of license.	60	07 / 20
12.	*Initiation of service.	-	07 / 20
13.	Final Architectural Certification Of Payment.	-	05 / 20
14.	Final Project Report Form (HR0055).	60	09 / 20

(*) For projects that do NOT involve construction or renovation, please complete items 11 and 12 only.

NOTE – If litigation occurs, the completion forecast will be adjusted at the time of the final determination to reflect the actual issue date.

SEP 11 '17 PM 12:08

A F F I D A V I T

STATE OF TENNESSEE

COUNTY OF HAMILTON

Joseph M. Winick, being first duly sworn, says that he / she is the applicant named in this application or his / her / it's lawful agent, that this project will be completed in accordance with the application, that the applicant has read the directions to this application, the Rules of the Health Services & Development Agency, and and T.C.A. § 68-11-1601, *et seq*, and that the responses to this application or any other questions deemed appropriate by the Tennessee Health Services & Development Agency are true and complete.

SIGNATURE

SWORN to and subscribed before me this 7 of September (Month), 2017 (Year), a Notary Public in and for the State of Tennessee, County of Hamilton.

Shelia Hall
NOTARY PUBLIC

My commission expires 6 9 (Month / Day), 2018.

SHELIA HALL
STATE OF TENNESSEE NOTARY PUBLIC
HAMILTON COUNTY

TABLE OF ATTACHMENTS

Proof Of Publication

HSDA - Letter Of Intent
HSDA - Publication Of Intent
Affidavit Of Publication

Description	Section / Item
ARTICLE - Rural Hospitals Across Tennessee At Risk Of Closing	A-3
ARTICLE - State By State Breakdown Of 80 Rural Hospital Closures	A-3
REPORT - Rural Relevance 2017: Assessing The State Of Rural Healthcare In America	A-3
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Proof Of Publication

HSDA - Letter Of Intent
HSDA - Publication Of Intent
Affidavit Of Publication

LETTER OF INTENT
TENNESSEE HEALTH SERVICES & DEVELOPMENT AGENCY

The Publication of Intent is to be published in The Dunlap Tribune, a newspaper of general circulation in Sequatchie County, Tennessee, on or before September 7, 2017, for one day.

==========

This is to provide official notice to the Health Services & Development Agency and all interested parties, in accordance with T.C.A. § 68-11-1601 *et. seq.*, and the Rules of the Health Services & Development Agency, that Erlanger Sequatchie Valley Regional Hospital, with an ownership type of governmental, and to be managed by itself, intends to file an application for a Certificate of Need ("CON") to construct a regional community hospital (critical access hospital), with a total complement of twenty-five (25) inpatient beds, to include services for inpatients, outpatients, emergency medical services, and magnetic resonance imaging (MRI) in Dunlap, Sequatchie County, Tennessee.

This facility will replace the existing Erlanger Bledsoe Hospital, located at 71 Wheelertown Avenue, Pikeville, TN 37367. The new Erlanger Sequatchie Valley Regional Hospital, MRI and equipment will be located at 17399 Rankin Avenue, Dunlap, Sequatchie County, Tennessee, 37327, otherwise described as map 041, parcels 021.00 and 020.01, at the Sequatchie County Tax Assessor's Office.

A companion CON application will be filed with the Health Services & Development Agency for a new provider based emergency department in Pikeville, Tennessee, to replace the existing provider based emergency department located at 16931 Rankin Avenue, Dunlap, Sequatchie County, Tennessee.

The total project cost is estimated to be $ 32,653,836.

The anticipated date of filing the application is September 12, 2017.

The contact person for this project is Joseph M. Winick, Sr. Vice President, Erlanger Health System, 975 East 3rd Street, Chattanooga, Tennessee, 37403, and by phone at (423) 778-7274.

Joseph M. Winick	September 6, 2017 Date:	Joseph.Winick@erlanger.org E-Mail:

==========

The Letter Of Intent must be filed in triplicate and received between the first and the tenth day of the month. If the last day for filing is a Saturday, Sunday or State Holiday, filing must occur on the preceding business day. File this form at the following address:

Health Services & Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, Tennessee 37243

==========

The published Letter Of Intent must contain the following statement pursuant to T.C.A. §68-11-1607(c)(1): (A) Any health care institution wishing to oppose a Certificate of Need application must file a written notice with the Health Services and Development Agency no later than fifteen (15) days before the regularly scheduled Health Services and Development Agency meeting at which the application is originally scheduled; and (B) Any other person wishing to oppose the application must file written objection with the Health Services and Development Agency at or prior to the consideration of the application by the Agency.

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PUBLICATION OF INTENT

TENNESSEE HEALTH SERVICES & DEVELOPMENT AGENCY

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Instructions To Newspaper

The following shall be published in the "Legal Notices" section of the newspaper in a space no smaller than four (4) inches.

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NOTIFICATION OF INTENT TO APPLY FOR A CERTIFICATE OF NEED

This is to provide official notice to the Health Services & Development Agency and all interested parties, in accordance with T.C.A. § 68-11-1601 *et. seq.*, and the Rules of the Health Services & Development Agency, that Erlanger Sequatchie Valley Regional Hospital, with an ownership type of governmental, and to be managed by itself, intends to file an application for a Certificate of Need ("CON") to construct a regional community hospital (critical access hospital), with a total complement of twenty-five (25) inpatient beds, to include services for inpatients, outpatients, emergency medical services, and magnetic resonance imaging (MRI) in Dunlap, Sequatchie County, Tennessee.

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==========

Upon written request by interested parties, a local Fact-Finding public hearing shall be conducted. Written requests for hearing should be sent to:

Health Services & Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, Tennessee 37243

Pursuant to T.C.A. § 68-11-1607(c)(1): (A) Any health care institution wishing to oppose a Certificate Of Need application must file a written notice with the Health Services and Development Agency no later than fifteen (15) days before the regularly scheduled Health Services and Development Agency meeting at which the application is originally scheduled; and (B) Any other person wishing to oppose the application must file written objection with the Health Services and Development Agency at or prior to the consideration of the application by the Agency.

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Rural Hospitals Across Tennessee At Risk Of Closing

Emergency At The E.R.

BY: Chris Conte
POSTED: 4:22 PM, Jul 25, 2017
UPDATED: 8:36 PM, Jul 25, 2017

Share Article

PARSON, Tenn. - With barely 11,000 residents you could consider Decatur County to be on the front lines of a battle being fought across rural America right now, one that small town hospitals are repeated losing putting patients in life or death situations.

Built in 1964, Decatur County General Hospital lies just a few blocks from the center of the town of Parsons. The "L" shaped building is currently running with a bare minimum staff, 80 full time employees and just one doctor. Hospital officials have worked tirelessly over the last few months, trimming the staff of nurses and lab technicians down from 110 people in an effort to minimize costs. The county mayor here estimates Decatur General lost about $200,000 last year, this life line to so many is currently on life support and in danger of closing.

"If this goes away there are so many people who won't get the care they need," says Paulette Johnson who was at the emergency room on a recent Tuesday having x-rays done on her neck.

The 67-year-old lives in Scotts Hill, Tennessee, a town that lies about 20 minutes away from the emergency room at Decatur County General Hospital. If this hospital shuts its doors, it would take more than an hour for Paulette to get to the next closest emergency room.

That kind of drive could mean the difference between life or death in an emergency.

close

"They can save your life here, you're gonna lose your life if you have to go further," Paulette says.

Decatur County General is hardly alone in the struggle to stay open. Nationwide 81 rural hospitals have closed since 2010. Nine of those closures have happened in Tennessee, county run hospitals from the eastern mountains to the Mississippi River have disappeared. The only state with more rural hospital closures than Tennessee is Texas, where in 2013 an 18-month old died after being rushed to an emergency room that her parents didn't realize had closed.

List of hospitals closed in Tennessee:

- Haywood Park Community Hospital – Haywood County
- Gibson General Hospital – Gibson County
- Humboldt Medical Center – Gibson County
- Tennova Healthcare McNairy Regional – McNairy County
- United Regional Medical Center – Coffee County
- Parkridge West – Marion County
- St. Mary's – Scott County
- Starr Regional – McMinn County
- Copper Basin Medical Center - Polk County

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NEWS STORIES

Camp Bow Wow Smyrna reminds pet owners to...

Animal lovers are reminded to keep an eye on their pets as temperatures continue to soar in the Middle Tennessee area.

I-440 West Blocked After Truck Spills Debris

A portion of westbound Interstate 440 has been partially blocked after a vehicle overturned and spilled debris onto the roadway.

close

State-by-state breakdown of 80 rural hospital closures

Written by Ayla Ellison (Twitter | Google+) | August 15, 2017 | Print | Email

Of the 26 states that have seen at least one rural hospital close since 2010, those with the most closures are located in the South, according to research from the North Carolina Rural Health Research Program.

Thirteen hospitals in Texas have closed since 2010, the most of any state. Tennessee has seen the second-most closures, with eight hospitals closing since 2010. In third place is Georgia with six closures, followed by Alabama and Mississippi, which have each seen five hospitals close over the past six years.

Listed below are the 80 rural hospitals that closed between January 2010 and July 2017, as tracked by the NCRHRP. For the purposes of its analysis, the NCRHRP defined a hospital closure as the cessation in the provision of inpatient services. As of July, all of the facilities listed below no longer provided inpatient care. However, many of them still offered other services, including outpatient care, imaging, emergency care, urgent care, primary care or skilled nursing and rehabilitation services. This list does not include hospitals that have closed and re-opened.

Alabama
Chilton Medical Center (Clanton)
Elba General Hospital
Florala Memorial Hospital
Randolph Medical Center (Roanoke)
Southwest Alabama Medical Center (Thomasville)

Arizona
Cochise Regional Hospital (Douglas)
Florence Community Healthcare
Hualapai Mountain Medical Center (Kingman)

California
Colusa Regional Medical Center
Corcoran District Hospital
Kingsburg Medical Center

Florida
Campbellton-Graceville Hospital

Georgia
Calhoun Memorial Hospital (Arlington)
Charlton Memorial Hospital (Folkston)
Hart County Hospital (Hartwell)
Lower Oconee Community Hospital (Glenwood)
North Georgia Medical Center (Ellijay)
Stewart-Webster Hospital (Richland)

Illinois
St. Mary's Hospital (Streator)

Kansas
Central Kansas Medical Center (Great Bend)
Mercy Hospital Independence

Kentucky
New Horizons Medical Center (Owenton)
Nicholas County Hospital (Carlisle)
Parkway Regional Hospital (Fulton)
Westlake Regional Hospital (Columbia)

Maine
Parkview Adventist Medical Center (Brunswick)
Southern Maine Health Care – Sanford Medical Center
St. Andrews Hospital (Boothbay Harbor)

Massachusetts
North Adams Regional Hospital

Michigan
Cheboygan Memorial Hospital

Minnesota
Albany Area Hospital
Lakeside Medical Center (Pine City)

Mississippi
Kilmichael Hospital
Merit Health Natchez – Community Campus
Patient's Choice Medical Center of Humphreys County (Belzoni)
Pioneer Community Hospital of Newton
Quitman County Hospital (Marks)

Missouri
Parkland Health Center – Weber Road (Farmington)
Sac-Osage Hospital (Osceola)
SoutheastHEALTH Center of Reynolds County (Ellington)

Nebraska
Tilden Community Hospital

Nevada
Nye Regional Medical Center (Tonopah)

North Carolina
Davie Medical Center-Mocksville
Blowing Rock Hospital
Vidant Pungo Hospital (Belhaven)
Yadkin Valley Community Hospital (Yadkinville)

Ohio
Doctors Hospital of Nelsonville
Physicians Choice Hospital-Fremont

Oklahoma
Epic Medical Center (Eufaula)

Memorial Hospital & Physician Group (Frederick)
Muskogee Community Hospital

Pennsylvania
Mid-Valley Hospital (Peckville)
Saint Catherine Medical Center Fountain Springs (Ashland)

South Carolina
Bamberg County Memorial Hospital
Marlboro Park Hospital (Bennettsville)
Southern Palmetto Hospital (Barnwell)

South Dakota
Holy Infant Hospital (Hoven)

Tennessee
Copper Basin Medical Center (Copperhill)
Gibson General Hospital (Trenton)
Haywood Park Community Hospital (Brownsville)
Humboldt General Hospital
Parkridge West Hospital (Jasper)
Starr Regional Medical Center-Etowah
McNairy Regional Hospital (Selmer)
United Regional Medical Center (Manchester)

Texas
East Texas Medical Center-Clarksville
East Texas Medical Center-Gilmer
East Texas Medical Center-Mount Vernon
East Texas Medical Center-Trinity
Good Shepherd Medical Center (Linden)
Gulf Coast Medical Center (Wharton)
Hunt Regional Hospital of Commerce
Lake Whitney Medical Center (Whitney)
Nix Community General Hospital (Dilley)
Renaissance Hospital Terrell
Shelby Regional Medical Center
Timberlands Hospital (Crockett)
Wise Regional Health System-Bridgeport

Virginia
Lee Regional Medical Center (Pennington Gap)

Wisconsin
Franciscan Skemp Medical Center (Arcadia)

More information on the rural hospitals that have closed since 2010 can be accessed here.

More articles on healthcare finance:

Quorum Health sees net loss narrow to $30.6M, plans more hospital sales
Tenet's net loss balloons to $56M on lower patient volume
Physician advocates: 'We can only judge CHS by its actions, not its words'

Research

Rural Relevance 2017: Assessing the State of Rural Healthcare in America

Author: Michael Topchik

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Foreword

The 2017 Rural Relevance Study arrives at a time of great uncertainty for all healthcare providers. Congress has taken the first step toward dismantling the Patient Protection and Affordable Care Act (ACA) and House Republicans have put forward legislation to replace it with The American Health Care Act (AHCA), a hybrid model that seeks to maintain some features of the ACA while repealing others. Key elements of this proposed legislation would impact rural providers either directly or indirectly, including:

- **Reversal of ACA's cuts in federal disproportionate share hospital (DSH) Medicaid payments:** The proposed legislation reverses cuts to DSH payments, a funding stream that supports hospitals which treat an unusually large share of uninsured patients and patients covered under Medicaid. Many rural hospitals are reliant on Medicaid DSH payments as a source of revenue and will benefit from stabilization in funding.
- **An increase in the uninsured:** Several provisions from the ACA may be impacted, including the repeal of the individual mandate and, more importantly, changes to the premium support for individuals purchasing coverage on the non-group market. The Congressional Budget Office (CBO) estimates that as a result, 24 million more people may be uninsured by 2026 – a projection criticized by HHS Secretary Price. However, most believe that the number of uninsured is likely to increase and believe that under the proposed legislation, poorer, older adults would be the most impacted as they are expected to have a harder time qualifying for tax credits. Additionally, the new legislation would enable higher premium variance by age, moving from a 3:1 allowable age-based premium difference to a 5:1 differential. With a disproportionately older percentage of the population living in rural areas and fewer able to afford health coverage under the AHCA, this would ultimately increase the burden on rural providers.
- **Rolling-back Medicaid expansion and potential long-term funding constraints through Medicaid restructuring:** States may choose to maintain current funding associated with Medicaid expansion through 2020 (capped at 2016 rates). However, the CBO projects some states will consider dropping the expansion as federal dollars "dry up" under the AHCA. As a result, some rural populations will learn how far their coverage can stretch as federal dollars are first capped and then frozen.

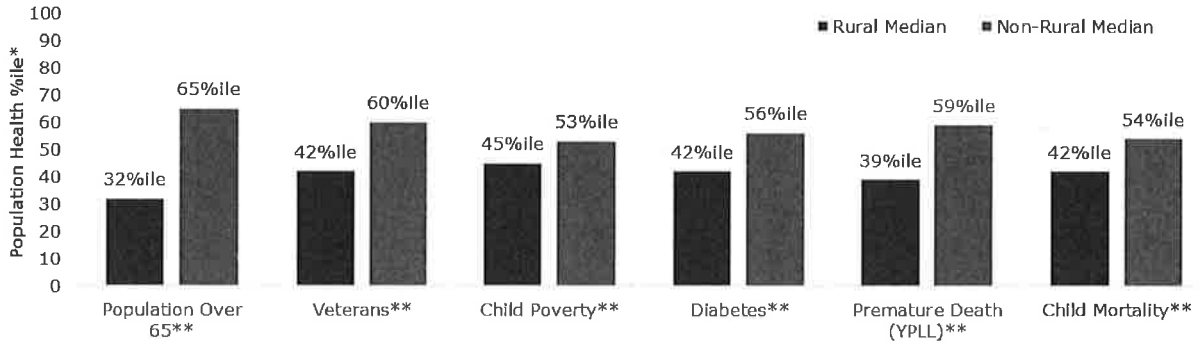
The uncertainty surrounding the future of the ACA/AHCA will likely continue to be unsettling for rural providers – especially when the potential for changes in legislation threatens financial viability and stability. The Chartis Center for Rural Health (CCRH) and iVantage Health Analytics have devoted significant resources to evaluating the state of the rural health safety net and modeling the impact of potential policy changes on rural providers. In this state of uncertainty, the Rural Relevance Study offers a unique lens into the state of rural healthcare, the value the safety net provides, and the opportunities for the future.

Rural Populations Suffer Many Health Disparities

As part of the 2017 study, CCRH explored the intersection of rural provider performance and the socioeconomic challenges and health disparities faced by rural communities. Our population health assessment measures the health status of rural populations by evaluating health outcomes, quality of care, access to care, health behaviors, and social, economic, and environmental determinants of health. Using nearly 70 metrics, the CCRH quantified the health status of each rural provider's community.

Our research validates the hypothesis that rural healthcare providers serve populations which are not only socioeconomically disadvantaged but also suffer from numerous health disparities and poorer outcomes than non-rural communities (Figure 1).

Comparison of Population Health in Rural and Non-Rural Hospital Communities



*Population Health metrics are percentile ranked for all acute care rural and non-rural providers by hospital service area such that **lower ranks indicate greater population challenges**.
**Lower percentile scores indicate higher density (i.e. providers serving a greater proportion of individuals over 65 receive lower scores).

Figure 1. Rural hospitals serve populations that suffer from various health disparities and poorer outcomes than non-rural providers.

While rural populations are equally challenged with baseline disparities, there are significant variations by region, state and even within communities in the same state. Highlighting these variations at a state level and then searching exceptions creates an opportunity to learn more about the unique health status of each community and provides valuable information to target services and funding to meet the highest needs of each population.

Two Distinct and Overlapping Populations Drive Up Demand

Seniors

According to the US Census Bureau, **adults in rural areas are older** than those living in non-rural areas, with a median age of 51, compared to age 45 in non-rural areas. Hospitalization rates and lengths of stay increase with age among adults, peaking for those over 65.[1] This creates increased demand for healthcare in rural areas. As a result, the majority of rural providers serve a greater proportion of patients over the age of 65 than two-thirds of all U.S. acute care hospitals.

The number of Americans over 65 is expected to increase from nearly 50 million to more than 80 million by 2050, largely driven by baby boomers.[2] In fact, seniors are expected to outnumber children under 5 for the first time in history by 2020.[3] Given the healthcare consumption, complexity of care needed, and associated costliness of healthcare services, this aging of the population will exert increasing operational, clinical and financial pressures on rural providers.[4]

Veterans

A disproportionate number of the nation's veterans live in rural and non-metropolitan counties. Nearly three-quarters of rural hospitals **serve a greater proportion of military veterans than the median non-rural provider**. Veterans living in these rural areas may need to travel greater distances to access a VHA facility, so rural hospitals are often called upon to fill a local access void. Of the 5.3 million veterans residing in rural America, 41 percent struggle with service-related disabilities, making access to quality healthcare imperative for these individuals.[5] Rural veterans utilize inpatient, emergency department, physician office visit and behavior health services at higher rates than non-veterans and more than urban veterans.[6]

Prevalence of Disease Combined with Less Access to Care

This year's research into rural healthcare revealed that rural communities have a higher burden of disease (including preventative diseases) and yet the supply of physicians and therefore access to healthcare is lower than in non-rural communities. This combination of a higher disease rate and lower access to care isn't surprising given the geographic distribution of populations across rural America. It is, however, an alarming trend and one that could be contributing to the higher premature death rates and child mortality rates in rural communities.

Rural hospitals **serve communities with greater rates of diabetes**, the seventh-leading cause of death in the nation.[7] Several factors contributing to diabetes such as obesity, physical inactivity, and a lack of exercise are more prevalent in rural communities, according to research.[8] The American Diabetes

---

[1] Agency for Healthcare Research and Quality, 2012.
[2] U.S. Census Bureau, 2014.
[3] U.S. Census Bureau, 2016.
[4] Department of Health and Human Services, 2011.
[5] National Rural Health Association, 2017.
[6] Variation in Utilization of Health Care Services for Rural VA Enrollees with Mental Health-Related Diagnoses, 2015.
[7] Center for Disease Control and Prevention, 2016.
[8] Robert Wood Johnson Foundation, 2013.

Association estimates the total cost of diabetes has risen from $174 billion in 2007 to $245 billion in 2012, a 41 percent increase. Patients with diagnosed diabetes incur average medical expenditures of about $13,700 per year. Particularly prevalent in rural America, rural hospitals are on the frontline in providing diabetic screening and care for populations which may not have access to primary or specialty care.

America is in the midst of **an opioid epidemic** that affects all income levels, educational backgrounds and geographies. However, specific demographic and socioeconomic conditions can lead to increased risk behaviors, especially opioid and other drug abuse. While this is more common among the uninsured and impoverished, the research shows significant variation.

According to the Centers for Disease Control and Prevention (CDC), the rate of death from opioid-related overdoses is 45 percent higher in **nonmetropolitan counties**.[1] Many rural emergency services may lack the resources to respond quickly and effectively. Rarely are highly-trained paramedics the first responders in rural communities. In addition, distances in rural geographies may mean longer wait times for critical interventions such as injectable antidotes like Naloxone.[2]

Rural communities are also generally isolated from treatment facilities and addiction counseling. Nationwide, only 11 percent of patients seeking addiction treatment receive care. Further, the distribution of this treatment is uneven. In those states which expanded Medicaid (a disproportionately important source of health coverage for rural populations), a higher proportion of buprenorphine prescriptions (an important therapy to wean patients off opioids) is covered, compared to those states which did not expand Medicaid.[3]

Last, the cost of providing lifesaving injectable antidote drugs such as Naloxone have skyrocketed, putting rural providers in the difficult position of providing more expensive therapies in the hands of EMS with little opportunity to recoup that cost, given the lack of commercial insurance or even Medicaid coverage in many rural communities.[4]

Thus, the lack of expedient access to advanced Emergency Medical Services, the lack of appropriate behavioral health/addiction treatment services, and the role Medicaid payments play in these interventions, combined with the skyrocketing costs of important life-saving and treatment therapies, places rural populations in the crosshairs of the opioid epidemic.

The burden of disease on rural communities is not being met with the **appropriate level of access** (Figure 2). Plagued by a physician workforce shortage, rural communities struggle to receive primary care, dental care and behavioral healthcare. This is exacerbated by geographic isolation, limited public transportation, fewer employment opportunities and limited health insurance coverage.[5] The patient-to-primary care physician ratio in rural areas is 39.8 physicians per 100,000 people, compared to 53.3 physicians per 100,000 in non-rural areas. Eighty-five percent of rural counties are designated as primary care Health Professional Shortage Areas (HPSAs), some with persistent whole county shortages.[6] This uneven distribution of physicians has an impact on the health of a population, as they lack access to preventative care as well as other types of ambulatory care. Further straining these rural access trends is

---

[1] Center for Disease Control and Prevention, 2015.

[2] Rural Health Information Hub, The Rural Monitor, May 18, 2016.

[3] Use of Opioid Recovery Medications, Sept, 2016.

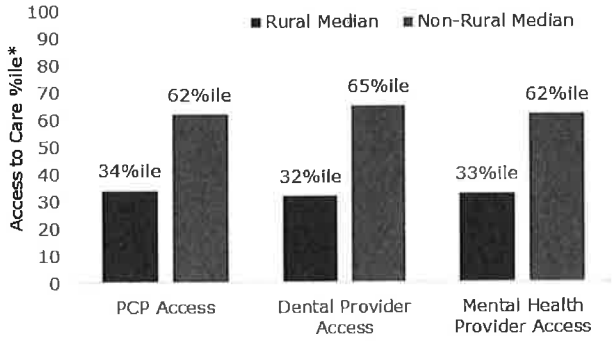
[4] Patients get hooked on opioid overdose antidote, then prices skyrocket, Kaiser Health News, 2017.

[5] National Rural Health Association, 2017.

[6] Persistent Primary Care Health Professional Shortage Areas (HPSAs) and Health Care Access in Rural America, 2009.

the uneven aging of the provider workforce, where there are a greater proportion of providers nearing retirement.[1]

Access to Healthcare in Rural Hospital Communities



*Population Health metrics are percentile ranked for all acute care rural and non-rural providers by hospital service area such that **lower ranks indicate greater population challenges**.

Figure 2. Communities served by rural providers have less access to healthcare than non-rural areas. At the median, rural hospital communities rank in the bottom third with respect to primary, dental and mental healthcare access when compared to all acute care hospitals nationally on a 0-100 percentile scale.

Population Health Chart Book: National maps for each of the population health indicators explored in the study, as well as some state versus state comparisons are available at iVantageINDEX.com. View the population health chart book here.

The Rural Health Safety Net Remains Under Financial Pressure

The closure of 80 rural hospitals since 2010 underscores the challenges faced by rural providers, and research indicates that many more are struggling to stay open.[2] This is an indication that the rural health safety net continues to unravel, putting the mission to care for rural populations in jeopardy in a number of states.

Forty-one percent of rural hospitals operate at a negative margin. Figure 3 visualizes those facilities operating at negative margins in two cohorts (i.e. <3 percent and <0 percent), overlaid with rural providers which are achieving positive margins.

[1] The Aging of the Primary Care Physician Workforce, 2009.
[2] UNC Cecil G. Sheps Center for Health Services Research.

Rural Hospital Operating Margins

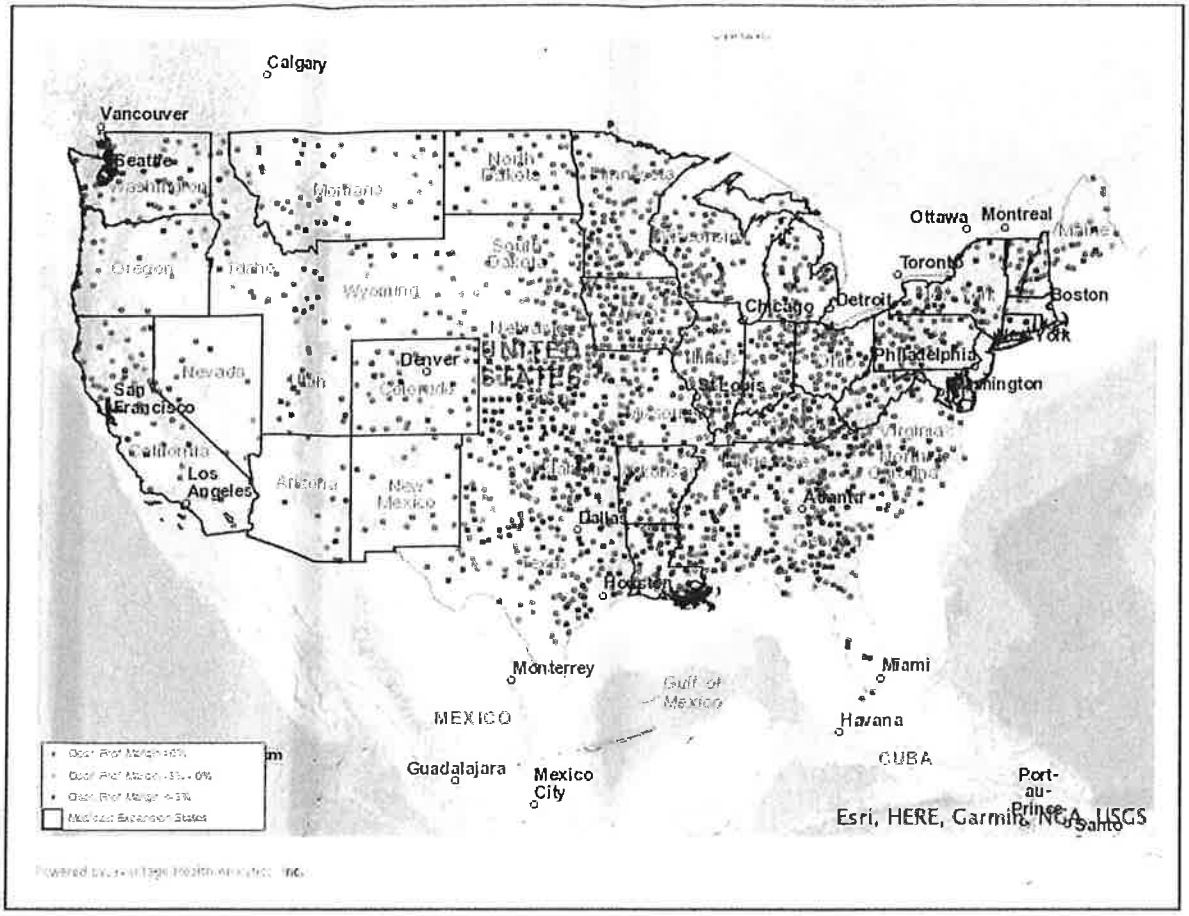


Figure 3. Each rural hospital across the country is point located in green if having a positive 2015 operating profit margin, orange if having a negative operating profit margin not exceeding -3 percent, and in red if having an operating profit margin below -3 percent.

Research Note: Rural hospital operating margins in Medicaid expansion states are statistically higher than rural hospitals in states that did not expand Medicaid. Contact CCRH for detailed metrics on your state.

Numerous factors are at play in each state which may have an impact on rural operating margins. These factors include:

- Payor mix and percentage of uninsured population
- Allowable cost-based Medicare reimbursement
- State expanded Medicaid as part of the ACA*
- Prevalence of competition and the rate of out-migration of patients seeking care in non-rural settings

- Employment rate and related availability of employer-sponsored commercial insurance
- Payor negotiated rates
- Availability of primary care
- Underlying population health and health disparities

Additionally, the healthcare industry's transition from volume to value has put increased pressure on hospital margins for many providers and a renewed focus on cost management to maintain positive margins. Jamie Orlikoff, a health governance expert, recommends that the industry work to take 5-6 percent of costs out of the system and reach a five-year target of 25-30 percent cost reduction.[1]

Cost containment is particularly challenging for Critical Access Hospitals (CAHs), currently receiving special cost-based reimbursement from Medicare. This system of reimbursement was created to ensure access to crucial services in rural communities despite not having the patient volumes to support those services in a market-based environment. This reimbursement policy has been successful in helping preserve access to care in rural America but changes to it could dramatically shift the current state.

While all hospitals strive to provide the best clinical care at the lowest cost, rural hospitals with cost-based reimbursements are not incentivized to focus on cost management. Nonetheless, benchmarks from the top performing rural hospitals reveal substantially lower cost positions when compared to their rural health peers nationally. The study offers a detailed examination of top hospital performance for Critical Access Hospitals and Rural and Community Hospitals.

Alternative payment models including Accountable Care Organizations (ACOs), which many providers now participate, make it difficult for CAHs as it introduces competing incentives. In capitated payment environments, it can become challenging to work across the continuum of care for rural providers that may have inflated cost structures to maintain access to low volume services. For ACOs that need to better manage costs across the continuum of care, patients may be redirected away from rural access points. Conversely, many types of care should be provided locally to offer a better patient experience at a lower cost, which is an area of intense focus for ACOs that include rural providers. These dynamics are driving questions about what is the right care model for covered lives within rural communities. The answer to this question is a critical one and the opportunities for innovation are exciting but the economics of new care models could very well put additional financial pressure on rural providers.

The consumer market is also adding pressure for hospitals to reduce costs as high-deductible plans shift the first out-of-pocket dollars to the consumer. Rural patients with high-deductible plans are becoming more price sensitive and showing a willingness to travel greater distances to reduce their healthcare costs. Rural hospitals therefore need to focus on improving their efficiency as lower volumes often equate to higher variable costs.

Additionally, employers are partnering with payors to form narrow networks of preferred providers. These providers are preferred by the market because they offer exceptional value and deliver quality care at the lowest cost. Rural hospitals must strive to be relevant and gain in-network status by defending and reducing their costs while continuously improving the quality of care in the face of these and other market forces.

[1] Presentation at American Hospital Association Rural Health Care Leadership Conference, February 7, 2015.

Policy Changes Impact Rural Providers

In addition to the current market forces that effect rural health operating margins, there are a number of policy changes already impacting the financial health of rural providers and a few which remain in question given the new administration in Washington. For this study, we analyzed seven current and proposed policies and their impact on rural providers, including: Sequestration, Bad Debt, CAH Reimbursement, PPS Coding Offset, Value-Based Purchasing, Medicaid Expansion, and Alternative Care Models. The methodology for the impact calculations below is available here.

State Snapshots: What's the impact of policies on rural healthcare and communities in your state? Snapshots for all states are available on our web site.

Rural Pressure Point: Sequestration

In March 2013, a range of Federal spending cuts went into effect. The cuts, commonly referred to as sequestration, included a planned two percent cut in almost all Medicare spending. The Congressional Budget Office projected that the cuts would total $123 billion over a 10-year period.

The estimated community impact of the sequestration over 10 years, based upon 2015 cost report data is:

- **$3.5 billion** in lost Medicare reimbursement among rural hospitals
- **153,000 jobs lost** in rural hospitals and communities
- **$18.0 billion** GDP loss

While the impact of sequestration impacts all hospitals with reimbursements for Medicare beneficiaries, the cuts are disproportionately harmful to rural providers. First, rural providers receive significantly more government reimbursement (Medicare and Medicaid) than non-rural counterparts, and these reimbursements tend to yield lower payments per case when compared with commercial payors. Second, rural hospitals' razor-thin or negative margins leave little room to absorb any reduction in revenues. The state-by-state impact is not evenly distributed - as is the case with many policy changes (see map on page 7).

Rural Pressure Point: Bad Debt

The Middle-Class Tax Relief and Job Creation Act[1] instituted "bad debt" cuts as a means for paying for the program. Between 2012 and 2015, rural hospitals have absorbed a reduction in reimbursable bad debt, dropping from 100 percent to 65 percent.

This 35 percent decrease for what is often referred to as charity care, has been one of the key factors negatively impacting the financial performance of rural providers. This analysis into bad debt and its ramifications on the rural health safety net estimates the 10-year impact of these cuts using 2015 Cost Report data.

The community impact of bad debt cuts over a 10-year period:

- **$1.4 billion** in lost Medicare reimbursement among rural hospitals
- **62,000 jobs lost** in rural hospitals and communities
- **$7.3 billion** GDP loss

The impact has been most severe in states which have chosen not to expand Medicaid under the ACA. In states that have expanded Medicaid, many of the charity care services previously offered are now offered to citizens newly insured under the ACA. However, for rural providers in states that did *not* expand Medicaid, the same level of charity care continues to be provided but without the ability to seek reimbursement for uncompensated services.

Further exacerbating these cuts is the emergence of commercial bad debt. Unlike charity care, which typically involves uninsured patients, commercial bad debt is associated with insured patients unable to pay for medical services due to high deductible plans which can be as much as $5,000. Anecdotes gathered from rural hospitals indicate that many providers are finding it difficult to collect full payments in a timely manner, if at all.

Rural Pressure Point: CAH Reimbursement

The Balanced Budget Act (BBA) of 1997 authorized the creation of the Critical Access Hospital (CAH) with special conditions of participation and special reimbursements intended to maintain access to critical care in rural areas with low volumes of patients. Cost-based reimbursement created an annual settlement, whereby Medicare pays the hospital 101 percent of allowable costs filed on their cost report. This program has been helpful in maintaining rural access to care and as a counter to the unintended consequences associated with the development of the Prospective Payment System. The CAH system is largely viewed as a life raft for the fragile rural health safety net.

The impact of recommended CAH Reimbursement cuts over a 10-year period:

- **$1.2 billion** in lost Medicare reimbursement among CAHs
- **52,000 jobs lost** in CAH hospitals and communities
- **$6.1 billion** GDP loss

[1] Pub.L. 112–96, H.R. 3630, 126 Stat. 156, enacted February 22, 2012.

States primarily in the Midwest would suffer the greatest losses in Critical Access Hospital revenue and see the most job loss as a result of these reimbursement cuts. In large part, this is driven by the rural nature of these states and the large number of hospitals spread out across relatively agrarian counties (see Rural Relevance Chart Book, Chapter 2, Policy Impact).

Rural Pressure Point: PPS Coding Offset

Under the American Taxpayer Relief Act (ATRA),[1] Congress required CMS to recoup "excessive" payments from 2008-2013 under the prospective payment system (PPS). Additionally, the legislation authorized further coding offset for increases seen during this period. This cut was proposed by CMS and then withdrawn, but policymakers continue to include it as part of deficit reduction and cost containment policy.

As coding changes evolve, some higher fee services have been collapsed under one lower cost code based upon CMS evaluation of physician practices that offer similar services, often at lower cost. This reflects a pain point for rural hospitals treating numerous ambulatory conditions in their outpatient clinics. In rural communities, these hospital-based clinics may be the only places to receive such interventions, and yet may carry a higher cost burden given the nature of hospital overhead structure.

The community impact of a PPS Coding Offset over a 10-year period:

- **$359 million** in lost Medicare reimbursement among rural hospitals
- **16,000 jobs lost** in rural hospitals and communities
- **$1.8 billion** GDP loss

Individual states could see losses exceeding $20 million in hospital revenue (such as California) and over $100 million in GDP (such as North Carolina) (see Rural Relevance Chart Book, Chapter 2, Policy Impact).

Value-based Purchasing (VBP)

The smallest rural hospitals, typically CAHs, can't participate in the CMS Value Based Purchasing Program (VBP), also called Pay for Performance, which withholds a percentage (two percent) of Medicare inpatient payments and puts them into a pool for bonus (and penalty) payments. Hospitals that achieve a benchmark of value will see these monies remitted and may earn additional payments if they exceed the benchmark. Hospitals that do not meet the benchmark will forfeit these payments. In this way, CMS is providing incentives (and penalties) for hospitals to chase the value curve in defined areas of Quality, Outcomes, Patient Satisfaction and Efficiency.

The 2017 Rural Relevance Study models the CMS 2018 Value Based Purchasing (VBP) rules and applies these to the rural and CAHs to empirically evaluate how well the rural safety net functions. If the 2018 CMS VBP program were in effect today and applied to all rural hospitals, it would create an inflow of nearly $207 million to these providers.

Based on the current performance of rural healthcare, CAHs should welcome value-based purchasing incentives. If 2018 rules were currently in effect, CAHs could expect to earn $23 million in bonus payments nationally based on current performance.

[1] Pub.L. 112–240, H.R. 8, 126 Stat. 2313, enacted January 2, 2013.

- Using the 2018 rules, CAHs would receive $22.8 million in value-based reimbursements, preserving over 1,000 jobs and $124 million in GDP in 2018. There would be potential to secure another $52.3 million with performance increases, which would preserve an additional 2,000 jobs and $261 million in GDP.
- The average CAH is expected to realize $17,000 in bonus payments, with the opportunity to capture an additional $38,000 with performance increases.
- CAHs outperform their rural PPS peers. Rural PPS hospitals can expect to see an overall loss of nearly $21 million from their withholding amounts nationally.
- Nearly $270 million in bonus dollars would be available for the rural PPS hospitals with performance increases.

It is important to note that the current VBP program is *inpatient* focused and is not the best fit with small rural hospitals with low inpatient volumes as CAHs see an average of 74.4 percent of their patient volume as outpatients.[1] To address this, CMS has requested the development of a candidate rural-relevant VBP measure set by the National Quality Forum (NQF). This candidate measure set has been promulgated and awaits trial in the field. A key recommendation of the NQF is the inclusion of bonus payments for high performing rural safety net facilities, but not penalties such as those that exist for larger, less rural hospitals.

Policy Impact Chart Book: A detailed impact review of the policies highlighted in the study is available at iVantageINDEX.com. View the policy impact chart book here.

[1] Flex Monitoring Team Data Summary Report No. 16, October, 2014.

Disparities in Operating Margin Among Rural Providers: Medicaid Expansion

Medicaid expansion has proven to be a key driver of the implementation of provisions under the Affordable Care Act (ACA). The expanded coverage of individuals previously uninsured is one of the key provisions made optional in the U.S. Supreme Court case challenging the constitutionality of the ACA in National Federation of Independent Business (NFIB) v. Sebelius[1]. In the decision, the mandate to have insurance was deemed constitutional but not the "coercive" mechanism where states would either accept the expansion or risk losing existing Medicaid coverage. Thus, there has been uneven expansion of this key provision that has offered (or denied) millions of rural Americans health insurance coverage. Rural providers serving these populations have been directly impacted through enhanced payment resulting from increased insurance coverage for populations previously uninsured. This has been particularly noteworthy since bad debt cuts went into full effect (35 percent reduction) in 2015.

The 2017 Study finds that the expansion states have higher median rural hospital operating margins than non-expansion states. Additionally, the study notes variation by state and region explored next (see map on page 7).

Graves-Loebsack Save Rural Hospitals Act: An Alternative Model

Our exploration of operating margins led us to consider possible paths forward toward stability and sustainability. The Graves-Loebsack Save Rural Hospitals Act (HR 3225) includes provisions to both redress some of the policies/cuts explored in this study for the last six years as well as pave a way forward to codify into law new models for providing access to care in rural settings, borrowing from pilots that have been offered around the country. Under the proposed Save Rural Hospitals Act, Community Outpatient Hospital status preserves emergency and outpatient care for rural communities. The research shows that this conversion would financially benefit 97 percent of eligible hospitals currently operating at a loss.

This act, if passed, could preserve for communities the following over a 10-year period:

- **$5.4 billion** in lost Medicare reimbursement among rural hospitals
- **237,000 jobs lost** in rural hospitals and communities
- **$27.9 billion** GDP loss

This model is based upon the following elements of the Community Outpatient Hospital reimbursement structure. Note that this model is not inclusive of grant funding.

- 105 percent of reasonable costs reimbursed
- 100 percent of bad debt reimbursed
- Exemption from two-percent sequestration

[1] (567 U.S. ___ (2012), 183 L. Ed. 2d 450, 132 S. Ct. 2566

The 2017 Study finds that **rural hospital revenues may be impacted by a conversion to a new Outpatient/Emergency Hospital model with reductions in payment cuts and enhancements in reimbursements.** Please contact CCRH to model current performance under new models of reimbursement to better understand hospital performance under alternative models of service.

Rural Leaders Show the Way

The 2017 Top 100 Rural Providers

Across the spectrum of performance indicators, the Top 100 Rural and Community Hospitals and the Top 100 CAHs, as measured by the Hospital Strength INDEX (INDEX), are writing the blueprint for success as providers in rural America. Our research shows that these leaders share key attributes that dovetail with the vision articulated by the Triple Aim: better health for populations, better outcomes for patients and doing so at lower cost.[1]

Using the INDEX, characteristics of this year's top performing rural providers are compared to one another by the applicable peer group. By comparing the Top 100 cohorts of CAHs (see Rural Relevance Chart Book, Chapter 3, Value Leaders) and Rural and Community hospitals (see Rural Relevance Chart Book, Chapter 3, Value Leaders) to their respective counterparts across the U.S., the analysis highlights the areas of strength of top performers while at the same time establishing benchmarks for all other providers.

- Top performing CAHs boast a median overall percentile rank of 95.0 versus the all-CAH median of 51.6 on the Hospital Strength INDEX.
- The median Top 100 Rural and Community facility performs in the 94.4 percentile compared to a national median of 46.5.
- Top 100 CAHs capture more Medicare IP business than 84.3 percent of all other rural hospitals and greater Medicare OP market share than 91.8 percent of all other rural hospitals within a defined PSA.
- When looking at Outcomes, top CAHs excel at keeping readmission and mortality rates low.
- Top rural and community hospitals produce consistently better outcomes at much lower average case-weight and wage-rate adjusted Medicare IP and OP costs.
- Finally, this cohort analysis reveals significant distinction in Financial Stability (measured by Capital Efficiency [Net Income/Total Revenue]), whereas Top 100 CAHs score higher than two-thirds of all other providers in the study.

[1] Institute for Healthcare Improvement, 2017.

While top performing CAHs and rural and community hospitals perform significantly better compared to their peers, there are differences in areas of relative strength when compared against one another (see Rural Relevance Chart Book, Chapter 3, Value Leaders). When looking at value, for example, Top 100 CAHs show stronger performance as compared to Top 100 Rural and Community hospitals in the Medicare Process of Care measures that comprise the Quality Pillar, as well as the Patient Satisfaction Pillar comprised of HCAHPS scores.

Across the nation, there is a wide range of performance among rural providers. The INDEX provides an analysis of the value of the safety net performance nationally and cascades this analysis to states, regions, etc. Numerous states subscribe to the INDEX to offer a hospital-by-hospital analysis of performance and to direct resources for performance improvement. The following section compares performance characteristics of the rural hospitals across the nation to non-rural providers.

Where does your facility stand in 2017? Contact CCRH to assess individual hospital performance and learn what it takes to become a Top 100 Rural Hospital.

Rural Provider Performance Compared with Non-Rural Provider Performance

Quality, Outcomes and Patient Satisfaction

- **Quality**: Rural providers score better in emergency department (ED) Arrival to Admission Times for Admitted ED Patients (rural 220 min to non-rural 311 min), ED Arrival to Departure Times for Discharged ED patients (rural 117 min to non-rural 161), Median time from ED arrival to provider contact (rural 21 min to non-rural 30 min), and Median Time to Pain Management (rural 49 min to non-rural 56 min).
- **Outcomes**: Rural providers perform better than their non-rural counterparts for Heart Failure (HF) Readmission (rural 21.8 to non-rural 22), pneumonia (PN) Readmission (rural 16.9 to non-rural 17.3) and hospital-wide readmission (rural 15.5 to non-rural 15.7).
- **Patient Satisfaction:** Rural providers outperform non-rural in overall ranking – receiving a 9 out of 10, as well as in eight individual categories including nurse communication, doctor communication, pain control, medication explanation and discharge instructions.

Costs and Charges

Costs and charges are important to consider in rural health. Even though they don't reflect the ultimate consumer price, they do influence the final payment or settlement. Costs are important because they set the floor below which hospitals will lose money. Rural hospital costs are also important because they establish the basis for a Medicare settlement for cost-based reimbursements to help keep low volume

rural safety net providers "whole." Charges, on the other hand, are set by the hospital and may serve as the basis for negotiated payments by commercial insurance companies that reimburse hospitals at a premium compared with Medicare in 96 percent of inpatient services[1]. Charges may vary widely by hospital for the same services and final payments show wide variation for the same services observed.[2] However, as noted earlier, rural hospitals receive most payments from government payors that pay on a fee schedule.

Rural providers are concerned that their cost and charge structure will become misaligned with the wider market in such a way that ultimately undermines the attractiveness of the safety net. The 2017 study examined costs and charges in inpatient areas (based upon Diagnostic Resource Group volumes (DRGs) and outpatient service areas) with the highest volumes (see Rural Relevance Chart Book, Chapter 3, Value Leaders).

- Rural hospitals charge far less than their non-rural counterparts on a case-mix and wage adjusted basis. This difference is especially apparent in the inpatient setting, but also holds true among outpatients. Rural hospital charges are particularly low for common inpatient stays such as pneumonia, kidney and urinary tract infection, heart failure and COPD when wage and case-mix adjusted.
- Non-rural hospitals outperform rural facilities with respect to outpatient Medicare costs, sustaining lower costs across many common procedures when case-mix and wage adjusted. However, rural hospitals perform just as well with respect to inpatient costs among Medicare patients.

Value Leaders Chart Book: Detailed analysis of top performing rural hospitals, as well as a review of rural provider performance versus non-rural providers is available at iVantageINDEX.com. View the value leaders chart book here.

[1] National Comparisons of Commercial and Medicare Fee-For-Service Payments to Hospitals, 2016.
[2] The Dramatic Difference: What a Hospital Charges vs. What Medicare Pays. Kaiser Family News, 2013.

Conclusion

In summary, the rural health safety net serves a population that is older, poorer and sicker with less access to care than their non-rural counterparts. This population has a higher proportional demand for healthcare given baseline health disparities. The rural health safety net is anchored by rural hospitals that offer critical access to quality care. Through federal and state polices and rural-relevant reimbursements, this safety net has been designed to provide access to populations which are geographically dispersed and often underserved. Yet this safety net continues to be threatened by potential policy changes at both state and federal levels.

Rural healthcare providers serve to support not only the health of their population, but also the health of the local economy and, by extension, the communities served. The shift from local rural access to non-rural centers of care may not offer savings, but shifts the spend from rural to non-rural, often with negative consequences in terms of access, care and cost. As cost savings initiatives are considered, care must be taken so that the industry doesn't *"trip over a dollar to save a dime"* as is typically the case when considering the overall cost of supporting local access to care for rural populations.

While there is no question that non-rural providers provide more sophisticated interventions for the sickest patients, the study confirms that rural providers offer quality care with good outcomes and high levels of patient satisfaction at the median as compared to more non-rural counterparts for the care they offer.

Preserving access to all types of care, especially inpatient care, may be out of the reach of the smallest providers. But rural providers have a critical role to play in developing alternative care models for a geographically dispersed, heterogeneous populations, leading the way toward answering the key question around the care models of the future for rural America.

Against this context, rural providers should act now to prepare for changes ahead. Developing a comprehensive understanding of an organization's current performance, position and exposure is critical, as is aligning leadership around the most likely scenarios ahead. As has been the case for the last six years, the Rural Relevance Study offers a snapshot into the state of rural healthcare, the value the safety net provides and the challenges and opportunities for the future.

About the Hospital Strength INDEX®

The Hospital Strength INDEX is rural healthcare's most comprehensive and objective assessment of rural providers. By assessing performance across more than 50 individual indicators and eight pillars of performance, INDEX brings a rural-relevant perspective to healthcare leaders making strategic and operational decisions. The INDEX is the foundation for many of rural healthcare's most prominent awards (e.g. Top 100 Critical Access Hospitals, NOSORH Performance Excellence Awards) and is used by organizations such as the National Rural Health Association in support of its advocacy and legislative initiatives.

Since its inception, the INDEX has helped more than 750 rural and Critical Access Hospitals integrate sophisticated analytics for benchmarking performance, and has also been used by more than 25 state agencies, state hospital associations, federal grant programs and both the National Rural Health Association (NRHA) and the National Organization of State Offices of Rural Health (NOSORH). INDEX analytics have also informed healthcare industry policy, research and thought leadership.

Study Note

The total number of rural hospitals included in the analysis is 2,157, which includes hospitals designated as rural by the Office of Rural Health Policy (ORHP), a division of the Health Resources & Services Administration (HRSA) and excludes hospitals with more than 200 beds.

The methodology behind INDEX uses publicly available hospital level data to (a) identify the variables that statistically contribute to the measures of cost, quality, outcomes and patient perspective and (b) score each hospital on each measure based on the weighting of each variable as determined by a principal components analysis. The use of publicly available hospital data comes with the inherent problem of missing data for some hospitals. To address this issues, INDEX uses a multiple imputation approach to provide estimates of missing variables based on available data.

All available data are included. Statistical sampling and data projection methodologies are employed only when necessary. Each INDEX release is based on the most recently available data for each indicator source. All information included in this release (version 7.0) represents the most recently available data as of December, 2016.

INDEX is based on a composite measure of eight pillars:

- Inpatient Market Share
- Quality
- Patient Perspective
- Charges
- Outpatient Market Share
- Outcomes
- Cost
- Financial Stability

The methodology is reviewed and revised as necessary each year to ensure it provides a current and relevant analysis of rural hospital performance. The current methodology is available online at www.iVantageINDEX.com.

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Michael specializes in rural health network development and benchmarking for performance improvement consulting. He has established himself as a resource for rural providers, health systems and networks leveraging diverse data sets – both public and private – to support rural-relevant benchmarking, research and advocacy. Michael has been instrumental in shaping the annual *Rural Relevance: Vulnerability to Value* study which explores the state of rural healthcare in America and is widely used by rural providers, advocacy groups, policy makers and the media.

THE CHARTIS GROUP

CHARTIS CENTER FOR RURAL HEALTH

The Chartis Center for Rural Health (CCRH) builds upon the commitment of The Chartis Group and iVantage Health Analytics to deliver expertise, performance management solutions, advisory services and research to the system-supported rural facilities, community hospitals, and Critical Access Hospitals which provide care to more than 60 million Americans.

Pairing iVantage's extensive knowledge of rural healthcare, research and solution portfolio with the healthcare expertise and resources of The Chartis Group, CCRH creates an unparalleled value proposition for rural health leaders and those advocating on their behalf. The Chartis Center for Rural Health provides insight, perspective, analysis and solutions to this important healthcare segment in order to address the biggest challenges and drive performance improvement.

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Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Reducing Potentially Excess Deaths from the Five Leading Causes of Death in the Rural United States

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Background

In 2014, the all-cause age-adjusted death rate in the United States reached a historic low of 724.6 per 100,000 population (*1*). However, mortality in rural (nonmetropolitan) areas of the United States has decreased at a much slower pace, resulting in a widening gap between rural mortality rates (830.5) and urban mortality rates (704.3) (*1*). During 1999–2014, annual age-adjusted death rates for the five leading causes of death in the United States (heart disease, cancer, unintentional injury, chronic lower respiratory disease (CLRD), and stroke) were higher in rural areas than in urban (metropolitan) areas (Figure 1). In most public health regions (Figure 2), the proportion of deaths among persons aged <80 years (U.S. average life expectancy) (*2*) from the five leading causes that were potentially excess deaths was higher in rural areas compared with urban areas (Figure 3). Several factors probably influence the rural-urban gap in potentially excess deaths from the five leading causes, many of which are associated with sociodemographic differences between rural and urban areas. Residents of rural areas in the United States tend to be older, poorer, and sicker than their urban counterparts (*3*). A higher proportion of the rural U.S. population reports limited

physical activity because of chronic conditions than urban populations (*4*). Moreover, social circumstances and behaviors have an impact on mortality and potentially contribute to approximately half of the determining causes of potentially excess deaths (*5*).

Potentially excess deaths (also described as potentially preventable deaths) are defined as deaths among persons aged <80 years in excess of the number that would be expected if the death rates for each cause were equivalent across all states to those that occurred among the three states with the lowest rates (*6,7*). Although not all potentially excess deaths can be prevented, many might represent deaths that could be prevented through improved public health programs that support healthier behaviors and neighborhoods and better access to health care services.

Reducing Potentially Excess Deaths in Rural Areas of the United States

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In 2014, approximately 62% of all 1,622,304 deaths in the United States were related to the five leading causes of death (6). During 2014, the number of potentially excess deaths from the five leading causes in rural areas was higher than those in urban areas (*8*). Targeted, needs-based prevention efforts, combined with improved access to treatment for chronic conditions, might reduce the rural-urban gap in age-adjusted death rates and potentially excess deaths from the five leading causes of death.

Heart Disease, Stroke, and Chronic Lower Respiratory Disease

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Heart disease, stroke, and CLRD share several substantial co-morbidities from individual behavioral and social risk factors (*9–12*). The percentage of potentially excess deaths from these three causes is higher in rural than urban areas in all 10 regions (*8*). In addition, potentially excess deaths among regions vary substantially. For example, the percentages of excess deaths in urban areas in regions 3, 4, 5, 6 and 7 related to stroke are higher than even the rural area percentages in regions 1, 2, 8, 9, and 10. For these three causes of potentially excess deaths, the highest urban percent in one or more regions is higher than the lowest rural percentages in three or more regions. Stroke is the most prominent example: urban excess deaths in regions 4 (South East) and 6 (New Mexico, Texas, Oklahoma, Arkansas, and Louisiana) far outpace rural excess deaths in regions 1, 2, 5, 7, 8, 9 and 10. In region 5 (Great Lakes), rural-urban differences in potentially excess deaths nearly disappeared for heart disease and stroke. Additional research is needed to understand the causes of these differences and what can be learned from both the broad regional differences across the United States and the near elimination of rural-urban differences in the Great Lakes region.

Tobacco use increases the risk for developing and dying from heart disease, stroke, and CLRD. Cigarette smoking is the leading cause of preventable disease and death in the United States (*13*) and is the most substantive risk factor for CLRD (*10*). Nationally, the prevalence of cigarette

smoking among adults living in rural counties is higher than in urban counties, and smoking rates differ markedly by region, making tobacco use a likely leading cause of differential mortality between urban and rural areas (*4*). Understanding where tobacco use in rural areas is higher than urban areas can help prioritize resources to reduce tobacco use and secondhand smoke exposure and begin to address the increasing numbers of CLRD-related deaths in rural areas.

Heart disease and stroke mortality rates are decreasing in both rural and urban areas. However, this improvement in mortality trends is plateauing and the rate of decline for heart disease in rural areas is slowing relative to urban areas, thus increasing the differential rural-urban gap in mortality rates (*8*). In 22 states, including rural states such as Alaska, Idaho, Kentucky, Montana, Vermont and West Virginia, the number of deaths attributed to heart disease declined below the number of cancer deaths for the first time (*8*). For stroke, the difference in the number of deaths in rural and urban areas remained constant, with substantive declines in both rural and urban areas (*8*). In 2013, stroke declined from the third to the fifth leading cause of death in nonmetropolitan areas (*14*). Lack of physical activity, poor nutrition (especially diets high in calories, sodium, added sugars, and saturated fat), and associated obesity are major risk factors for hypertension and diabetes (*15*). These risk factors and conditions contribute substantially to heart disease and stroke death rates in the United States and are more prevalent in rural areas than urban areas. Obesity has been linked to a variety of serious chronic illnesses, including diabetes, heart disease, cancer, and arthritis (*16–18*). From 1960 to 2010, the proportion of adults in the United States who were overweight or obese increased from 40.5% to 66.1% (*19*). Self-reported obesity was higher in rural areas than urban areas and increased with increasing levels of rurality (*4*). Regular physical activity and improved physical fitness offer numerous health benefits, including reduced risk for cardiovascular disease, diabetes, obesity, some cancers, and musculoskeletal conditions (*20*). Despite evidence of modest increases in the prevalence of physical activity and improved nutrition, the prevalence rates of hypertension and diabetes have not been improving over time (*21,22*). However, a greater percentage of adults with hypertension are controlling their blood pressure (*23*), and since 2006 there has been a sustained decline in the incidence of diabetes and a plateauing in the prevalence of diabetes nationally (*24*).

Barriers to health care access result in unmet health care needs that include, but are not limited to, a lack of preventive and screening services, treatment of illnesses (*25*) and timely urgent and emergency services (*26*). Residents of rural areas experience many of these barriers. Specifically, rural counties in the United States have a higher uninsured rate (*27*); experience health care workforce shortages (approximately only 11 percent of all physicians choose to practice in rural settings) (*28*); often lack subspecialty care (e.g., oncology), critical care units, or emergency facilities (*29*); have limited transportation options; and experience longer time to services caused by distance (26). Differential access to quality health care (*25*), including timely access, likely contributes to

rural-urban gaps in mortality rates and potentially excess deaths. For example, persons with CLRD and unmet health care needs in rural areas can experience serious life-threatening respiratory episodes, and the lack of timely access to emergency care could affect survival. In contrast, the parallel mortality trends for stroke might be explained by the success of complementary programs that improve the quality of stroke care. These programs (CDC's *Paul Coverdell National Acute Stroke Program*, the American Heart Association/American Stroke Association's *Get with the Guidelines* program, and The Joint Commission's Certification for Primary Stroke Centers program) organize systems that coordinate acute stroke care across both urban and rural hospitals (*30*). However, comparable programs to improve cardiac care have not been implemented in rural areas, which might account for divergent trend in myocardial infarction mortality rates.

Cancer

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During 2003–2012, the overall cancer-related age-adjusted death rate decreased by 1.5% per year (*31*); however, rates declined less in rural than urban areas (*8*). Age-adjusted death rates from cancer have mirrored decreases in the prevalence of risk factors such as tobacco use, which is a shared risk factor with heart disease, stroke, and CLRD (*10–12*), and increases in cancer screening, vaccinations, and improvements in treatment (*31*). Differences in these death rates might reflect higher prevalence of tobacco-use and obesity in rural areas (*4*) and lack of access to cancer screening services, follow-up to abnormal tests, quality care for cancer patients, and cancer survival care (*32*).

To address the rural-urban gap in cancer-related potentially excess deaths, comprehensive approaches that encompass the cancer continuum (e.g., prevention, early detection, treatment, and survivorship) are needed at the local and state level to reduce risks associated with potentially excess deaths from cancer in rural areas (*33*). Comprehensive cancer-control programs are funded by CDC in 50 states, the District of Columbia, seven tribes and tribal organizations, and seven U.S. territories and Pacific Island jurisdictions (https://www.cdc.gov/cancer/ncccp/about.htm (https://www.cdc.gov/cancer/ncccp/about.htm)). These programs build coalitions that develop and implement strategic plans for cancer prevention and reduce morbidity and mortality for persons affected by cancer.

CDC also supports cancer screening programs that address health disparities among adults who are uninsured or underinsured (*34,35*), which is a common characteristic among rural populations (*32*). Historically, funding for the National Breast and Cervical Cancer Early Detection Program and the Colorectal Cancer Control Program has focused on direct screening services. Since 2012, emphasis has shifted to population-based approaches, such as partnering with health systems to implement evidence-based interventions to increase population-level screening (*36*), including provider reminders for persons who are due for cancer screening (*37*).

As differences in cancer-related death rates are addressed at the local and state level, opportunities are available to address them at the federal level. The Cancer Moonshot is focused on accelerating the understanding of cancer and its prevention, early detection, treatment, and cure, including improving access and care (*38*). Although some components of this federal initiative target the genomic level, when combined with population-based approaches, the rural-urban gap in cancer-related deaths rates might be reduced.

Unintentional Injury

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During 2008–2010, the annual age-adjusted death rates for unintentional injury were highest in rural counties (*8*). During 1999–2014, the age-adjusted death rates for unintentional injuries were approximately 50% higher in rural areas than urban areas (Figure 1). Several factors explain the wide gap in rural-urban death rates from unintentional injuries. First, unintentional injury burden is higher in rural areas because of severe trauma associated with high speed motor vehicle traffic-related deaths (*4*). Second, rates of opioid analgesic misuse and overdose death are highest among poor and rural populations (*39*). Third, behavioral factors (e.g., alcohol impaired driving, seatbelt use, and opioid prescribing) contribute to higher injury rates in rural areas (*40–42*). Fourth, access to treatment for trauma and drug poisoning is often delayed when the injury occurs in rural areas. For life-threatening injury, higher survival is associated with rapid emergency treatment (*43,44*). Because of the geographic distance involved, emergency medical service (EMS) providers who operate ambulances take longer to reach injured or poisoned patients in rural areas. Moreover, ambulatory transport to the optimal treatment facility also can take longer because of increased distance to the treatment facility. Most life threatening trauma is best treated in advanced trauma centers, which are usually located in urban areas; care at these centers has been associated with 25% lower mortality (*45*). Trauma centers have advanced equipment and specialized staff available 24 hours, 7 days a week. Such care also includes access to advanced neurosurgical care, which is important because approximately one third of all injury-related deaths involve a traumatic brain injury. Regulatory restrictions and EMS capability and certification to treat drug overdose cases with naloxone at the scene of overdose events also might be a factor in higher opioid poisoning-related deaths in rural areas.

Interventions to address the disproportionate unintentional injury death rates in rural areas include increased adherence to guidelines for triaging ambulatory transport destinations (*46*), changing state rules to expand the types of EMS providers that can administer naloxone to reverse a drug overdose (*47*), and enforcement of motor vehicle seatbelt and alcohol laws to reduce motor vehicle crashes (*48*). Educating rural opioid prescribers on the opioid guideline (*49*) and better access to opioid agonist medication-assisted treatment programs probably would benefit rural communities

with high opioid use disorder rates (*50*). Quicker access to definitive trauma and opioid dependency treatment and additional interventions are needed to reduce unintentional injury deaths in rural areas.

Conclusion

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In the United States, there is a rural-urban gap in age-adjusted death rates and potentially excess deaths from the five leading causes of death. Rural communities experience higher age-adjusted death rates and a higher number of potentially excess deaths from the five leading causes compared with urban areas. Higher death rates and potentially excess deaths are often associated with various interconnected societal, geographic, behavioral, and structural factors. Historic trends indicate that focusing on access to health care in rural areas of the United States alone is not sufficient to adequately address complex health outcomes, including mortality among rural populations (*3*). Consistent with the recommendations and best practices described in this report, approaches to address the nonuniform achievements in rural areas must focus on strengthening the health care delivery system while improving and increasing the integration of primary, specialty, and substance abuse services (*3*). Identifying structural and societal modifiable factors contributing to the gap between rural and urban mortality outcomes from the five leading causes of death is challenging. Additional analysis can yield results that inform the strategic alignment of resources with condition-specific needs. To reverse the widening gap in age-adjusted death rates from unintentional injuries between rural and urban areas, special attention should be given to designing, implementing, and monitoring locally informed initiatives in rural communities for the effective prevention and treatment of opioid misuse, including treatment of opioid overdose. Needs-based allocation of resources can substantially impact rural health. Although rural communities are at higher risk for death from the five leading causes of death, funding to address risk factors is allocated on a population basis (*3*), often resulting in underfunded rural programs. An increased emphasis on need and epidemiologic burden of disease as major factors in targeting future allocation of public health and prevention funding might contribute, among other factors, to bridging the mortality gap from the five leading causes of death between rural and urban areas in the United States.

Acknowledgments

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Debra Houry, MD, National Center for Injury Prevention and Control; Mary G. George, MD, National Center for Chronic Disease Prevention and Health Promotion.

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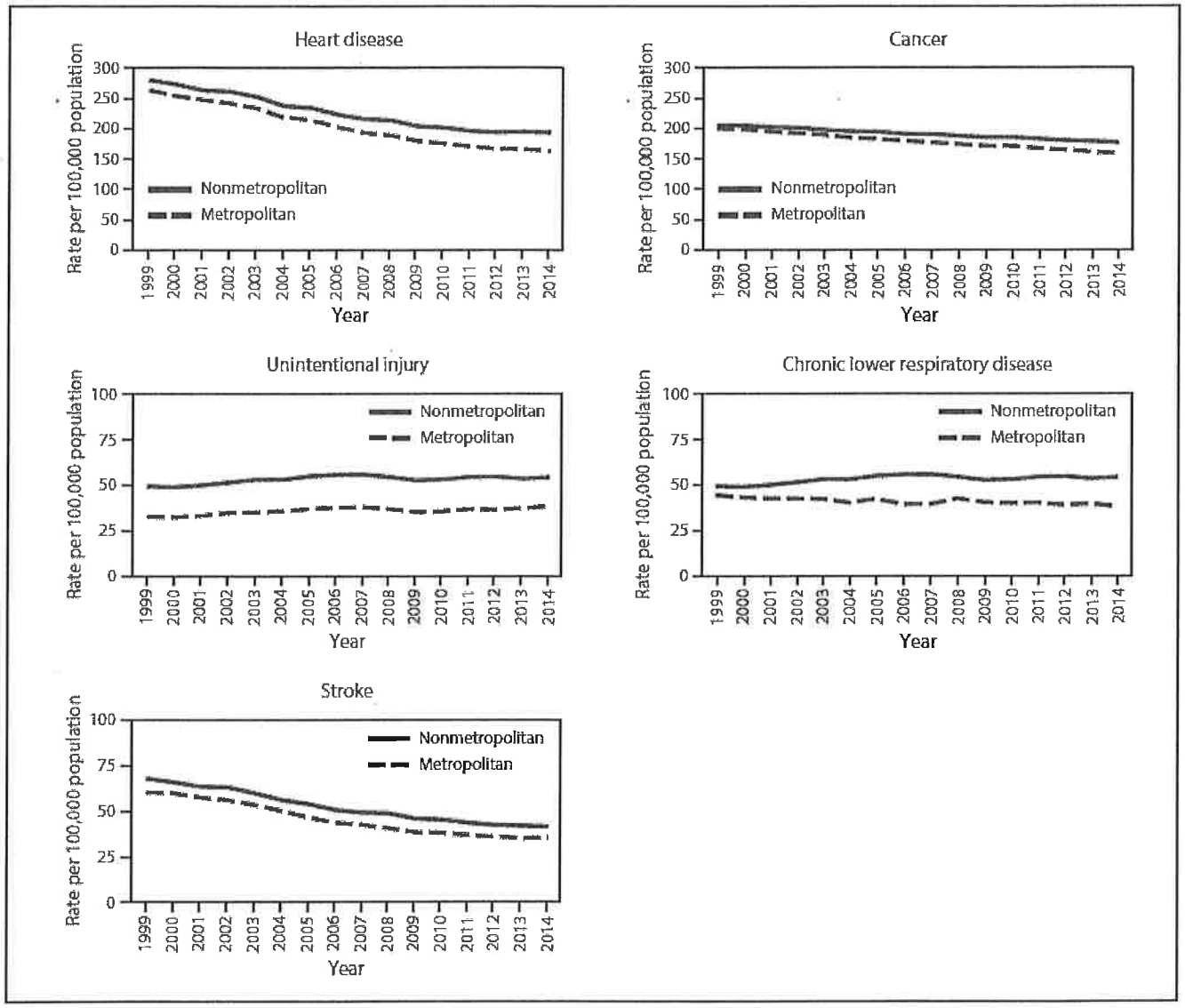
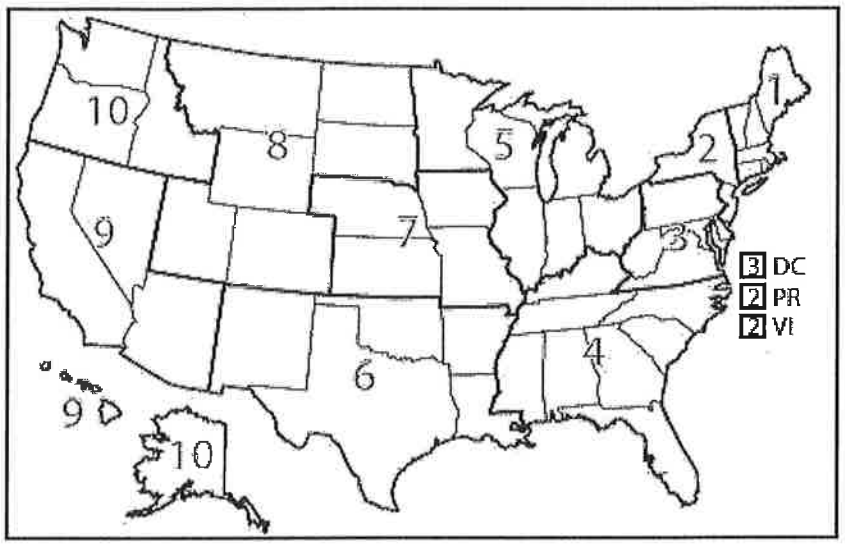
FIGURE 1. Age-adjusted death rates among persons of all ages for five leading causes of death in nonmetropolitan and metropolitan areas,* by year — National Vital Statistics System, United States, 1999–2014



Source: Moy E, García MG, Bastian B, et al. Leading causes of death in nonmetropolitan and metropolitan areas—United States, 1999–2014. MMWR Surveill Summ 2017;66(No. SS-1).

* Nonmetropolitan and metropolitan areas were identified using the Office of Management and Budget's 2013 county-based classification scheme. (**Source:** Office of Management and Budget, White House. Revised delineations of metropolitan statistical areas, micropolitan statistical areas, and combined statistical areas, and guidance on uses of the delineations of these areas. Washington, DC: Office of Management and Budget; 2013. https://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b13-01.pdf (https://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b13-01.pdf))

FIGURE 2. U.S. Department of Health and Human Services public health regions* Return Top



Source: Moy E, García MG, Bastian B, et al. Leading causes of death in nonmetropolitan and metropolitan areas—United States, 1999–2014. MMWR Surveill Summ 2017;66(No. SS-1).

* *1* = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *2* = New Jersey, New York, Puerto Rico, and the U.S. Virgin Islands (Mortality data for residents of U.S. territories were excluded.); *3* = Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia; *4* = Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee; *5* = Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin; *6* = Arkansas, Louisiana, New Mexico, Oklahoma, and Texas; *7* = Iowa, Kansas, Missouri, and Nebraska; *8* = Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming; *9* = Arizona, California, Hawaii, and Nevada; *10* = Alaska, Idaho, Oregon, and Washington.

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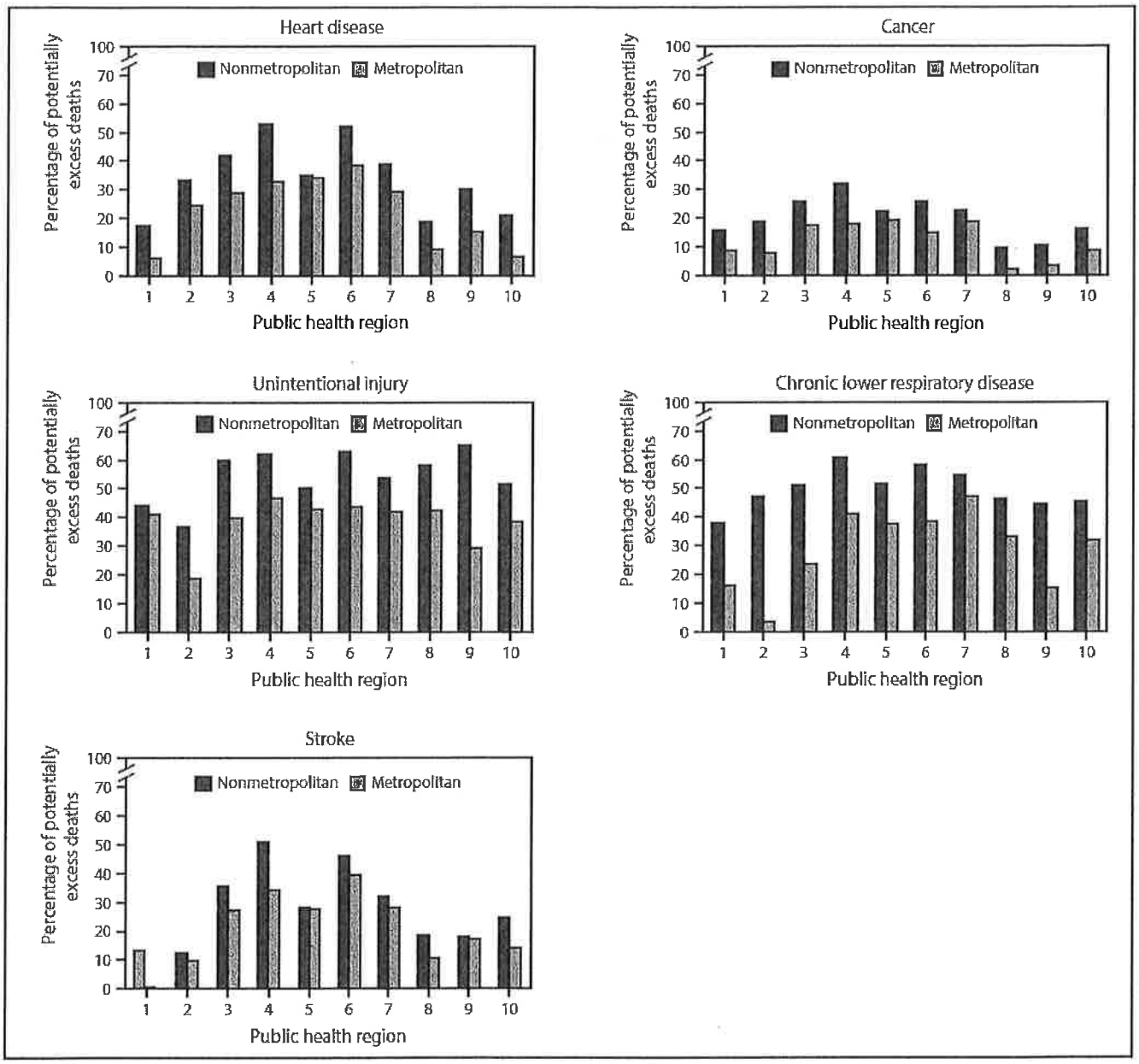
FIGURE 3. Percentage of potentially excess deaths* among persons aged <80 years for five leading causes of death in nonmetropolitan and metropolitan areas,† by year and public health region§ — National Vital Statistics System, United States, 2014



Source: Moy E, García MG, Bastian B, et al. Leading causes of death in nonmetropolitan and metropolitan areas—United States, 1999–2014. MMWR Surveill Summ 2017;66(No. SS-1).

* For each age group and cause, the death rates of the three states with the lowest rates during 2008–2010 (benchmark states) were averaged to produce benchmark rates. Potentially excess deaths were defined as deaths among persons aged <80 years in excess of the number that would be expected if the age group–specific death rates of the benchmark states occurred across all states.

† Nonmetropolitan and metropolitan areas were identified using the Office of Management and Budget's 2013 county-based classification scheme. (**Source:** Office of Management and Budget, White House. Revised delineations of metropolitan statistical areas, micropolitan statistical areas, and combined statistical areas, and guidance on uses of the delineations of these areas. Washington, DC: Office of Management and Budget; 2013. https://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b13-01.pdf (https://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b13-01.pdf)).

§ *1* = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *2* = New Jersey and New York; *3* = Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia; *4* = Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee; *5* = Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin; *6* = Arkansas, Louisiana, New Mexico, Oklahoma, and Texas; *7* = Iowa, Kansas, Missouri, and Nebraska; *8* = Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming; *9* = Arizona, California, Hawaii, and Nevada; *10* = Alaska, Idaho, Oregon, and Washington.

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Page last reviewed: January 12, 2017

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Department of Health & Human Services
Centers for Medicare & Medicaid Services
61 Forsyth St., Suite. 4T20
Atlanta, Georgia 30303-8909

June 14, 2017

Stephanie Boynton, CEO
Erlanger Bledsoe Hospital
71 Wheelertown Avenue
Pikeville, TN 37367

Re: Critical Access Hospital (CAH) Relocation Preliminary Determination

Dear Mrs. Boynton:

Thank you for providing us with the information regarding the proposed relocation of Erlanger Bledsoe Hospital. You provided documentation of continuing to meet all rural location and necessary provider requirements at 42 CFR 485.610, as well as documentation attesting to compliance with the 75% requirement at 42 CFR 485.610(d)(1). Based on our preliminary evaluation, Erlanger Bledsoe Hospital will meet all regulatory requirements regarding relocation of a Necessary Provider CAH when it relocates to the new address.

Please be aware that this is a preliminary evaluation only and the final determination cannot occur until after the CAH relocates and submits evidence that it continues to meet all requirements. After the relocation is complete, Erlanger Bledsoe Hospital must attest that it remains essentially the same provider serving the same community at the new location (per 42 CFR 485.610(d)(1)), and whether the information provided with the earlier attestation remains the same.

If you have any further questions, please do not hesitate to contact Jackie Whitlock at (404) 562-7437 or Jacqueline.whitlock@cms.hhs.gov.

Sincerely,

Jackie Whitlock for

Sandra M. Pace
Associate Consortium Administrator
Division of Survey & Certification

erlanger
BLEDSOE

February 24, 2017

Ms. Sandra Pace
Associate Regional Administrator
Division of Survey and Certification Operations
Center of Medicare and Medicaid Services
63 Forsyth Street, SW, Suite 4T20
Atlanta, GA 30303-8909

RE: Erlanger Bledsoe Hospital Relocation
Request to Confirm CAH Designation

Dear Ms. Pace,

Erlanger Bledsoe Hospital, formerly Bledsoe County General Hospital, owned by Chattanooga Hamilton County Hospital Authority is a "necessary provider/critical access hospital" located in Pikeville, Bledsoe County, Tennessee (see attached documentation regarding our necessary provider designation). Erlanger Bledsoe Hospital wishes to advise you of its intent to replace and relocate its hospital facility from 71 Wheelertown Avenue, Pikeville, TN, Bledsoe County, to 17399 Rankin Avenue in Dunlap, TN, Sequatchie County. The new location is 20 miles from the current facility. The current hospital, originally a Hill Burton facility, is 45 years old and in need of replacement.

In the new location, Erlanger Bledsoe meets the criteria for maintaining the "necessary provider designation", as follows:

Population Served:
We will serve 75% of the population currently served. In the past year, we have served patients primarily in the following zip codes:
37327 Dunlap TN
37338 Graysville TN
37339 Gruetli TN
37347 Jasper TN
37365 Palmer TN
37367 Pikeville TN
37377 Signal Mtn. TN
37379 Soddy Daisy, TN
37397 Whitwell, TN

We anticipate 75% of our patients will continue to be located in these service areas, thus meeting the "75 of the same population served."

Services:
Erlanger Bledsoe will provide the same services that we currently offer, as well as, some additional services including surgery; therefore we will meet the "75% of same services offered criteria."

Employees:
Erlanger Bledsoe anticipates there will be an increase in the number of employees. All current employees will be offered employment at the new location; therefore we will meet the "75% of the same employee criteria. The new location is 20 miles from the current facility."

Rural Definition:
The proposed location will meet the rural area definition as defined by the State of Tennessee. Please see attached documentation.

Also, Erlanger Bledsoe Hospital currently operates a provider based emergency department located in Dunlap, TN, Sequatchie County. This provider based emergency department will be relocated to 553 US 127 Bypass, Pikeville, TN, Bledsoe County. The proposed location for the provider based emergency department is approximately 28 miles from Cumberland Medical Center via a two lane road, Highway 127S/ US-127S /TN-28. Rhea Medical is located approximately 22 miles via a two lane road, Dayton Mountain Highway, TN-30 (see attached map incorporating the geography and roadways referenced). The proposed location for the provider based emergency department meets the rural definition as defined by the State of Tennessee.

It is anticipated that the relocation and replacement of the facilities will be implemented and completed within 24-36 months, after all approvals are received.

We would appreciate your confirmation that our proposed relocation will not impact our current critical access designation/necessary provider status for both locations.

I am happy to answer any questions you may have about this submission either via the telephone or in person, as you review our submission. Please feel free to call me at 423-447-5350.

Thank you for your review of this matter.

Sincerely,

Stephanie Boynton

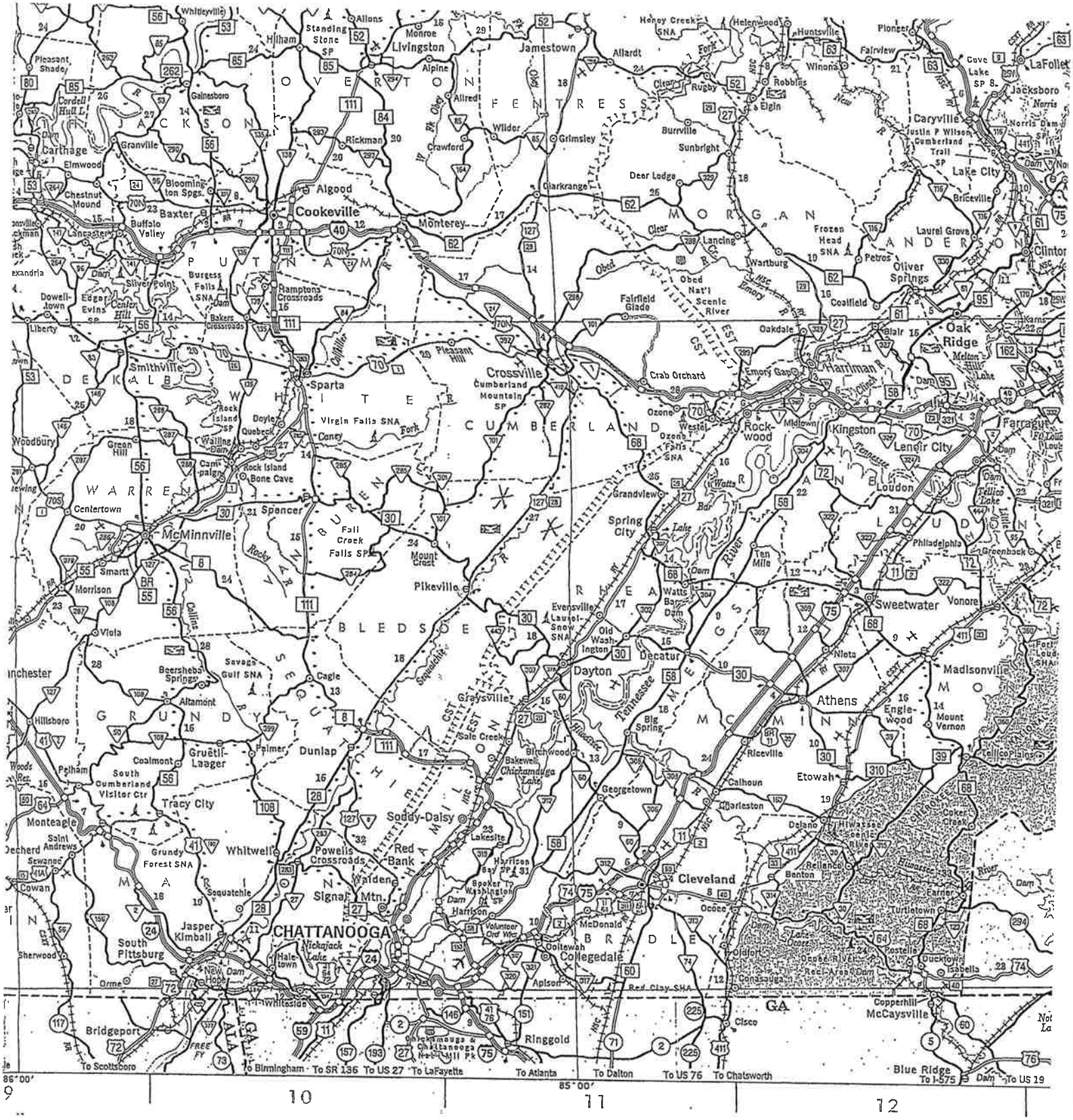
Stephanie Boynton
CEO Erlanger Bledsoe and SVED

CC: Joe Winick
Rob Brooks
Alana Sullivan

Steven Johnson
Britt Tabor
Bill Jolley, THA

Attachments:

Official Tennessee Transportation Map
Necessary Provider Documentation, Department of Health and Human Services
Rural Definition from State of Tennessee
Mapquest documentation regarding site locations
License



THE MILEAGE CHART

en cities is shown at the
zontal and vertical columns for
resent the approximate shortest
es via interstate, U.S. or state
For example: Athens to
es.

nly with respect to the accuracy
leage and other features shown
or comments about the Official

FREE MAP

Order a complimentary copy of this map online at http://www.tennessee.gov/tdot/maporder/maporder.htm. One map per individual may be mailed. Organizations can order additional copies. The map is for free distribution only and cannot be sold.

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TENNESSEE
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From the Mississippi River to the Great Mountains, fascinating history to dramatic vistas, Beale Street blues to Appalachian blu Tennessee is one of America's most destinations. Tennessee's incredible scenery

HCFA MEDICARE • MEDICAID

DEPARTMENT OF HEALTH & HUMAN SERVICES

Region IV
Health Care Financing
Administration

Bill Tilley

Refer to: tnrhp.cah

Atlanta Federal Center
61 Forsyth Street, SW, Suite 4T20
Atlanta, Georgia 30303-8909

COMMISSIONER
Received
MAR 15 1999
DEPARTMENT OF HEALTH

March 10, 1999

Fredia S. Wadley, M.D.
Commissioner
Tennessee Department of Health
Cordell Hull Building, Third Floor
425 5th Avenue, North
Nashville, TN 37247

Dear Dr. Wadley:

This is to advise you that the Health Care Financing Administration (HCFA) has approved the Tennessee Rural Health Care Plan to participate in the Medicare Rural Health Flexibility Program. We appreciate the efforts of the Office of Rural Health and Health Access and the Tennessee Hospital Association in developing the plan. Please note that no provider agreement may be issued to a critical access hospital until all network agreement signatures have been obtained.

Should there be any questions concerning this matter, please contact Bill Blanton at (404) 562-7433.

Sincerely,

Eugene A. Grasser
Associate Regional Administrator
Division of Medicaid and State Operations

- volume/capacity of the hospital and other related health care resources
- distance/travel time to other health care facilities in the service area
- any other barriers to accessing health care in the service delivery area

The following is a list of all Tennessee Hospitals with an average daily census of 15 or less in 1997. All of these hospitals meet at least one of the criteria for being designated as a necessary provider. Some of these hospitals are currently for profit and this is noted in the list.

Hospital Name	Licensed beds	Staffed Beds	Swing Beds	Patient days	ADC	Profit Status	Comment
JOHNSON COUNTY HOSPITAL	65	20	14	557	1.5	NFP	Closed in 1998
BAPTIST HICKMAN COMMUNITY HOSPITAL	44	25	10	1808	5.0	NFP	
COFFEE MEDICAL CENTER	60	36	10	2979	8.2	NFP	
BAPTIST THREE RIVERS HOSPITAL	42	42	12	2996	8.2	FP	
TROUSDALE MEDICAL CENTER	34	25	8	3242	8.9	NFP	Satellite of Carthage
METHODIST HOSPITAL OF MCKENZIE	65	27	5	3465	9.5	NFP	
GIBSON GENERAL HOSPITAL	100	73	0	3474	9.5	NFP	
CUMBERLAND RIVER HOSPITAL NORTH	27	27	10	3666	10.0	FP	
COLUMBIA EMERALD HODGSON HOSPITAL	24	12	0	3732	10.2	FP	Satellite of Col.Southern TN Med.C
* BLEDSOE COUNTY GENERAL HOSPITAL	26	26	7	3755	10.3	FP	
COPPER BASIN MEDICAL CENTER	44	44	0	3784	10.4	NFP	
MACON COUNTY GENERAL HOSPITAL	43	43	10	3994	10.9	NFP	
WAYNE MEDICAL CENTER	80	32	15	4117	11.3	NFP	
RHEA MEDICAL CENTER	57	40	8	4298	11.8	NFP	
COLUMBIA TRINITY HOSPITAL	40	31	6	4570	12.5	FP	
COLUMBIA WHITWELL MEDICAL CENTER	52	52	0	4617	12.6	FP	Satellite of Grandview
METHODIST HAYWOOD PARK HOSPITAL, INC.	62	44	10	4697	12.9	NFP	
BOLIVAR GENERAL HOSPITAL	61	57	10	4725	12.9	NFP	
MCNAIRY COUNTY GENERAL HOSPITAL	86	48	0	4814	13.2	NFP	
METHODIST HOSPITAL OF LEXINGTON	52	35	11	4970	13.6	NFP	
MARSHALL MEDICAL CENTER	119	77	0	5179	14.2	NFP	
CUMBERLAND RIVER HOSPITAL SOUTH	41	41	10	5198	14.2	FP	Satellite of Cumberland River North
CAMDEN GENERAL HOSPITAL	83	35	0	5247	14.4	NFP	
BAPTIST MEMORIAL HOSP. LAUDERDALE	70	67	10	5297	14.5	NFP	
JEFFERSON MEMORIAL HOSPITAL	67	51	14	5312	14.6	NFP	
BAPTIST PERRY COMMUNITY HOSPITAL	53	53	9	5361	14.7	FP	
MEDICAL CENTER OF MANCHESTER	49	49	0	5581	15.3	FP	
WHITE COUNTY COMMUNITY HOSPITAL	60	60	0	5632	15.4	FP	

Additional rural hospitals closed before 1997 but within the past 5 years
Lewis county closed in 1996
Baptist Hospital-Roane Co. closed in 1997.

(Rule 1200-08-01-.01, continued)

(73) Psychologist. A person currently licensed as such by the Tennessee Board of Examiners in Psychology.

(74) Qualified Emergency Medical Service Personnel. Includes, but shall not be limited to, emergency medical technicians, paramedics, or other emergency services personnel, providers, or entities acting within the usual course of their professions, and other emergency responders.

(75) Radiological Technologist. A person currently registered as such by the American Society of Radiological Technologists.

(76) Reasonably Available. Readily able to be contacted without undue effort and willing and able to act in a timely manner considering the urgency of the patient's health care needs. Such availability shall include, but not be limited to, availability by telephone.

(77) Registered Health Information Administrator (RHIA). A person currently registered as such by the American Health Information Management Association.

(78) Registered Health Information Technician (RHIT). A person currently accredited as such by the American Health Information Management Association.

(79) Registered Nurse. A person currently licensed as such by the Tennessee Board of Nursing.

(80) Rural Area. A county classified by the federal Office of Management and Budget (OMB) as rural, all counties, excluding Davidson, Hamilton, Knox, and Shelby, currently defined as rural in Chapter 1200-20-11 of the Tennessee Comprehensive Rules and Regulations, or an area outside of a county or part of a county previously classified as rural by the OMB and reclassified by the OMB as a metropolitan statistical area as of June 6, 2003.

(81) Satellite Hospital. A freestanding hospital licensed with a parent hospital that is on separate premises and operated under the same management.

(82) Shall or Must. Compliance is mandatory.

(83) Social Worker. A person who has at least a bachelor's degree in Social Work or related field, and preferably, two (2) years medical social work or other community based work experience.

(84) Stabilize. To provide such medical treatment of the emergency medical condition as may be necessary to assure, within reasonable medical probability, that the condition will not materially deteriorate due to the transfer as determined by a physician or other qualified medical personnel when a physician is not readily available.

(85) State. A state of the United States, the District of Columbia, the Commonwealth of Puerto Rico, or a territory or insular possession subject to the jurisdiction of the United States.

(86) Student. A person currently enrolled in a course of study that is approved by the appropriate licensing board.

(87) Supervising Health Care Provider. The designated physician or, if there is no designated physician or the designated physician is not reasonably available, the health care provider who has undertaken primary responsibility for an individual's health care.

(88) Surgical Technologist. A person who works under supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual is usually employed by a hospital, medical office, or surgical center and supervised during the surgical procedure

mapquest

Trip to:

Erlanger Bledsoe Hospital
71 Wheelertown Ave
Pikeville, TN 37367
(423) 447-2112
19.76 miles / 24 minutes
Notes

Proposed Site of New Hospital

17399 Rankin Ave, Dunlap, TN 37327-7028 — Download Free App

1. Start out going **north** on **Rankin Ave / US-127 N / TN-28 / TN-8** toward **Russell St.** Continue to follow **US-127 N / TN-28.** Map — **19.2 Mi** *19.2 Mi Total*

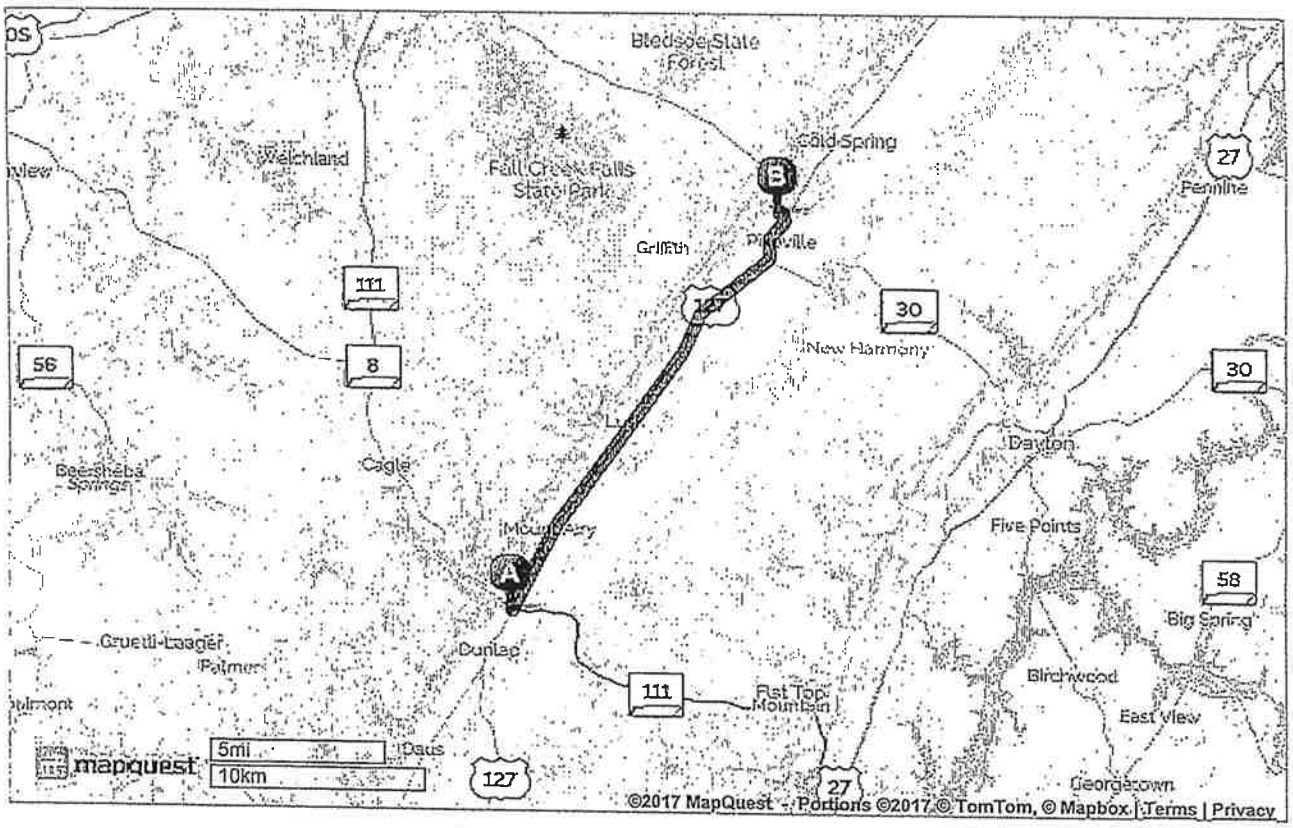
2. Turn **left** onto **State Route 30 / TN-30.** Map — **0.4 Mi** *19.6 Mi Total*
State Route 30 is just past Old State Highway 28

3. Take the 1st **left** onto **Wheelertown Ave.** Map — **0.2 Mi** *19.8 Mi Total*
If you reach Buckshot Ln you've gone a little too far

4. **71 WHEELERTOWN AVE** is on the **right.** Map
If you reach Buckshot Ln you've gone about 0.1 miles too far

Erlanger Bledsoe Hospital
71 Wheelertown Ave, Pikeville, TN 37367 > Current CAH location
(423) 447-2112

Total Travel Estimate: **19.76 miles - about 24 minutes**



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Trip to:

[463 - 463] US 127 Byp

Pikeville, TN 37367

17.95 miles / 20 minutes

Notes

17399 Rankin Ave, Dunlap, TN 37327-7028

Download Free App

1. Start out going **north** on **Rankin Ave / US-127 N / TN-28 / TN-8** toward **Russell St.** Continue to follow **US-127 N / TN-28.** Map — **18.0 Mi**

18.0 Mi Total

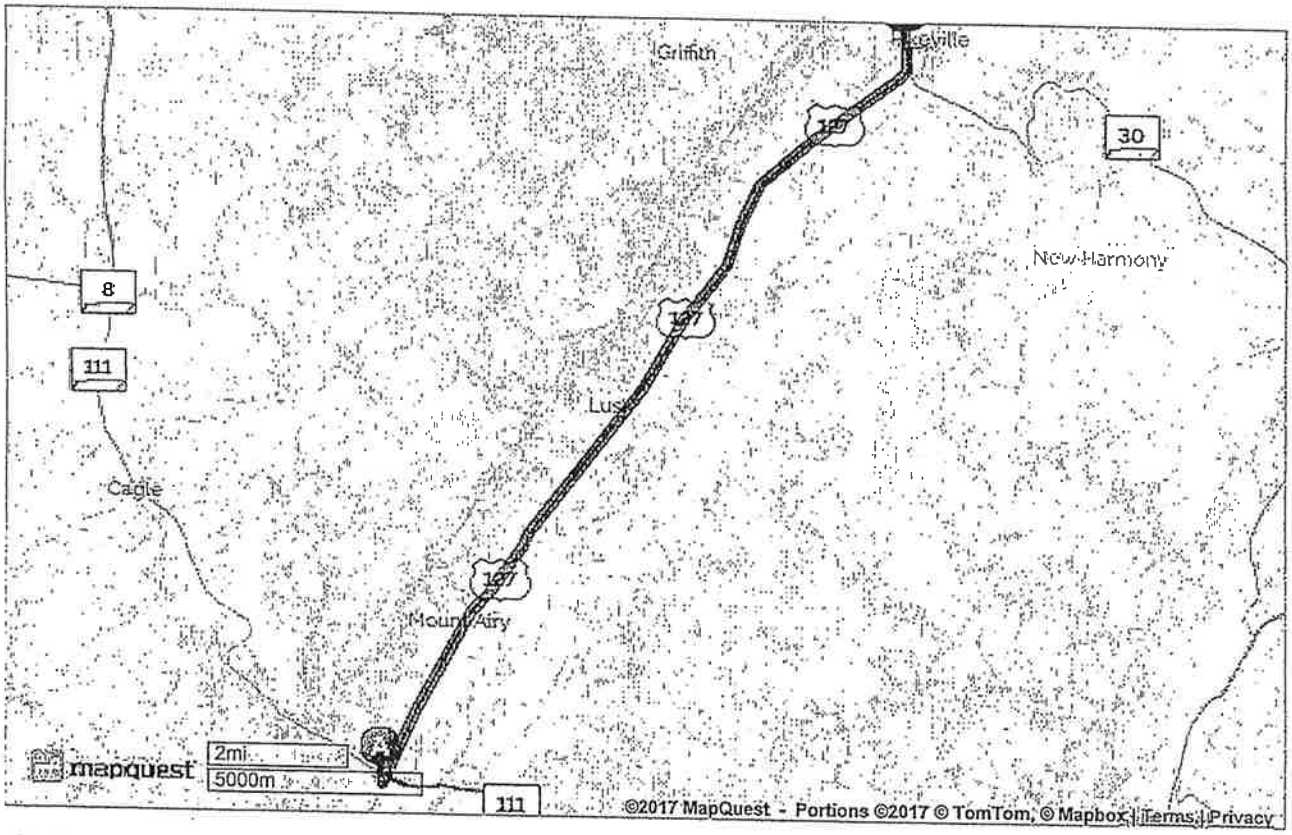
2. **[463 - 463] US 127 BYP.** Map

Your destination is 0.3 miles past Main St
If you reach Sequatchie Rd you've gone about 0.3 miles too far

[463 - 463] US 127 Byp, Pikeville, TN 37367

A= Proposed site for Hospital
B = Proposed site for Provider Based ED

Total Travel Estimate: **17.95 miles - about 20 minutes**



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Trip to:

[463 - 463] US 127 Byp

Pikeville, TN 37367

20.11 miles / 28 minutes

Notes

Rhea Medical Center
9400 Rhea County Hwy, Dayton, TN 37321
(423) 775-1121

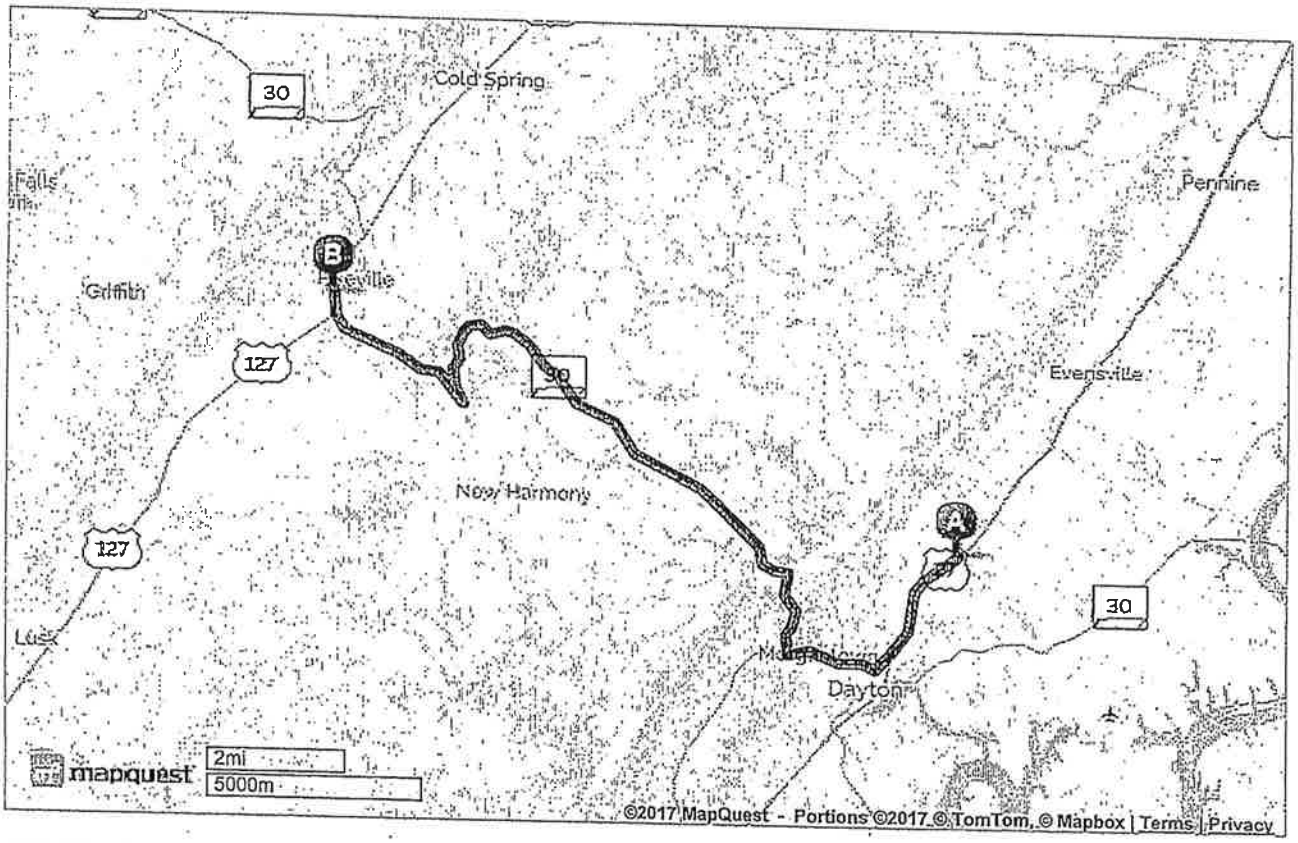
Download Free App

	1. Start out going **southwest** on **Rhea County Hwy / US-27 S / TN-29** toward **Lower Fine Ln.** Map	**2.4 Mi** *2.4 Mi Total*
BUS SOUTH 27	2. Turn **slight right** onto **Access Rd / US-27 Bus S / TN-378.** Continue to follow **US-27 Bus S / TN-378.** Map *US-27 Bus S is just past 11th Ave*	**0.5 Mi** *2.9 Mi Total*
30	3. Turn **right** onto **Dayton Mountain Hwy / TN-30.** Continue to follow **TN-30.** Map *TN-30 is just past 7th Ave* *If you reach Church St you've gone a little too far*	**16.8 Mi** *19.7 Mi Total*
NORTH 127	4. Turn **right** onto **US-127 N / TN-30 / TN-28 / Main St.** Continue to follow **US-127 N / TN-30 / TN-28.** Map	**0.4 Mi** *20.1 Mi Total*
	5. **[463 - 463] US 127 BYP.** Map *If you reach Sequatchie Rd you've gone about 0.3 miles too far*	

[463 - 463] US 127 Byp, Pikeville, TN 37367 553 US 127 Bypass

Proposed Site for Provider Based ED.

Total Travel Estimate: **20.11 miles - about 28 minutes**



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Trip to:

[463 - 463] US 127 Byp
Pikeville, TN 37367
28.28 miles / 34 minutes
Notes

Cumberland Medical Center
421 S Main St, Crossville, TN 38555
(931) 484-9511

Download Free App

1. Start out going **south** on **S Main St / US-127 S / TN-28** toward **Justice Center Dr.** Continue to follow **US-127 S / TN-28.** Map — **3.3 Mi** *3.3 Mi Total*

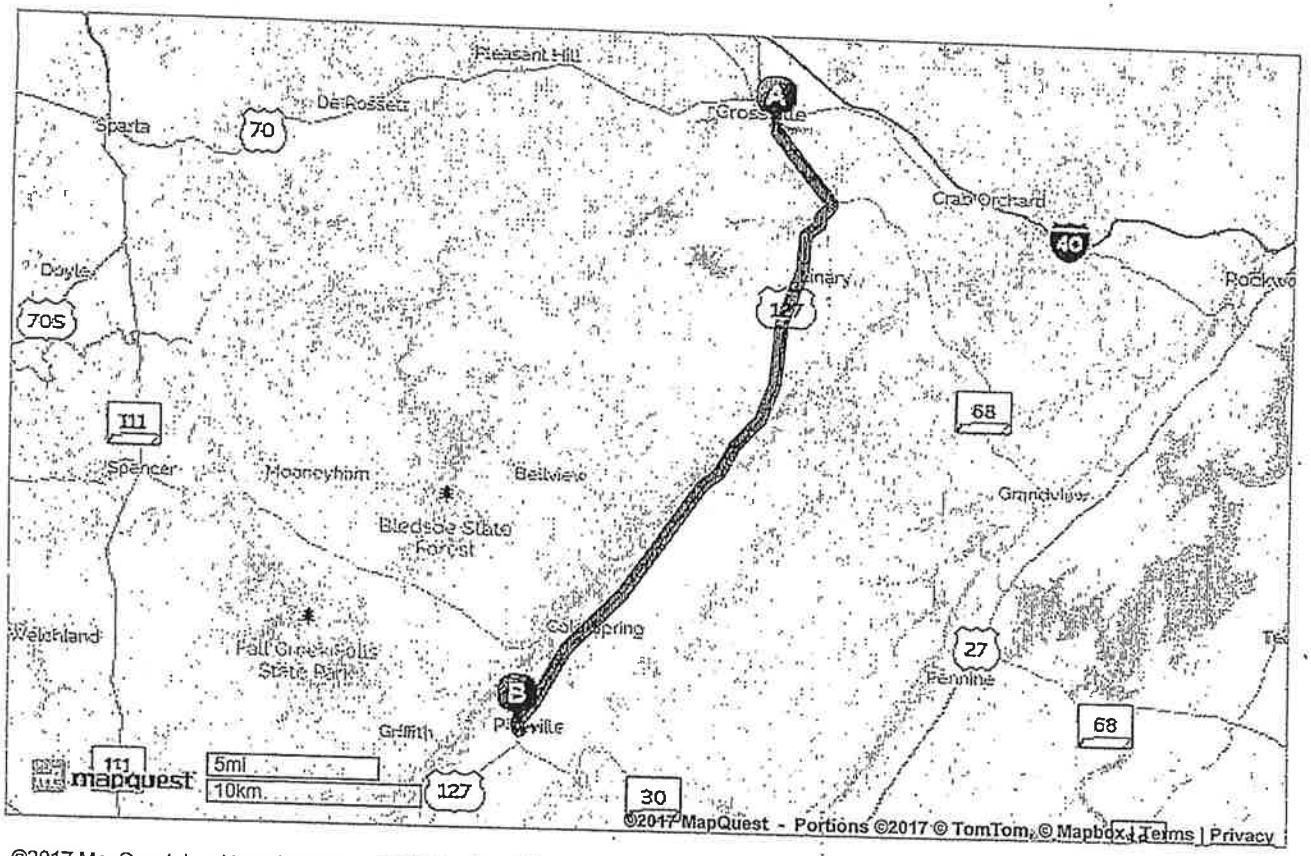
2. Turn **slight right** onto **Highway 127 S / US-127 S / TN-28.** Continue to follow **US-127 S / TN-28.** Map — **25.0 Mi** *28.3 Mi Total*
US-127 S is 0.1 miles past Old Homestead Hwy

3. **[463 - 463] US 127 BYP.** Map
Your destination is 0.3 miles past Sequatchie Rd
If you reach Main St you've gone about 0.3 miles too far

[463 - 463] US 127 Byp, Pikeville, TN 37367 553 US 127 Bypass

Proposed Site for Provider Based ED

Total Travel Estimate: **28.28 miles - about 34 minutes**



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Board for Licensing Health Care Facilities

State of Tennessee

0000000005

No. of Beds 0025

DEPARTMENT OF HEALTH

This is to certify, that a license is hereby granted by the State Department of Health to

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY, ERLANGER *to conduct and maintain a*

Hospital ERLANGER BLEDSOE

Located at 71 WHEELERTOWN AVENUE, PIKEVILLE

County of BLEDSOE *, Tennessee.*

This license shall expire MAY 21 *,* 2017 *, and is subject to the provisions of Chapter 11, Tennessee Code Annotated. This license shall not be assignable or transferable, and shall be subject to revocation at any time by the State Department of Health, for failure to comply with the laws of the State of Tennessee or the rules and regulations of the State Department of Health issued thereunder.*

In Witness Whereof, we have hereunto set our hand and seal of the State this 5TH *day of* MAY *,* 2016 *.*

In the Distinct Category(ies) of: CRITICAL ACCESS HOSPITAL
PEDIATRIC BASIC HOSPITAL

By Vincent J. Davis, MPH
DIRECTOR, DIVISION OF HEALTH CARE FACILITIES

By John J. Dreyzehner MD
COMMISSIONER

Description	Section / Item
Secretary Of State Acknowledgement	A-4
Articles Of Organization	A-4

State of Tennessee

EHS Enabling Legislation

Department of State

To all to whom these Presents shall come, Greeting:

I **Gentry Crowell**, Secretary of State of the State of Tennessee, do hereby certify that the annexed is a true copy of

PRIVATE CHAPTER NO. 125

SENATE BILL NO. 1499

PRIVATE ACTS OF 1977

the original of which is now on file and a matter of record in this office.

In Testimony Thereof, I have hereunto subscribed my Official Signature and by order of the Governor affixed the Great Seal of the State of Tennessee at the Department in the City of Nashville, this 13th day of June A.D. 19 77

Gentry Crowell

Secretary of State

PRIVATE CHAPTER NO 125

SENATE BILL NO. 1499

By Albright, Ortwein

Substituted for: House Bill No. 1514

By Robinson (Hamilton)

AN ACT To amend Chapter 297 of the 1976 Private Acts of Tennessee entitled "AN ACT To create a Governmental Hospital Authority to own and operate Baroness Erlanger Hospital, T. C. Thompson Children's Hospital and other related facilities and provide for the establishment and organization of a Board of Trustees for the operation thereof," relative to the Board of Trustees of said Hospital Authority and the powers and duties thereof, to the issuance of bonds and other obligations by the authority and the securing thereof, to the Financial Review Committee with respect to the authority and the duties and powers thereof, and to other provisions with respect to the duties and obligations of the authority, and validating and reenacting said Chapter No. 297 and ratifying all acts of the Board of Trustees of the authority.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE:

SECTION 1. Chapter 297 of the Private Acts of 1976 is amended by amending Section 1 thereof to read as follows:

"SECTION 1. A governmental Hospital Authority to be known as the Chattanooga-Hamilton County Hospital Authority, is hereby created and established for and on behalf of Hamilton County, Tennessee, for the purpose of performing a governmental function by operating Baroness Erlanger Hospital and T. C. Thompson Children's Hospital and such other similar or associated hospitals and existing health centers deemed appropriate to be operated by said authority as sole operator for the purpose of providing health care facilities and programs for the residents of Hamilton County, Tennessee."

SECTION 2. Chapter 297 of the Private Acts of 1976 is amended by deleting the first paragraph of Section 2 thereof and by substituting for such paragraph two new paragraphs to read as follows:

"SECTION 2. The Hospital Authority shall be operated upon the tracts and parcels of real property owned jointly by Hamilton County and the City of Chattanooga, Tennessee, and on which are situated the Baroness Erlanger Hospital and the T. C. Thompson Children's Hospital or upon any other real property acquired by the authority through gift and purchase. The city and the county are authorized and directed to convey and assign all real property constituting the Baroness Erlanger Hospital and the T. C. Thompson Children's Hospital to the authority. The city and the county are also authorized to convey and assign all personal property constituting the Baroness Erlanger Hospital and the T. C. Thompson Children's Hospital to the authority.

"In the event the authority shall at any time cease to exist as the operator of Baroness Erlanger Hospital, T. C. Thompson Children's Hospital and such other similar or associated hospitals and existing health centers deemed appropriate to be operated by the authority as sole operator, the real estate which was owned on August 5, 1976, by the county and the city and conveyed to the authority by the county and the city, shall revert in fee simple to the county, subject to such encumbrances as may be on said property at the time of reversion; provided, however, that the city shall have an option to require transfer to it of the title to the same proportion of such real estate as was owned by the city on such date, subject to such encumbrances on that portion of the real estate.

"If the authority shall at any time cease to use any such parcel or parcels of said real estate for hospital or related purposes for a period of two (2) years, then the county and the city shall have the option to require transfer to them of title to such parcel or parcels in fee simple, subject to such encumbrances as may be on said property at the time of such transfer of title, in the same proportion as such parcel or parcels were previously owned by the county and the city. In the event that either the county or the city shall elect not to exercise its option with respect to any such parcel or parcels of real estate, then the other of them shall have the option to require transfer to it of the entire parcel or parcels of real estate in question. In the event that neither the county nor the city decides that they wish to exercise said option, then the authority shall have the right to dispose of such property in whatever manner it deems appropriate."

SECTION 3. Chapter 297 of the Private Acts of 1976 is amended by amending Section 3 thereof to read as follows:

"SECTION 3. Said Hospital Authority shall be operated and controlled by a Board of Trustees consisting of eleven (11) members who shall serve without compensation but who shall be indemnified by the authority for any liability they might incur while acting in such capacity other than from culpable negligence. The original members of the Board of Trustees and their respective terms of office are declared to be those

individuals whose names are set out below, and upon expiration of such terms the members of the Board of Trustees shall be appointed by the county judge of the county, the mayor of the city, the chancellors of the chancery courts, and the legislative delegation for four (4) year terms as provided in the next succeeding paragraph hereof. The following are confirmed as the original members of the Board of Trustees and shall hold office for terms ending as follows (or until their successors are appointed):

Name of Trustee	Successor to be Appointed by	Term of Office Expires
David P. McCallie, M.D.	Mayor	11-1-80
Mrs. Vi Ketchersid	County Judge	11-1-80
Stan Guthrie	Chancellors	11-1-80
Harry W. McKaldin, Jr.	Mayor	11-1-79
Sebert Brewer, Jr.	County Judge	11-1-79
Don J. Russell, M.D.	Mayor and County Judge (with approval of medical society)	11-1-79
J. E. Lawrence	Mayor	11-1-78
John C. Cantrell	County Judge	11-1-78
Claude Ramsey	Legislative Delegation	11-1-78
Charles Griffin	Mayor	11-1-77
Forrest Cate	County Judge	11-1-77

"The method of appointment of the members of the Board of Trustees after the expiration of the terms of the original members of such board shall be as follows: The mayor of the city shall appoint four (4) trustees, with the approval of a majority of the members of the Board of Commissioners. The county judge of the county shall appoint four (4) trustees, with the approval of a majority of the members of the county council. Said mayor and county judge shall jointly appoint one (1) trustee with the approval of the president of the Chattanooga-Hamilton County Medical Society, Inc., acting with the approval of a majority of the House of Delegates of said society, and with the approval of a majority of the members, respectively, of the Board of Commissioners and of the county council. The chancellors of chancery court shall jointly appoint one (1) trustee. The legislative delegation shall by a majority vote appoint one (1) trustee.

"Upon the expiration of the term of office of any trustee, his successor shall be appointed for a term of four (4) years by the authority appointing the trustee whose term has expired. The original trustees, for all purposes of this section, shall be considered to have been appointed by the mayor, the county judge, the chancellors and/or the legislative delegation as indicated in the above tabulation.

"All such appointments to the Board of Trustees as provided herein shall be made without regard to religious preference, race, sex or national origin, and in the making of appointments due consideration shall be given to making said Board of Trustees representative, as nearly as may be practicable, of all residents of the city and county, including the various racial groups therein.

"Any member so appointed to the Board of Trustees may, for reasonable cause, be removed from his or her office in the same manner and by the same authority as such member was appointed to the office; provided that such removal shall be preceded by a full hearing and adequate notice of such hearing. 'Reasonable cause' shall include, but shall not be limited to, misconduct in office, failure to perform duties prescribed by this act or other applicable law, or failure to diligently pursue the objectives for which the authority was created.

"Vacancies on the Board of Trustees caused by any reason whatsoever, shall be filled by appointment of the authority who appointed the trustee vacating the office, but without the necessity of approval otherwise herein required. A trustee so appointed shall hold office for the remainder of the term of the trustee vacating the office.

"A member of the Board of Trustees may serve as such trustee for not more than eight (8) consecutive years, excluding any previous service as a member of the Board of Trustees of Baroness Erlanger Hospital and/or T. C. Thompson Children's Hospital."

The occupancy of their respective offices by the present members of the Board of Trustees (being those individuals enumerated in amended Section 3 above) is hereby ratified and confirmed.

SECTION 4. Chapter 297 of the Private Acts of 1976 is amended by repealing Section 4 thereof and substituting therefor a new Section 4 to read as follows:

"SECTION 4. Whenever used in this act, unless a different meaning clearly appears from the context, the following terms whether used in the singular or the plural shall be given the following respective interpretations:

'Authority' or 'Hospital Authority' means the Chattanooga-Hamilton County Hospital Authority as created by this act.

'Board of Commissioners' means the Board of Commissioners of the city.

'Board of Trustees' means the Board of Trustees of the authority as provided for in this act.

'Bonds' means bonds of the authority authorized to be issued by this act. 'Advance refunding bonds' means bonds issued for the purpose of refunding outstanding bonds which will neither mature by their terms nor be subject to and called for redemption within a period of 30 days following the date of issuance of said advance refunding bonds.

'Chancellors' means the Chancellors of the Chancery Courts of Hamilton County, Tennessee.

'Chief Executive Officer' means, as the context requires, the president of the authority, the mayor of the city, and the county judge of the county.

'City' means the City of Chattanooga, Tennessee.

'County' or 'Hamilton County' means Hamilton County, Tennessee.

'County Council' means the county council of the county.

'County Judge' means the county judge or such other chief executive officer of the county as may be created by subsequent law.

'Financial Review Committee' means the Financial Review Committee provided for in this act.

'Hamilton County Sales Tax Agreement' means the agreement between the city and the county, dated March 23, 1966.

'Legislative Delegation' means the Hamilton County delegation to the Legislature of Tennessee, being the Senators and Representatives elected from those districts lying in whole or in part in the county.

'Mayor' means the mayor of the city or such other chief executive officer of the city as may be created by subsequent law.

'Notes' means notes of the authority authorized to be issued by this act. 'Short-Term Notes' means nonrenewable notes having a term no longer than three (3) years. 'Long-Term Notes' means renewable short-term notes and notes having a term longer than three (3) years.

'Project' or 'Facility' shall mean any one or combination of buildings, structures or facilities owned by the authority, including the site therefor and all machinery and equipment therein or necessary to the operation thereof, and shall include expressly the Baroness Erlanger Hospital and the T. C. Thompson Children's Hospital."

SECTION 5. Chapter 297 of the Private Acts of 1976 is amended by repealing Section 5 thereof and by renumbering Section 6 thereof as Section 5.

SECTION 6. Chapter 297 of the Private Acts of 1976 is amended by renumbering Section 7 thereof as Section 6 and by amending said renumbered Section 6 to read as follows:

"SECTION 6. The Board of Trustees shall be vested with the full, absolute and complete authority and responsibility for the complete operation, management, conduct and control of the business and affairs of the Hospital Authority herein created. This authority and responsibility shall include, but shall not be limited to, the establishment, promulgation and enforcement of the rules, regulations and policies of the authority, the granting of or the refusal of medical staff privileges, the upkeep and maintenance of all property, the administration of all financial affairs of the authority, including pledging of assets for expansion and improvement of facilities and any other necessary financial needs of the authority. The authority shall have, but shall not be limited to, the following powers together with all powers incidental thereto or necessary for the performance of those hereinafter stated: (1) to sue and be sued and to prosecute and defend, at law or in equity, in any court having jurisdiction of the subject matter and of the parties; (2) to have and use an official seal and to alter the same at pleasure; (3) to acquire, whether by purchase, construction, exchange, gift, lease, or otherwise, and to improve, maintain, extend, equip and furnish hospital and related facilities within the corporate limits of Hamilton County, including expressly, but without limitation, professional office buildings, ancillary residence facilities and data processing facilities, and including all real and personal properties which the Board of Trustees may deem necessary in connection therewith and regardless of whether or not any such facilities shall then be in existence; (4) to execute all contracts, agreements and other instruments with any person, partnership, corporation, federal, state, county or municipal government, including but not limited to the issuance of bonds, mortgages, notes and other forms of indebtedness, and contracts for the

management of hospital and clinic facilities (but no such management contract shall exceed two (2) years in length); (5) subject to the provisions of Section 2 hereof, to sell, lease, exchange, donate, and convey any or all of its properties whenever its Board of Trustees shall find any such action to be in furtherance of the purposes for which the authority was created; (6) to borrow money and issue its bonds and notes for the purpose of carrying out any of its powers; (7) as security for the payment of the principal of and interest on any bonds and notes so issued and any agreements made in connection therewith, to mortgage and pledge any or all of its facilities or any part or parts thereof, whether then owned or thereafter acquired, and to pledge all or any portion of the revenues and receipts therefrom or from any thereof; (8) to employ and pay compensation to such employees, and agents, including attorneys, accountants, engineers, architects and financial consultants, as the Board of Trustees shall deem necessary for the business of the authority; and (9) to establish bylaws and make all rules and regulations not inconsistent with the provisions of this act, deemed expedient for the management of the authority's affairs.

"No contract, except for personal services or lease obligations, involving an expenditure exceeding one thousand dollars ($1,000.00), nor several proposed contracts aggregating more than one thousand dollars ($1,000.00), for the same general work or kind of work, supplies or equipment, shall be awarded until after at least one advertisement in some newspaper of general circulation published in the county at least ten (10) days before such contract is awarded or supplies purchased, and then only to the lowest and best bidder. Said bids shall be sealed and filed with the president or his designee, who shall publicly open them on the date specified and not prior thereto. No entire project or purchase involving the same type of work, equipment or supplies shall be split into small contracts. Nothing in this paragraph shall be construed to apply to the issuance of bonds or notes by the authority.

"Purchases and contracts involving an expenditure of not more than one thousand dollars ($1,000.00) shall be made in conformity with the rules and regulations adopted by the Board of Trustees.

"The authority shall prescribe reasonable rates, fees and charges for the services and facilities furnished by the authority and shall revise such rates, fees and charges from time to time so as to produce revenue at least sufficient to pay the principal of and interest on all bonds and other obligations issued by the authority, including reserves therefor, and to pay the cost of maintaining and operating its facilities."

SECTION 7. Chapter 297 of the Private Acts of 1976 is amended by the addition of a new Section 7 thereto to read as follows:

"SECTION 7. Except as herein otherwise expressly provided, all bonds issued by the authority shall be payable solely out of and secured by a pledge of all or any portion of the revenues and receipts derived from the authority's projects or of any thereof as may be designated in the proceedings of the Board of Trustees under which such obligations shall be authorized to be issued and may be secured by a mortgage or deed of trust covering all or any part of the projects from which the revenues and receipts so pledged may be derived, as such projects may thereafter be extended or enlarged; provided, that notes issued in anticipation of the issuance of bonds may be retired out of the proceeds of such bonds. The proceedings under which the bonds are authorized and any such mortgage or deed of trust may contain agreements and provisions respecting the maintenance of the facilities covered thereby, the establishment of rates, fees and charges for the services and facilities furnished by the authority, the creation and maintenance of special funds from the revenues of the authority and the rights and remedies available in the event of default, all as the Board of Trustees shall determine advisable and not in conflict with the provisions of this act. Each pledge, mortgage and deed of trust made for the benefit or security of any bonds of the authority shall continue in effect until the principal of and interest on the bonds for the benefit of which the same were made shall have been fully paid. In the event of default in such payment or in any agreement of the authority made as a part of the contract under which the bonds were issued, whether contained in the proceedings authorizing the bonds or in any mortgage or deed of trust executed as security therefor, such payment or agreement may be enforced by suit, mandamus, the appointing of a receiver in equity or by foreclosure of any such mortgage or deed of trust, or any one or more of such remedies.

"Such bonds may be executed and delivered by the authority at any time and from time to time, may be in such form and denominations and of such terms and maturities, may be subject to redemption prior to maturity either with or without premium, may be in fully registered form or in bearer form registrable either as to principal or interest or both, may bear such conversion privileges and be payable in such installments and at such time or times not exceeding forty (40) years from the date thereof, may be payable at such place or places whether within or without the State of Tennessee, may bear interest at such rate or rates payable at such time or times and at such place or places and evidenced in such manner, may be executed by such officers of the authority, and may contain such provisions not inconsistent herewith, all as shall be provided in the proceedings of the Board of Trustees whereunder the bonds shall be authorized to be issued. Any bonds of the authority may be sold at public or private sale for such price and in such manner and from time to time as may be determined by the Board of Trustees to be most advantageous, and the authority may pay all expenses, premiums and commissions which its Board of Trustees may deem necessary or advantageous in connection with the issuance thereof.

"Proceeds of bonds and notes issued by the authority may be used for the purpose of constructing, acquiring, reconstructing, improving, equipping, furnishing, bettering, or extending any project or projects, including the payment of interest on the bonds during construction of any such project and for six (6) months after the estimated date of completion, the payment of engineering, fiscal, architectural, bond insurance and legal expenses incurred in connection with such project and the issuance of the bonds, and the establishment of a reasonable reserve fund for the payment of principal of and interest on such bonds in the event of a deficiency in the revenues and receipts available for such payment. Any bonds and long-term notes shall, except as herein otherwise expressly provided, be issued for capital expenditures and none of the proceeds shall be used for operational expenditures or routine maintenance needs.

"Except as hereinafter in this paragraph provided, the amount of bonds and notes of the authority which may be issued at any time, together with any bonds and notes of the authority then outstanding, shall not exceed an amount equal to ninety percent (90%) of the sum of the value of the existing plant, property and equipment of the authority at the time of issuance of such bonds plus the contract price of the improvements to be constructed, acquired and installed from the proceeds of such bonds, less (1) the principal amount outstanding, if any, of such bonds as may have been issued by the county for the expansion, remodeling, repairing, equipping, and/or construction of all or any part of Baroness Erlanger Hospital and/or T. C. Thompson Children's Hospital, and (2) the amount, if any, of any unfunded portion of the employees' pension fund of Baroness Erlanger Hospital and/or T. C. Thompson Children's Hospital. Plant, property and equipment for the purpose of the preceding sentence shall be stated at market value as determined by a professional appraiser to be selected by the Financial Review Committee. A certificate of such professional appraiser with respect to the value of such plant, property and equipment, a certificate of the county judge of the county with respect to the amount of outstanding bonds of the county for such hospital purposes, and a certificate of the chief executive officer of the authority with respect to the unfunded portion of such employees' pension fund shall each be conclusive for the purposes of determining the amount of bonds and notes which may be issued pursuant to this paragraph. The limitations expressed in this paragraph shall not apply to the issuance of advance refunding bonds.

"The Board of Trustees shall direct in the proceedings authorizing the issuance of any bonds of the authority that there shall be set aside and appropriated as a reserve for the payment of principal and interest on said bonds an amount not less than the required amount of principal and interest on the bonds falling due during the 12 month period next succeeding the date of issuance of the bonds.

"Any bonds or notes of the authority at any time outstanding may at any time and from time to time be refunded by the authority by the issuance of its refunding bonds in such amount as the Board of Trustees may deem necessary, but not exceeding the sum of the following: (a) the principal amount of the obligations being refinanced; (b) applicable redemption premiums thereon; (c) unpaid interest on such obligations to the date of delivery or exchange of the refunding bonds; (d) in the event the proceeds from the sale of the refunding bonds are to be deposited in trust

as hereinafter provided, interest to accrue on such obligations from the date of delivery to the first or any subsequent available redemption date or dates selected, in its discretion, by the Board of Trustees, or to the date or dates of maturity, whichever shall be determined by the Board of Trustees to be most advantageous or necessary to the authority; and (e) expenses, premiums and commissions of the authority, including bond discount, deemed by the Board of Trustees to be necessary for the issuance of the refunding bonds. A determination by the Board of Trustees that any refinancing is advantageous or necessary to the authority, or that any of the amounts provided in the preceding sentence should be included in such refinancing, or that any of the obligations to be refinanced should be called for redemption on the first or any subsequent available redemption date or permitted to remain outstanding until their respective dates of maturity, shall be conclusive.

"Any such refunding may be effected either by the exchange of the refunding bonds for the obligations to be refunded thereby with the consent of the holders of the obligations so to be refunded, or by sale of the refunding bonds and the application of the proceeds thereof to the payment of the obligations to be refunded thereby, in the manner herein provided.

"Prior to the issuance of the refunding bonds, the Board of Trustees shall cause notice of its intention to issue the refunding bonds, identifying the obligations proposed to be refunded and setting forth the estimated date of delivery of the refunding bonds, to be given to the holders of the outstanding obligations by publication of an appropriate notice one (1) time each in a newspaper having general circulation in Hamilton County and in a financial newspaper published in New York, New York, and having national circulation. As soon as practicable after the delivery of the refunding bonds, and whether or not any of the obligations to be refunded are to be called for redemption, the Board of Trustees shall cause notice of the issuance of the refunding bonds to be given in the manner provided in the preceding sentence.

"If any of the obligations to be refunded are to be called for redemption, the Board of Trustees shall cause notice of redemption to be given in the manner required by the proceedings authorizing such outstanding obligations.

"The principal proceeds from the sale of any refunding bonds shall be applied only as follows: either,

(a) to the immediate payment and retirement of the obligations being refunded; or

(b) to the extent not required for the immediate payment of the obligations being refunded then such proceeds shall be deposited in trust to provide for the payment and retirement of the obligations being refunded and to pay any expenses incurred in connection with such refunding, but provision may be made for the pledging and disposition of any surplus, including, without limitation, provision for the pledging of any such surplus to the payment of the principal of and interest on any issue or series of refunding bonds. Money in any such trust fund may be invested in direct obligations of, or obligations the timely payment of principal of and interest on which are fully guaranteed by the United States government, or obligations of any agency or instrumentality of the United States government, or in certificates of deposit issued by a bank or trust company located in the State of Tennessee if such certificates shall be secured by a pledge of any of said obligations having an aggregate market value, exclusive of accrued interest, equal at least to the principal amount of the certificates so secured. Nothing herein shall be construed as a limitation on the duration of any deposit in trust for the retirement of obligations being refunded but which shall not have matured and which shall not be presently redeemable or, if presently redeemable, shall not have been called for redemption."

SECTION 8. Chapter 297 of the Private Acts of 1976 is amended by adding at the end of the third paragraph of Section 9 thereof a new sentence to read as follows:

"A certificate by such actuary with respect to the currency of such required pension fund contributions shall be conclusive for the purpose of determining compliance by the authority with the provisions of this section."

SECTION 9. Chapter 297 of the Private Acts of 1976 is amended by adding a new sentence to the end of Section 10 thereof, said new sentence to read as follows:

"Notwithstanding the foregoing provisions of this section, nothing herein contained shall be construed as limiting any expenditures made by the authority for the payment of principal of and in-

terest on bonds or other obligations issued by the authority."

SECTION 10. Chapter 297 of the Private Acts of 1976 is amended by amending Section 11 thereof to read as follows:

"SECTION 11. A Financial Review Committee shall be created consisting of seven (7) members, one (1) of whom shall be Black. The membership shall be composed of the auditor of the city, the auditor of the county, and five (5) other persons who are residents of Hamilton County, three (3) of whom shall be appointed by the county judge with the approval of a majority vote of the county council and two (2) of whom shall be appointed by the mayor with the approval of a majority vote of the Board of Commissioners; provided, that if any members of such committee shall not have been so appointed within 90 days from the date of approval of this act by the county council of the county, such members shall thereupon be appointed by a majority vote of the members of the legislative delegation.

"The members of the committee shall serve without compensation. They shall be indemnified by the authority for any liability they might incur while acting in such capacity other than for culpable negligence. With the exception of the city auditor and the county auditor, the remaining members shall be initially appointed to staggered terms as follows: two (2) for terms of three (3) years; one (1) to be so appointed by the county judge and one (1) to be so appointed by the mayor; two (2) for terms of two (2) years; one (1) to be so appointed by the county judge and one (1) to be so appointed by the mayor; and one (1) to be so appointed by the county judge for a term of one (1) year. Thereafter, each appointee shall serve for a period of three (3) years and such appointee's successor shall be appointed in the same manner and by the same official who appointed the person whose term has expired. Any person appointed to fill a vacancy for any reason other than expiration of term of office shall be appointed to hold office for the remainder of the term of the member vacating the office. Said vacancy shall be filled in the same manner as the original appointment.

"The Financial Review Committee shall review the proposed issuance of bonds or long-term notes, to consider if the issuance of said obligations is within the fiscal ability of the authority based upon the appropriate preceding annual audits, monthly operating statements subsequent to the closing date of the most recent audit period included in the most recent annual audit, additional revenue projections reasonably anticipated as a result of the proposed capital expenditure (taking into account any probable revenue loss during replacement, if any), and any other data reasonably bearing upon the fiscal soundness of the issuance of such bonds or long-term notes. At such time or times as the Board of Trustees of the authority shall desire to authorize the issuance of bonds or long-term notes it shall first submit the proposal to issue such obligations to the Financial Review Committee, which committee shall file its advisory report thereon with the Board of Trustees within sixty (60) days after the receipt of such proposal. Upon the filing of such report with the Board of Trustees, or after sixty (60) days following the date of submission of such proposal to such committee, whichever is earlier, the Board of Trustees may proceed with the issuance of such bonds or long-term notes; provided, that the submission to the Financial Review Committee herein required shall not be necessary at any time if such committee has not then been validly appointed and is not in existence.

"The Financial Review Committee shall annually review the proposed budget prepared by the Board of Trustees and shall file its report thereon with the Board of Trustees and the County Council.

"All reports of the Financial Review Committee shall be made to the County Council of the county, the Board of Commissioners of the city and the Board of Trustees of the authority, and shall be considered by the respective governing bodies with which such reports are filed."

SECTION 11. Chapter 297 of the Private Acts of 1976 is amended by adding six new sections thereto to be numbered 17 to 22, inclusive, and to read as follows:

SECTION 17. Notwithstanding any other provision of this act the county shall have the option to purchase all real and personal property of the authority if either of the following shall have occurred:

(a) The authority shall have defaulted in the payment when due of principal or interest on any of its bonds or long-term notes then outstanding; or

(b) The authority shall have filed written notice with the county judge that it is the expectation of the Board of Trustees of the authority that the authority will so default in the payment of principal of or interest on any of its bonds or long-term notes then outstanding on the next succeeding date on which such principal or interest shall fall due.

"The purchase price in the event that the county shall elect to exercise any such option shall be an amount equal to the principal of and interest to maturity or the first call date, if any, whichever shall be earlier, together with any applicable premiums, on all bonds and long-term notes of the authority then outstanding, and the amount so received by the authority from the county shall be impressed with a trust in favor of the holders of such bonds and long-term notes and shall be used for the payment of principal of and interest and redemption premiums thereon and for no other purpose.

"Such purchase option of the county shall be superior to any right of foreclosure herein permitted, and any mortgage hereinafter granted by the authority shall recognize and be subject to such option to purchase.

"SECTION 18. The authority is hereby declared to be a public instrumentality acting on behalf of the county, but without the power of eminent domain, and in that connection to be fulfilling a public function, and the authority and all properties at any time owned by it and the income therefrom and all bonds or notes issued by the authority and the income therefrom shall be exempt from all taxation in the State of Tennessee. Also, for purposes of the Securities Law of 1955, compiled as Sections 48-1601 through 48-1648, Tennessee Code Annotated, and any amendment thereto or substitution therefor, bonds or notes issued by the authority shall be deemed to be securites issued by a public subdivision of the State of Tennessee.

"SECTION 19. The authority shall be a public nonprofit corporation and no part of its net earnings remaining after payment of its expenses shall inure to the benefit of any individual, firm or corporation.

"SECTION 20. Neither the county nor the city shall in any event be liable for the payment of the principal of or interest on any bonds or notes of the authority or for the performance of any pledge, mortgage, obligation or agreement of any kind whatsoever which may be undertaken by the authority, and none of the bonds or notes of the authority or any of its agreements or obligations shall be construed to constitute an indebtedness of either the county or the city within the meaning of any constitutional or statutory provision whatsoever.

"SECTION 21. Nothing contained in this act shall be construed to impair any contract rights which may have vested prior to the enactment of this act.

"SECTION 22. It is hereby declared that the purpose of this act is to facilitate adequate hospital facilities for the residents of the county. Bonds may be issued under this act without regard to the requirements, restrictions or procedural provisions contained in any other law."

SECTION 12. Chapter 297 of the Private Acts of 1976 is hereby in all respects ratified and confirmed and said act as herein amended is hereby reenacted by this General Assembly.

SECTION 13. If any provision of this act or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect any other provisions or application of the act which can be given effect without the invalid provision or application, and to that end the provisions of this act are declared to be severable.

SECTION 14. This act shall have no effect unless it is approved by a two-thirds vote of the County Council of Hamilton County. Its approval or nonapproval shall be proclaimed by the presiding officer of the county council and certified by such officer to the Secretary of State.

SECTION 15. For the purpose of approving this act as provided in Section 14 it shall take effect on becoming law, the public welfare requiring it, but for all other purposes it shall be effective only upon being approved as provided in Section 14.

SENATE BILL NO. 1499

PASSED: May 19, 1977

SPEAKER OF THE SENATE

SPEAKER OF THE HOUSE OF REPRESENTATIVES

APPROVED this 28th day of May 1977

GOVERNOR

Description	Section / Item
Option To Lease	A-6-A

INTERLOCAL OPTION TO LEASE REAL ESTATE

This Option Agreement ("Agreement") is made and entered into as of the latest of the signature dates ("Effective Date") by and between Sequatchie County, Tennessee, (Lessor) and the Chattanooga-Hamilton County Hospital Authority d/b/a Erlanger Health System, a Tennessee governmental entity (Lessee), pursuant to the Tennessee Interlocal Corporation Act, codified at T.C.A. §§ 29-20-101 *et seq.*

WITNESSETH:

WHEREAS, Lessor has a purchase option agreement with the owner of a certain real property located in Dunlap, Tennessee, being a tract of land containing 15.95 acres, more or less, located at 17399 Rankin Avenue Dunlap, TN , and more particularly described as Tax Parcel(s) 021.00 and 020.01 (the "Land") at the Sequatchie County Tax Assessor's office upon which Lessor will construct a building)s) for operation of a critical access hospital (the "Property"); and

WHEREAS, Lessee desires to secure an exclusive option to lease the Property from Lessor, and Lessor desires to grant such option to Lessee;

NOW, THEREFORE, in consideration of the foregoing, and the mutual covenants and promises herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby covenant and agree as follows:

1. Option to Lease.

(a) In consideration of the sum of Ten Dollars ($10.00) paid to Lessor by Lessee, the receipt and sufficiency of which is hereby acknowledged, Lessor hereby grants to Lessee the exclusive right and option to lease the Property, together with all improvements, easements, and appurtenances thereto.

(b) This option to lease shall become effective as of the Effective Date and shall remain in effect for a period of 12 Months ("Option Term"), after which time this option to lease shall be null and void and of no further legal force and effect.

2. Notice of Exercise of Option.

(a) At any point during the option period, Lessee may give Lessor written notice of its intention to exercise this option to lease, which notice shall be delivered in person or by registered or certified mail as hereinafter prescribed within the Option Term.

(See Amendment) (b) Upon receipt by Lessor of Lessee's notice of intent to exercise the option granted hereunder, Lessor and Lessee shall enter into negotiations to finalize a lease agreement for the Property for a term of ten (10) years with two (2) successive ten (10) year renewal terms.

3. Lessor Representations and Warranties.

(a) During the Option Term, Lessor shall grant no option or other right in the Property or any other right related thereto.

(b) After purchase option is perfected, Lessor shall be the sole owner of, and shall have good and marketable leasehold title to, the Land, and the Land is free and clear of all liens, encumbrances, claims, demands, easements, covenants, restrictions and encroachments of any kind or nature.

(c) Lessor has the full power and authority to enter into and perform its obligations under this Agreement.

4. Commissions and Finder's Fees.

Each of the parties represents that the negotiations relative to this Agreement and the transactions contemplated hereby have been carried on by Lessee directly with Lessor and in such manner as not to give rise to any valid claims against any of the parties hereto for a brokerage commission, finder's fee, or other like payment.

5. Confidentiality

The parties each agree that they will not, without the prior written consent of the other, disclose the existence of this Agreement, the terms hereof, nor the existence or status of negotiations pursuant hereto, except to such of their respective shareholders, directors, officers, managers, employees and agents who have a need to know in order to consummate the transactions contemplated in this Agreement; provided that the foregoing shall not prohibit any disclosure which, in the opinion of the attorneys of either party, is necessary to comply with applicable laws, regulation, subpoena, court order or other legal process. Further, each party

agrees to keep confidential any non-public proprietary information obtained regarding the other in connection with the transaction contemplated hereby.

6. Termination.

Lessee may terminate this Agreement at any time by giving written notice to Lessor. If Lessee fails to provide notice to Lessee of its option during the Option Term, this Agreement shall immediately terminate, unless an extension is otherwise agreed to by the parties. Additionally, this Agreement shall terminate in the event that a lease agreement is entered into between the parties for the Property.

7. Notice.

Any notice required to be given under this Agreement, or which either party desires to give to the other, shall be in writing and shall be deemed given when deposited in the United States mail (registered or certified mail with return receipt requested), postage prepaid, and addressed as follows:

Lessor: Sequatchie County

Dunlap, TN

Lessee: Erlanger Health System
Legal Department
975 East Third Street
Chattanooga TN 37403

8. Binding Effect.

This Agreement shall be binding upon and inure to the benefit of the successors and assigns of Lessor and Lessee.

9. Governing Law.

This Agreement shall be governed by and construed in accordance with the laws of the State of Tennessee.

10. Successors and Assigns; Runs with the Land.

The Property shall be held, conveyed, assigned, hypothecated, encumbered, leased, used and occupied subject to the option provided under this Agreement and the covenants, terms and provisions set forth herein, which such covenants, terms and provisions shall run with the Property and each portion therefo and interest therein, and shall be binding upon and insure to the benefit of the parties and any other person and entity having any interest herein during the ownership thereof, and their respective grantees, heirs, executors, adminstrators, successors and assigns, and all persons claiming under them.

11. Entire Agreement.

This Agreement constitutes the entire agreement between the parties. No representations, warranties, or promises, other than as expressly set out herein, have been made by either party to the other to induce the execution of this Agreement. No waiver or modification of this Agreement shall be effective unless in writing and duly signed by the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

LESSOR:

By: D. Keith Cartwright, Seminole Co. Executive

Printed Name: D. Keith Cartwright, Seminole County Executive

Date: 9/1/17

LESSEE:

By: Stephanie Bryant

Printed Name: Stephanie Boynton, VP/CEO Erlanger Bledsoe

Date: 9/1/17

TO THE
OPTION AGREEMENT

This Amendment to the Option Agreement (the "Amendment") is entered into as of the latest of the signature dates (the "Effective Date") by and between by and between Sequatchie County, Tennessee, (Lessor) and the Chattanooga-Hamilton County Hospital Authority d/b/a Erlanger Health System, a Tennessee governmental entity (Lessee), pursuant to the Tennessee Interlocal Corporation Act, codified at T.C.A. §§ 29-20-101 *et seq*.

WITNESSETH:

WHEREAS, an Option Agreement (the "Agreement") was entered into between the parties effective as of the 1 day of September, 2017 whereby Lessor granted Lessee an exclusive option to lease the Property (as defined in the Agreement); and

WHEREAS, the parties desire to amend the Agreement to provide for the rental amounts of the lease;

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, and for other valuable considerations, the parties agree to modify the Agreement as follows:

1. The following sentence is hereby added at the end of Section 1(a): "The Property will be leased for the operation of a critical access hospital."

2. Section 2(b) of the Agreement is hereby deleted in its entirety and replaced with the following:

   Upon receipt by Lessor of Lessee's notice of intent to exercise the option granted hereunder, Lessor and Lessee shall enter into negotiations to finalize a lease agreement for the Property for a term of ten (10) years with two (2) successive ten (10) year renewal terms at an anticipated rental rate of $146,330 per month based upon a project cost of $32,653,836 amortized over the 30 year term at an interest rate of 3.5%. The rental rate may be adjusted upon completion of the project and finalization of project costs and is subject to independent, third party verification that such rental rates fall within an acceptable range of fair market value.

3. By executing this Amendment, the parties ratify and affirm the Agreement.

REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK; SIGNATURE PAGE FOLLOWS

IN WITNESS WHEREOF, the duly authorized officers of the parties have executed this Amendment to the Agreement as of the date above written.

LESSOR:

BY: D. Keith Cartwright

NAME: D. Keith Cartwright, Scountchie County Executive

DATE: 9-5-2017

LESSEE:

BY: Stephanie Boynt

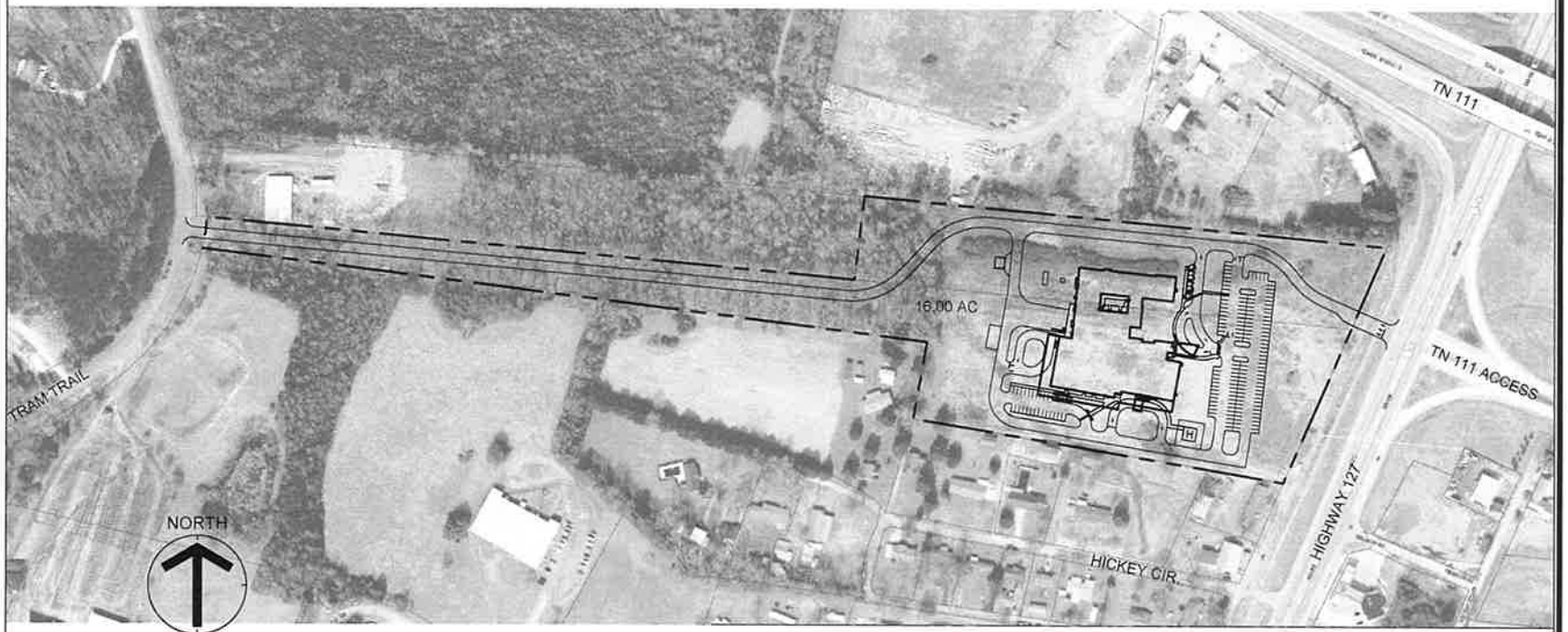
NAME: Stephanie Boynton, VP/CEO Erlanger Bledsoe

DATE: 9/7/17

Description	Section / Item
Erlanger Sequatchie Valley Regional Hospital - Site Plan	A-6-B
Erlanger Sequatchie Valley Regional Hospital - Floor Plans	A-6-B

Drawn By: GRW
Checked By: CHK
Approved By: APR

VICINITY MAP



250 0 250 500
GRAPHIC SCALE

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G S & P

Design Services For The Built Environment

GRESHAM SMITH AND PARTNERS

www.greshamsmith.com

1400 Nashville City Center
511 Union Street
Nashville, TN 37219
615.770.8100

ERLANGER SEQUATCHIE VALLEY REGIONAL HOSPITAL
SEQUATCHIE CAMPUS

US HWY 127 BY-PASS, DUNLAP, TN

NOT FOR CONSTRUCTION

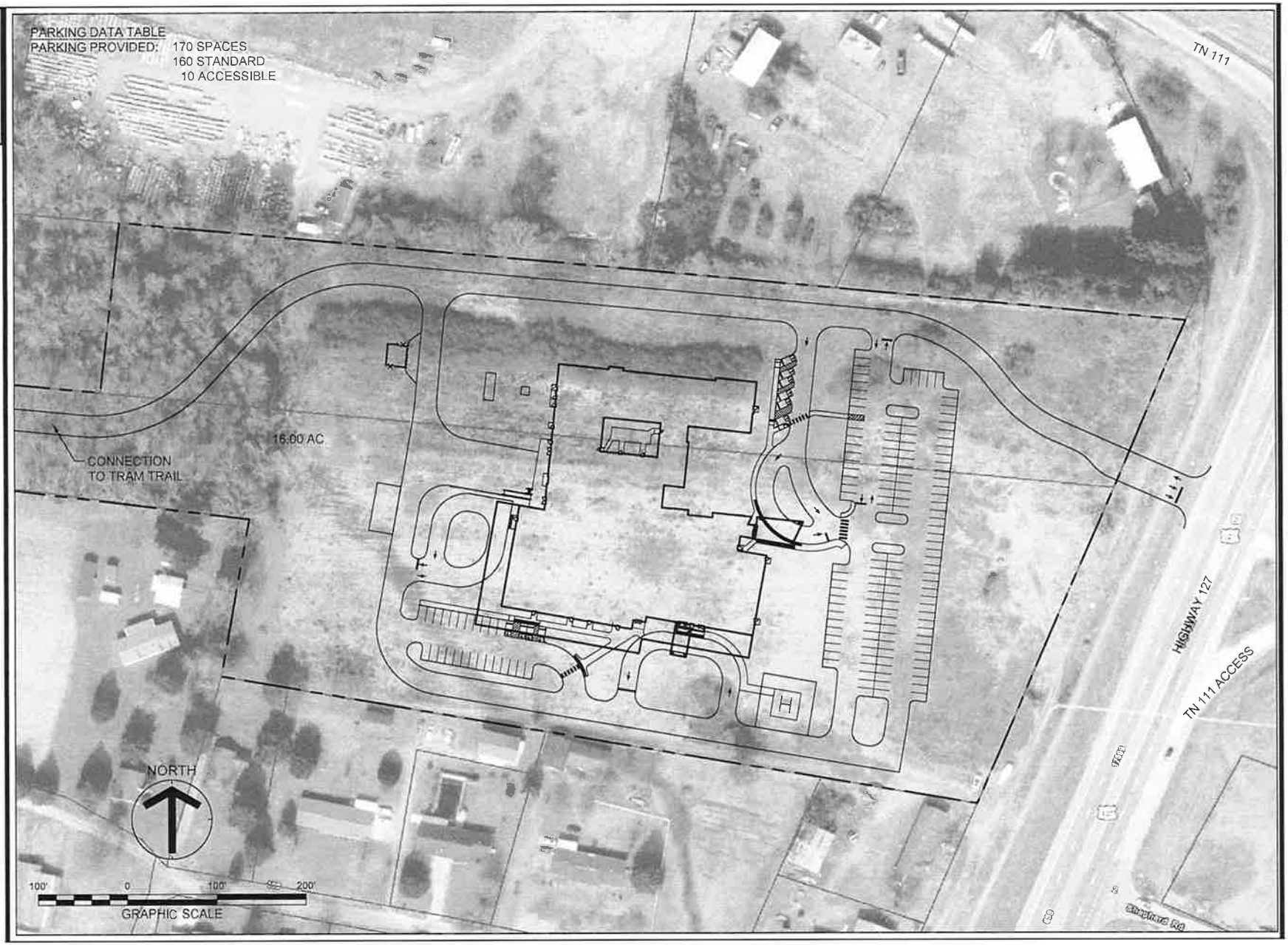
Revision		
No.	Date	Description
#	#######	
#	#######	
#	#######	
#	#######	
#	#######	

OVERALL SITE EXHIBIT

EXH-C1

PROJECT: Project Number
DATE: July 26, 2017

LINE IS 3 INCHES WHEN PRINTED FULL SIZE
FULL SHEET SIZE = 24"X36"



Drawn By: gsw
Checked By: OK
Approved By: AFR

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G S & P

Design Services For The Built Environment

GRESHAM SMITH AND PARTNERS

www.greshamsmith.com

1400 Nashville City Center
511 Union Street
Nashville, TN 37219
615.726.8100

ERLANGER SEQUATCHIE VALLEY REGIONAL HOSPITAL
SEQUATCHIE CAMPUS

US HWY 127 BYPASS, DUNLAP, TN

NOT FOR CONSTRUCTION

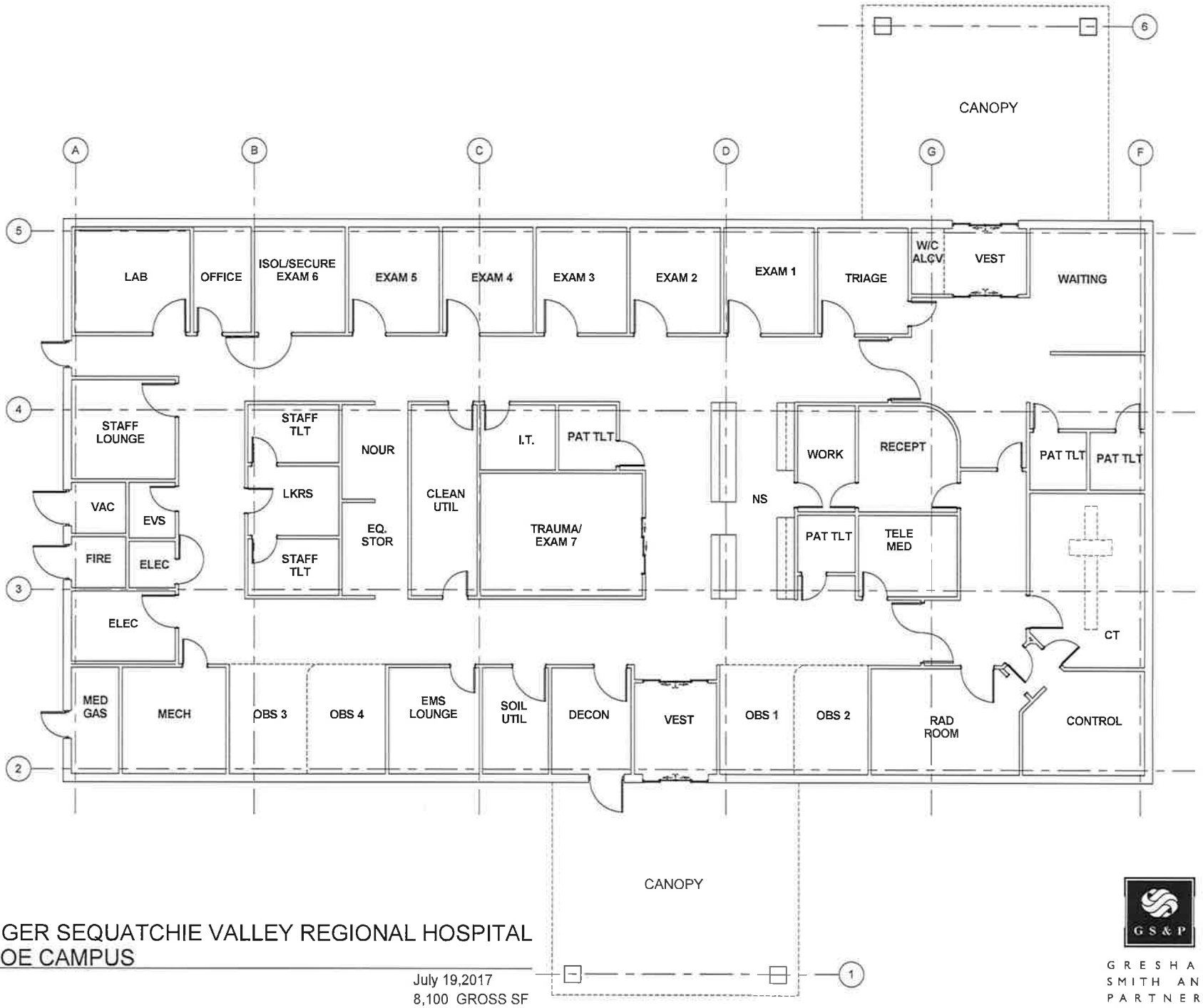
Revision		
No.	Date	Description
#	########	
#	########	
#	########	
#	########	
#	########	

DETAILED SITE EXHIBIT

EXH-C2

PROJECT: Project Number
DATE: July 26, 2017

LINE IS 3 INCHES WHEN PRINTED FULL SIZE
FULL SHEET SIZE = 24"X36"

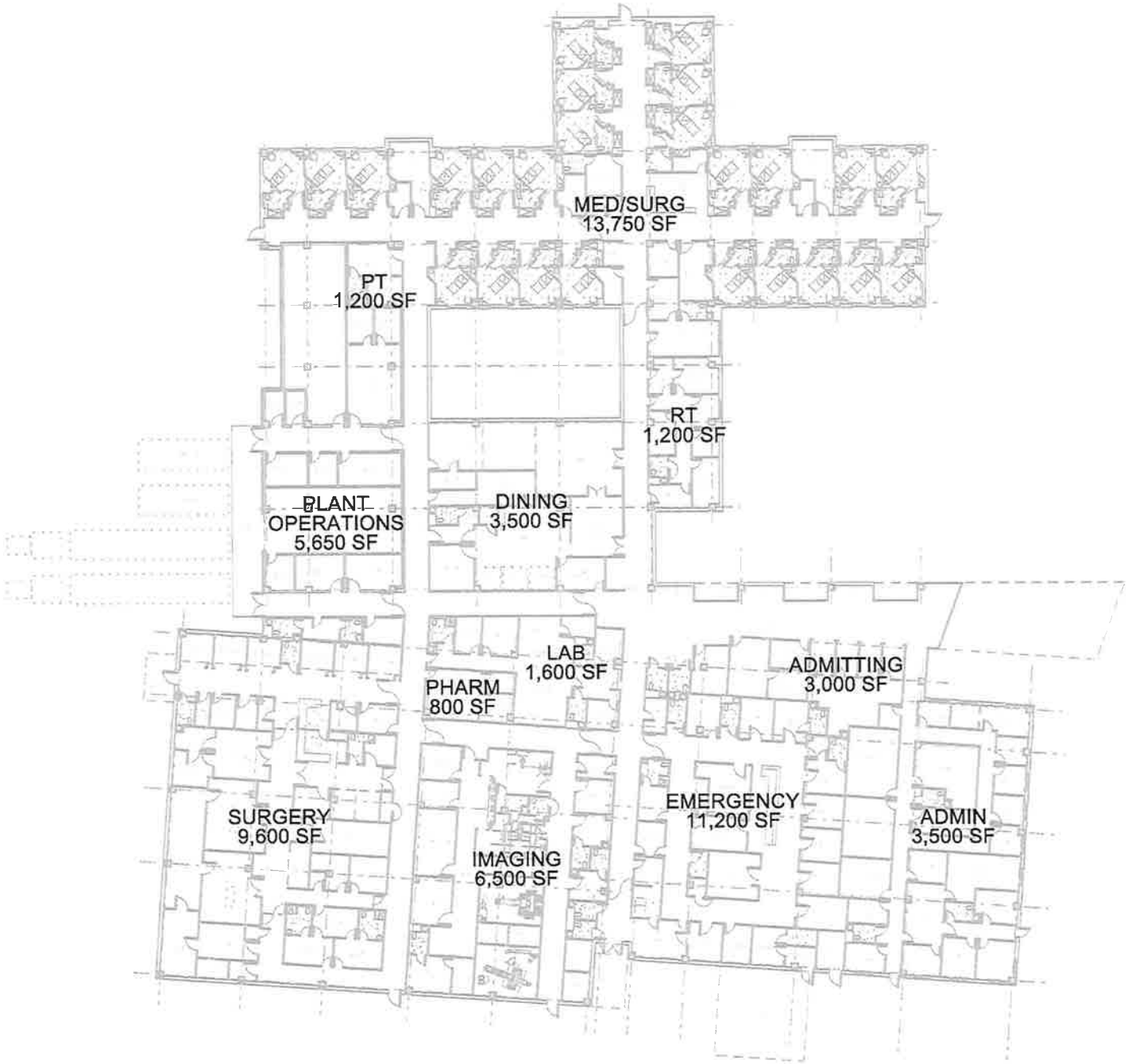


ERLANGER SEQUATCHIE VALLEY REGIONAL HOSPITAL
BLEDSOE CAMPUS

1

July 19,2017
8,100 GROSS SF

GS&P
GRESHAM SMITH AND PARTNERS



1 SEQUATCHIE VALLEY REGIONAL HOSPITAL

July 19 , 2017
61,500 GROSS SF

GRESHAM
SMITH AND
PARTNERS

Description	Section / Item
Erlanger O/P Order Policy	B-MRI
Erlanger MRI Safety Policy	B-MRI
CV - MRI Medical Director	B-MRI

Erlanger Health System
Policy and Procedure

Origination Date: 02/11/09		
Approval:		
Reviewed Date:	Revised Date:	Approval:
4/18/112/2013		
		7/2014

Index Title: Non-EmergentHospitalOutpatient Order Policy
Originating Department: Patient Access
Number: 8316.1035
Description for EHS Intranet: Outpatient Orders

Policy Statement: Erlanger Health System (EHS) requires a complete and valid physician outpatient order prior to non-emergent hospital services being rendered.

Purpose: To establish guidelines outlining the documentation required for all non-emergent outpatient services orders submitted in accordance with payer guidelines. This policy should be used in conjunction with the Non-Covered Services Policy and the Medical Necessity Policy.

Scope: All non-emergent outpatient services provided by an outpatient department of Erlanger Health System.

Exceptions: Exceptions to this policy applicable to Medicare patients include the following services for which Medicare does not require a documented order:

- Screening mammography;
- Pneumococcal pneumonia vaccine (PPV) and its administration;
- Influenza vaccine and its administration.

Definitions:

Authentication: The requirement of a written signature or a computer-secure entry by a unique identifier of a primary author who has approved the entry.

Advance Beneficiary Notice (ABN): An ABN is a written notice given to a Medicare Beneficiary before Part B services are furnished when Erlanger Health System believes that Medicare will not pay for some or all of the services on the basis that they are not reasonable and necessary (i.e., under §1862(a)(1) of the Act) and Erlanger Health System (EHS) wishes to bill the patient for the provided services. The information in the ABN will assist the beneficiary in making an informed decision whether or not to receive the service and be financially responsible for the payment.

Deferral of Hospital Outpatient Services: The deferral or re-scheduling of services until the receipt of a complete and valid physician order and the financial requirements being met.

Medical Necessity: Items or services which may be justified as reasonable, necessary, and/or

appropriate, based on evidence-based clinical standards of care.

Modification of Orders: Existing orders may not be changed by EHS personnel. Any change or addition to a service or test embodied in an existing order requires that the procedures noted in the "Modification of Outpatient Orders" section of this policy be followed.

Non-Physician Practitioner ("NPP"): An NPP can be a physician assistant, clinical psychologist, nurse practitioner, clinical nurse specialists, licensed clinical social worker, or certified nurse midwife acting within his/her state scope of practice laws and hospital-granted privileges.

Outpatient Laboratory Requisition: A computer generated document listing outpatient tests that are available for a Physician to order. It can serve as evidence of the services the Physician intended to order if it is also adequately documented in the medical record and authenticated.

Order Sets: An order that outlines a treatment regime or standard of care required for a patient having a specifically-defined type of care / treatment (i.e., AHCPR protocol for treatment of pressure ulcers). Special Note: Orders for outpatient services may be supported by a valid, approved hospital order set that has been initiated by a physician or NPP and approved by the hospital's Medical Staff. A copy of the order set must be maintained in the patient's medical records.

Recurring Orders:A physician may submit an order for tests, injections, lab, infusions, etc., to be performed on a recurring basis. The recurring order must include all elements as outlined in theoutpatient order elements noted below in this policy, including:

- Frequency of the test, etc. to be performed (such as monthly, weekly,bi-weekly, etc.)
- The length of time that the order is to re-occur and is valid(such as 6 weeks, 2 weeks, 3 months, etc.) Most will be updated every six months – however, a Recurring Order may be valid beyond 6 months or less / more than this time period based on time specifications of the physician as the duration of the patient's specific treatment period, not to exceed twelve months.
- Number of treatments to be provided (such as 10 HBO TX, etc.)
- Must be medically necessary

Treating physician: A physician, as defined in §1861 (r) of the Social Security Act (the Act), who furnishes a consultation or treats a beneficiary for a specific medical problem, and who uses the results of a diagnostic test in the management of the beneficiary's specific medical problem.

PROCEDURES:

The following are the required data elements for Non-Emergent Hospital Outpatient Orders:

1. Patient Legal Name;
2. Patient date of birth;
3. Reason for ordering the test or service (i.e., diagnosis description signs or symptoms);

4. Physician or qualified health professional authentication "signature";
5. Name of ordering practitioner;
6. Date of order (Date provider signed the order).

A complete and valid physician order contains the above elements. When the above elements are present and all other coverage guidelines are met, the hospital may provide and subsequently bill for the services ordered once performed.

Special Note: An acceptable order should not include such diagnosis language as:

- Rule/Out (R/O)
- Possible
- Suspicious
- Probable

A complete and valid physician order should be secured for all non-emergent outpatient services **at least 48 hours prior to the patient's date of service**by responsible registration and scheduling personnel.

All non-emergent outpatient services scheduled without a complete and valid order 48 hours prior to the patient's date of service will be escalated by Patient Access. The physician or physician's office personnel will be contacted via telephone and email notifying them that the service will be deferred due to the lack of a valid order. Once notified, the physician's office must supply a valid order that contains all of the required elements no later than 24 hours prior to scheduled appointment to prevent the service from being deferred and rescheduled.

Unscheduled or walk-in patients must arrive at registration with a complete and valid physician order. Patient Access, Registration or other responsible personnel receiving an incomplete order must call the physician office and request the required information. The physician office must furnish a new order for any unscheduled or walk-in patients arriving at registration without a complete and valid order prior to the services being provided. Unscheduled or walk-in patients may experience extended wait times pending receipt of a complete and valid order, verification of patient insurance policy requirements related to pre-certification or pre-authorization of services prior to services being rendered.

Every effort should be made to obtain all required information prior to services being rendered. For Medicare and Medicaid patients, the Center for Medicare & Medicaid Services guidelines state that if patient care or the integrity of a specimen is at risk, you should continue processing the test (s) or performing service (s) and subsequently obtain the required elements. This requires clinical judgment and should be discussed with appropriate supervisor(s).

All Patient Access registration departments are responsible for scanning the complete and valid physician order into HPF in order for the order to become a part of the patient's medical record.

If any of the required outpatient order data elements noted above are missing, a new order will be **REQUIRED** directly from the physician prior to the services being performed.

Verbal orders will notbe accepted for non-emergent hospital outpatient services.

Modification of Order:

As noted above, every effort should be made to obtain all required information prior to non-emergent outpatient services being provided. Patient Access, Registration or other personnel receiving an incomplete order must call the physician office and request that the physician office furnish a new and valid order prior to the services being provided.

If patient services were rendered with an incomplete order (i.e. missing or incorrect Dx),the physician can make an entry to clarify/correct this by amending the patient's medical record, documenting the missing data element and / or reason for the correction and providing us with a copy of the amended patient record. If an order for a clinical diagnostic service is missing the provider's authentication, you may rely on a copy of the patient's medical record if it already has documentation of the provider's intent to order the services and the medical record had beenpreviously authenticated. Please note that this should be the exception not the rule.

Implementation:

1. EHS must ensure all outpatient orders, whether paper-based or generated through web-based physician portals, meet the requirements of this policy.

2. EHS must have a process in place to ensure staff and Physicians are notified of the requirements of this policy.

Annual Review:

This policy and related supporting documents are subject to annual review by the Patient Access Department and members of the Revenue Cycle Committee, including the Office of Compliance.

Enforcement:

All EHS personnel whose responsibilities are affected by this policy are expected to be familiar with the basic procedures and responsibilities created by this policy. Those employees who fail to comply with this policy will be subject to appropriate disciplinary action pursuant to EHS' applicable policy and procedure, up to and including termination.

Committee	Approval/Date

References:

Medicare Conditions of Participation
42 C.F.R §482.23; §428.24; §428.26b.4
42 C.F.R §410.32
TJC (The Joint Commission) RC standards
TJC (The Joint Commission) MS 2.5
http://www.cms.gov/Medicare/Coding/ICD10/index.html
CMS Benefit Policy Manual (Pub 100.02) Transmittal 80
CMS "Medicare Program Integrity Manual" (Publication [Pub.] (100-08), Chapter 3, Section 3.4. 11. D
CMS, State Operations Manual Appendix A-Survey Protocol, Regulations, and Interpretive Guidelines for Hospitals, Interpretive Guidelines §482.24(c) (1) (i) and (ii)
EHS Rules and Regulations of the Medical Staff (January 18, 2011)
EHS Bylaws of the Medical Staff (May 2010)
The ABN manual instructions and ABN Form CMS -R-131 are available at
http://www.cms.gov/ BNI/02_ABN.asp

Origination Date: Dec 2015 Approval: _____		
Reviewed Date:	Revised Date:	Approval:
_____	_____	_____
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Erlanger Health System Policy and Procedure

Index Title: MRI Safety
Originating Department: Radiology
Number: 7049.003

Policy statement: To ensure safe clinical practice involving magnetic resonance imaging (MRI) equipment. This policy also services as the MRI Safety manual.

In situations where there is a conflict with the procedures contained in this policy and those contained in other policies such as "Nursing Standards of Practice", those contained in this policy/manual shall take precedence.

Scope: MRI Personnel, physicians, and all persons who receive MRI services.

Procedure: Section I – General Information

MRI equipment shall not be used in any manner that creates a threat or danger to Erlanger faculty, staff, patients, physicians, or the general public.

All MRI exams are prohibited without a physician's written order. The only exception allowed is for training purposes, and those individuals must be under the direct supervision of the radiologist assigned to MRI for that day.

The MRI environment is that area within the scanner room where the magnetic field strength exceeds 3 gauss.

The MRI Technologist employed by Erlanger and specifically trained for MRI is the only personnel authorized to operate an MRI scanner. Their qualifications must include certification by the ARRT (R) and/or (MR). He/she must complete the MRI safety training initially and on an annual basis. The MRI technologist will also be responsible for clearance of patients and staff to enter the MRI environment.

The MRI Manager and Radiology Director are responsible for the following:

· MRI equipment is properly maintained, aligned, calibrated, and repaired by qualified persons including medical physicists
· Notify the RSO (Radiation Safety Officer) of any acquisition, upgrade, transfer, or disposal of an MRI device.
· Conduct an annual inventory of all MRI equipment
· Ensure that only appropriately trained and authorized individuals use the MRI scanners, and maintain a current list of those individuals
· Department specific orientation for all new employees assigned to MRI, located within the employee personnel folder

Section II – Static Magnetic Field

The most common breaches of MRI safety occur due to an object being attracted to the static magnetic field. An individual may be struck, injured or trapped against the magnet by the object. Equipment may be damaged by slamming into the magnet or being struck by another object that is acceleration rapidly due to the strong attraction of the magnetic field.

Field Strength: the strength of the static field is regulated by the federal government. As of July 14, 2003 the U.S. Department of Health and Human Services (DHHS),Food and Drug Administration (FDA), Center for Devices and Radiological Health (CDRH) determined that there is a significant risk scanning adults, children, and infants older than one month at a main static field greater than 8T. The limit for neonates and infants younger than one month is 4T. Currently, the maximum magnetic field strength for clinical use at Erlanger is 3T.

Projectile Effect: Items that are ferromagnetic have the potential of becoming projectiles when brought into the magnetic field. These items have the potential of causing serious injury including death to anyone who may be in the path of the object as it accelerates toward the magnet. Projectiles may cause an individual to be pinned to the magnet. Equipment may be irreparably damaged by becoming a projectile or by being struck by one. Common items include O2 tanks, wheelchairs, floor buffers, etc. Extreme care must be taken at all times.

Torsion and Translation Forces: Ferromagnetic objects or devices, including those within the human body will be attracted to the magnet.

Section III – Equipment Screening

All equipment used for patient MRI scans, including projectors for functional MRI and stimulus producing apparatus must be tested for MRI safety BEFORE entering the fringe field. Individuals are cautioned to NEVER take equipment into the magnet room without prior testing for magnetic attraction.

MRI Safety Label Terminology:

MR SAFE – an item that poses no known hazards in all MRI environments. Items include non-conduction, non-metallic, non-magnetic items such as a plastic container or a cotton sheet. An item may be determined to be MR SAFE by providing a scientifically based rationale rather than test data. The MR SAFE icon consists of the letters "MR" in green in a white square with a green border, or the letters "MR" in white within a green square.

MR COMPATIBLE – a device shall be considered MR COMPATIBLE if it is MR safe and has been demonstrated, when used in the MRI environment, to neither significantly affect the quality of the acquired data nor have its operations affected by the MR system. The MRI conditions in which the device was tested should be specified in conjunction with the term MR SAFE, since a device which is safe under one set of conditions may not be found to be so under more extreme MR conditions.

MR CONDITIONAL – An item that has been demonstrated to pose no known hazards in a specified MRI environment with specified conditions of use. For MR CONDITIONAL items, the labeling includes results of testing sufficient to characterize the behavior of the item in the MRI environment. Any parameter that affects the safety of the item should be listed, and any condition that is known to produce an unsafe condition must be described. The MR CONDITIONAL icon consists of the letters "MR" in black inside a yellow triangle with a black border.

MR UNSAFE – An item that is known to pose hazards in all MRI environments. This includes magnetic items such as a pair of ferromagnetic scissors. The MR UNSAFE icon consists of the letter "MR" in black on a white field inside a red circle with a diagonal red band.

Section IV – Emergency Procedures

Written emergency procedures should be made available in the areas where MRI devices are used. All MRI staff must familiarize themselves with these emergency procedures.

Technical staff shall immediately seek appropriate medical attention for any individual injured within the MRI environment. The emergency team must report outside the MRI scanner room to begin treatment for the patient.

Crash carts and other emergency equipment containing ferromagnetic material MUST NOT be brought into the scan room.

An MRI safe approved stretcher or dockable scanning table must be available at all times near the MRI scan room.

If there is an emergency such as an equipment failure that could cause injury or sparking of equipment or fire, the MRI technologist should immediately perform an emergency stop.

In the case of a magnet emergency necessitating to drain (quench) the magnetic field immediately, push the emergency magnet shut-off switch located on the magnet safety panel. Pulling the emergency switch quenches the magnet and causes the field to collapse within approximately 10 seconds. This should only be done in a severe emergency. Report the incident immediately and call for assistance to ensure the ferrous object is removed from the field properly. When time permits, the accident shall be entered into the Occurrence Reporting System located on the intranet.

Any Erlanger staff, physician, or student who becomes aware of an event that COULD HAVE resulted in the injury or death of an individual in the MRI environment (a near miss) shall notify the MRI manager, Radiology Director, and/or the Radiation Safety Officer (RSO).

Section V – Clinical Use of MRI scanners

Zoning

Zone I – Negligible MRI hazards and open to the general public. This is typically the reception and waiting room area for the MRI suite. The purpose of this zone is to channel patients to the pre-screening area (Zone II).

Zone II – The purpose of this zone is to restrict further public access to the suite, provide direct supervision of patients and visitors by the MRI staff, and provide an opportunity to prescreen individuals. All ferromagnetic objects must be collected and secured within Zone II. Staff should verify that all transport equipment is MR SAFE by viewing MRI safety labels or by testing for magnetic attraction.

Zone III – This zone is the entry zone to the MRI scanning room. Without exception, only authorized MRI staff should be allowed free access between Zones III and IV. MRI staff will make sure no unscreened individuals are allowed past Zone III, and restrict access as required. Locked entries are employed to prevent access by unscreened individuals.

Zone IV – Only those personnel required so that the patient can complete the exam will be allowed in the MRI scanning room during the procedure. Family members should remain in the waiting area unless the patient requires their presence for exam completion. This should be a rare occasion.

Code red situations will require the use of MR SAFE fire extinguishers and restriction of public first responders from Zone IV until MR SAFE conditions can be established or first responders verified and MR SAFE. In a code red situation in Zone IV, first responders DO NOT have free access to either Zone III or IV. MRI authorized technical staff are responsible for screening all individuals responding to a code red, or other emergency.

The entrance to Zone IV is visually marked by signage on the normally closed room doors indicating the MRI machine is always on and the area is restricted.

Section VI – MRI Safety Pre-Screening

Each person must be checked for safety or pre-screened prior to entering the magnetic environment of the scan room. An important aspect of protecting people from MRI system-related accidents and injuries involves an understanding of the risks associated the various implants, devices, and accessories which may be present within or adjacent to the person.

Individuals – All individuals, including employees and students, who work within the magnetic environment must be screened for personal safety prior to entering the magnetic field. During orientation, new employees will be properly trained to pre-screen and clear patients for an MRI scan, which includes completion of MRI safety training.
Any individual who has a need to enter the magnet room (such as facility maintenance employees, site visitors) must be screened on a case by case basis.

Patients – Preliminary screening of patients for MRI procedures will take place during the scheduling process and at the bedside. Such screening helps prevent scheduling of patients who may be at risk for safe MR imaging. In the department, it is mandatory for every MRI patient to undergo comprehensive screening in preparation for the MRI study prior to entering Zone IV (see appendix). Family members of patients whose presence is required for exam completion are held

to the same screening requirements as patients. It should be noted that having undergone a previous MRI procedure without incident does not guarantee a safe subsequent MRI exam.

Pregnancy – Women who are or may be pregnant may be scanned by MRI after determining that the medical benefits outweigh any theoretical minimal risk to the fetus by the referring physician and radiologist. For more detail information concerning pregnancy, contrast and MRI, see policy 7049.002

Ear Protection – to reduce the acoustic noise levels to the ear during an MRI procedure, all patients will be required to wear approved hearing protection during the exam. Approved hearing protection includes ear plugs, noise attenuating headset, or approved MRI sound system.

Implants and devices – Implants and devices are evolving rapidly and must be thoroughly investigated if potential patients or individuals who will enter the magnetic environment indicate their presence. Implants tested to 1.5T may not be compatible at 3.0T. Any implants for 3.0T imaging must determine to be acceptable specifically for 3.0T. The maximum magnetic field strength currently used for patients at Erlanger is 3.0T. If the individual knows or has documentation as to the specific manufacturer and type of device, then the following steps are implemented:

- Look up the item by the manufacturer in the current Reference Manual for Magnetic Resonance Safety, Implants, and Devices by Frank G. Shellock, Ph.D. or on the web site: **http://www.mrisafety.com**

- **Or, http://www.Magresource.com**

- If device is not listed, contact the manufacturer and have the the text that states the device is safe faxed to 423-778-2137. The written text should include the FDA stamp that verifies the device is MRI safe at 1.5T and/or 3.0T or other specific conditions.

Magnetic field-related translation attraction and torque are known to present hazards to individual and patients with certain implants and devices.

Claustrophobia Screening – statistics indicate that about 10% and up to 20% of the general population is claustrophobic to some degree. All patients should be screened for claustrophobia, and in many cases the exam can be successful with reassurance from MRI staff. In the event the patient is unable to complete the exam, consult with the radiologist for other alternative, including sedation.

Medical Status Screening – Patients must be evaluated for medical status or issues that may prevent them from lying flat or holding still for long periods of time.

Section VII – Radio Frequency (RF) Electromagnetic Fields and Safety

Safety risks from RF include potential tissue heating and burns to the patients. RF may damage electronic or implanted medical devices. Equipment that is not RF shielded may be damaged or may cause spurious signals when operated in the magnetic field. Conducting materials within the RF field may result in a concentration of electrical currents sufficient to cause excessive heating and tissue damage. Therefore, all conducting material not in use should be remove from the magnet bore (drug patches with foil backing, external fixators). Cables, wires and other accessories should be inspected regularly by the scanner operators/service engineers to ensure insulation, connectors and other components are intact and functioning safely. Report all broken equipment immediately to the MRI supervisor. Inspections are recorded in a service log.

Tissue Heating and Burns can include:

Dental hardware – most dental hardware is generally safe in the MRI environment although some orthodontic components may be ferromagnetic.

Tattoos – RF heating of tattooed tissue has been reported especially with use of iron oxide containing inks. The patient should be informed of the potential for heating or burns and instructed to alert the scanner operator immediately if warming occurs.

Transdermal medication patches – these most often contain a metallic layer which has been reported to cause heating of tissue during scanning and producing a burn on the patients. It is essential that any patient wearing a transdermal patch that has a metallic component be identified during the pre-screening process.

Coils – coils are the devices that transmit and receive the RF signals and can be produced in a variety of configurations. The MRI technologist must have some basic knowledge of coil technology how to properly conduct the MRI scan. Safety issues can occur as follows:

· Transmitting RF energy through a receive-only coil may damage or ruin the device

· Transmitting more RF power than the coil was designed to manage can damage or ruin the device

· Twisting, looping or crossing cables may cause current to be induce, resulting in damaging the coil, abnormal heating or potential arcing

Section VIII – Reporting Requirements

Mandatory MRI safety training is required for employees who work within the magnetic environment. Any events or occurrences that may compromise the safety of individuals and patients near the magnetic environment need to be reported and addressed.

Accidents, Injuries, and Incidents – use the on-line occurrence reporting tool located on the intranet. Familiarity of this module is done at orientation with on-going yearly competency documentation. Report all incidents to the MRI supervisor or manager.

Equipment damage or failure – Malfunctions of equipment due to breakage or failure present a safety risk to individuals and patients and must be reported immediately. Report these findings to the MRI supervisor or manager, along with the appropriate engineers for repair.

Facility Safety Breach – A facility safety breach are failed access points allowing non-trained or non-escorted individuals into the magnetic environment. Open access must be addressed immediately to prevent serious injury to persons or equipment. Other potential safety breaches include flooding, electrical hazards, and obvious structural faults. Facility safety breaches must be reported immediately to the MRI supervisor or manager, along with the facilities director or VP.

Committee	Approval/Date

Medical Director	Approval/Date
Blaise Baxter, M.D.	12/22/15

References:

Blaise W. Baxter, MD
Curriculum Vitae

Tennessee Interventional Associates
975 East Third Street
Box 376
Chattanooga, TN 37403
423-778-7234
Baxter.blaise@gmail.com

Birthdate: January 16, 1963
Birthplace: Bracebridge, Ontario

Education:

Fellowship

University of Western Ontario
Dalhousie University
Halifax, Nova Scotia
Neuroradiology
1996 - 1998

Residency

Dalhousie University
Halifax, Nova Scotia
Diagnostic Imaging Residency
1992 - 1996

Internship
York-Finch General Hospital
Downsview, Ontario
Rotating Internship
1988 – 1989

Graduate/Medical School
Dalhousie University
Halifax, Nova Scotia
Doctor of Medicine
1984 - 1988

Undergraduate
University of King's College
Halifax, Nova Scotia
Bachelor of Science (Major in Biology)
1980 - 1984

Board Certification:

American Board of Radiology
Diagnostic Radiology
1996

Fellow of Royal College of Physicians and Surgeons
Diagnostic Radiology

1996

Medical Licensure: Tennessee License #31416

Society Memberships:

Society of Neuro Interventional Surgery

American Association of Neurological Surgeons / CNS Cerebrovascular Section

Chattanooga Hamilton County Medical Society

American College of Radiology

Radiology Society of North America

Tennessee Radiological Society

College of Physicians and Surgeons of Canada
American Society of Neuroradiology

University Appointments:

Neuro Interventional Surgery Fellowship
University of Tennessee College of Medicine
Program Director

Clinical Assistant Professor
University of Tennessee College of Medicine, Radiology and Surgery
Chief, Interventional Radiology
Erlanger Health System

Lecturer – Dalhousie University, Halifax, Nova Scotia.

Hospital Appointments:

Erlanger Medical Center
Chattanooga, Tennessee
Section Chief, Interventional Radiology
July 2007 – Present

Parkridge and East Ridge Medical Centers
Chattanooga, Tennessee
Chief of Radiology
February 2006 - 2008

Professional Experience:

Current Position	Tennessee Interventional Associates Interventional Radiologist Chattanooga, TN
1999—2011	Associates in Diagnostic Radiology, PC Diagnostic and Interventional Radiologist Chattanooga, Tennessee
1998 – 1999	QEII Health Sciences Centre Halifax Infimary Halifax, Nova Scotia

1996 – 1998	Neuroradiology Fellowship University of Western Ontario Dalhousie University Halifax, Nova Scotia
1992 – 1996	Diagnostic Imaging Residency Dalhousie University Halifax, Nova Scotia
1991 – 1992	Flight Surgeon, Medical Officer CFB Greenwood, Nova Scotia
1989 – 1991	Flight Surgeon, Medical Officer CFB Summerside, PEI
1985 – 1986	Terry Fox Research Clerkship awarded by the National Institute of Canada, Dalhousie University Halifax, Nova Scotia

Awards and Honors:

Dr. Richard B. Goldbloom Award in Paediatrics, 1988

Terry Fox Research Scholarship - National Cancer Institute of Canada, 1985 – 1986

Entrance Scholarship – Dalhousie Medical School, Halifax, Nova Scotia, 1984

Entrance Scholarship - University of King's College, Halifax, Nova Scotia, Coleman-Pelham-Roach Scholarship, 1981

Lieutenant Governor's Medal, 1980

Professional Activities:

Leadership and Clinical Trial Committees

Steering Committee Member: Solitaire With the Intention For Thrombectomy (SWIFT) Trial. Study sponsored by ev3 Inc. 2007-present

Steering Committee Member: DWI or CTP Assessment with Clinical Mismatch in the Triage of Wake Up and Late Presenting Strokes Undergoing Neurointervention (DAWN) Trial. Study sponsored by Stryker. 2013 – present.

Steering Committee Member: PerfusiOn imaging Selection of Ischemic Stroke Patients for EndoVascular ThErapy (POSITIVE) Trial. Study sponsored by MUSC. 2013 – present.

Steering Committee Member: Trevo Registry. Study sponsored by Stryker. 2013 – present.

Medical Advisory Committee: Wingspan StEnt System Post MArket SurVEillance Study (WEAVE) Trial. Study sponsored by Stryker. 2013 – present.

Program Committee Member: Society of NeuroInterventional Surgery (SNIS). 2010 – present.

Editorial Services To Scholarly Publications

Reviewer, American Journal of Neuroradiology (1997 – 1998).

Reviewer, *Journal of NeuroInterventional Surgery* 2011 – present

Consulting Activities

Stryker/Concentric Medical, Freemont, CA. Consultant. 2006 – present.

Covidien/ev3 Inc., Irvine, CA. Consultant. 2009 – present.

Penumbra Inc., Alameda, CA. Consultant. 2009 – present.

Rapid Medical, Israel

Reverse Medical Corporation, Irvine, CA. 2009 – present.

Codman & Shurtleff, Inc., Raynham, MA. 2009 – present

Silk Road Medical, Inc., Sunnyvale, CA, 2012 – present.

Publications:

A Utility-Weighted Modified Rankin Scale: Derivation and Application to Completed Stroke Trials (P5.008). Chaisinanunkul N, Saver J, Jovin T, Berry S, Lewis R, Lees K, Furlan A, Baxter B, Lutsep H, Ribo M, Jansen O, Gupta R, Pereira-Mendes V and Nogueira R. *Neurology*. 2014 April 8.

ADAPT FAST Study: A Direct Aspiration First Pass Technique for Acute Stroke Thrombectomy. Turk AS, Frei D, Fiorella D, Mocco J, Baxter B, Siddiqui A, Spiotta A, Mokin M, Dewan M, Quarfordt S, Battenhouse H, Turner R, Chaudry I. *Journal of Neurointerventional Surgery*. Published Online First, 25 February 2014.

Initial Clinical Experience with the ADAPT Technique: A Direct Aspiration First Pass Technique for Stroke Thrombectomy. Turk AS, Spiotta A, Frei D, Mocco J, Baxter B, Fiorella D, Siddiqui A, Mokin M, Dewan M, Woo H, Turner R, Hawk H, Miranpuri A, Chaudry I. *Journal of Neurointerventional Surgery*. 2013 April.

A Trial of Imaging Selection and Endovascular Treatment for Ischemic Stroke.
Kidwell CS, Jahan R, Gornbein J, Alger JR, Nenov V, Ajani Z, Feng L, Meyer BC, Olson S, Schwamm LH, Yoo AJ, Marshall RS, Meyers PM, Yavagal DR, Wintermark M, Guzy J, Starkman S, Saver JL; MR RESCUE Investigators. *New England Journal of Medicine*. 2013 March.

Saver JL, Jahan R, Levy EI, Jovin TG, Baxter B, Nogueira R, Clark W, Budzik R, Zaidat OO; the SWIFT Trialists. SOLITAIRE™ with the intention for thrombectomy (SWIFT) trial: design of a randomized, controlled, multicenter study comparing the SOLITAIRE™ Flow Restoration device and the MERCI Retriever in acute ischaemic stroke. *Int J Stroke*. 2012 Nov 6.

Solitaire Flow Restoration Device Versus the Merci Retriever in Patients with Acute Ischaemic Stroke (SWIFT): a Randomised, Parallel-Group, Non-Inferiority Trial.
Saver JL, Jahan R, Levy EI, Jovin TG, Baxter B, Nogueira RG, Clark W, Budzik R, Zaidat OO; SWIFT Trialists. *Lancet*. 2012 October.

Putting the 'Eye' In IV Access – Unconventional Approaches in Head and Neck Intervention. Baxter B, Mayich M, Hungerford, J. *Journal of Neurointerventional Surgery*. Vol 4 Suppl 1:A68. Chattanooga, TN, Newfoundland, Canada, July 2012.

Imaging-Based Endovascular Therapy for Acute Ischemic Stroke due to Proximal Intracranial Anterior Circulation Occlusion Treated Beyond 8 Hours From Time Last Seen Well: Retrospective Multicenter Analysis of 237 Consecutive Patients. Tudor G Jovin, David S Liebeskind, Rishi Gupta, Marilyn Rymer, Ansaar Rai, Osama O Zaidat, Alex Abou-Chebl, Blaise Baxter, Elad I Levy, Andrew Barreto, Raul G Nogueira, *Stroke; a Journal of Cerebral Circulation*, 42(8):2206-11, August 2011.

For the Merci Registry Investigators. Endovascular Mechanical Thrombectomy for the Treatment of Acute Ischemic Stroke Due to Arterial Dissection. Jeremy D. Fields, MD; Helmi L. Lutsep, MD; Marilyn R. Rymer,

MD; Ronald F. Budzik, MD; Thomas G. Devlin, MD, PhD; Blaise W. Baxter, MD; Reza Malek, MD, MsC; Arash M. Padidar, MD; Stanley L. Barnwell, MD, PhD; Wade S. Smith, MD, PhD Submitted, 2010.

Internal Carotid Artery Thrombosis after Blunt Trauma – Salvage Therapy with the Penumbra Thrombectomy System. Rader M, Ramsay P, Maxwell R, Baxter B., *American Surgeon* 2010; 76(3): 343-345.

Arteriovenous Fistula and Pseudoaneurysm of the Posterior Tibial Artery after Calcaneal Slide Osteotomy: A Case Report. Jesse F Doty, Richard G Alvarez, Brandon S Asbury, Joseph N Rudd and William B Baxter *Foot Ankle International* 31(4):329-32 (2010).

Comparison of Selected Stretch Positions of the Piriformis Muscle Using Computerized Tomography and Biomodeling: a Pilot Study. Marcellin-Little D, Tillman LJ, Levine D, Baxter B, Andrews J, Wells H, *Journal of Orthopaedic and Sports Physical Therapy* 2009:39(1);A26-27.

The Merci Retrieval System for Acute Stroke: The Southeast Regional Stroke Center Experience. Devlin, T., Baxter, B., Feintuch, T., Desbiens, N., *Neurocritical Care*, 06:11-21, 2007.

Monitoring Cerebral Perfusion After Subarachnoid Hemorrhage Using CT. Nabavi, D.G., LeBlanc, L.M., Baxter, B., Lee, D.H., Fox, A.J., Lownie, S.P, Ferguson, G.G., Craen, R.A., Gelb, A.W., Lee, T.Y., *Diagnostic Neuroradiology* (2001) 43:7-16.

Endovascular Treatment of a "Blister-like" Aneurysm of the Internal Carotid Artery. P. D. McNeely, D.B. Clarke, B. Baxter, I. Mendez, *The Canadian Journal of Neurological Sciences*, Vol. 27, No. 3, 247-250, August 2000.

Double Microcatheter Technique for Detachable Coil Treatment of Large, Wide-Necked Intracranial Aneurysms. B.W. Baxter, D. Ross, S.P. Lownie, *American Journal of Neuroradiology*, 19:12176-1178, June 1998.

Abstract Publications:

"Measuring MERCI: exploring data mining techniques for examining the neurologic outcomes of stroke patients undergoing endo-vascular therapy at Erlanger Southeast Stroke Center." McNabb M, Cao Y, Devlin T, Baxter B, Thornton A. Annual International Conference of the IEEE Engineering in Medicine and Biology Society 2012. Abstract published in Engineering in Medicine and Biology Society (EMBC), 2012 Annual International Conference of the IEEE. 2012 August 28 – September 1. Pages 4704 – 4707.

"Thrombectomy for Acute Ischemic Stroke Patients Aged 80 Years or Older: Long-term Outcomes in 178 Patients." Nogueira RG, Smith WS, Jovin T, Liebeskind DS, Budzik RF, Baxter B, Rymer MM, Platform presentation at International Stroke Conference, February 25, 2010, Abstract published in *Stroke*. 2010 Apr; 41(4):e227.

"Neither Time to Treatment Nor the Use of Adjunctive Intra-arterial Thrombolytics Increase the Risk for Symptomatic Intracranial Hemorrhage After Endovascular Treatment of CT Perfusion or MRI-Selected Stroke Patients Treated at Late Time Windows: Analysis of the Pre-DAWN Dataset." Nogueira RG, Gupta R, Liebeskind DS, Rymer MM, Barreto AD, Levy AI, Zaidat OO, Rai A, Baxter B, Jovin T. 35th International Stroke Conference (San Antonio, TX – February 2010). Abstract published in Stroke. 2010 Apr;41(4):e227.

Presentations:

11th Annual SNIS/Joint Cerebrovascular Section Fellows Course, "Negotiating with the Hospital," Colorado Springs, Colorado, August 1, 2014.

SNIS 11th Annual Meeting, "DAWN Trial SNIS Investigator Meeting Presentation," Colorado Springs, Colorado, July 28, 2014.

11th Asian Australasian Federation of Interventional and Theapuetic Neuroradiology, "Cost Saving with New Generation Coils in Treatment of Difficult DAVF and Anuerysm," Da Nang, Vietnam, March 27, 2014.

11th Asian Australasian Federation of Interventional and Theapuetic Neuroradiology, "Carotid Endarterectomy Versus Stenting: E.B.M. and Practices," Da Nang, Vietnam, March 26, 2014.

11th Asian Australasian Federation of Interventional and Theapuetic Neuroradiology, "IV rTPA and Intra-Arterial Intervention in Ischemic Stroke: Indication and Result," Da Nang, Vietnam, March 26, 2014.

SNIS presents, "Stroke Summit 2014: Excellence in Patient Care," Chattanooga, Tennessee, March 19, 2014.

4th SNIS International Endovascular Stroke Conference and Joint Cerebrovascular Section Annual Meeting, "U.S. ADAPT Experience: A Direct Aspiration First Pass Technique for Acute Stroke Thrombectomy," San Diego, California, February 11, 2014.

Erlanger Medical Center, "Stroke Treatment," Chattanooga, Tennessee, January 28, 2014.

Foothills Medical Centre, "Growing Pains of a Busy U.S. Stroke Center: The Erlanger Experience," Calgary, Alberta, Canada, November 14, 2013.

Stop Stroke Saturday, Chattanooga, Tennessee, September 14, 2013.

Trevo Pro Vue Retrieval System Lab Training Course, "Procedural Set Up and Recommendations and Patient Case Experiences," Atlanta, Georgia, May 1, 2013.

Cardiac Symposium Seminar, "Innovations in Stroke Treatments," Ringgold, GA, February 21, 2013

3rd SNIS International Endovascular Stroke Conference and Joint Cerebrovascular Section Annual Meeting, "Ischemic Stroke and Hemorrhagic Cases," Honolulu, Hawaii, February 5, 2013

3rd SNIS International Endovascular Stroke Conference and Joint Cerebrovascular Section Annual Meeting, "Lunch Symposium," Honolulu, Hawaii, February 5, 2013

3rd SNIS International Endovascular Stroke Conference and Joint Cerebrovascular Section Annual Meeting, "Stroke Intervention in the Posterior Circulation", Honolulu, Hawaii, February 2, 2013

"Stroke Intervention Development the Asia/Pacific Region," Stryker, San Jose, California, January 29 – 31, 2013

ABC/WIN Conference,"Initial Multi-center Clinical Experience with Treating Small (<5mm) Aneurysms with the Penumbra PC400 Large Volume Coil: Improving the Treatment of Small Aneurysms at 4 High Volume US Centers", Val d'Isere, France, January 16, 2013

ABC/WIN Conference, "Preliminary Experience with a New Micro Vascular Covered Plug for More Rapid Endovascular Vessel Occlusions and Flow Control", Val d'Isere, France, January 14, 2013

Covidien Neurovascular Fellows Course, "Advanced Stroke Treatment," Houston, TX, December 8, 2012

Covidien Neurovascular Fellows Course, "Practice Management," Houston, TX, December 6, 2012

Covidien National Sales Meeting, "Access and Thrombectomy Techniques for Stroke Intervention," Newport Beach, California, November 15 – 16, 2012.

Stryker, "Recent Advances in Stroke Intervention," St. Louis, Missouri, November 7 – 8, 2012.

Cerebral Vascular Meeting, Conjoint Event of HKSITN and HKSS, "Evidence-based Strategies for Acute Stroke Treatment," Hong Kong, China, October 20, 2012.

Cerebral Vascular Meeting, Conjoint Event of HKSITN and HKSS, "Building a Stroke Centre," Hong Kong, China, October 20, 2012.

12th Advanced Neuroradiology Course, National Neuroscience Institute, "Recent Advances in Stroke Intervention," Singapore, October 18, 2012.

NEIMS 2012, "Coil Trials: Have We Learned Anything New?" Las Vegas, NV, September 23, 2012

NEIMS 2012, "Case Management Session", with Blaise Baxter, MD, M. Shazam Hussain, MD, Philip Meyers, MD and Michael Alexander, MD, Las Vegas, NV, September 23, 2012

NEIMS 2012, "Panel: the Future of Intracranial Stenting; East Meets West", Panel Discussion with Wei-Jian Jiang, MD, PhD, Peter Rasmussen, MD, Jian-Min liu, MD, Michael Alexander, MD, Simon Yu, MD and Blaise Baxter, MD, Las Vegas, NV, September 22, 2012

NEIMS 2012, "Transplanting Best Practices: Opening a Stroke Center in Vietnam", Las Vegas, NV, September 21, 2012

NEIMS 2012, Moderator, "Creating & Sustaining Continuum of Care for Stroke", Las Vegas, NV, September 21, 2012

NEIMS 2012, "Neuro-interventional Therapeutic Advances", Las Vegas, NV, September 21, 2012

Co-Moderator, Advanced Stroke Treatment Summit, Covidien
Chicago, IL, September 18-19, 2012
New York, NY, June 26-27, 2012

Society of NeuroInterventional Surgery Fellows Course 2012, "Stroke Treatment", San Diego, CA, July 27, 2012

Society of NeuroInterventional Surgery Meeting, "Clinical Experience and Lessons Learned with the Penumbra PC 400 Large Volume Coil: Improving the Treatment of Both Large and Small Aneurysms," San Diego, CA, July 2012.

"Stroke Access" Live Stroke Webinar sponsored by Covidien, Chattanooga, Tennessee, June 6, 2012.

Penumbra Fellows Meeting 2012, "Integrating New Technology into a Private Neuroradiology Practice", San Francisco, CA, March 2, 2012

Stryker Neurovascular Global Sales Meeting, "Acute Ischemic Stroke – Growing Endovascular Stroke Care", San Francisco, CA, February 15, 2012

Principal Lecturer, National Stroke Intervention Training Center, Introduction to Neurointerventional Procedures Workshop:
February 13 – 17, 2012
December 12-16, 2011
April 11-15, 2011
October 11-15, 2010
April 26-30, 2010
February 8-12, 2010
January 18-22, 2010
September 14-19, 2009
March 2-6, 2009

ABC-WIN Seminar, "Clinical Experience and Lesions Learned with the Penumbra PC400 Large Volume Coil: Improving the Treatment of both Large and Small Aneurysms", Val d'Isere, France, January 18, 2012

China Neuro-Interventionalists Conference (CNIC) 2011, "Mechanical Thrombectomy of BAO," Zhengzhou, China, October 30, 2011

NEIMS (New Era International Multidisciplinary Sharing) 2011, "Mechanical Thrombectomy of BAO," Zhengzhou, China October 27 - 28, 2011

Queen Mary Hospital and Tuen Men Hospital, "State of the Art Stroke Intervention," Hong Kong, October 24, 2011

13th Singapore Stroke Conference, "State of the Art Stroke Intervention," "Challenging Stroke Intervention Cases," Singapore, October 21 – 22, 2011

Penumbra Early Experience Roundtable (PEER) Meeting, "Penumbra Coil and Penumbra System for Treatment of Stroke", Chicago, IL, September 30 – October 1, 2011

NeuroNext National Symposium, "Clinical Management of AIS," San Jose, CA, October 2011

Vietnam Medical Congress, "Advanced Techniques in Neurointervention for Treatment of Stroke and Neurovascular Diseases", "Current Stroke Management at Erlanger Stroke Center", Ho Chi Minh City, Vietnam, July 2011

SNIS 2nd Annual Fellows Course, "Stroke Treatment – How I Do It", "Challenging Stroke Cases", Colorado Springs, CO, July 29, 2011

SNIS Annual Meeting, "Live Aneurysm Case Presentations," "A Discussion of New Techniques", "Challenging Stroke Cases", Colorado City, CO, July 28, 2011

SNIS Practicum, "Didactics Sessions: Stump the Expert," Seattle, Washington, June 5, 2011

SNIS Practicum, "Demonstration: Merci," Seattle, Washington, June 4, 2011

Penumbra Early Experience Roundtable (PEER) Dinner – "A Discussion of New Techniques with the Penumbra system and Early Experience with the Penumbra Coil 400", Washington, DC, May 10, 2011

Chattanooga Area 60th Annual Cardiac Symposium, "Innovations in Stroke Care", Chattanooga, TN, April 2011

Sanctuary of Endovascular Therapy, "High Volume Stroke Center Partnered with Peripheral Vascular Interventionalist: How to Work Together", Kiawah, SC, February 26, 2011

CLOTS, "Overview of Evidence for Intra-Arterial Pharmacomechanical Therapy", "Intra-Arterial Pharmacomechanical Therapy – How I do It", Dallas, TX, October 24-28, 2010

New Era International Multidisciplinary Sharing (NEIMS) Conference, A Focus on Acute Ischemic Stroke, "Tips and Tricks with Merci Devices", "Stroke Case Management: Panel Discussion", "Stroke Center Model 2: Chattanooga", Las Vegas, NV, October 2010

Australian and New Zealand Society of Neuroradiology and Asian-Australian Federation of Interventional and Therapeutic Neuroradiology, "Current Status and Role in Acute Stroke Management: Experience in a Large Stroke Centre", "State of the Art Stroke Treatment", Melbourne, Australia, April 24, 2010

CLOTS, "Overview of Evidence for Intra-arterial Pharmacomechanical Therapy", "Intra-arterial Pharmacomechanical Therapy – How I do It", Dallas, TX, December 6-10, 2009

2009 Vascular Access Conference, "Complicated Vascular Access Cases", Chattanooga, TN, August 27, 2009

SNIS Annual Meeting "Does Anesthesia Influence Clinical Outcomes in Mechanical Embolectomy? Real World Data from the Merci Registry", Boca Raton, FL, July 2009

Presented to United States President, George W. Bush, "Emerging Treatments for Acute Stroke", Southeast Regional Stroke Center at Erlanger Hospital, Chattanooga, TN, February, 2007

2nd Annual National Tutorial on Stroke, "Endovascular Treatment for Acute Stroke", Chicago, Illinois, June 3-5, 2005

Moderator, Concentric Physician Users Stroke Training Workshop:
Cleveland, Ohio, October 23, 2010
Newport Beach, Virginia, June 5, 2010
Atlanta, Georgia, May 8, 2010
Chicago, Illinois, March 6, 2010
Chicago, Illinois, September 19, 2009
Las Vegas, Nevada, April 24, 2009
Sydney, Australia, February 14, 2009
New Orleans, Louisiana, February 13, 2008
New York, New York, October 12 – 13, 2007
Chicago, Illinois, June 10, 2007
New York, New York, May 11, 2007
San Francisco, California, February 6, 2007
Miami, Florida, March 10, 2006
Las Vegas, Nevada, November 12, 2005
Chicago, Illinois, June 4, 2005
Toronto, Canada, May 20, 2005

Tutorial in Peripheral Vascular Interventional, "Carotid Artery Disease: Indications for Revascularization and Stenting Technique", Erlanger Health System, Chattanooga, TN, May 13-14, 2005

5th Annual Chattanooga Stroke Treatment Conference, "New Endovascular Treatment for Acute Stroke", Chattanooga, TN, November 6, 2004

65th Educational Conference of the Tennessee Society of Radiologic Technologists, Chattanooga, TN, October 16, 2003

Erlanger Healthy Heart Community Lecture Series, "What are my treatment options for intracranial artery disease?", UT Family Practice Center, Chattanooga, TN, August 8, 2002

Neurosurgery in the Caymans, "Endovascular Treatment of Cerebrovascular Disease", "GDC Coil Embolization of Intracranial Aneurysms; New Materials and Techniques", "Joint Ventures between Neurosurgeons and Interventional Neuroradiologists: The Nuts and Bolts", Cayman Islands, October 17 – 21, 2001

The Neuro Course
GDC Guglielmi Coils and AVMs – Embolization and Crazy Glue
Erlanger Health System, Chattanooga, Tennessee, 2000, 2001

Interventional Radiology Option, "Stroke Prevention and Treatment" Cumberland Medical Center, Crossville, Tennessee, October 2000
Atlantic Provinces Radiology Conference, "Head CT – The Good, The Bad, and the Ugly", Halifax, NS, October 1998
Atlantic Clinical Neurosciences Meeting, "Endovascular Treatment of Intracranial Aneurysms", Halifax, NS, April 1997

Neurosciences Grand Rounds, Halifax, NS

Ophthalmology Grand Rounds, Halifax, NS
Anesthesiology Grand Rounds, Halifax, NS

ICU and Neurosurgical Nurses CME Lecture, Halifax, NS

Saint John Regional Hospital Radiology/Neurosciences Group, Saint John, NB

American Society of Neuroradiology 35th Annual Meeting, "A Convenient Method for Cerebral Blood Flow Measurement: Dynamic CT Evaluation of Perfusion Parameters", Toronto, Ontario, May 1997

University of Western Ontario Neurosciences Research Day, June 1997

Radiology Grand Rounds – Dalhousie University, Halifax, NS

American Roentgen Ray Society 98th Annual Meeting, San Francisco, CA, April 1998

Dr. John Connelly's Dalhousie University Graduate Students' Neurosciences Course

Atlantic Provinces Radiology Conference, "Imaging Degenerative Disc Disease", Halifax, NS, October 1995

Atlantic Neurosciences Meeting, "Imaging Carotid Disease", Halifax, NS, April 1995

Atlantic Provinces Radiology Conference, "Helical CT – Imaging Strategies", Halifax, NS, October 1993

Abstract / Poster Presentations

"DAWN. DWI or CTP Assessment with Clinical Mismatch in the Triage of Wake Up and Late Presenting Strokes Undergoing Neurointervention," Jovin T, Jahans C, Saver J, Berry S, Lewis R, Lees K, Furlan A, Baxter B, Lutsep H, Ribo M, Jansen O, Gupta R, Mendes-Pereira V, Albers G, Smith W, Nogueira R. Presented at XXIII European Stroke Conference, Nice, France, May 6-9, 2014.

"A Utility-Weighted Modified Rankin Scale: Derivation and Application to Completed Stroke Trials," Chaisinanunkul N, Saver J, Jovin T, Berry S, Lewis R, Lees K, Furlan A, Baxter B, Lutsep H, Ribo M, Jansen O, Gupta R, Pereira-Mendes V and Nogueira R. Presented at American Academy of Neurology 66th Annual Meeting at the Pennsylvania Convention Center, Philadelphia, PA, April 30, 2014.

"Initial Multi-Center Experience with the Penumbra PC 400 Detachable Coil," Patel A, Moyle H, Chaudry I, Frei D, Bellon R, Huddle D, Baxter B, Quarfordt S, Turner R, Turk A. Presented at SNIS Meeting, Miami, Florida, July 2013.

"Initial Multi-Centre Experience with the Penumbra PC 400 Detachable Coil in Aneurysms 10mm or Greater," Chaudry I, Frei D, Baxter B, Patel A, Huddle D, Loy D, Moyle H, Polykarpou M, Patel A, Turner R, Turk A. Presented at SNIS Meeting, Miami, Florida, July 2013.

"Initial Multi-center Clinical Experience with Treating Small (<5mm) Aneurysms with the Penumbra PC400 Large Volume Coil: Improving the Treatment of Small Aneurysms at 4 High Volume US Centers", Blaise Baxter, Steve Quarfordt, Aman Patel, Henry Moyle, Aquilla Turk, Imran Chaudry, Ray Turner, Don Frei, Dan Huddle, Rich Bellon. Presented at SNIS Meeting, Miami, Florida, July 2013.

David S Liebeskind, Reza Jahan, Raul G Nogueira, Osama O Zaidat, Jeffrey L Saver, and for the SWIFT Investigators. Impact of Collaterals on Successful Revascularization in SWIFT. Stroke. 2013;44:A57. Presented at the International Stroke Conference. Honolulu, Hawaii. February 6-8, 2013.

David S Liebeskind, Reza Jahan, Raul G Nogueira, Tudor G Jovin, Helmi L Lutsep, Jeffrey L Saver, and for the SWIFT Investigators. Serial ASPECTS from Baseline to 24 Hours in SWIFT: A Novel Surrogate Endpoint for Revascularization in Acute Stroke. Stroke. 2013;44:ATMP17. Presented at the International Stroke Conference. Honolulu, Hawaii. February 6-8, 2013.

David S Liebeskind, Reza Jahan, Raul G Nogueira, Tudor G Jovin, Helmi L Lutsep, Jeffrey L Saver, and for the SWIFT Investigators. SWIFT! Early Presentation is Associated with Better Collaterals, Smaller Established Infarcts, and Better Clinical Outcomes from Endovascular Recanalization. Stroke. 2013;44:A130. Presented at the International Stroke Conference. Honolulu, Hawaii. February 6-8, 2013.

Reza Jahan, David Liebeskind, Raul Nogueira, Jeffrey Saver, and for SWIFT Investigators. TICI Success Rates In Swift: Comparison Between Randomized Arms And Correlation To 90 Day Neurologic Outcome. Stroke. 2013;44:A163. Presented at the International Stroke Conference. Honolulu, Hawaii. February 6-8, 2013.

Reza Jahan, David Liebeskind, Raul Nogueira, Jeffrey Saver, and for SWIFT Investigators. Revascularization Endpoints in SWIFT. Stroke. 2013;44:ATMP3. Presented at the International Stroke Conference. Honolulu, Hawaii. February 6-8, 2013.

Osama Zaidat, Marc A Lazzaro, Scott Brown, Raul G Nogueira, Rishi Gupta, Tudor Jovin, Tudor Jovin, Adnan Siddiqui, Dileep Yavagal, Reza Jahan, Jeffrey Saver, and For the Swift Investigators. How Long is Too Long: The Effect of Thrombectomy Procedure Duration on Outcome in Revascularized SWIFT Trial Patients. Stroke. 2013;44:ATP4. Presented at the International Stroke Conference. Honolulu, Hawaii. February 6-8, 2013.

"Blood Pressure Variation Associated with Emergent Intubation and During Endovascular Treatment in Acute Stroke Patients," Thomas Devlin, Francis Fesmire, Erlanger Health System, Chattanooga, TN; Wade Smith, Univ of California, San Francisco, San Francisco, CA; Jeffrey Shapiro, Piedmont Hosp, Atlanta, GA; Justin Jones, Blaise Baxter, Erlanger Health System, Chattanooga, TN. Presented as electronic poster at International Stroke Conference in Honolulu, Hawaii, February 1, 2013.

"Initial Multi-center Clinical Experience with Treating Small (<5mm) Aneurysms with the Penumbra PC400 Large Volume Coil: Improving the Treatment of Small Aneurysms at 4 High Volume US Centers", Blaise Baxter, Steve Quarfordt, Aman Patel, Henry Moyle, Aquilla Turk, Imran Chaudry, Ray Turner, Don Frei, Dan Huddle, Rich Bellon. Presented as oral poster at ABC/WIN Conference in Val d'Isere, France, January 16, 2013

"Preliminary Experience with a New Micro Vascular Covered Plug for More Rapid Endovascular Vessel Occlusions and Flow Control", Blaise Baxter, Satoshi Tateshima, David Niemann, Shaye Moskowitz. Presented as oral poster at ABC/WIN Conference in Val d'Isere, France, January 14, 2013

Saver JL, Jahan R, Levy EI, Jovin TG, Baxter B, Nogueira R, Clark W, Budzik R, Zaidat OO, for the SWIFT Trialists. Comparison of Solitaire FR and Merci Retriever Among MCA Acute Ischemic Stroke Patients in the SWIFT Multicenter, Randomized Trial. Presented at the 8th World Stroke Congress. Brasilia, Brazil. October 10-13, 2012.

Saver J, Jahan R, Levy E, Jovin T, Baxter B, Nogueira R, Clark W, Budzik R, Zaidat OO; for the SWIFT Trialists. Pooled analysis of roll-in and randomized patients in SWIFT confirms benefit of solitaire thrombectomy in patients with acute ischemic stroke. J Neurointerv Surg. 2012; 4 (Suppl 1) : A10-A11. Presented at the Society of NeuroInterventional Surgery (SNIS) 9th Annual Meeting, San Diego, California, USA. July 23-26, 2012.

"Clinical Experience and Lessons Learned with the Penumbra PC 400 Large Volume Coil: Improving the Treatment of Both Large and Small Aneurysms", Blaise Baxter and Steven Quarfordt. Presented as oral poster at SNIS 9th Annual Meeting in San Diego, CA, July 22 – 26, 2012.

"Putting the 'Eye' in I.V. Access – Unconventional Approaches in head and Neck Intervention", Blaise Baxter, Michael Mayich, John Hungerford. Presented as e-poster at SNIS 9th Annual Meeting in San Diego, CA, July 22-26, 2012.

"Wingspan Stent for Symptomatic Intracranial Stenosis: a Single Center Analysis", Baxter, B., Quarfordt, S., Hunger, J., Kline, A., Maass, G., Huang, X. Presented as e-poster at SNIS 9th Annual Meeting in San Diego, CA, July 22 - 26, 2012.

"Review of Penumbra System Trials: Low Rate of Embolization of Previously Uninvolved Territory of the Brain Using the Penumbra System in Acute Ischemic Stroke Treatment", Blaise Baxter. Presented as oral poster at SNIS 9th Annual Meeting in San Diego, CA, July 22 - 26, 2012.

"Comparison of SOLITAIRE Flow Restoration Device and the MERCI Retriever among Acute Ischemic Stroke Patients with Artrial Fibrillation in the SWIFT Multicenter, Randomized Trial", Saver, J., Jahan, R., Levy, E. Jovin, T., Baxter, B., Nougeira, R., Clark W., Budzi R., Zaidat O., for the SWIFT Trialists. Presented as oral poster at SNIS 9th Annual Meeting in San Diego, CA, July 22-26, 2012.

Saver J, Jahan R, Levy E, Jovin T, Baxter B, Nogueira R, Clark W, Budzik R, Zaidat OO; for the SWIFT Trialists. Solitaire Flow Restoration device versus the Merci Retriever in acute ischemic stroke: Subgroup and sensitivity analysis of the SWIFT multicenter, randomized trial. Cerebrovasc Dis 2012; 33 (suppl 2) pg 131. Presented at the European Stroke Conference. Lisbon, Portugal. May 22-25, 2012.

"Loose Screws: A Rare Complication of Repaired Cavernous Carotid Aneurysm", Dimple Bosu, Bradley Keel, Blaise Baxter, Victor Kolade. Presented at 2012 Southern Society of General Internal Medicine meeting in New Orleans, LA; February 10, 2012.

"Blood Pressure Variation Associated with Emergent Intubation and During Endovascular Treatment in Acute Stroke Patients", Thomas Devlin, Francis Fesmire, Wade Smith, Jeffrey Shapiro, Justin Jones, Blaise Baxter, Presented at International Stroke Conference, New Orleans, LA, February 1, 2012.

"An Uncommon Cause for a Common Symptom Complex", Nikhil Panda, Blaise Baxter, Steve Quarfordt, Bruce Faerber, Keith Woodward, Presented at Tennessee American College of Physicians meeting, October 13, 2011, Awarded second prize.

"Imaging Based Intraarterial Treatment for Acute Anterior Circulation Ischemic Stroke Due to Intracranial Large Vessel Occlusion Beyond 8 Hours from Symptoms Onset - Preliminary Multicenter Experience", Jovin TG, Gupta R, Liebeskind DS, Levy E, Rai A, Barreto A, Zaidat O, Janjua N, Abou-Chebl A, Yavagal D, Rymer M, Baxter B, Nogueira RG, 61st Annual Meeting of the American Academy of Neurology, Seattle, WA, April 2009.

"Preliminary Data for the DAWN Trial (DWI/PWI and CTP Assessment in the Triage of Wake-Up and Late Presenting Strokes Undergoing Neurointervention): Imaging Based Endovascular Therapy for Proximal Anterior Circulation Occlusions Beyond Eight Hours from Last Seen Well in 193 Stroke Patients", Raul Noguiera, David Liebeskind, Rishi Gupta, Elad Levy, Ansar Rai, Andrew Barreto, Osama Zaidat, Nazli Janjua, Brooklyn, Alex Abou-Chebl, Dileep Yavagal, Marilyn Rymer, Blaise Baxter, Anthony Furlan, Tudor Jovin, Presented as an oral platform during the stroke/interventional neurology section of the 61st American Academy of Neurology meeting in Seattle, WA 2009, Society of Neuro-Interventional Surgery meeting in Boca Raton, FL 2009, and 34th International Stroke Conference in San Diego, CA, February 2009.

"Imaging Based Intraarterial Treatment for Acute Anterior Circulation Ischemic Stroke Due to Intracranial Large Vessel Occlusion Beyond 8 Hours from Symptoms Onset - Preliminary Multicenter Experience", Jovin TG, Gupta R, Liebeskind DS, Levy E, Rai A, Barreto A, Zaidat O, Janjua N, Abou-Chebl A, Yavagal D, Rymer M, Baxter B, Nogueira RG, 61st Annual Meeting of the American Academy of Neurology, Seattle, WA, April 2009.

"Preliminary Data for the DAWN Trial (DWI/PWI and CTP Assessment in the Triage of Wake-Up and Late Presenting Strokes Undergoing Neurointervention): Imaging Based Endovascular Therapy for Proximal Anterior Circulation Occlusions Beyond Eight Hours from Last Seen Well in 193 Stroke Patients", Raul Noguiera, David Liebeskind, Rishi Gupta, Elad Levy, Ansar Rai, Andrew Barreto, Osama Zaidat, Nazli Janjua, Brooklyn, Alex Abou-Chebl, Dileep Yavagal, Marilyn Rymer, Blaise Baxter, Anthony Furlan, Tudor Jovin, Presented as an oral platform during the stroke/interventional neurology section of the 61st American Academy of Neurology meeting in Seattle, WA 2009, Society of Neuro-Interventional Surgery

meeting in Boca Raton, FL 2009, and 34th International Stroke Conference in San Diego, CA, February 2009.

"Internal Carotid Artery Thrombosis after Blunt Trauma – Salvage Therapy with the Penumbra Thrombectomy System", Rader M, Ramsay P, Maxwell R, Baxter B., Southeastern Surgical Congress, February 7-10, 2009, Atlanta, GA (presented by M Rader).

"Successful Thrombectomy in Acute MCA Stroke in a 13 y/o Child Using the MERCI Retrieval System", Baxter, B., Devlin, T.,Talbott, G.A., Varghese, S.S., Connell, B., Johnson, J., Society for Neuro-critical Care meeting, Abstract, Program 85, 2007.

"Utilization of the Merci Retrieval System for Acute Ischemic Stroke: The Chattanooga Regional Stroke Center Experience", B. Baxter; T. Devlin, et al., Society of Neuro-critical Care, November, 2006.

"Acute Thoracic Aortic Injury (ATAI): Experience with Helical CT", Martin Simms, MD, C.M. Richart, B.W. Baxter, J.T. Johnston, American Roentgen Ray Society, 100th Annual Meeting, Washington, D.C., May 7-12, 2000.

"A Convenient Method for Cerebral Blood Flow Measurement: Dynamic CT Evaluation of Perfusion Parameters", G.A. Joy, B.W. Baxter, T.Y. Lee, A.J. Fox, D.H. Lee, S.P. Lownie, G.G. Ferguson, R.A. Craen, A.W. Gelb, R.F. Del Maestro, American Roentgen Ray Society, 1998 Annual Meeting.

Scientific Presentations:

Primary Results of the SOLITAIRE™ With the Intention for Thrombectomy (SWIFT) Multicenter, Randomized Clinical Trial.
Jeffrey Saver, Reza Jahan, Elad Levy, Tudor Jovin, Blaise Baxter, Raul Nogueira, Wayne Clark, Ronald Budzik, Osama Zaidat. Presented as an oral platform at International Stroke Conference, New Orleans, LA, February 1, 2012.

Canadian Interventional Radiological Society Annual Meeting "Re-Treading Old Ground – Direct access of the Vertebral Artery". Podium Presentation (Residents' and Fellows' Section).
Presenter Mayich M, Vancouver, Canada, 2012.

CT Perfusion Imaging in the Selection of Hyperacute Stroke Patients to Undergo Emergent Carotid Endarterectomy.
Sachin V Phade, MD, (Presenting), Mark W Fugate, MD, Grant R Major, MD, R K Hutson, MD, Steven D Quarfordt, MD, Blaise W Baxter, MD, Thomas G Devlin, MD. Presented at Peripheral Vascular Surgery Society 22nd Annual Winter Meeting, Vail, CO, January 28, 2012.

Incidence of Catheter-induced Clot Formation in Acute Ischemic Stroke Patients Undergoing Mechanical Thrombectomy: Is Pre-procedure Intravenous Heparin Bolus Necessary?
J.B. Crudup, MD, B.I. Hartley, MD, B.W. Baxter, MD. Presented as an oral platform at Radiology Society of North America meeting, Chicago, IL, 2011.

Epidural Blood Patch for Spontaneous Cerebrospinal Fluid Leak.
Arlene Richardson, MD and Blaise Baxter, MD. Presented as an oral platform at the National Medical Association's 2010 Annual Convention & Scientific Assembly, August 2010, Orlando, FL.

Successful Thrombectomy in Acute MCA Stroke in a 13 Y/O Child Using the MERCI Retrieval System.
Talbott, G.A., Verghese, S.S., Connell, B., Johnson, J., Baxter, B., and Devlin, T.G., Presented at: Neurocritical Care Society 5th Annual Meeting, November 2-3, 2007 (Abstracts: Oral & Presentations) Las Vegas, NV.

Utility of CT Myelography in Spontaneous Intracranial Hypotension.
A.M. Andeejani, Vandorpe, W.J. Maloney, B. Baxter, G.C. Llewellyn, R. Holness, Presented at: American Society of Head and Neck Radiology, Phoenix, Arizona, March 1998, Canadian Association of Radiologists Annual Meeting, Halifax, NS, June 1998.

Anomalous Orbital Venous Drainage of Intracranial Veins.
A.M.I. Andeejani, W.J. Maloney, R. Vandorpe, B.Baxter, G. Llewellyn, D.B. Clarke, Presented at: American Society of Neuroradiology 36th Annual Meeting, Philadelphia, PA, May 1998.

The Role of CT Myelography and Delayed CT Myelography in the Management of Spontaneous Intracranial Hypotension: New Sign of Spontaneous Hypotension Preimposed Treatment.
A.M.I Andeejani, R. Vandorpe, W.J. Maloney, B. Baxter, G. Llewellyn, R. Holness, Presented at: American Society of Neuroradiology 36th Annual Meeting, Philadelphia, PA, May 1998.

Anomalous Intracranial Venous Drainage into the Orbit in a Patient with Extensive Cerebral Development Venous Anomalies.
A.M.I. Andeejani, W.J. Maloney, R. Vandorpe, B. Baxter, C.G. Llewellyn.
Presented at: Canadian Association of Radiologists Annual Meeting, Halifax, NS, June 1998.

A Convenient Method for Cerebral Blood Flow Measurement: Dynamic CT Evaluation of Perfusion Parameter.
G.A. Joy, B.W. Baxter, T.Y. Lee, A.J. Fox, D.H. Lee, S.P. Lownie, G.G. Ferguson, R.A. Craen, A.W. Gelb, R.F. DelMaestro.
Presented at: American Society of Neuroradiology 35th Annual Meeting, Toronto, ON, May 1997.
Canadian Association of Radiologists Annual Meeting, Halifax, NS, June 1998.

A Comparison of Length of Hospitalizations and Clinical Outcomes for DGC Embolization Vs Surgical Clipping of Anterior Communicating and Basilar Artery Aneurysms.
E. Versnick, B.Baxter, R. Vandorpe, W. Maloney, I. Mendez.
Presented at: 99th Annual ARRS Meeting, New Orleans (Exhibit & Presentation), 1999.
37th Annual American Society of Neuroradiology, San Diego, 1999.

Research / Clinical Trials (Principle Investigator):

The THERAPY Trial: The Randomized, Concurrent Controlled Trial to Assess the Penumbra System's Safety and Effectiveness in the Treatment of Acute Stroke

SWIFT-Solitaire FR with the Intention for Thrombectomy Study-IDE study sponsored by ev3 Neurovascular

ACE: An Aneurysm Coiling Efficiency Study of the Penumbra Coil 400 System

Stenting versus Aggressive Medical Management for Preventing Recurrent Stroke in Intracranial Stenosis (SAMMPRIS)

TREVO-Thrombectomy Revascularization of large Vessel Occlusions in acute ischemic stroke-IDE study sponsored by Concentric Medical

Reverse Medical ReStore Thrombectomy Device for Flow Restoration in Arteries of Patients Experiencing Acute Ischemic Stroke-IDE study sponsored by Reverse Medical

DEDAS Acute Ischemic Stroke Trial; thrombolytic; sponsored by PAION (Germany)

Interventional Management of Stroke Trial II, acute ischemic stroke trial, combined mechanical and thrombolytic; NIH

Interventional Management of Stroke Trial III, acute ischemic stroke trial; combined mechanical and thrombolytic; NIH

Multimedia

Fundamentals of Diagnostic Radiology; CD-ROM, Cupido Daniels – Chief Editor.

Description	Section / Item
Medicare Indicators	B-ED
CFO Letter For ED	B-ED

Data.Medicare.gov

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Timely and Effective Care - Hospital

Timely and Effective Care measures - provider data. This data set includes provider-level data for measures of heart attack care.

Find in this Dataset | Manage | More Views | Filter | Visualize | Export | Embed | About

	Phone Number	Condition	Measure ID	Measure Name	Score	Sample
86659	(423) 447-2112	Emergency Department	ED_1b	ED1	Not Available	Not Available
86660	(423) 447-2112	Emergency Department	ED_2b	ED2	Not Available	Not Available
86661	(423) 447-2112	Emergency Department	EDV	Emergency department volume	Low (0 - 19,999 patients annually)	
86662	(423) 447-2112	Preventive Care	IMM_2	Immunization for influenza	Not Available	Not Available
86663	(423) 447-2112	Preventive Care	IMM_3_OP_27_FAC_ADHPC	Healthcare workers given influenza vaccination	Not Available	Not Available
86664	(423) 447-2112	Heart Attack or Chest Pain	OP_1	Median Time to Fibnnolysis	Not Available	Not Available
86665	(423) 447-2112	Emergency Department	OP_18b *	OP 18	95	169
86666	(423) 447-2112	Heart Attack or Chest Pain	OP_2	Fibrinolytic Therapy Received Within 30 Minutes of ED Arrival	Not Available	Not Available
86667	(423) 447-2112	Emergency Department	OP_20 *	Door to diagnostic eval	25	184
86668	(423) 447-2112	Emergency Department	OP_21 *	Median time to pain med	49	25
86669	(423) 447-2112	Emergency Department	OP_22 *	Left before being seen	2	15682
86670	(423) 447-2112	Emergency Department	OP_23	Head CT results	Not Available	Not Available
86671	(423) 447-2112	Colonoscopy care	OP_29	Endoscopy/polyp surveillance: appropriate follow-up interval for normal c	Not Available	Not Available
86672	(423) 447-2112	Colonoscopy care	OP_30	Endoscopy/polyp surveillance: colonoscopy interval for patients with a his	Not Available	Not Available
86673	(423) 447-2112	Cataract surgery outcome	OP_31	Improvement in Patient's Visual Function within 90 Days Following Catarac	Not Available	Not Available
86674	(423) 447-2112	Heart Attack or Chest Pain	OP_3b	Median Time to Transfer to Another Facility for Acute Coronary Interventior	Not Available	Not Available
86675	(423) 447-2112	Heart Attack or Chest Pain	OP_4 *	Aspirin at Arrival	99	84
86676	(423) 447-2112	Heart Attack or Chest Pain	OP_5	Median Time to ECG	9	86
86677	(423) 447-2112	Pregnancy and Delivery Care	PC_01	Percent of newborns whose deliveries were scheduled early (1-3 weeks ea	Not Available	Not Available
86678	(423) 447-2112	Stroke Care	STK_4	Thrombolytic Therapy	Not Available	Not Available
86679	(423) 447-2112	Blood Clot Prevention and Treatment	VTE_5	Warfarin therapy discharge instructions	Not Available	Not Available
86680	(423) 447-2112	Blood Clot Prevention and Treatment	VTE_6	Hospital acquired potentially preventable venous thromboembolism	Not Available	Not Available

erlanger

July 27, 2017

Ms. Melanie M. Hill
Executive Director
State of Tennessee
Health Services & Development Agency
500 Deaderick Street, Suite 850
Nashville, TN 37243

RE: Sequatchie Valley Regional Hospital
Provider Based Emergency Department
Certificate of Need Application

Dear. Ms. Hill:

This letter serves to confirm Erlanger's support for development and operation of the provider based emergency department associated with the above referenced Certificate of Need application. Much as we currently do with the Erlanger Bledsoe provider based emergency department, Erlanger will provide all need resources to operate the emergency department inclusive of equipment and staff. Erlanger will also document the cost of maintaining needed resources and will sustain them to insure the provision of high quality care within the emergency services continuum.

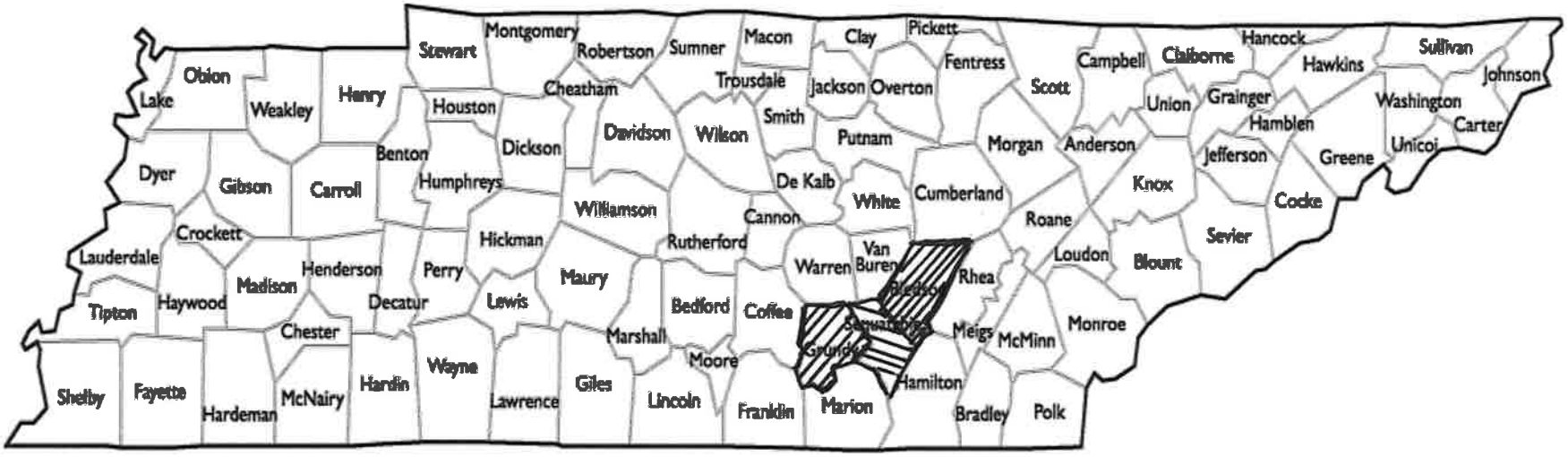
If you have questions on the above, please do not hesitate to contact me.

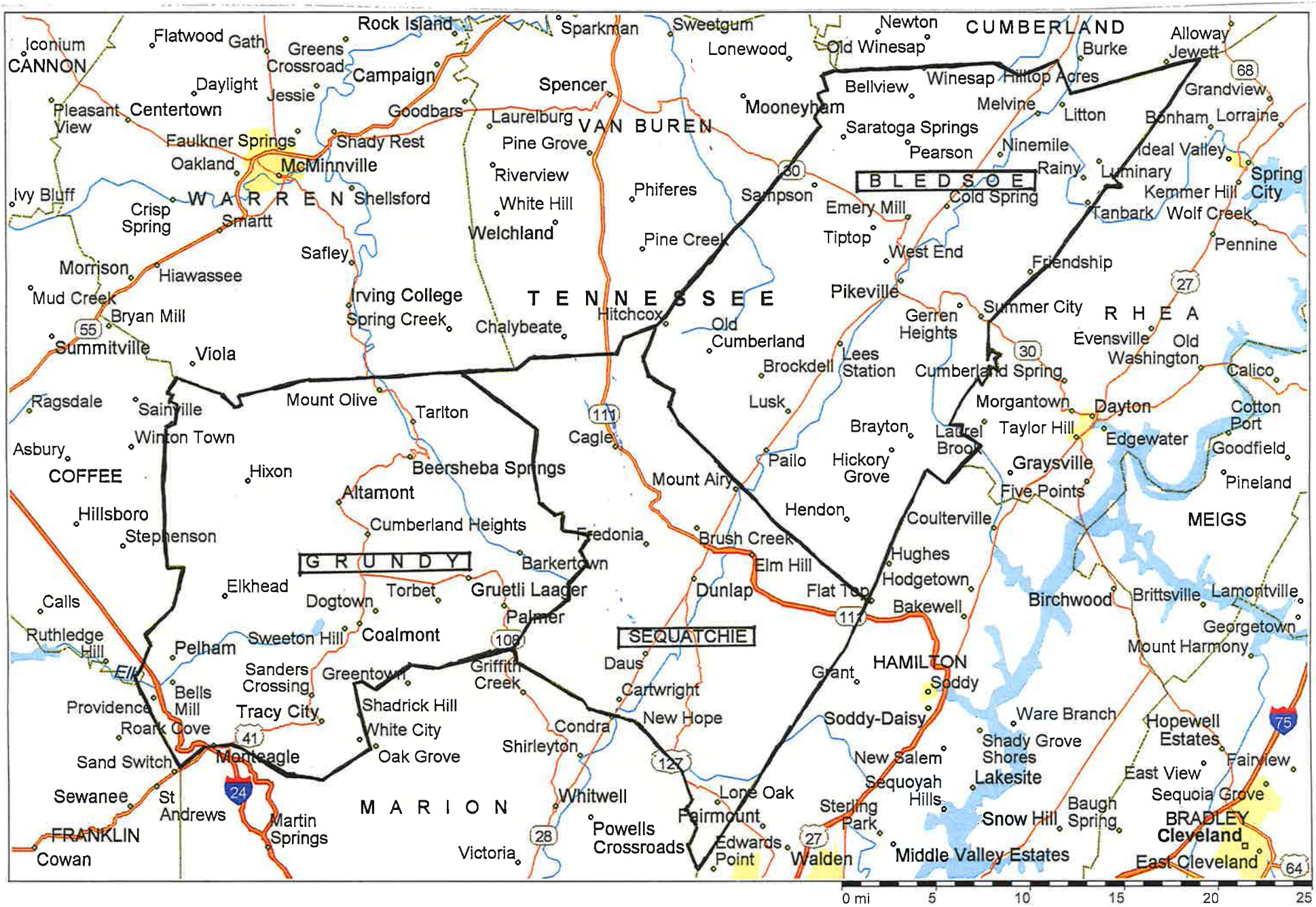
Sincerely,

J. Britton Tabor, CPA, FACHE
Executive Vice President, CFO/Treasurer

Description	Section / Item
Service Area	B-I-3

TENNESSEE COUNTY MAP




CANNON
Iconium
Flatwood
Gath
Rock Island
Greens Crossroad
Campaign
Daylight
Jessie
Pleasant View
Centertown
Goodbars
Faulkner Springs
Shady Rest
Oakland
McMinnville
Ivy Bluff
Crisp Spring
WARREN
Smartt
Shellsford
Safley
Morrison
Hiawassee
Mud Creek
Bryan Mill
Summitville
Viola
Irving College
Spring Creek
Ragsdale
Sainville
Winton Town
Asbury
COFFEE
Hixon
Mount Olive
Tarlton
Hillsboro
Stephenson
Altamont
Beersheba Springs
Cumberland Heights
GRUNDY
Elkhead
Dogtown
Torbet
Barkertown
Gruetli Laager
Calls
Ruthledge Hill
Pelham
Sweeton Hill
Coalmont
Palmer
Elk
Sanders Crossing
Greentown
Griffith Creek
Providence
Bells Mill
Tracy City
Shadrick Hill
Roark Cove
White City
Sand Switch
Monteagle
Oak Grove
Sewanee
St Andrews
Martin Springs
MARION
FRANKLIN
Cowan
Victoria
Laurelburg
Pine Grove
Riverview
White Hill
Welchland
Chalybeate
Spencer
VAN BUREN
Sparkman
Sweetgum
Lonewood
Phiferes
Pine Creek
Hitchcox
TENNESSEE
Old Cumberland
Cagle
Mount Airy
Fredonia
Brush Creek
Elm Hill
Dunlap
SEQUATCHIE
Daus
Cartwright
New Hope
Condra
Shirleyton
Whitwell
Powells Crossroads
Lone Oak
Fairmount
Edwards Point
Mooneyham
Sampson
Brockdell
Lusk
Pailo
Hendon
Newton
Old Winesap
CUMBERLAND
Bellview
Winesap
Hilltop Acres
Saratoga Springs
Pearson
Emery Mill
Cold Spring
BLEDSOE
Tiptop
West End
Pikeville
Gerren Heights
Lees Station
Cumberland Spring
Brayton
Hickory Grove
Coulterville
Hughes
Hodgetown
Flat Top
Bakewell
Grant
HAMILTON
Soddy
Soddy-Daisy
New Salem
Sequoyah Hills
Sterling Park
Walden
Middle Valley Estates
Alloway
Jewett
Burke
Melvine
Litton
Ninemile
Rainy
Tanbark
Friendship
Summer City
Morgantown
Taylor Hill
Laurel Brook
Graysville
Five Points
Birchwood
Ware Branch
Shady Grove Shores
Lakesite
Snow Hill
Baugh Spring
Grandview
Bonham
Lorraine
Ideal Valley
Luminary
Kemmer Hill
Spring City
Wolf Creek
Pennine
RHEA
Evensville
Old Washington
Calico
Dayton
Edgewater
Cotton Port
Goodfield
Pineland
MEIGS
Brittsville
Lamontville
Georgetown
Mount Harmony
Hopewell Estates
Fairview
East View
Sequoia Grove
BRADLEY
Cleveland
East Cleveland
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Description	Section / Item
Architect Letter - Construction Cost	B-II-1
Siemens Quote For MRI Unit	B-II-1
Siemens Quote For CT Unit	B-II-1
Siemens Quote For Equipment Maintenance	B-II-1

GRESHAM
SMITH AND
PARTNERS

July 24, 2017

Mr. Joseph M. Winick, FACHE
Senior Vice President
Planning, Analytics & Business Development
Erlanger Health System
975 East 3rd Street
Chattanooga, TN 37403

Subject: **Sequatchie Valley Regional Hospital**

Dear Joe:

Thank you for engaging Gresham Smith and Partners on the design and development of the above reference project. We are excited to be working with Erlanger on the new hospital and associated emergency department to serve residents of the Sequatchie Valley.

Based on plans developed to date and our review of the sites and building conditions, we estimate construction cost of the project, net of contingencies, equipment and related expenses at $322.00 per square foot which includes the hospital with 61,500 SF and the emergency department with 8,100 SF for a total construction cost of $22,411,900.00. The sites for the hospital and for the emergency department are both suitable for their intended uses; both will also provide convenient access from adjacent roadways.

Plans for design of the buildings will comply with the latest AIA standards and guidelines for design and construction of hospitals as prescribed by the Tennessee Department of Health.

Please let us know if you need additional information.

Sincerely,

Jeffery Morris, AIA, LEED AP, LEAN, EDAC
Principal

JEFFERY E. MORRIS
REGISTERED ARCHITECT
AGRICULTURE
COMMERCE
100200
STATE OF TENNESSEE
24 July 2017

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6967

SIEMENS Healthineers

SIEMENS REPRESENTATIVE
Karen Dixon - (865) 360-8644

PRELIMINARY PROPOSAL

Customer Number: 0000006071

Date: 7/27/2017

ERLANGER HEALTH SYSTEM
975 EAST THIRD STREET
CHATTANOOGA, TN 37403

Quote Nr: **1-L6CDWA Rev. 0**

MAGNETOM Skyra

All items listed below are included for this system:

Qty	Part No.	Item Description
1	14456160	**MAGNETOM Skyra - System** MAGNETOM Skyra is designed to provide you the versatility you need to meet the increasing demands in healthcare. Maximize 3T with its core technologies Tim(r) 4G and Dot(r), along with its comprehensive application portfolio and experience unique functionalities to increase patient comfort. Every case. Every day. System Design - Short and open appearance (173 cm system length and 70 cm Open Bore Design) to reduce patient anxiety and claustrophobia - Whole-body superconductive Zero Helium Boil-Off 3T magnet - Actively Shielded water-cooled Siemens gradient system for maximum performance - TrueForm Magnet and Gradient Design Tim 4G (Total imaging matrix in the 4th generation) for excellent image quality and speed - Siemens unique DirectRF(tm) technology enabling the all digital-in/ digital-out design - Dual-Density Signal Transfer Technology - Tim Coil Interface Dot (Day optimizing throughput) for higher consistency, flexibility and efficiency - Dot Display - Dot Control Centers - Brain Dot Engine Tim Application Suite allowing excellent head-to-toe imaging - Neuro Suite - Angio Suite - Cardiac Suite - Body Suite - Onco Suite - Breast Suite

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		- Ortho Suite - Pediatric Suite - Scientific Suite Further included - High performance host computer - Patient communication: standard headphones and MagnaCoil(tm) In-Ear headset - Siemens uniqueTimCT FastView localizer and CAIPIRINHA - syngo MR software including - 1D/2D PACE - BLADE - iPAT² - Phoenix - Inline Diffusion - WARP - MDDW (Multiple Direction Diffusion Weighting) - CISS - DESS - TGSE The system (magnet, electronics and control room) can be installed in 31 sqm space. For system cooling either the Eco Chiller options or the Separator is required.
1	14456161	**Tim [204x24] XQ Gradients #Sk** Tim [204x24] XQ-gradients performance level Tim 4G with its newly designed RF system and innovative coil architecture enables high resolution imaging and increased throughput. Up to 204 simultaneously connected coil elements allow in combination with the 24 independent RF channels for the most flexible parallel imaging and support the most demanding applications. Maximum SNR is ensured through the new Tim 4G matrix coil technology. XQ - gradients The XQ- gradients are designed combining high performance and linearity to support clinical whole body imaging at 3T. The force compensated gradient system minimizes vibration levels and acoustic noise. The XQ gradients combine 45 mT/m peak amplitude with a slew rate of 200 T/m/s. High-performance measurement and reconstruction system
1	14456165	**Standard Coil Package 24-ch #Sk** This package includes: - Head/Neck 16 DirectConnect - Spine 24 DirectConnect - Body 6 - Flex Large 4 - Flex Small 4 - Flex Coil Interface
1	14418507	**Tim Dockable Table #Sk** The Tim Dockable Table is designed for maximum patient comfort and smooth patient preparation. Tim Dockable Table can support up to 250 kg (550 lbs) patients without restricting the vertical or horizontal movement. The one step docking mechanism and the innovative multi-directional navigation wheel ensure easy maneuvering and handling. Critically ill or immobile patients can now be prepared outside the examination room for maximum

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		patient care, flexibility and speed.
1	14416914	**Pure White Design #T+D** The MAGNETOM Aera / MAGNETOM Skyra design is available in different light and appealing variants which perfectly integrates into the different environments. The color of the main face plate cover of the Pure White Design Variant with the integrated Dot Control Centers and the unique Dot Display is brilliant white surrounded by a brilliant silver trim. The asymmetrical deco area on the left side is colored white matte and also with a brilliant surrounding silver trim. The table cover is presented also in the same color and material selection.
1	08464872	**PC Keyboard US english #Tim** Standard PC keyboard with 101 keys.
1	14446650	**SW syngo MR E11C** syngo MR E11C software with new features and applications. GOBrain protocols (for Aera and Skyra with 48 or more rf-channels).
1	14441866	**DotGO Routine Package #T+D** The DotGO Routine Package includes both: - Spine Dot Engine and - Large Joint Dot Engine. As a package they offer a comprehensive set of workflows with guidance and automation, for standardized image quality in Spine and MSK MR imaging. The Spine Dot Engine provides the functionality of Inline Composing and Tim Planning Suite for streamlining workflows in all spine imaging. Tools, such as auto-positioning and vertebral recognition with AutoAlign Spine, AutoCoverage and Spine Labelling support and optimize reproducibility for your cervical, thoracic and lumbar spine imaging for all clinical indications. The Large Joint Dot Engine enhances standardization of the knee, hip and shoulder workflows and optimizes reproducible image quality by incorporating automation tools, such as anatomically based auto-positioning (AutoAlign). Dedicated imaging techniques, such as Advanced WARP, are included and can help to expand the access of diagnostic MRI to a broader range of patient types.
1	14446591	**Advanced Diffusion #T+D** Advanced Diffusion is a package consisting of the diffusion-weighted, readout-segmented EPI sequence RESOLVE and the noise reduced QuietX DWI sequence.
1	14402527	**SWI #Tim** Susceptibility Weighted Imaging is a high-resolution 3D imaging technique for the brain with ultra-high sensitivity for microscopic magnetic field inhomogeneities caused by deoxygenated blood, products of blood decomposition and microscopic iron deposits. Among other things, the method allows for the highly sensitive proof of cerebral hemorrhages and the high-resolution display of venous cerebral blood vessels.
1	14441759	**FREEZEit Body MRI Package #T+D** FREEZEit Body Package contains two robust sequences for advanced body imaging: TWIST VIBE and StarVIBE. - TWIST VIBE is a new fast, high-resolution 4D imaging sequence for multi-arterial liver imaging. - StarVIBE is a motion insensitive VIBE sequence using a stack-of-stars trajectory.
1	14409198	**Native syngo #Tim** Integrated software package with sequences and protocols for non-contrast enhanced 3D MRA with high spatial resolution. syngo NATIVE particularly enables imaging of abdominal and peripheral vessels and is an alternative to MR angiography techniques with contrast medium, especially for patients with severe renal insufficiency.
1	14405224	**Composing syngo #Tim** This application provides dedicated evaluation software for creation of full-format images from overlapping MR volume data sets and MIPs (starting from syngo MR B13) acquired at multiple stages.
1	14405328	**TWIST syngo #Tim** This package contains a Siemens unique sequence and protocols for time-resolved (4D) MR angiographic and

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		dynamic imaging in general with high spatial and temporal resolution. syngo TWIST supports comprehensive dynamic MR angio exams in all body regions. It offers temporal information of vessel filling in addition to conventional static MR angiography, which can be beneficial in detecting or evaluating malformations such as shunts. In case of general dynamic imaging, for example an increase in spatial resolution by a factor of up to 2 at 60 seconds temporal resolution (compared to conventional dynamic imaging) is possible due to intelligent k-space sampling strategies. Alternatively, increased temporal resolution at constant spatial resolution is possible.
1	14441748	**Quiet Suite #T+D** Quiet Suite enables complete, quiet examinations for neurology and orthopedics with at least 70% reduction in sound pressure levels.
1	14441803	**Body 6 #Sk** Flexible, universal 6-channel receive coil with 6 integrated preamplifiers. Elements are arranged in 2 rows of 3 elements each. Main features: - Integrated operation with the Spine 24. - iPAT-compatible. - Dual-Density Signal Transfer. - SlideConnect(tm) technology for easy coil set up.
1	14416959	**Shoulder 16 Coil Kit #Sk** The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technolgy combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility. The Shoulder 16 Coil Kit for examinations of the left or right shoulder consists of a base plate and two different sized iPAT compatible 16 channel coils (Shoulder Large 16 and Shoulder Small 16). These will be attached and can be relocated on the base plate.The 16-element coils with 16 integrated pre-amplifiers ensure maximum signal-to-noise ratio. Shoulder Large 16 and Shoulder Small 16 will be connected via a SlideConnect plug for fast and easy coil set-up and patient preparation.
1	14456318	**TX/RX Knee 15 Flair 3T #Sk** New 15-channel transmitter/receiver coil for joint examinations in the area of the lower extremities. Main features : - 15-element design (3x5 coil elements) with 15 integrated preamplifiers - iPAT-compatible - SlideConnect Technology
1	14407259	**MR Workplace Table, height adjust.** The table is suitable for the syngo Acquisition Workplace and the syngo MR Workplace based on syngo hardware. This 110V version has motorized table height adjustment.
1	14407261	**MR Workplace Container, 50cm** 50 cm wide extra case for the syngo host computer with sliding front door to allow change of storage media (CD/DVD/USB).
1	MR_STD_RIG_INST	**MR Standard Rigging and Installation** MR Standard Rigging and Installation This quotation includes standard rigging and installation of your new MAGNETOM system Standard rigging into a room on ground floor level of the building during standard working hours (Mon. - Fri./ 8 a.m. to 5 p.m.) It remains the responsibility of the Customer to prepare the room in accordance with the SIEMENS planning documents Any rigging requiring a crane over 80 tons and/or special site requirements (e.g. removal of existing systems, etc.) is an incremental cost and the responsibility of the Customer. All other "out of scope" charges (not covered by the standard rigging and installation) will be identified during the

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		site assessment and remain the responsibility of the Customer.
1	MR_BTL_INSTALL	**MR Standard Rigging & Install**
1	MR_PREINST_DOCK	**T+D Preinstall kit for dockable table**
1	MR_CRYO	**Standard Cryogens**
1	MR_PM	**MR Project Management** A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemen's equipment. The assigned PM will work with the customer's facilities management, architect or building contractor to assist you in ensuring that your site is ready for installation. Your PM will provide initial and final drawings and will coordinate the scheduling of the equipment, installation, and rigging, as well as the initiation of on-site clinical education.
1	MR_INT_DOT_BCLS	**MR Dot Training Class** Tuition for (1) imaging professional to attend Classroom Course at Siemens Training Center. The objectives of this class are to introduce the user interface of the common syngo platform, including Dot, and instructions on building protocols, demonstration of software functions, and hands-on sessions. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	MR_INITIAL_32	**Initial onsite training 32 hrs** MR_INITIAL_32 Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	MR_FOLLOWUP_32	**Follow-up training 32 hrs** Up to (32) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	MR_FOLLOWUP_24	**Follow-up training 24 hrs** Up to (24) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	MR_ELEARN	**e.learning CEU subscription (12 mths)** This (12) month multi-modality e.learning subscription will provide access for (10) imaging professionals at the customer site to utilize up to (50 CEUs). This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	KKTECOMR_60	**KKT ECOCHILLER 133L** The KKT ECO 133 -L chiller is a dedicated 20°C cooling system for MAGNETOM Aera and MAGNETOM Skyra which automatically adapts to the different cooling requirements (e.g. system in operation, standby, ...) to reduce the energy consumption for cooling. The cooling system must be used in combination with the IFP (Interface Panel), if there is no on-site chilled water supply at all. The IFP is included in the scope of supply.
1	CHILINST_AVT	**Chiller Start-up and Warranty for TIM**

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	SY_PR_TEAMPLAY	**teamplay Welcome & Registration Package** teamplay is a cloud-based network that brings together your imaging modality users, the systems' dose and utilization data, and the users' expertise to help you improve the delivery of care to your patients. Basic features are provided free of charge. Premium features (benchmarking, non-Siemens devices) are provided on a trial basis for three months at no charge, and may be used thereafter on a subscription fee basis. To register: http://teamplay.siemens.com/#/institutionRegistration/1
1	MR_BUDG_ADDL_RIG	**Budgetary Add'l/Out of Scope Rigging**

System Total: $1,865,293

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard, Malvern, PA 19355
Fax: (866) 309-6967

SIEMENS REPRESENTATIVE
Karen Dixon - (865) 360-8644

PRELIMINARY PROPOSAL

FINANCING: The equipment listed above may be financed through Siemens. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

Siemens Healthcare is pleased to submit this Preliminary Pricing Proposal. A Preliminary Pricing Proposal is provided for planning purposes only; it is not contractually binding. To receive a contractually binding proposal for the Products listed above, inclusive of Terms, Conditions, and Warranty coverage, please contact your Siemens Healthcare Sales Representative.

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SIEMENS Healthineers

SIEMENS REPRESENTATIVE
Brad Fox - (615) 585-2104

PRELIMINARY PROPOSAL

Customer Number: 0000006071

Date: 7/25/2017

ERLANGER HEALTH SYSTEM
975 EAST THIRD STREET
CHATTANOOGA, TN 37403

Quote Nr: **1-L5B1FJ Rev. 0**

SOMATOM Definition AS (64-slice Configuration)

All items listed below are included for this system: *(See Detailed Technical Specifications at end of Proposal.)*

Qty	Part No.	Item Description
1	14444263	**SOMATOM Definition AS (64slice)** The SOMATOM Definition AS (64-slice configuration) is Siemens' state-of-the-art single source CT that provides the possibility to maximize clinical outcome and to minimize radiation dose. The unique STRATON X-ray source utilizes an electron beam that is accurately and rapidly deflected, creating two precise focal spots alternating 4,608 times per second. This doubles the X-ray projections reaching each detector element. The two overlapping projections result in an oversampling in z-direction. The resulting measurements interleave half a detector slice width, doubling the scan information without a corresponding increase in dose. Siemens' proprietary UFC (Ultra Fast Ceramic) detectors and the corresponding 64-slice detector electronics enable a virtually simultaneous readout of two projections for each detector element - resulting in a full 64-slice acquisition. This sampling scheme is identical to that of a 64 x 0.3 mm allowing for reconstruction of 192 slices using 0.1 mm reconstruction interval Increment The fast rotation time of 0.33 seconds (0.3 s optional) delivers excellent temporal resolution. The SOMATOM Definition AS is set to raise the standard of patient-centric productivity with FAST CARE Technology. With Siemens' FAST - Fully Assisting Scanner Technologies - the SOMATOM Definition AS can simplify typically time consuming and complex procedures during a CT examination: the scanning process gets more intuitive and the results become more reproducible. The CARE technology includes many unique features like CARE kV that sets the ideal voltage for every examination and adjusts the respective scan parameters or industry's first Adaptive Dose Shield that prevents clinically irrelevant over radiation in spiral scanning.
1	14420766	**SAFIRE #AWP** The Sinogram Affirmed Iterative Reconstruction (SAFIRE) enhances spatial resolution, reduces image noise and increases sharpness by introducing multiple iteration steps in the reconstruction process. The resulting image quality enables to reduce dose by up to 60%*. *In clinical practice, the use of SAFIRE may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task. The following test method was used to determine a 54 to 60% dose reduction when using the SAFIRE reconstruction software. Noise, CT numbers, homogeneity, low contrast resolution and high contrast resolution were assessed in a Gammex 438 phantom. Low dose data reconstructed with SAFIRE showed the same image quality compared to full dose data based on this test. Data on file.
1	14444243	**iMAR #AWP** The iMAR metal artifact reduction algorithm combines three successful approaches (beam hardening correction, normalized sinogram inpainting and frequency split). This allows to reduce metal artifacts caused by metal implants such as coils, metal screws and plates, dental fillings or implants. iMAR is compatible with extended FoV, the extended CT scale as well as the newest dose reduction feature. Along with the new algorithm comes the simple user interface of iMAR enabling easy reconstruction of clinical images with reduced metal artifacts.

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Qty	Part No.	Item Description
1	14433993	**FAST Planning #AWP** Direct, organ-based setting of scan and recon ranges for a faster and more standardized workflow
1	14449409	**FAST Adjust** FAST Adjust: assists the user to handle system settings in a fast and easy way by automatically solving of conflicts within user defined limits by one single click on the FAST Adjust button. The limits for scan time and tube current per scan are defined via the Scan Protocol Assistant. FAST Adjust offers an undo functionality to return to previously set values.
1	14449412	**CARE kV** CARE kV automatically proposes the best tube voltage based on the patient's size, the system capabilities, and the type of examination. Once the kV setting has been chosen, CARE kV also automatically adjusts other scan parameters, including the tube current. This reduces dose, maintains a constant image quality, and simplifies processes for technicians.
1	14420771	**CARE Child** Dedicated pediatric CT imaging, including 70 kV scan modes and specific CARE Dose4D curves and protocols.
1	14449411	**CARE Dashboard** Visualization of activated dose reduction features and technologies for each scan range of an examination to analyze and manage the dose to be applied in the scan.
1	14449410	**CARE Profile** CARE Profile: Visualization of the dose distribution of the scan range along the topogram prior to the scan.
1	14408111	**Extended Field of View #AWP** Software program with special reconstruction algorithms that allow for visualization of objects using a FOV up to 78 cm (non-diagnostic image quality). License to use software on a single unit.
1	14419142	**Workstream 4D #AWP** WorkStream 4D further enhances the already superb workflow of the SOMATOM CT system by offering direct generation of sagittal, coronal, oblique or double-oblique reconstructed images directly from CT raw data as part of the CT protocol.
1	14419144	**DICOM SR Viewer #AWP** The DICOM SR (structured report) Viewer allows to read reports created with specific applications (e.g. Circulation, Lung Care, Calcium Scoring and Onco) without the application itself being on the respective computer.
1	14420824	**Standard IRS** Reconstruction computer for the preprocessing and reconstruction of the CT raw data. The reconstruction computer contains a cluster of 2 high-performance GPU boards performing the preprocessing and reconstruction of the CT data. The raw data memory is 900 GByte. The peak recon performance is 40 frames/sec.
1	14408152	**UHR** UHR mode delivers Ultra High resolution in plane of up to 24lp/cm for high defined imaging of small structures such as inner ear, joints or fractures of the bone
1	14408032	**Rear cover incl. gantry panels** Rear Cover including gantry control panels with control functionality from the backside.
1	14420777	**Patient Table 2000 mm** Patient table to support up to 200cm scan range. Motor-driven table height adjustment from min. 49 cm to max. 92 cm, longitudinal movement of the tabletop 200 cm in increments of 0.5 mm, positioning accuracy +/- 0.25 mm from any direction. Horizontal scan range 200 cm. Table height can be controlled alternatively by means of foot switch (2 each on both sides of the patient table). In the case of emergency stop or power failure, the tabletop can also be moved manually in horizontal direction. Max. table load: 227 kg/500 lbs, Table feed speed: 2-200 mm/s, Distance between gantry front and table base 40 cm. Positioning aids: Mattress protector, head-arm support (inclusive cushion), and non-tiltable head holders with positioning cushion set, patient restraining system for head fixation, restraining-strap set with body fixation strap that

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		can be directly connected to the patient table top, headrest, table extension, knee-leg support.
1	14420929	**Mattress for Patient Table** For the comfortable positioning of the patient on the CT table.
1	14408022	**Cooling System Air** Air cooling for the dissipation of heat generated in the gantry.
1	14408101	**Computer Desk #AWP** New CT desk to accommodate the control components and color monitor. Width: 1200 mm, Depth: 800 mm, Height: 720 mm.
1	14408102	**Computer Cabinet #AWP** New cabinet to accommodate the computer system and UPS. Matched to the design of the control console table. Width: 800 mm, Depth: 800 mm, Height: 720 mm
1	CT_RECON_192	**AS-64 slice configuration z-Sharp Tech.** The unique STRATON X-ray source utilizes an electron beam that is accurately and rapidly deflected, creating two precise focal spots alternating 4,608 times per second. This doubles the X-ray projections reaching each detector element. The two overlapping projections result in an oversampling in z-direction. The resulting measurements interleave half a detector slice width, doubling the scan information without a corresponding increase in dose. Siemens' proprietary UFC (Ultra Fast Ceramic) detectors and the corresponding 64-slice detector electronics enable a virtually simultaneous readout of two projections for each detector element - resulting in a full 64-slice acquisition. This sampling scheme is identical to that of a 64 x 0.3 mm allowing for reconstruction of 192 slices using 0.1 mm reconstruction interval increment. z-Sharp Technology, utilizing the STRATON X-ray sources and the UFC detectors, provides scan speed independent visualization of 0.33 mm isotropic voxels and a corresponding elimination of spiral artifacts in the daily clinical routine at any position within the scan field.
1	SURE_VIEW	**SureView** Provides exceptional image quality at any pitch setting, enabling you to scan faster because you can scan at any pitch without degrading image quality
1	UFC_DETECTOR	**UFC Detector** Ultra Fast Ceramics (UFC) technology is a unique type of scintillation technology material that quickly and efficiently transforms radiation from the X-ray tube into light signals. Its superb overall quantum efficiency and unique short afterglow enable time-critical X-ray detection at low doses and extremely fast data collection.
1	FAST_SCAN_ASSIST	**FAST Scan Assistant** FAST Scan Assistant: An intuitive user interface for solving conflicts by changing the scan time, resp. the pitch and/or the maximum tube current manually.
1	ADAPT_DOSE_SHIELD	**Adaptive Dose Shield** Adaptive Dose Shield for spiral acquisition to eliminate pre- and post-spiral over-radiation.
1	CT_LUNGIMAGINGAS64	**Lung Imaging** For well over a decade, CT has been recognized and used as the standard of care for lung nodule detection and sizing. This is due to CT's spatial resolution, geometric accuracy, and ability to create various reconstructions and 3D views. The high contrast environment in the chest between the lungs and the nodules makes for a relatively easy detection task for clinicians using CT images. Recent advances in CT technology have allowed these scans to be effectively performed at lower doses, higher resolutions, and faster scan times. The SOMATOM Definition AS64 CT is indicated for use in low dose lung cancer screening for high risk populations*. The AS64 is delivered with two specific scan protocols to provide low dose lung cancer screening exams at approximately 1.5 mGy CTDI for a standard size adult. These default protocols utilize Siemens proprietary dose reducing features such as CARE Dose4D(tm), automatic exposure control technology that

PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
		modulates and adapts dose for every patient, for high image quality at low dose. *As defined by professional medical societies.
1	CARE_DOSE4D	**CARE Dose4D** CARE Dose4D delivers the highest possible image quality at the lowest possible dose for patients - maximum detail, minimum dose. Adaptive dose modulation for up to 60% dose reduction
1	DICOM_SR	**DICOM SR Dose Reports** DICOM structured file allows for the extraction of dose values (CDTIvol, DLP)
1	DOSE_ALERT	**Dose Alert** Dose Alert: As requested by the new release of the standard IEC 60601 3rd edition, the SOMATOM Definition automatically adds up CTDIvol and DLP depending on z-position (scan axis). The Dose Alert window appears, if either of these cumulative values exceeds a user-defined threshold.
1	DOSE_NOTIFICATION	**Dose Notification** Dose Notification: As requested by the new release of the standard IEC 60601 3rd edition, the SOMATOM Definition AS provides the ability to set dose reference values (CTDIvol, DLP) for each scan range. If these reference values are exceeded the Dose Notification window informs the user.
1	CT_TILTED_SPIRAL	**Gantry tilt incl. tilted spiral** Allows for sequential scanning with a tilted gantry between +/- 30°, depending on the vertical position of the table. Using the gantry tilt sensitive organs (like eye lenses) can be moved out of the scan range or it eases access during interventional procedures. The tilted spiral allows to utilize the gantry tilt for spiral scan modes.
1	NEURO_BEST CONTRAST	**Neuro BestContrast** The Neuro BestContrast algorithm can provide enhanced tissue contrast, resulting in improved contrast between gray and white matter without increasing image noise. This post processing step is rapid and can be easily incorporated into clinical workflow where it can be used with other dose reduction approaches such as iterative reconstruction.
1	ACCESS_PROTECT	**Access Protection** Scan Protocols are password protected allowing only authorized staff members to access and permanently change protocols
1	NEMA_XR-29	**NEMA_XR-29 Standard** This system is in compliance with NEMA XR-29 Standard Attributes on CT Equipment Related to Dose Optimization and Management, also known as Smart Dose.
1	CT_UPS_DEF_AS	**Standard UPS for Definition AS** The standard partial system uninterruptible power system (UPS) is built directly into the power distribution cabinet (PDC) and supports the critical circuits for table and gantry electronics, console computer, image reconstruction system, and the internal Ethernet switch (to ensure connectivity). This enables safe removal of patient if outage occurs during scanning. The UPS allows for a safe shutdown of the CT scanner in the event of power interruption. The UPS provides 5-7 minutes of power, during which the user is prompted and guided through the process to perform a safe shutdown of the system. This safe shutdown ensures that no data is lost.
1	CT_PM	**CT Project Management** A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemen's equipment. The assigned PM will work with the customer's facilities management, architect or building contractor to assist you in ensuring that your site is ready for installation. Your PM will provide initial and final drawings and will coordinate the scheduling of the equipment, installation, and rigging, as well as the initiation of on-site clinical education.
1	CT_BUDG_ADDL_RIG	**Budgetary Add'l/Out of Scope Rigging @ $5,000**

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Qty	Part No.	Item Description
1	CT_STD_RIG_INST	**CT Standard Rigging and Installation** This quotation includes standard rigging and installation of your CT new system. Standard rigging into a room with reasonable access, as determined by Siemens Project Management, during standard working hours (Mon. - Fri./ 8 a.m. to 5 p.m.) It remains the responsibility of the Customer to prepare the room in accordance with the SIEMENS planning documents. Any special rigging requirements (Crane, stairs, etc.) and/or special site requirements (e.g. removal of existing systems, etc.) is an incremental cost and the responsibility of the Customer. All other "out of scope" charges (not covered by the standard rigging and installation) will be identified during the site assessment and remain the responsibility of the Customer.
1	4SPAS014	**Low Contrast CT Phantom & Holder**
1	PSPD250480Y3K	**Surge Protective Device (SPD)**
1	CTSDEF01	**CT Slicker** Thermoseal seams and flaps deflect fluids, reducing contaminant penetration into the cushion and table. Contaminants are retained on the tabletop or shunted to the floor. Cleanup is faster, more thorough, and contaminant build-up is reduced. Built using heavy, clear, micro matte vinyl, and top grade hook and loop fastening strips (Velcro) to better fit the specified table. Custom vinyl resists tears and minimizes radiologic interference. Latex free. Set includes CT Skirts. Shipped with main cover, a catheter bag holder, and 3 restraining belts unless otherwise noted. Includes warranty from RADSCAN Medical.
1	EZ9900C	**Dual EmpowerCTA w/EDA (ceiling)**
1	CT_EDUOPTION5	**Clinical Education & Training: Option 5** Siemens offers multiple options for clinical education and training on your new system. These options enable a more personalized approach to the introduction to system operation, features, and benefits and will help ensure that your technologists and physicians have the opportunity to engage in the level of training that best meets your current clinical needs and business objectives. The following items are the education and training modules are highly recommended for the operation of your new Siemens system and are most effective for sites where technologists and/or physicians have limited experience on Siemens' systems. In addition to covering routine procedures, this option also provides additional opportunities to learn more specialized procedures and further increase efficiencies.
1	CT_CONVERPKG	**Education Pkg for Conversion Customers** This educational package is designed to assist customers in the transition to Siemens CT scanning systems. The package offering consists of two 4 hour customized workshop sessions at the customer's facility-both sessions must be scheduled for and subsequently completed within a 24 hour window, access to Siemens Learning Center for 12 months and up to a total of 100 CE's. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	CT_INITIAL_32	**Initial onsite training 32 hrs** Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	CT_FOLLOWUP_16	**Follow-up training 16 hrs** Up to (16) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

Siemens Medical Solutions USA, Inc.
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SIEMENS Healthineers

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Qty	Part No.	Item Description
1	CT_FOLLOWUP_24	**Follow-up training 24 hrs** Up to (24) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	SY_PR_TEAMPLAY	**teamplay Welcome & Registration Package** teamplay is a cloud-based network that brings together your imaging modality users, the systems' dose and utilization data, and the users' expertise to help you improve the delivery of care to your patients. Basic features are provided free of charge. Premium features (benchmarking, non-Siemens devices) are provided on a trial basis for three months at no charge, and may be used thereafter on a subscription fee basis. To register: http://teamplay.siemens.com/#/institutionRegistration/1

System Total: $720,113

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PRELIMINARY PROPOSAL

OPTIONS on Quote Nr: **1-L5B1FJ Rev. 0**

OPTIONS for SOMATOM Definition AS (64-slice Configuration)

All items listed below are OPTIONS:

Qty	Part No.	Item Description	Extended Price
1	14408037	**HeartView CT** Scanning technique and program for ECG controlled data acquisition and image reconstruction with SOMATOM. The package comprises: HeartView CT option on the syngo Acquisition Workplace console for the ECG-controlled acquisition and reconstruction of artifact free images of the heart. The ECG signal is supplied by an ECG device integrated in the gantry. The use of the software of this option is restricted to a single system unit.	+ $41,250
1	14408038	**Cardio BestPhase Plus #AWP** Cardio BestPhase, is a software dedicated to automatically detect the optimal phase for motion-less coronary visualization. The phase is defined in either end-systole, end-diastole or both time points and automatically reconstructed.	+ $15,400
1	14449414	**Physiological Measurement Module** The Physiological Measurement Module allows connection of a 3 Channel ECG cable for ECG controlled cardiac acquisition. Item includes ECG cable	+ $2,200
1	14420778	**Multi Purpose Table** Patient table to support up to 200 cm scan range. Motor-driven table height adjustment from min. 55 cm to max. 92 cm, longitudinal movement of the tabletop 200 cm in increments of 0.5 mm, positioning accuracy (horizontal) is +/- 0.5 mm. The accuracy of the repositioning (horizontal) is specified as +/- 0.25 mm. Table height can be controlled alternatively by means of foot switch (2 each on both sides of the patient table). In the case of emergency stop or power failure, the tabletop can also be moved manually in horizontal direction. Max. table load: 227 kg/500 lbs (with bariatric table top up to 307 kg/676 lbs); table feed speed: 1-200 mm/s; distance between gantry front and table base 40 cm. Positioning aids: Mattress protector, head-arm support (inclusive cushion), and non-tiltable head holders with positioning cushion set, patient restraining system for head fixation, restraining-strap set with body fixation strap that can be directly connected to the patient table top, headrest, table extension, knee-leg support	+ $33,000
1	14408217	**High Cap. Patient & Trauma Tab.Top** The high capacity and trauma table top offers the capability to support up to 307 kg/676 lbs of patient weight. It allows easy positioning and transfer from and to the table; due to its flat surface. Special accessories and an extended table top width of 530 mm ensure a safe and comfortable positioning for obese patients.	+ $27,500
1	14408218	**High Cap. Patient & Trauma Acc Kit** The High capacity and Trauma accessory kit contains additional Patient restraint set with a width of 400mm and additional table extensions for feet and head.	+ $2,200

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Qty	Part No.	Item Description	Extended Price
1	14414734	**Mattress for Bariatric Table Top** This mat is used for scanning non-bariatric patients on the flat, bariatric table top. Placing this mat on the bariatric table top eliminates the need to exchange the table top when non-bariatric patients are scanned. This mat has a curved profile and enables comfortable positioning of non-bariatric patients.	+ $1,650
1	14410232	**Mat for MPT Standard Table Top** Replacement for the positioning mattress for Standard Multi-purpose tabletop.	+ $440

FINANCING: The equipment listed above may be financed through Siemens. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

Siemens Healthcare is pleased to submit this Preliminary Pricing Proposal. A Preliminary Pricing Proposal is provided for planning purposes only; it is not contractually binding. To receive a contractually binding proposal for the Products listed above, inclusive of Terms, Conditions, and Warranty coverage, please contact your Siemens Healthcare Sales Representative.

Siemens Healthcare

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SIEMENS Healthineers

Proposal # 1-L7CH4W

THIS QUOTATION REPRESENTS A PRELIMINARY PROPOSAL AND DOES NOT CONSTITUTE AN OFFER OR A CONTRACT. A BINDING CONTRACT THAT INCLUDES THE TERMS SET FORTH HEREIN SHALL ONLY BECOME EFFECTIVE UPON EXECUTION BY THE PARTIES OF A COMPLETE AGREEMENT.

District / Sales Office

SIEMENS MEDICAL SOLUTIONS USA,INC.
4800 North Point Pkwy
Alpharetta, GA 30022
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Email: stephen.mckissack@siemens-healthineers.com

Sold To
ERLANGER HEALTH SYSTEM
975 EAST THIRD STREET
CHATTANOOGA, TN 37403

Bill To
ERLANGER HEALTH SYSTEM
975 EAST THIRD STREET
CHATTANOOGA, TN 37403

Payer
ERLANGER HEALTH SYSTEM
975 EAST THIRD STREET
CHATTANOOGA, TN 37403

Item #	System Name	Functional Location	Service Agreement	Contract Duration	Warranty Period Price	Partial Year Price	Annual Price
1	SOMATOM Definition AS64		Gold contract	Warranty + 7 Years	$0	$0	$116,584
2	Magnetom Skyra		Select contract	Warranty + 7 Years	$0	$0	$137,843
3	Chiller		OEM contract	Warranty + 7 Years	$0	$0	$11,500

Proactive Service Plans: (Pinnacle, Select, Essential) Notwithstanding anything to the contrary contained in this Agreement, remote access to the Equipment identified above will be established through a broadband internet based connection to either a Customer-owned or Siemens-provided secure end-point. The method of connection will be a Peer-to -Peer VPN IPsec tunnel (non-client based) with specific inbound and outbound port requirements.

Includes:
Parts and/or Labor to the extent shown in Exhibit A.
Principal Coverage Period (PCP) as stated in Exhibit A for each system.
System Updates.
Access to Siemens Customer Care Center for technical telephone support (remote diagnostics, if available to the site and the equipment).

Excludes:
Parts defective due to "acts of God", abuse, misuse, neglect, thermal and shock. Specialty components, including, but not limited to: Glassware, Flat Detectors, Consumables, Transducers, MRI coils, SPECT and PET sources (unless purchased as an option). Non-Siemens components and accessories (such as VCR, injector, laser printer, MR surface coils, tables/table tops, chiller, UPS, etc.) unless specifically identified in Exhibit A.

Notes:
The chilled water supply is an integral part of the MR Equipment covered by this Agreement and is critical for the proper operation of the Equipment and for minimizing the loss of cryogens and preventing damage to the MR and its components. Servicing of the chiller by vendors contracted and certified by Siemens is the recommended path for reducing downtime, potential cryogen losses and damage to the MR and its components. Cryogens lost on the associated MR Equipment and any other damages caused to the MR and any of its components due to issues with chillers not serviced by Siemens under a Siemens service contract or due to other excluded causes (e.g., interruption of power, force majeure occurrences, Customer misuse or negligence, etc.) are not covered under this Agreement and will be replaced and/or repaired at the Customer's sole cost and expense at the current negotiated rate for Siemens "Service By Request" (Time and Materials) customers.

Exhibit A

Item #1:

Equipment:	**SOMATOM Definition AS64**		
Equipment Location:	ERLANGER HEALTH SYSTEM		
Address:	975 EAST THIRD STREET, CHATTANOOGA, TN 37403		
Functional Location:	**Service Quote Nr:** 1-L7BXJ1 Rev 0	**Equipment Quote Nr:** 1-L5B1FJ	**Payment Frequency:** Monthly
Standard Warranty: Extended Warranty	**Warranty Start:** Upon Warranty Commencement	**Warranty End:** 1 Year Duration	**Warranty Price:** $0
Service Agreement: Gold contract	**Contract Start:** Upon Warranty Expiration	**Contract End:** 7 Year Duration	**Annual Price:** $116,584

(See Glossary pages for detailed description of items listed below.)

Coverage applies during the Warranty or Contract Period as indicated:	Warranty Period	Contract Period
Principal Coverage Period	06:00am - 04:00pm M-F	06:00am - 04:00pm M-F
Uptime Guarantee	97%	97%
Phone Response	30 min	30 min
On-Site Response	4 hours	4 hours
Parts Order Requirement	noon	noon
Parts Delivery	Same Day	Same Day
Application Hotline Phone Support	✓	✓
CT Detector Coverage	✓	✓
General Spare Parts Coverage	✓	✓
Labor	✓	✓
LifeNet Access	✓	✓
No Consumable Coverage	✓	✓
Planned Maintenance	✓	✓
Quality Assurance	✓	✓
Safety Checks	✓	✓
Siemens Remote Services	✓	✓
Siemens Virus Protection SELECT	✓	✓
Technical Phone Support	✓	✓
Travel	✓	✓
UM Basic Report CT	✓	✓
Updates	✓	✓
Water/Air Cooling System	✓	✓
X-Ray Tube Coverage Unlimited	✓	✓
syngo Remote Assist Hotline Support	✓	✓
Accredited Self Study Program	N/A	Qty 1
EVOLVE Definition AS (without IRS)	N/A	✓
Enhanced Virtual Learning Sub	N/A	Qty 1

This pricing is only valid for new service contracts that are signed with the equipment purchase or prior to warranty commencement.

No further Options or Alternatives are included in the above listed equipment.

Item #2:

Equipment:	**Magnetom Skyra**		
Equipment Location:	ERLANGER HEALTH SYSTEM		
Address:	975 EAST THIRD STREET, CHATTANOOGA, TN 37403		
Functional Location:	**Service Quote Nr:** 1-L7BXJ1 Rev 0	**Equipment Quote Nr:** 1-L6CDWA	**Payment Frequency:** Monthly
Standard Warranty: Extended Warranty	**Warranty Start:** Upon Warranty Commencement	**Warranty End:** 1 Year Duration	**Warranty Price:** $0
Service Agreement: Select contract	**Contract Start:** Upon Warranty Expiration	**Contract End:** 7 Year Duration	**Annual Price:** $137,843

(See Glossary pages for detailed description of items listed below.)

Coverage applies during the Warranty or Contract Period as indicated:	Warranty Period	Contract Period
Principal Coverage Period	08:00am - 10:00pm M-F	08:00am - 10:00pm M-F
Annual Exam Allowance	Unlimited	Unlimited
Uptime Guarantee	98%	98%
Phone Response	30 min	30 min
On-Site Response	4 hours	4 hours
Parts Order Requirement	noon	noon
Parts Delivery	Same Day	Same Day
ACR Support Package MR	✓	✓
Application Hotline Phone Support	✓	✓
Coil Coverage	✓	✓
Continuous Effort	✓	✓
General Spare Parts Coverage	✓	✓
Guardian Pro MR	✓	✓
Labor	✓	✓
LifeNet Access	✓	✓
MMA and Helium	✓	✓
No Consumable Coverage	✓	✓
PM's performed outside PCP weekdays	✓	✓
Planned Maintenance	✓	✓
Quality Assurance	✓	✓
Real Time Monitoring M-F 7am-10pm ET	✓	✓
Safety Checks	✓	✓
Siemens Remote Services	✓	✓
Siemens Virus Protection SELECT	✓	✓
Technical Phone Support	✓	✓
Travel	✓	✓
UM Advanced Report MR	✓	✓
Updates	✓	✓
syngo Remote Assist Hotline Support	✓	✓
Accredited Self Study Program	N/A	Qty 1
EVOLVE HW Skyra, Skyra fit	N/A	✓
EVOLVE SW Skyra, Skyra fit	N/A	✓
Enhanced Virtual Learning Sub	N/A	Qty 1

This pricing is only valid for new service contracts that are signed with the equipment purchase or prior to warranty commencement.

No further Options or Alternatives are included in the above listed equipment.

Item #3:

Equipment:	**Chiller**		
Equipment Location:	ERLANGER HEALTH SYSTEM		
Address:	975 EAST THIRD STREET, CHATTANOOGA, TN 37403		
Functional Location:	**Service Quote Nr:** 1-L7BXJ1 Rev 0	**Equipment Quote Nr:** 1-L6CDWA	**Payment Frequency:** Monthly
Standard Warranty: OEM Basic Warranty	**Warranty Start:** Upon Warranty Commencement	**Warranty End:** 1 Year Duration	**Warranty Price:** $0
Service Agreement: OEM contract	**Contract Start:** Upon Warranty Expiration	**Contract End:** 7 Year Duration	**Annual Price:** $11,500

(See Glossary pages for detailed description of items listed below.)

Coverage applies during the Warranty or Contract Period as indicated:	Warranty Period	Contract Period
Principal Coverage Period	08:00am - 10:00pm M-F	08:00am - 10:00pm M-F
On-Site Response	4 hours	4 hours
Chiller Coverage Exclusions	✓	✓
Chiller Life Expectancy	✓	✓
General Spare Parts Coverage	✓	✓
Labor	✓	✓
Planned Maintenance	✓	✓
Technical Phone Support	✓	✓
Travel	✓	✓
Updates	✓	✓

This pricing is only valid for new service contracts that are signed with the equipment purchase or prior to warranty commencement.

No further Options or Alternatives are included in the above listed equipment.

Glossary

Deliverables	Description
Accredited Self Study Program	This accredited self-study program provides the latest trends in imaging. These hot topic review articles will be mailed directly to your institution and will provide up to 24 Category A Continuing Education Credits fully recognized by ARRT and NMTCB. A comprehensive study guide accompanies each article to help ensure focus on technologist-relevant information.
ACR Support Package MR	This ACR accreditation assistance package includes a remotely executed pre-submission system quality check to evaluate the readiness of one applicable Siemens system to acquire images for ACR accreditation. Supporting deliverables include one printed accreditation guidebook (additional copies available electronically) aligned to the applicable Siemens system and Siemens operating system nomenclature, workflow templates and/or phantom acquisition protocols and available web based user training containing imaging acquisition tips relative to the ACR accreditation process. Additionally, unlimited technical and clinical applications phone support pertaining to the system readiness and deliverables described above , performed by the Uptime Service Center during normal hours of operation M-F 8-8PM EST during the term of this engagement agreement. Customer is responsible for applying for accreditation, and all tasks and costs related to the application and acquiring the ACR phantom, collecting images, working with and communicating with the ACR. Numerous factors determine whether a site receives ACR accreditation. Therefore, Siemens does not guarantee a site will receive ACR accreditation.
Application Hotline Phone Support	Siemens Customer Care Center Clinical Applications Phone Support is provided with this contract during modality specified hours, call 1-800-888-7436 with your questions and to receive direct access to a Clinical Education Specialist
Chiller Coverage Exclusions	Glycol is a consumable and the customer's responsibility to maintain glycol onsite after installation. If the service vendor is not able to identify the specific supplier of glycol in the system, it may become necessary to flush and refill the system to specifications.Flush and refills under these circumstances are considered an exclusion to the service agreement.
Chiller Life Expectancy	Note: Chiller systems. The OEM suppliers have implemented a 10 year life expectancy on chiller systems. Siemens Healthineers will provide you an End of Service (EOS) notification no less than twelve (12) months prior to the EOS date. Full-service contracts cannot be approved beyond the 10th year; however, there is an annual, renewable Preventative Maintenance PM option. Replacement of chiller is recommended subsequent to EOS notification.
Coil Coverage	Covers the repair and replacement of Siemens coils (Third Party coils are not covered, i.e. Invivo 4 Channel wrist array, lower extremity, knee array, 7-channel Breast, 4 ch. Small Extremity coil, 8-channel Shoulder) If your service contract has a parts allowance, the coils will be deducted from the parts allowance. If you do not have parts coverage, repair or replacement of a coil will be a billable charge.
Continuous Effort	In room-down/system-down situations, on-site work will continue past the contract PCP, 7 days a week, at no additional charge until the system is repaired, by not later than 1:00 a.m. local time. Continuous Effort applies only when a CSE has been on-site for at least one (1) hour prior to the end of the PCP. In such a case, Continuous Effort shall begin at the end of the PCP and end at 1 a.m. the following calendar day. Continuous Effort shall resume no sooner than seven (7) hours later, and may resume at a later time with the consent of the Customer.
CT Detector Coverage	Repair and maintenance coverage of UFC (Ultra Fast Ceramic) multislice spiral CT Detector.
Enhanced Virtual Learning Sub	This (12) month multi-modality subscription will provide access for imaging professionals at the customer site to e.learnings, tuition for one-hour virtual monthly webinars, step-by-step videos, and up to (24 CEUs). Imaging professionals must be logged into PEPconnect (Siemens online learning platform) to be eligible to receive CEUs. PEPconnect provides access to all online and virtual training documentation with a wide variety of product-specific, clinical and job-relevant courses, as well as performance support activities for customers with Siemens medical equipment. This educational offering must be completed (12) months from purchase date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
EVOLVE Definition AS (without IRS)	At least 1 software upgrade to the next syngo level; also, 1 hardware upgrade to the main system and, if existent, the connected syngo CT Workplace. Contract including syngo Evolve for connected syngo CT Workplace must be purchased if purchased on the main system to ensure compatibility. syngo MultiModality Workplace and refurbished systems excluded in all cases.
EVOLVE HW Skyra, Skyra fit	Customer receives at least one hardware upgrade to the main system as they become available providing a service contract is in place covering Evolve. Syngo MultiModality Workplace excluded in all cases.
EVOLVE SW Skyra, Skyra fit	Customer Receives all software upgrades and updates to the main system as they become available providing a service contract is in place covering Evolve. Syngo MultiModality Workplace excluded in all cases.
General Spare Parts Coverage	Replacement of standard spare parts. Excludes high-vacuum components, consumables, Shock wave components, Transducers, TEE's and Specialty Probes, Flat Panel Detectors, MMLC, and Waveguides. Excludes non-Siemens parts unless specifically identified in Exhibit A.

Deliverables	Description
Guardian Pro MR	The Siemens Guardian Program™ offers you proactive online monitoring of your system's performance on an ongoing real-time basis. By continuously monitoring your system for possible deviations from current norms, the Guardian Program provides for a high level of system availability, making it possible to detect and resolve system errors before malfunctions occur. In the event of a system error message, one of our certified support engineers will immediately evaluate and initiate appropriate actions.. An expert opinion on the exact status of your system is also offered within the first 15 minutes.
Labor	Unlimited coverage of on-site labor during the Principal Coverage Period indicated. Preferred labor rates for billable service outside of Principal Coverage Period (at current prevailing tiered rates).
LifeNet Access	The LifeNet portal provides access to customer service information related to diagnostic imaging equipment. Access includes service and PM management tools, equipment performance reports, service documentation, asset management and service contract management tools and much more.
MMA and Helium	Maintenance of magnet ancillary components and magnet performance. Covers parts and labor associated with maintaining the magnet and refrigeration components (CryoCare). Covers burst disc, vent kit, valves, MSUP, ERDU, helium compressor, high pressure gas lines and cold head. Supply of liquid helium and labor to fill magnet. - If the magnet refrigeration system shut down due to facility services failure, then cryogen usage will increase and additional charges may apply - Helium fills to recover from a customer caused quench will be chargeable.
No Consumable Coverage	Upon selection to not have consumable coverage, customer agrees to supply at his/her own expense consumables, such as but not limited to, batteries, leads, padding, storage media, cassettes, etc. Full list of consumables covered can be found on Lifenet customer portal: www.usa.siemens.com/lifenet.
On-Site Response	Siemens guarantees on-site CSE arrival within a specific time period (see Exhibit A) after a call for service has been placed with the Siemens Customer Care Center. This on-site response applies in system/room down situations only. (See Response Time Guarantee in General Terms and Conditions for additional information)
Parts Delivery	Spare parts arrival for on-site repair of room-down/system-down is typically the Same Day following the time the parts order is submitted.
Parts Order Requirement	Parts order must be placed with Siemens by noon (Customer's local time) in order to receive Parts Delivery commitment as specified.
Phone Response	The response time indicated on Exhibit A provides preferred call-handling of a service event. This call-back response is the telephone response to the customer by the Siemens Customer Care Center personnel or the CSE to provide the status of the service call.
Planned Maintenance	Preventive services carried out in accordance with the equipment's specific maintenance plan. This includes: tracking and scheduling of required maintenance tasks; exchange of wear and tear parts according to maintenance plan; care measures; adjustments to factory specifications; verification of specified performance and functionality; documentation and detailed protocol of system condition.
PM's performed outside PCP weekdays	Planned maintenance optimizes system reliability through standardized measures and procedures. Siemens will coordinate planned maintenance in accordance with the manufacturer's recommendations outside the PCP hours designated on Exhibit A on Weekdays only.
Principal Coverage Period	Hours defined in Exhibit A during which agreed-upon services are provided.
Principle Coverage Period 14 HRS. 8AM-10PM	Specific 14-hour period during which agreed-upon services are provided, as noted above.
Quality Assurance	Regular quality assurance tasks and image quality inspections to achieve consistent, high-quality images, are performed to keep the system within the quality specifications as issued by the factory.
Real Time Monitoring M-F 7am-10pm ET	Real time event monitoring of a system by a Siemens engineer. Customers will be notified of critical events and action for resolution within 15 minutes of event occurring. Events of non-critical nature will be stored for trending purposes enabling predictive analysis for potential future failures. Siemens will respond to trends and schedule service accordingly.
Safety Checks	Safety Checks are performed to insure compliance with all local and federal guidelines and regulations. This service consists of Tracking and scheduling of required tests Mechanical Safety Checks (e.g. mechanical movements etc.) Electrical Safety Checks (e.g. leakage currents, insulation etc.) Reporting of findings and results

Deliverables	Description
Siemens Remote Services	Siemens Remote Services – the efficient and comprehensive infrastructure for medical equipment-related remote services – combines high-tech medical engineering with state-of-the-art information technology. Services, which formerly required on-site visits, are now available via data transfer. SRS enables both Core Services (which are included as part of our standard service agreements), as well as optional services (called Enhanced Productivity Services - EPS) which customers can purchase as an enhancement to their agreement. **Core Services Include:** remote diagnosis and repair via dial-in modem, event monitoring (performance screening of customer system where CSE evaluates status messages at periodic intervals and initiates appropriate service action within the scope of customers service agreement), software updates, LifeNet web site access. **Enhanced Productivity Services (EPS) Include:** Guardian Program, Virus Protection Program, Utilization Management, Application training and on-site support.
Siemens Virus Protection SELECT	Siemens Virus Protection SELECT consists of the following service features: Virus scanner installation: Expert installation of the certified and tested virus scanner Trend Micro OfficeScan Ongoing remote virus scanner updates: Constant automatic remote updates of the latest validated virus pattern and scan engine Security Hotline: The local Uptime Service Center is our customer's contact for up-to-date virus information and rapid response support. Siemens Virus Protection is available for all *syngo*-based systems which are - connected to our SRS infrastructure by a VPN broadband connection - covered by one of our service agreements - equipped with the required software version, which includes the Virus Scanner as well as the necessary CA-based Managed Node Package (MNP). Siemens will not be liable for system failures and loss of patient data, caused by a virus.
syngo Remote Assist Hotline Support	Allows Siemens to connect to your Siemens Imaging Console and provides you with direct real time support. Available for Tim Class MRI Systems with software version VB17 or VC13, AND Definition Class CT Systems. Requires a Siemens remote service connection.
Technical Phone Support	Direct access to specialists at the Siemens Customer Care Center for fast diagnosis and technical support. Technical Phone Support is available to Siemens customers over the telephone, 24 hours a day, 7 days a week.
Travel	Includes travel time for Customer Service Engineer to and from Customer's site. Subject to change to reflect currently prevailing rates, if occurring outside of the Principal Coverage Period indicated.
UM Advanced Report MR	Siemens Utilization Management Advanced provides system-specific usage data, which is collected from the system itself. This detailed data allows Siemens' customers the ability to leverage their system's full potential. Advanced Reporting includes reports on system usage and performance as well as detailed reports on body region studies and provides anonymous benchmark information about comparable systems at other facilities operating in similar environments. These reports are easily accessible through Siemens' customer portal LifeNet.
UM Basic Report CT	Utilization Management Basic provides periodic evaluation updates of your system's capacity performance, including, for example, information on patient examinations per day, or the number of studies conducted on individual body parts. UM Basic provides an overview about the system usage and therefore serve as initial indicators of how system utilization can be optimized. It contains general information such as: total number of patients, average/total number of patient exams per hour, total number of protocols, total number of patient exams, mean time between patient exams, average duration per patient exam. In addition, the report shows system-specific information such as: average number of scan seconds per patient exam, average duration per study, total number of reconstructed images, total number of selected body regions, total number of archiving operations, or percentage number of studies per coil.
Unlimited Exams	Coverage includes an unlimited number of Patient Exams per year.
Updates	Modifications or reliability enhancements to equipment. Includes two types: Mandatory (safety and performance-related update instructions) and Non-mandatory (reliability-related service instructions). Does not include enhancements to the operating system or additional functionality.
Uptime Guarantee	Guarantee that the Equipment will function at the minimum Uptime Performance level set forth in Exhibit A of this Agreement. A SRS connection via VPN broadband is mandatory.
Water/Air Cooling System	Coverage of the split heat exchanger, also known as a remote cooling system, active cooling system or split chiller. (This is a Siemens unit, manufactured by Riedel.) Maintenance for this unit is included in the system service price of the service agreement and does not require the purchase of separate chiller coverage.

Deliverables	Description
X-Ray Tube Coverage Unlimited	Warranty - Unlimited tube coverage provided on all CT x-ray tubes. After warranty - Annual x-ray tube coverage is unlimited scan seconds.

Siemens Medical Solutions USA, Inc. General Terms and Conditions

1. Scope
For the term set forth on the first page hereof under the heading "Contract Duration", Siemens will provide (i) remedial maintenance service on the equipment described on the preceding pages hereof (the "Equipment") when requested by the Customer, as well as planned maintenance inspections, when scheduled, as further described in the Glossary section attached hereto, in order to keep the Equipment operating in accordance with the manufacturer's specifications, and (ii) any training courses and/or other educational offerings described in Exhibit A and the Glossary. Siemens will make every effort to respond to service calls at a mutually agreed upon arrival time consistent with the provisions cited in Section 2. In connection with the provision of Equipment maintenance services, Siemens may take photographs or other images of the Equipment or components thereof in order to expedite the completion of repairs, provided that any such photographs shall not include any patients, employees or agents of the Customer and further provided that such photographs and images will only be used in order for Siemens to carry out its duties and responsibilities hereunder.

In the event that (i) the term of this Agreement does not include the Equipment warranty period (as indicated on the first page hereof under the heading "Contract Duration"), or (ii) the term of this Agreement does not commence immediately upon the expiration of the Siemens warranty, or (iii) the Equipment was serviced prior to commencement of the term by anyone other than Siemens or an authorized Siemens dealer or service provider, or (iv) the Equipment was moved from its original location or is not connected to its original power supply (other than portable or mobile Equipment), then the Equipment is subject to inspection by Siemens to determine if it is in good operating condition prior to the commencement of services under this Agreement. Any inspection as well as any repairs or adjustments deemed necessary by Siemens during such inspection shall be made at Siemens' per-call rates and terms then in effect and shall include charges for parts, with all such repairs or adjustments to be completed prior to the commencement of service under this Agreement.

If this Agreement includes any training courses or other educational offerings, such training courses or other offerings may consist of on-site training or consultation at the Customer site, a Siemens training facility or via conference call or net meeting, self-study or computer based training, or other arrangements, as further described in Exhibit A and the Glossary. In some cases, tuition charges will cover travel and lodging for off-site training, and in other cases Customer will be responsible for all travel and lodging costs. Details of the training are provided on Exhibit A and the Glossary.

2. Principal Coverage Period (PCP)
Service and maintenance will be provided during the principal coverage period ("PCP") as defined on Exhibit A, excluding the following holidays: New Years Day, Memorial Day (observed), Independence Day, Labor Day, Thanksgiving Day, Chrisimas Day. If one of the foregoing holidays falls on a Saturday, then the holiday will be observed on the previous Friday, and if the holiday falls on a Sunday, the holiday will be observed on the following Monday. Unless an extended hours coverage option has been selected, labor and travel required outside the PCP will be charged at Siemens' per-call rates and terms then in effect.

3. Replacement Parts
Siemens will supply at its own expense, necessary parts, except as indicated in the Glossary section, provided replacement of the parts is required because of normal wear and tear or otherwise deemed necessary by Siemens and further provided that the Siemens-manufactured parts are available from the factory. All Parts will be new, standard parts, or used, reworked or refurbished parts that comply with applicable performance and reliability specifications. Exchange parts removed from the Equipment shall become the property of Siemens unless such exchange parts constitute "hazardous wastes", "hazardous substances", "special wastes" or other similar materials, as such terms are defined by any federal, state or local laws, rules or regulations, in which case, at the option of Siemens, the exchange parts shall remain the property of the Customer and shall be disposed of by the Customer in strict compliance with all applicable laws, rules and regulations.

4. Planned Maintenance (PM)
Planned maintenance will be carried out according to the manufacturer's recommended schedule. Planned maintenance generally includes checking mechanical and electrical safety, lubrication, functional testing and adjusting for optimum performance as specified in the detailed planned maintenance work plan.

5. Software Maintenance
Whenever the Equipment covered by this Agreement utilizes Siemens' operating system software, Siemens will provide all maintenance and commercially available updates for such operating system software as part of this Agreement. Such updates will solely enhance previously purchased capacities of the Equipment. Operating system software upgrades that provide new features or capabilities or that require hardware changes will be offered to Customer when commercially available and at purchase prices established by Siemens. In addition, some upgrades may require applications training performed by Siemens' personnel that will be offered at Siemens' rates and terms then in effect. Siemens retains the sole right to determine whether an upgrade requires such training.

Nothing in this Agreement shall in any way grant to Customer any right to or license in any diagnostic service software utilized by Siemens in servicing the Equipment. Such service software is and remains the property of Siemens and is available to Customer pursuant to the terms and conditions of a separate diagnostic materials license agreement, which may require payment of a license fee. This service software shall be disabled by Siemens upon cancellation or termination of this Agreement.

6. Equipment; Location; Remote Access
The Equipment covered under this Agreement is limited to the Siemens furnished Equipment described on the face sheet(s). The Equipment shall not be moved to another location unless Customer obtains the prior written consent of Siemens, subject to the following exceptions (i) portable Equipment (e.g., Ultrasound equipment, but not including any equipment that is housed in a mobile vehicle, van or trailer) may be moved to other locations within the same facility, so long as the Customer informs Siemens of the location of the Equipment when Siemens is scheduled to provide on-site service; (ii) if Equipment is located in a trailer, van or other form of mobile vehicle, the Equipment may be moved from the Equipment Location identified on Exhibit A, provided, however, that Siemens shall not be required to service such Equipment, and the Response Time and Uptime Performance Guarantees (if any) shall not apply, if either (a) the Customer does not notify Siemens at least one (1) month in advance of the Equipment's mobile route, or (b) the Equipment is moved more than 25 miles from the original Equipment Location; and (iii) if fixed Equipment is moved to any other location within the Customer's facility, then either (a) the Customer will engage Siemens to relocate the Equipment, at Siemens' then current rates and charges, or (b) if Siemens does not perform the services necessary to relocate the Equipment, then Siemens may suspend services with respect to such Equipment until Siemens performs an inspection of the Equipment, at the Customer's cost, to determine if any repairs are necessitated as a result of any such relocation (in which case the Customer shall be separately charged for such repairs, including parts and labor, at Siemens' rates and charges then in effect).

Siemens service personnel will be given full and free access to the Equipment to perform inspections and service/maintenance on the Customer's premises, and will make specific appointments for such maintenance. If the Equipment is not made available at the appointed time, waiting time beyond a reasonable allowance will be charged at Siemens' per-call rates and terms then in effect.

Customer shall provide Siemens with both on-site and remote access to the Equipment. The remote access shall be provided through the Customer network as is reasonably necessary for Siemens to provide services under this Agreement. Remote access will be established through a broadband internet based connection to either a Customer owned or Siemens provided secure end-point. The method of connection will be a Peer-to-Peer VPN IPsec tunnel (non-client based) with specific inbound and outbound port requirements.

In the event the Customer fails to provide or maintain the remote access connection for any Proactive Service Agreement (e.g., Pinnacle, Select, Essential, as identified in Exhibit A), then Siemens shall have the option to terminate this Agreement. In addition, in accordance with the terms of Section 22 hereof, any Uptime Performance Guarantee shall be void if the remote access connection is not provided and available 24 hours per day, 7 days a week.

7. Agreement Term; Price; Payment Terms
This Agreement shall be in effect for the period stated on the first page of this Agreement.

For the basic services to be provided by Siemens under the terms of this Agreement, Siemens shall send invoices to the Customer and payments shall be made in advance based on the payment frequency shown in Exhibit A under "Payment Frequency".

Invoices for all amounts due under this Agreement shall be sent to the Customer by regular U.S. mail, postage prepaid, at the address set forth on the first page hereof under "Bill To".

All payments to be made by Customer under this Agreement are due net thirty (30) days from the invoice date. Past due payments shall bear interest at the rate of 1½% per month.

8. Causes for Exclusion/Separate Charges
This Agreement specifically excludes labor, parts and expenses necessary to repair Equipment:

- damaged by fire, accident, misuse, abuse, negligence, improper application or alteration or by a force majeure occurrence as described in Section 17 hereof, or by the Customer's failure to operate the Equipment in accordance with the manufacturer's instructions or to maintain the recommended operating environment and line conditions;

• defective due to unauthorized attempts to repair, relocate, maintain, service, add to or modify the Equipment by the Customer or any third party or due to the attachment and/or use of non-Siemens supplied parts, equipment or software without Siemens' prior written approval (and if the Customer or a third party modifies the Equipment, then Siemens may remove such Equipment from coverage under this Agreement unless the Customer restores the Equipment to the manufacturer's published specifications);

• defective due to any repair or service of the Equipment by the Customer or any third party prior to the commencement of the term of this Agreement;

• which failed due to causes from within non-Siemens supplied equipment, parts or software including, but not limited to, problems with the Customer's network;

• which is worn out and cannot be reasonably repaired due to the unavailability of spare parts from the original equipment manufacturer; or

• which is a transducer or probe and which is damaged or defective, or which failed, due to any of the foregoing causes or due to improper cleaning, disinfecting or TEE bite marks.

If Siemens is called upon to service or repair Equipment which falls under this Section 8, a separate invoice will be issued for labor, parts and expenses at Siemens' rates and terms then in effect.

This Agreement does not entitle the Customer to services related to information technology, patient and imaging workflow design and analysis, or problem diagnosis. Siemens' responsibility under this Agreement does not extend beyond the outbound or inbound sockets of the Equipment. In addition, changes, adjustments, additions or repairs required to or with respect to the Equipment resulting from issues, matters, items or concerns that are the responsibility of the Customer, such as changes related to Customer's network infrastructure, are not covered by this Agreement. This may include, but is not limited to, network IP address changes. Although the Equipment may have limited short term storage capacity, the storage of images, both patient and QA images, is the responsibility of the Customer.

If Siemens offers a Network Assistance option for the Equipment and the Customer purchases this option as indicated on Exhibit A, then Siemens shall assist the Customer in its efforts to identify the cause of any network or connectivity problems which may affect the operation of the Equipment; provided, however, that the price for this option does not include the cost of any repairs (labor, parts, etc.) to remedy such problems, which shall be the sole responsibility of the Customer. If the Customer does not purchase this option, or if this option is not offered by Siemens, then any assistance provided by Siemens to the Customer with respect to any network or connectivity issues shall require a P.O. from the Customer and shall be separately billed to the Customer at Siemens' then current rates and charges.

9. Default

Customer shall be in default under this Agreement upon: (i) a failure by Customer to make any payment due Siemens within ten (10) days of receipt of notice from Siemens that the payment was not made within the applicable payment period; (ii) a failure by Customer to perform any other obligation under this Agreement within thirty (30) days of receipt of notice from Siemens; (iii) a failure to grant Siemens access to the Equipment as set forth in Section 6 of this Agreement; (iv) a default by Customer or any affiliate of the Customer under any other obligation to or agreement with Siemens, Siemens Financial Services, Inc. or Siemens Medical Solutions Health Services Corporation, or any assignee of the foregoing (including but not limited to, a promissory note, lease, rental agreement, license agreement or purchase contract); or (v) the commencement of any insolvency, bankruptcy or similar proceedings by or against the Customer (including any assignment by Customer for the benefit of creditors). Upon the occurrence of any event of default hereunder, Siemens may, in addition to any and all other remedies available under law, elect to: (i) immediately cease providing services under this Agreement and any and all other agreements between the parties, or suspend any training courses or educational offerings provided under this Agreement, until the default is cured or corrected, (ii) terminate this Agreement, in which case Customer shall pay to Siemens (a) all amounts due under this Agreement through the effective date of termination, (b) as liquidated damages and not as a penalty, an amount equal to 25% of the remaining payments due under this Agreement from the date of termination through the scheduled expiration of the term of this Agreement, and (c) all costs and expenses of collection, including without limitation reasonable attorneys' fees and court costs incurred by Siemens as a result of the Customer's default, and/or (iii) commence collection actions (including court actions) for all sums due under this Agreement. All rights and remedies available to Siemens hereunder, by law or equity, shall be cumulative and there shall be no obligation for Siemens to exercise a particular remedy.

In the event that Customer cures all defaults hereunder, then prior to resumption of the Equipment maintenance services under this Agreement, Siemens may inspect the Equipment to determine if it is in good operating condition. Such inspection shall be charged to the Customer at Siemens' per-call rates and terms then in effect. Any repairs or adjustments which Siemens determines are required due to (i) the use of any non-Siemens parts, (ii) the repair or service of the Equipment by the Customer or any third party during the suspension of services by Siemens, or (iii) any of the exclusions from coverage set forth in Section 8 of this Agreement, shall be charged to the Customer at Siemens' rates and terms then in effect and shall include charges for parts, with all such repairs or adjustments to be completed prior to the resumption of service under this Agreement.

10. Limitation of Liability

Siemens' entire liability and Customer's exclusive remedy for any direct damages incurred by the Customer from any cause whatsoever, and regardless of the form of action, whether liability in contract or in tort, arising under this Agreement or related hereto, shall not exceed, as applicable: (i) an amount equal to the Annual Agreement Price (in effect when the cause of action arose) for the specific item of Equipment under this Agreement that caused the damage or is the subject matter of, or is directly related to, the cause of action, or (ii) the amount paid by Customer to Siemens under this Agreement for the particular training course or educational offering that is the subject matter of the claim. The foregoing limitation of liability shall not apply to claims by Customer or third parties for bodily injury or damage to real property or tangible personal property (including damage to the Equipment covered by this Agreement) caused solely and directly by the gross negligence or willful misconduct of Siemens. In addition, Siemens shall have no liability hereunder to Customer to the extent that Customer's or any third party's acts or omissions contributed in any way to any loss it sustained or to the extent that the loss or damage is due to a force majeure occurrence as described in Section 17 hereof or any other cause beyond the reasonable control of Siemens.

THIS IS A SERVICE AGREEMENT. WITHOUT LIMITING THE LIMITATION OF LIABILITY SET FORTH IN THE PRECEDING PARAGRAPH, SIEMENS EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL SIEMENS BE LIABLE FOR ANY LOST PROFITS, LOST SAVINGS, LOST REVENUES, LOSS OF USE OR DOWNTIME (EXCEPT AS OTHERWISE PROVIDED HEREIN), LOST DATA, OR FOR ANY INDIRECT, INCIDENTAL, UNFORESEEN, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES WHETHER BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR ANY OTHER THEORY OR FORM OF ACTION, EVEN IF SIEMENS HAS BEEN ADVISED OF THE POSSIBILITY THEREOF, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR THE USE OR PERFORMANCE OF THE EQUIPMENT.

11. Notices

Except for the issuance of invoices as set forth in Section 7 hereof, all notices required to be provided hereunder shall be in writing and shall be sent by overnight delivery via a nationally recognized delivery service or by certified or registered mail, postage prepaid, to Siemens at the address set forth on the first page of this Agreement and to the Customer at the address set forth under "Bill To" on the first page of this Agreement. Notice given in compliance with this Section 11 shall be sufficient for all purposes under this Agreement, and such notice shall be effective when sent. Either party may change its notice address only if notification is sent in writing pursuant to this Section 11.

12. Governing Law; Waiver of Jury Trial

This Agreement shall be governed by the laws of the Commonwealth of PA. TO THE EXTENT NOT PROHIBITED BY LAW, THE PARTIES WAIVE ALL RIGHTS TO A JURY TRIAL IN ANY LITIGATION ARISING FROM OR RELATED IN ANY WAY TO THIS AGREEMENT OR THE TRANSACTION CONTEMPLATED HEREBY.

13. Government Access Clause

Until the expiration of four (4) years after the furnishing of any services under this Agreement, Siemens shall make available upon written request of the Secretary of the Department of Health and Human Services, the Comptroller General, or any of their duly authorized representatives, this Agreement and the books, documents and records of Siemens which are necessary to certify the nature and extent of costs incurred under this Agreement. If Siemens carries out any of the duties of this Agreement through a subcontract with a value of $10,000 or more over a 12 month period with a related organization, such subcontract shall include a clause to the effect that until the expiration of four (4) years after the furnishing of any services under the subcontract, the related organization shall make available upon written request of the Secretary of the Department of Health and Human Services, the Comptroller General, or any of their duly authorized representatives, the subcontract and the books, documents and records of the related organization that are necessary to certify the nature and extent of costs incurred under that subcontract.

This provision shall apply if and solely to the extent that Section 1861 (v) (1) (I) of the Social Security Act applies to this Agreement.

14. Damages, Costs, And Fees

In the event that any dispute or difference is brought arising from or relating to this Agreement or the breach, termination, or validity thereof, the prevailing party shall not be entitled to recover from the other party punitive damages. The prevailing party shall be entitled to recover from the other party all reasonable attorneys' fees and collection agency fees incurred, together with such other expenses, costs and disbursements as may be allowed by law.

15. Severability; Headings

No provision of this Agreement which may be deemed invalid, illegal or unenforceable will in any way invalidate any other portion or provision of this Agreement. Paragraph headings are for convenience only and will have no substantive effect.

16. Waiver

No failure, and no delay in exercising, on the part of any party, any right under this

Agreement will operate as a waiver thereof, nor will any single or partial exercise of any right preclude the further exercise of any other right.

17. Force Majeure

Siemens will not be liable to Customer for any failure to fulfill its obligations under this Agreement due to causes beyond its reasonable control and without its fault or negligence including, but not limited to, governmental laws and regulations, acts of God or the public, war or other violence, civil commotion, blockades, embargoes, calamities, floods, fires, earthquakes, explosions, accidents, storms, strikes, lockouts, work stoppages, labor disputes, or unavailability of labor, raw materials, power or supplies. In addition, in the event of any determination pursuant to the provisions of a collective bargaining agreement between the Customer and any labor union representing any employees of the Customer preventing or hindering the performance of any of the obligations of Siemens under this Agreement, or determining that the performance of any such obligations violates provisions of that collective bargaining agreement, or in the event a trade union, or unions, representing any of the employees of the Customer otherwise prevents Siemens from performing any such obligations, then Siemens shall be excused from the performance of such obligations unless the Customer makes all required arrangements with the trade union, or unions, to permit Siemens to perform the work. The Customer shall pay any additional costs incurred by Siemens that are related to any labor dispute(s) that involve the Customer.

18. Confidentiality

Siemens and the Customer shall maintain the confidentiality of any information provided or disclosed to the other party, its employees or agents (a "receiving party") relating to the business, customers and/or patients of the disclosing party, including but not limited to know-how, technical data, processes, software, techniques, developments, inventions, research products and plans for future developments, proprietary matters of a business or technical nature, as well as this Agreement and its terms (including the pricing and other financial terms under which the Customer will be obtaining the services hereunder). Confidential Information shall also include all written materials (including correspondence, memoranda, manuals, training materials, notes and notebooks) and all computer software, models, mechanisms, devices, drawings or plans which may be disclosed or made available embodying Confidential Information. All Confidential Information shall be and remain the sole and exclusive property of the disclosing party. Each party shall use reasonable care to protect the confidentiality of the information disclosed, but no less than the degree of care it would use to protect its own confidential information, and shall only disclose the other party's confidential information to its employees and agents having a need to know this information. Confidential Information shall not include any information or data which (i) is or becomes public knowledge (through no fault of the receiving party or any of its employees or agents), (ii) is made available to the receiving party by an independent third party without any obligation of confidentiality, (iii) is already in the receiving party's possession at the time of receipt from the disclosing party (as such prior possession can be properly demonstrated by it), or (iv) is required by law to be disclosed, provided that the receiving party gives the disclosing party advance notice of the requirement for disclosure so that the disclosing party can take whatever action it deems necessary to protect the disclosure of its Confidential Information. In addition, this confidentiality provision shall not apply to any action brought by either party to enforce the terms of this Agreement against the other party.

Any unauthorized use, disclosure or misappropriation of any Confidential Information by the receiving party in violation the foregoing may result in irreparable and continuing damage to the disclosing party; in the event of such breach, the disclosing party shall be entitled to obtain immediate injunctive relief and any other relief or remedies to which it may be entitled. The receiving party waives any requirement that the disclosing party post a bond or other security in connection with any petition filed by the disclosing party for injunctive relief. In the event that a court of competent jurisdiction determines that the receiving party has breached this provision, then the receiving party shall reimburse the disclosing party for the costs of any court proceedings and all reasonable attorneys' fees.

19. End of Support Announcement

Notwithstanding anything to the contrary contained herein, in the event that Siemens makes a general announcement that it will no longer offer service agreements for an item of Equipment or components thereof, or provide a particular service agreement option or feature, whether due to the unavailability of spare parts or otherwise (an "EOS Announcement"), then upon no less than twelve (12) months prior written notice to the Customer, Siemens may remove any affected Equipment, components, options or features from coverage under this Agreement, with a corresponding adjustment of the Annual Agreement Price. In addition, at the end of this twelve (12) month period, the Customer may either remove the affected Equipment components, options or features from coverage under this Agreement or request that Siemens provide service or parts on a time and materials basis only, at Siemens' rates and terms then in effect, for any Equipment, components, options or features subject to an EOS Announcement.

20. Removal of Equipment from Coverage

The Customer may remove Equipment from coverage under this Agreement at any time upon no less than thirty (30) days prior written notice to Siemens if the use of the Equipment is permanently discontinued and the Equipment is removed from service. There is no fee for this cancellation. Prorated credit will be issued for any advance payments made by the Customer for the period after the effective date of removal (based on the notice requirement). In addition, if the Customer sells or otherwise transfers any of the Equipment to a third party and the Equipment remains installed and in use at the same location, but such third party does not assume the obligations of the Customer under this Agreement or enter into a new service agreement with Siemens with a term at least equal to the unexpired term of this Agreement, then the Customer may terminate this Agreement with respect to such Equipment upon no less than thirty (30) days prior written notice to Siemens, in which case the Customer shall pay to Siemens (i) all amounts due under this Agreement through the effective date of termination (based on the notice requirement) and (ii) as liquidated damages and not as a penalty, an amount equal to 25% of the remaining payments due under this Agreement for such Equipment from the date of termination through the scheduled expiration of the term of this Agreement.

21. HIPAA

To the extent required by the provisions of the Health Insurance Portability and Accountability Act ("HIPAA"), the Health Information Technology for Economic and Clinical Health Act ("HITECH"), and any regulations promulgated thereunder, Siemens does hereby assure Customer that it will appropriately safeguard Protected Health Information (as defined under HIPAA) made available to or obtained by Siemens pursuant to this Agreement or any Service Schedule ("PHI"). Without limiting the obligations of Siemens otherwise set forth in this Agreement or imposed by applicable law, Siemens agrees to comply with applicable requirements of law relating to PHI and with respect to any task or other activity Siemens performs on behalf of Customer. Specifically, Siemens shall:

(a) not use or disclose PHI other than as permitted or required by this Agreement or as required by law, and limit any use or disclosure of PHI to a limited data set or the minimum necessary to accomplish the intended purpose of such use or disclosure;

(b) implement administrative, physical and technical safeguards that reasonably and appropriately protect the confidentiality, integrity and availability of any electronic PHI that it creates, receives, maintains or transmits on behalf of the Customer, and comply, where applicable, with the HIPAA Security Rule with respect to such electronic PHI, and otherwise use appropriate safeguards to prevent use or disclosure of PHI, other than as provided for by this Agreement;

(c) report to Customer any use or disclosure of PHI not provided for by this Agreement, and report any security incident, of which Siemens becomes aware;

(d) in accordance with applicable HIPAA and HITECH requirements, ensure that any subcontractors or agents to whom Siemens provides PHI received from, or created or received by Siemens on behalf of, Customer agree to essentially the same restrictions and conditions that apply to Siemens with respect to PHI and implement reasonable and appropriate safeguards with respect to PHI;

(e) upon Customer's written request, make PHI available to the Customer as necessary for Customer to respond to individuals' requests for access to PHI about them, provided that the PHI in Siemens' possession constitutes a Designated Record Set and Siemens has been specifically engaged by Customer to so maintain and service such PHI on behalf of Customer;

(f) upon Customer's written request, make PHI available to Customer for amendment and incorporate any amendments to the PHI in accordance with applicable law, provided that the PHI in Siemens' possession constitutes a Designated Record Set and Siemens has been specifically engaged by Customer to so maintain and service such PHI on behalf of Customer;

(g) make available to Customer the information in its possession required to provide an accounting of disclosures of PHI as required by applicable law;

(h) mitigate, to the extent practicable, any harmful effect that is known to Siemens of a use or disclosure of PHI by Siemens in violation of the requirements of this Agreement or of law;

(i) provide notice of a breach of unsecured PHI to Customer without unreasonable delay, and in no case later than thirty (30) days after discovery of a breach. The notification shall include, to the extent possible, the identification of each individual whose unsecured PHI has been, or is reasonably believed by Siemens to have been, accessed, acquired, used, or disclosed. Siemens shall provide Customer with any other available information that Customer is required to include in notification to the individual under applicable law;

(j) make Siemens' internal practices, books, and records relating to the use and disclosure of PHI received from Customer available to the Secretary of the United States Health & Human Services for purposes of determining Customer's compliance with applicable law; and

(k) upon expiration or termination of this Agreement, return to Customer or destroy all PHI in its possession as a result of this Agreement and retain no copies of PHI, if it is feasible to do so. If return or destruction is not feasible, Siemens agrees to extend all protections contained in this Agreement to Siemens' use and/or disclosure of any retained PHI, and to limit further uses and/or disclosures to the purposes that make the return or destruction of the PHI infeasible.

Siemens may use and disclose PHI as necessary for Siemens to perform its obligations hereunder, and may (i) use the PHI for its proper management and administration and to carry out its legal responsibilities, (ii) disclose the PHI to a third party for Siemens' proper management and administration or to carry out Siemens' legal responsibilities, provided that the disclosures are required by law or Siemens obtains reasonable assurances from the third party regarding the confidential handling of such PHI as required under HIPAA and/or HITECH, and the third party agrees to notify Siemens of any instances in which the confidentiality of the information has been breached, (iii) provide data aggregation services related to the healthcare operations of Customer, and (iv) de-identify the PHI, and use such de-identified data, in accordance with the de-identification requirements under HIPAA.

Siemens agrees that it will negotiate in good faith an amendment to this Agreement if, and to the extent required by, the provisions of HIPAA and regulations promulgated thereunder, in order to assure that this Agreement is consistent therewith.

22. Uptime Performance Guarantee [DOES NOT APPLY TO EVERY SERVICE AGREEMENT]

For any Equipment that includes an Uptime Guarantee as specified in Exhibit A, Siemens guarantees that the Equipment will function at the minimum Uptime Performance (defined below) level set forth in Exhibit A (computed as described below).

"Uptime Performance" is defined as the capability of the Equipment to be utilized to treat or diagnose patients. The Equipment will be considered to be operational (i.e., it will not be considered to be "down"): (a) unless it cannot be utilized to treat or diagnose patients (room down); (b) if Siemens is prepared to perform maintenance services to make the Equipment operational but such service is refused by the Customer or is deferred by the Customer until a later time or date; (c) if the Equipment is not otherwise made available to Siemens' service engineers; (d) if the Equipment is down is due to, associated with, or caused by (i) misuse, negligence, or operator error, (ii) inadequate environmental conditions (not conforming with the environmental specifications provided by Siemens), including temperature and humidity, line power exceeding Siemens' requirements of voltage, frequency, impulses or transients, (iii) any of the exclusions set forth in Section 8 hereof, or (iv) acts of God or other force majeure events described in Section 17 hereof; or (e) during periods in which Siemens is performing scheduled or planned maintenance, changing high-vacuum components, and installing updates and/or upgrades. If the Equipment is not operational, then the Customer must immediately notify the Siemens Customer Care Center (24-hour Service Call Dispatch Center). Downtime will not commence until such notification is given to Siemens.

For purposes of calculating the Uptime Performance level percentage, such computation shall be made over the PCP, to include any extended coverage hours as indicated on Exhibit A. The Equipment's Uptime Performance shall be calculated to comply with the above guidelines on an annual basis. If the Equipment's Uptime Performance level is found to be less than the guaranteed percentage, as computed in accordance with the above guidelines, Siemens will extend the term of this Agreement by seven (7) calendar days (30 calendar days for Oncology Care Systems) for every percentage point (rounded to the nearest percent) below the guaranteed percentage. These days will be added at the end of the term of this Agreement. For example, if the guaranteed percentage is 97%, then 96% Uptime Performance would result in an extension of seven (7) calendar days and 95% Uptime Performance would result in an extension of fourteen (14) calendar days. The foregoing states Siemens' entire obligation and liability, and the Customer's sole remedy, for Siemens' failure to meet the Uptime Performance Guarantee.

In order for the Uptime Performance Guarantee to be effective, the Customer must place all calls for service through the Siemens Customer Care Center and must accept all Technical Assistance that is offered by Siemens, including, but not limited to, telephone support and remote diagnostics. For any period of time that the Customer does not seek and accept Technical Assistance from Siemens, then the Equipment shall be considered to be operational.

The Customer agrees to allow connection to Siemens' Remote Service diagnostic equipment, where available, for the Equipment covered by this Agreement. Siemens Remote Service (SRS) is required for SRS-capable systems. The Uptime Performance Guarantee shall be void if the SRS connection is not provided and available 24 hours per day, 7 days a week.

23. Response Time Guarantee [DOES NOT APPLY TO EVERY SERVICE AGREEMENT]

Siemens guarantees that it shall meet any on-site response time as specified in Exhibit A for system "down" situations. Response time is measured from the time that the Customer notifies the Siemens Customer Care Center that a system is down. The response time only applies during the PCP, to include any extended coverage hours (if selected by the Customer), as indicated on Exhibit A. For example, a request for on-site service made at noon on a Monday (where the PCP is 8:00 a.m. through 5:00 p.m., Mondays through Fridays) will have a guaranteed arrival time of 4:00 p.m. on the same day for customers with a four (4) hour response time and a guaranteed arrival time of 11:00 a.m. on the next day for customers with an eight (8) hour response time guarantee. A request for on-site service made at 9:00 a.m. on a Saturday will have a guaranteed arrival time of noon on the next Monday for customers with a four (4) hour response time and 4:00 p.m. on that Monday for customers with an eight (8) hour response time guarantee. If a request for on-site service is made outside the PCP (to include extended coverage hours, if selected by the Customer), Siemens will use its best efforts to have a CSE on-site as soon as possible.

If Siemens responds to a request for on-site service during the PCP but its work to repair or service the Equipment continues after the expiration of the PCP (to include any extended coverage hours, if applicable), then any work outside the PCP will be billed to the Customer, unless any optional Continuous Effort coverage that is available for the Equipment has been purchased as part of this Agreement. Continuous Effort coverage ensures that in room/system down situations, work will continue past the contracted PCP (including any extended coverage hours, if applicable, and/or core modality specific hours, as defined in the Glossary, if applicable) at no additional charge until the system is repaired or 1:00 a.m., whichever comes first, as long as the CSE has been on-site for one hour or more before the end of the contracted PCP (including any extended coverage hours and/or core modality specific hours, if applicable).

The remedy provided by Siemens for its failure to meet the on-site response time guarantee is as follows: for each one (1) hour or portion thereof that Siemens fails to meet the on-site response time guarantee, the Customer will receive one (1) free hour of overtime after the PCP for that service event. The foregoing states Siemens' entire obligation and liability, and the Customer's sole remedy, for Siemens' failure to meet the Response Time Guarantee.

24. Non-Assignment

Customer may not assign this Agreement unless it obtains the prior written consent of Siemens, which consent shall not be unreasonably withheld or delayed. Siemens may not assign this Agreement unless it obtains the prior written consent of the Customer, which consent shall not be unreasonably withheld or delayed, except that Siemens may assign without Customer approval to any subsidiary or affiliated company or any of its authorized dealers.

25. Reimbursement for Training Courses/Education Services Upon Early Termination; Cancellation Policy

If this Agreement includes any training courses or other educational offerings and this Agreement is terminated or Equipment is removed from coverage as provided hereunder prior to the expiration of the term, then Siemens may bill the Customer for any balance due and owing with respect to those training courses or other educational offerings that have been completed by the Customer, and Customer agrees to pay the same.

Customer shall notify the Siemens training and education coordinator, in advance, of the cancellation, in whole or in part, of any training or other educational offering, or any request to reschedule the same. The cancellation or rescheduling of any training courses and other educational offerings may be subject to the payment of a cancellation fee. A copy of Siemens' cancellation policy is available upon request or can be found at:
www.usa.siemens.com/clinicaleducation-cancellation-policy

26. Execution; Counterparts

If the Customer is a corporation or partnership, the person signing this Agreement on its behalf certifies that such person is an officer or partner thereof, that his or her action was duly authorized by appropriate corporate or partnership action, that such action does not conflict with the corporate charter or bylaws or the partnership agreement, as the case may be, or any contractual provision binding on such corporation or partnership, and that no consent of any stockholders to his or her action is required.

This Agreement may be executed in two (2) or more counterparts, each of which shall constitute an original document but all of which together shall constitute one and the same agreement.

27. Entire Agreement

This Agreement, including all exhibits and addenda attached hereto, constitutes the entire agreement between the parties relating to the subject matter hereof, and supersedes all prior and contemporaneous oral or written representations or communications between the parties. This Agreement may not be modified or amended, except in writing executed by the appropriate designated officers of the parties hereto. Any variation in the terms and conditions contained in this Agreement (including, but not limited to, the inclusion of Customer's own terms and conditions in any purchase order or other document issued by Customer in response to and/or referencing Siemens' quotation for service or this Agreement) shall not be deemed to be a part of this Agreement and shall not be binding upon Siemens unless set forth in writing and executed by the appropriate designated officer of Siemens. Subject to the limitations expressed herein, this Agreement will be binding upon and inure to the benefit of the parties hereto, their successors, legal representatives, and permitted assigns. Notwithstanding anything to the contrary contained herein, the provisions of Sections 9, 10, 12, 13, 14, 15, 16, 18, 21 and 25 shall survive the expiration or termination of this Agreement.

Description	Section / Item
Funding - Tennessee Municipal Bond Fund	B-II-2

s

TENNESSEE MUNICIPAL BOND FUND

Making great cities even better . . . one loan at a time

August 1, 2017

Honorable Keith Cartwright
County Executive
Sequatchie County
22 Cherry Street
P. O. Box 595
Dunlap, Tennessee 37327

RE: Sequatchie County New Hospital Financing

Dear County Executive Cartwright:

This letter will confirm our discussions with you to provide financing through a public building authority and First Tennessee Bank for the County's new hospital in the amount of approximately $32,653,836.

This is a preliminary commitment, subject to receipt of necessary supporting documents, legal documents, underwriting, credit approval, and other pertinent information. The preliminary commitment is good for twelve (12) months. The loan will be payable in full over a term of twenty-five (25) years and will bear an interest at either a variable rate based on the SIFMA index and a bank spread or a fixed rate, as the County shall determine. This interest rate may change, subject to market conditions for this type of financing.

We look forward to working with you on this project. If we can provide further information, please do not hesitate to contact us.

Sincerely,

TENNESSEE MUNICIPAL BOND FUND/
TENNESSEE COUNTY SERVICES LOAN PROGRAM

Charles G. Seivers
President/CEO

226 Capitol Blvd., Suite 502 • Nashville, Tennessee 37219 • (615) 255-1561 • Fax (615) 255-7428

Description	Section / Item
Erlanger Interim Financial Statements	B-II-3
Erlanger Audited Financial Statements	B-II-3

Consolidated Interim Financial Statements

March 31, 2017

DO NOT DISSEMINATE - The documents and information contained herein are confidential and protected pursuant to T.C.A. Section 68-11-272 and/or T.C.A. Section 68-11-238, as applicable, and are neither discoverable nor subject to production under Tennessee's Public Records Act or otherwise.

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Erlanger Health System
Executive Summary for the Period Ended
March 31, 2017

The following financial information represents consolidated information for the Erlanger Health System, which includes:

Erlanger Medical Center(EMC) ContinuCare(CUC) Bledsoe (BLEDSOE) Health Centers(SSDA) HMO Trust (HMO)

EMC Key Financial Indicators

- Net income from operations for Erlanger Health System for the month was $5,831,421 compared to a budgeted net income of $4,418,313. Year-to-date net income from operations was $12,067,203 compared to a budgeted net income of $11,475,256.
- Total net income for Erlanger Health System for the month was $5,302,295 compared to a budgeted total net income of $3,514,795. Year-to-date total net income was $5,502,618 compared to a budgeted total net income of $3,882,288.
- Admissions were 17.5% greater than prior year and 0.4% over budget.
- Total cash reserves are $59,997,796 (excluding $107 million for Investment Portfolio and $32 million of funds held by Bond Trustees). Current accounts payable is $38,578,954 for Erlanger Health System. Days cash on hand is 71 days.
- **Net income before interest, taxes, depreciation and amortization (EBITDA) was $34,771,475.**
- Net days in accounts receivable is 55 days.

Monthly Volumes

March had dramatic volume growth even during a month of high spring break vacations. Erlanger East exceeded expectations by virtually tripling prior year volumes. The monthly surgical inpatient volume was 11.1% greater than prior year and 11.2% under budget. Inpatient heart surgeries were 86.1% greater than prior year and were 97.1% over budget. Surgical mix was 27.2% for the month compared to 28.7% for prior year. Orthopedic inpatient surgeries were 13.7% greater than prior year and 10.5% less than budget. Neurosurgery inpatient surgeries 18.8% greater than prior year and 6.3% under budget. Observation days were on target with prior year and 6.6% under budget. Emergency room visits were on target with prior year and 4.0% under budget. Emergency room admits were 12.8% greater than prior year and 6.1% over budget. There were no divert hours and was overall a very strong inpatient volume month.

Income Statement Comments

March's income from operations exceeded prior year income by over $7 million based on tremendous growth as well as cost containment and efficiencies.. Net patient revenue was $6,926,109 over prior year and the effective cost management generated the increase in bottom line profit. Net patient revenue less essential access per adjusted admissions (Including bad debt expense and adjusted for wage index and case mix) was $7,493 as compared to a budget of $8,064. The cost per adjusted admission (including interest expense and excluding unrealized gain/loss on interest swaps) was also under budget at $7,368 compared to a budget of $8,143. The Medicare case mix index was 3.5% over budget (1.97 actual vs. 1.90 budget). Bad debt & charity care as a % of gross patient revenue was 5.71% as compared to a budget of 8.85%. The increase in uncompensated care had a negative impact on the net revenue. Medicare utilization was on target with prior year and 9.6% over budget. Indigent/Self-Pay utilization was 23.0% less than prior year and 21.9% under budget.

Case mix adjusted length of stay increased to 2.75 compared to a budget of 2.73 (0.9% over budget). Paid FTE's per adjusted occupied bed was efficient at 4.54 compared to budget of 5.20 and salary cost per hour was $33.91 compared to a budget of $33.87. Efficient productivity of operations continue to be evident even though staff is working toward the "go live" of e-chart. Also, the staffing cost was appropriately managed during the quarter given the Joint Commission survey. Supplies and drugs per adjusted admission (adjusted for wage index & case mix) was $1,708 compared to a budget of $1,810. Supply management was very effective in March.

Interest income includes a year to date unrealized loss of $2,650,653. The unrealized loss resulted from a market-to-market of the bond investment portfolio due to a rally of the stock market. Since Erlanger holds the bonds to maturity, the loss is not realized.

Balance Sheet Comments

Net patient accounts receivable decrease is reflective of the increased collections. Net days in accounts receivable is 55 days. Days in cash is 71 days and is consistent with our capital plan. The due from third party payors line represents any governmental settlements that are outstanding for fiscal years 2012-2017. The increase in prepaid expenses is due to increased annual payments to vendors amortized appropriately throughout the year. The assets whose use is limited includes $14.7 million in the bond construction fund. The post retirement benefits line item reflects the new GASB pension changes. The reserve for other liabilities includes long term PTO and self insured malpractice liability.

J. Britton Tabor, CFO

ERLANGER HEALTH SYSTEM
Unaudited Consolidated Balance Sheets as of: March 31, 2017

ASSETS	2017	2016
UNRESTRICTED FUND		
CURRENT:		
Cash and temporary investments	$ 59,100,627	$ 50,257,413
Funds held by trustee - current portion	4,407,797	4,502,982
Patient accounts receivable	544,589,652	460,716,265
Less allowances for patient A/R	(416,346,421)	(341,120,035)
Net patient accounts receivable	128,243,231	119,596,230
Other receivables	14,793,774	42,268,418
Due from third party payors	4,235,642	5,696,163
Inventories	18,022,869	14,344,385
Prepaid expenses	9,937,676	9,594,391
Total current assets	238,741,616	246,259,982
PROPERTY, PLANT, AND EQUIPMENT		
Net property, plant and equipment	216,913,311	170,569,529
LONG-TERM INVESTMENTS	897,169	699,429
OTHER ASSETS:		
Assets whose use is limited	134,238,796	166,515,206
Deferred debt issue cost	593,815	763,475
Other assets	1,156,656	1,376,861
Total other assets	135,989,267	168,655,543
DEFERRED OUTFLOWS OF RESOURCES		
Deferred pension adjustments	13,312,022	3,959,346
Deferred amounts from debt refunding	486,983	572,921
TOTAL	**$ 606,340,367**	**$ 590,716,749**

LIABILITIES	2017	2016
UNRESTRICTED FUND		
CURRENT:		
Current maturities of long term debt	$ 4,686,974	$ 4,879,593
Accounts payable/unearned income	38,578,954	50,384,226
Accrued salaries & related liabilities	15,442,835	26,627,090
Due to third party payors	-	111,465
Construction fund payable	1,650,561	1,092,112
Accrued Interest payable	4,375,864	4,568,785
Total current liabilities	64,735,189	87,663,270
POST RETIREMENT BENEFITS (GASB 67/68 & FAS 112)	67,845,960	55,268,993
RESERVE FOR OTHER LIABILITIES	24,189,626	17,773,332
DEFERRED INFLOWS OF RESOURCES		
Deferred pension adjustments	511,392	318,312
Deferred gain from sale-leaseback	3,006,213	3,470,969
LONG - TERM DEBT	202,335,637	207,107,502
FUND BALANCE:		
Unrestricted	201,867,385	196,891,939
Invested in capital assets, net of related debt	35,818,222	16,812,515
Restricted	6,030,743	5,409,917
	243,716,350	219,114,371
TOTAL	**$ 606,340,367**	**$ 590,716,749**

Erlanger Health System

Unaudited Consolidated Statement of Operations

For the periods ended March 31, 2017 and 2016

	Current Month			Year to Date		
	Actual	Budget	Prior Year	Actual	Budget	Prior Year
Net patient service revenue	$ 73,808,243	$ 75,246,947	$ 66,882,134	$ 624,439,301	$ 626,516,782	$ 571,416,285
Other revenue(expense)	4,289,520	3,243,574	3,302,502	32,007,662	29,054,030	25,497,545
Net operating revenue	78,097,763	78,490,520	70,184,636	656,446,962	655,570,813	596,913,830
Expenses						
Salaries and employee benefits	37,568,112	38,617,733	36,200,548	331,155,203	337,660,321	305,191,708
Supplies	10,576,888	10,968,375	11,483,994	93,273,749	92,976,956	83,905,476
Purchased services	15,321,716	14,325,284	14,795,289	128,939,076	125,536,209	118,615,309
Utilities	841,229	908,619	769,523	7,824,816	8,076,214	7,437,035
Drugs	6,960,292	5,877,593	5,703,660	57,230,327	49,956,384	44,221,009
Depreciation	507,615	3,047,888	2,154,300	22,436,183	26,932,466	21,168,381
Insurance & taxes	490,490	326,715	276,948	3,520,405	2,957,007	2,427,024
Total operating expense	72,266,342	74,072,207	71,384,262	644,379,759	644,095,557	582,965,941
Excess rev. over/(under) exp. from operations	5,831,421	4,418,313	(1,199,626)	12,067,203	11,475,256	13,947,889
NONOPERATING INCOME:						
Gain (Losses) on disposal of assets	(9,288)	(21,386)	126	(192,671)	(189,737)	834,702
Interest Income/Gains (Losses) on Investments	(108,121)	73,154	108,864	(1,110,896) [1]	536,951	1,508,801
Interest expense	(290,314)	(832,726)	(826,270)	(5,194,736)	(7,360,251)	(7,452,584)
Provisions for income tax	(121,403)	(122,560)	(99,995)	(66,283)	(579,930)	(543,364)
Excess rev. over/(under) expenses	$ 5,302,295	$ 3,514,795	$ (2,016,900)	$ 5,502,618	$ 3,882,288	$ 8,295,445
EBITDA	6,385,389	7,483,367	1,009,014	34,771,475	38,612,278	36,265,311
Operating Margin	7.47%	5.63%	-1.71%	1.84%	1.75%	2.34%
Total Margin	6.79%	4.48%	-2.87%	0.84%	0.59%	1.39%

1 - includes unrealized loss on investments of $2,650,653

Erlanger Health System

Unaudited Consolidated Statement of Operations

For the period ended March 31, 2017

		Current Month ACTUAL						
		Primary Health System						EHS
		EMC	BLEDSOE	HMO TRUST	SSDA	Total	CUC	Total
PATIENT SERVICE REVENUE								
Inpatient services	$	137,411,057	805,547	-	-	138,216,604	-	138,216,604
Outpatient services		111,094,875	4,406,593	-	597,920	116,099,387	1,826,628	117,926,015
Total patient service revenue	$	248,505,931	5,212,140	-	597,920	254,315,991	1,826,628	256,142,619
REVENUE DEDUCTIONS:								
Certified free care	$	1,524,437	-	-	(1,042)	1,523,395	17,339	1,540,734
Charity care		7,537,788	306,749	-	241,665	8,086,201	-	8,086,201
Bad debt expense		5,119,338	264,071	-	23,600	5,407,009	30,920	5,437,929
Medicare and medicaid rate adjustments		79,268,540	1,974,744	-	5,112	81,248,397	-	81,248,397
Contractual adjustments and policy discounts		83,696,553	1,550,798	-	60,454	85,307,805	713,309	86,021,114
Total revenue deductions	$	177,146,656	4,096,362	-	329,790	181,572,807	761,569	182,334,376
NONPATIENT SERVICE REVENUE	$	809,897	46,660	-	799,387	1,655,945	2,633,575	4,289,520
INVESTMENT IN JOINT VENTURES	$	-	-	-	-	-	-	-
Net operating revenue	$	72,169,173	1,162,438	-	1,067,517	74,399,129	3,698,634	78,097,763
OPERATING EXPENSE								
Salaries and employee benefits	$	35,257,951	647,196	-	374,256	36,279,403	1,288,708	37,568,112
Supplies		10,337,708	80,045	-	13,133	10,430,886	146,002	10,576,888
Purchased services		14,704,544	327,175	-	70,743	15,102,461	219,255	15,321,716
Utilities		773,003	33,942	-	11,978	818,923	22,307	841,229
Drugs		5,282,669	41,443	-	6,032	5,330,144	1,630,148	6,960,292
Depreciation		430,816	12,632	-	9,221	452,668	54,947	507,615
Insurance & taxes		461,511	1,598	-	-	463,110	27,380	490,490
Corporate overhead allocation		(164,957)	97,012	-	67,945	-	-	-
Total operating expense	$	67,083,244	1,241,044	-	553,307	68,877,595	3,388,747	72,266,342
Excess rev. over/(under) exp. from operations	$	5,085,929	(78,606)	-	514,210	5,521,534	309,887	5,831,421
NONOPERATING INCOME:								
Gain (Losses) on disposal of assets		(4,954)	-	-	-	(4,954)	(4,334)	(9,288)
Interest Income/Gains (Losses) on Investments		(114,636)	(23)	2,440	(149)	(112,367)	4,246	(108,121)
Interest expense		(290,267)	-	-	-	(290,267)	(47)	(290,314)
Provisions for income tax		-	-	-	-	-	(121,403)	(121,403)
EXCESS REVENUES OVER/(UNDER) EXPENSES	$	4,676,072	(78,628)	2,440	514,061	5,113,945	188,350	5,302,295

Er ger Health System

Unaudited Consolidated Statement of Operations

For the period ended March 31, 2017

		YTD ACTUAL						
		Primary Health System						EHS
		EMC	BLEDSOE	HMO TRUST	SSDA	Total	CUC	Total
PATIENT SERVICE REVENUE								
Inpatient services	$	1,157,137,070	5,122,342	-	-	1,162,259,412	-	1,162,259,412
Outpatient services		929,805,255	37,939,639	-	4,886,772	972,631,667	15,182,334	987,814,001
Total patient service revenue	$	2,086,942,326	43,061,981	-	4,886,772	2,134,891,079	15,182,334	2,150,073,413
REVENUE DEDUCTIONS:								
Certified free care	$	10,791,521	-	-	(9,374)	10,782,147	225,858	11,008,006
Charity care		87,803,908	2,188,771	-	2,041,200	92,033,880	-	92,033,880
Bad debt expense		64,760,294	2,455,170	-	216,269	67,431,733	408,558	67,840,290
Medicare and medicaid rate adjustments		648,425,294	15,477,473	-	17,680	663,920,447	-	663,920,447
Contractual adjustments and policy discounts		672,584,321	11,734,829	-	486,145	684,805,294	6,026,196	690,831,490
Total revenue deductions	$	1,484,365,338	31,856,244	-	2,751,920	1,518,973,501	6,660,612	1,525,634,112
NONPATIENT SERVICE REVENUE	$	9,656,224	529,293	-	2,886,910	13,072,427	18,789,498	31,861,925
INVESTMENT IN JOINT VENTURES	$	145,737	-	-	-	145,737	-	145,737
Net operating revenue	$	612,378,950	11,735,030	-	5,021,763	629,135,742	27,311,220	656,446,962
OPERATING EXPENSE								
Salaries and employee benefits	$	311,077,438	5,789,227	-	3,535,168	320,401,833	10,753,370	331,155,203
Supplies		91,164,251	593,645	-	87,630	91,845,525	1,428,224	93,273,749
Purchased services		123,145,937	3,070,409	-	633,283	126,849,629	2,089,447	128,939,076
Utilities		7,306,919	209,930	-	120,282	7,637,131	187,685	7,824,816
Drugs		44,795,735	280,788	-	119,339	45,195,862	12,034,465	57,230,327
Depreciation		21,755,207	118,035	-	108,605	21,981,847	454,336	22,436,183
Insurance & taxes		3,260,499	22,320	-	2,455	3,285,275	235,130	3,520,405
Corporate overhead allocation		(1,458,011)	857,463	-	600,548	-	-	-
Total operating expense	$	601,047,975	10,941,818	-	5,207,309	617,197,102	27,182,657	644,379,759
Excess rev. over/(under) exp. from operations	$	11,330,975	793,212	-	(185,547)	11,938,640	128,563	12,067,203
NONOPERATING INCOME:								
Gain (Losses) on disposal of assets		(142,276)	-	-	-	(142,276)	(50,395)	(192,671)
Interest Income/Gains (Losses) on Investments		(1,101,288) [1]	(297)	3,326	(1,692)	(1,099,950)	(10,945)	(1,110,895)
Interest expense		(5,193,980)	-	-	-	(5,193,980)	(755)	(5,194,736)
Provisions for income tax		-	-	-	-	-	(66,283)	(66,283)
EXCESS REVENUES OVER/(UNDER) EXPENSES	$	4,893,430	792,915	3,326	(187,238)	5,502,434	184	5,502,619

1 - Includes unrealized loss on investments of $2,650,653

Erlanger Health System

Unaudited Consolidated Statement of Operations

For the period ended March 31, 2017

		Current Month BUDGET						
		Primary Health System						EHS
		EMC	BLEDSOE	HMO TRUST	SSDA	Total	CUC	Total
PATIENT SERVICE REVENUE								
Inpatient services	$	138,345,901	406,139	-	51,779	138,803,819	-	138,803,819
Outpatient services		110,573,704	4,005,868	-	1,046,440	115,626,012	2,245,380	117,871,392
Total patient service revenue	$	248,919,605	4,412,007	-	1,098,219	254,429,831	2,245,380	256,675,211
REVENUE DEDUCTIONS:								
Certified free care	$	816,125	-	-	(1,042)	815,083	37,970	853,053
Charity care		7,978,994	186,887	-	285,500	8,451,381	-	8,451,381
Bad debt expense		13,229,307	306,141	-	45,606	13,581,054	99,120	13,680,174
Medicare and medicaid rate adjustments		72,468,849	1,442,979	-	214,708	74,126,537	-	74,126,537
Contractual adjustments and policy discounts		82,075,890	1,214,895	-	116,744	83,407,529	909,590	84,317,119
Total revenue deductions	$	176,569,166	3,150,902	-	661,517	180,381,585	1,046,680	181,428,265
NONPATIENT SERVICE REVENUE	$	1,090,582	53,536	-	250,099	1,394,217	1,832,370	3,226,587
INVESTMENT IN JOINT VENTURES	$	16,986	-	-	-	16,986	-	16,986
Net operating revenue	$	73,458,008	1,314,641	-	686,801	75,459,450	3,031,070	78,490,520
OPERATING EXPENSE								
Salaries and employee benefits	$	36,116,359	625,526	-	586,667	37,328,553	1,289,180	38,617,733
Supplies		10,806,278	59,212	-	21,891	10,887,380	80,995	10,968,375
Purchased services		13,682,944	345,931	-	85,559	14,114,434	210,850	14,325,284
Utilities		855,306	23,468	-	12,295	891,069	17,550	908,619
Drugs		4,793,615	35,932	-	10,696	4,840,243	1,037,350	5,877,593
Depreciation		2,967,619	12,529	-	11,520	2,991,668	56,220	3,047,888
Insurance & taxes		300,845	1,772	-	209	302,825	23,890	326,715
Corporate overhead allocation		(164,957)	97,012	-	67,945	-	-	-
Total operating expense	$	69,358,010	1,201,382	-	796,781	71,356,172	2,716,035	74,072,207
Excess rev. over/(under) exp. from operations	$	4,099,998	113,259	-	(109,980)	4,103,278	315,035	4,418,313
NONOPERATING INCOME:								
Gain (Losses) on disposal of assets		(16,986)	-	-	-	(16,986)	(4,400)	(21,386)
Interest Income/Gains (Losses) on Investments		57,223	(33)	83	-	57,274	15,880	73,154
Interest expense		(832,526)	-	-	-	(832,526)	(200)	(832,726)
Provisions for income tax		-	-	-	-	-	(122,560)	(122,560)
EXCESS REVENUES OVER/(UNDER) EXPENSES	$	3,307,710	113,226	83	(109,980)	3,311,040	203,755	3,514,795

Er. ger Health System

Unaudited Consolidated Statement of Operations

For the period ended March 31, 2017

		YTD BUDGET						
		Primary Health System						EHS
		EMC	BLEDSOE	HMO TRUST	SSDA	Total	CUC	Total
PATIENT SERVICE REVENUE								
Inpatient services	$	1,168,800,013	3,531,912	-	457,660	1,172,789,586	-	1,172,789,586
Outpatient services		906,295,537	35,360,127	-	9,249,176	950,904,840	17,634,920	968,539,760
Total patient service revenue	$	2,075,095,551	38,892,039	-	9,706,836	2,123,694,426	17,634,920	2,141,329,346
REVENUE DEDUCTIONS:								
Certified free care	$	4,833,055	-	-	(9,374)	4,823,681	298,800	5,122,481
Charity care		73,627,843	1,927,280	-	2,899,157	78,454,280	-	78,454,280
Bad debt expense		80,580,571	2,359,847	-	184,793	83,125,212	730,210	83,855,422
Medicare and medicaid rate adjustments		633,905,284	13,554,421	-	2,065,652	649,525,357	-	649,525,357
Contractual adjustments and policy discounts		680,110,121	9,992,581	-	819,301	690,922,003	6,933,020	697,855,023
Total revenue deductions	$	1,473,056,874	27,834,130	-	5,959,530	1,506,850,534	7,962,030	1,514,812,564
NONPATIENT SERVICE REVENUE	$	9,650,021	473,188	-	2,210,554	12,333,763	16,570,130	28,903,893
INVESTMENT IN JOINT VENTURES	$	150,137	-	-	-	150,137	-	150,137
Net operating revenue	$	611,838,835	11,531,097	-	5,957,861	629,327,793	26,243,020	655,570,813
OPERATING EXPENSE								
Salaries and employee benefits	$	315,717,348	5,472,209	-	5,080,114	326,269,671	11,390,650	337,660,321
Supplies		91,060,098	520,648	-	191,204	91,771,951	1,205,005	92,976,956
Purchased services		119,779,936	3,058,786	-	756,227	123,594,949	1,941,260	125,536,209
Utilities		7,597,363	207,426	-	108,675	7,913,464	162,750	8,076,214
Drugs		40,232,603	293,096	-	94,535	40,620,234	9,336,150	49,956,384
Depreciation		26,229,925	110,737	-	101,823	26,442,486	489,980	26,932,466
Insurance & taxes		2,722,546	15,658	-	1,843	2,740,047	216,960	2,957,007
Corporate overhead allocation		(1,458,008)	857,463	-	600,548	3	-	3
Total operating expense	$	601,881,811	10,536,024	-	6,934,970	619,352,805	24,742,755	644,095,560
Excess rev. over/(under) exp. from operations	$	9,957,024	995,073	-	(977,109)	9,974,988	1,500,265	11,475,253
NONOPERATING INCOME:								
Gain (Losses) on disposal of assets		(150,137)	-	-	-	(150,137)	(39,600)	(189,737)
Interest Income/Gains (Losses) on Investments		505,780	(299)	750	-	506,231	30,720	536,951
Interest expense		(7,358,451)	-	-	-	(7,358,451)	(1,800)	(7,360,251)
Provisions for income tax		-	-	-	-	-	(579,930)	(579,930)
EXCESS REVENUES OVER/(UNDER) EXPENSES	$	2,954,215	994,774	750	(977,109)	2,972,630	909,655	3,882,285

Erlanger Health System
Certified Free Care
For the period ended March 31, 2017

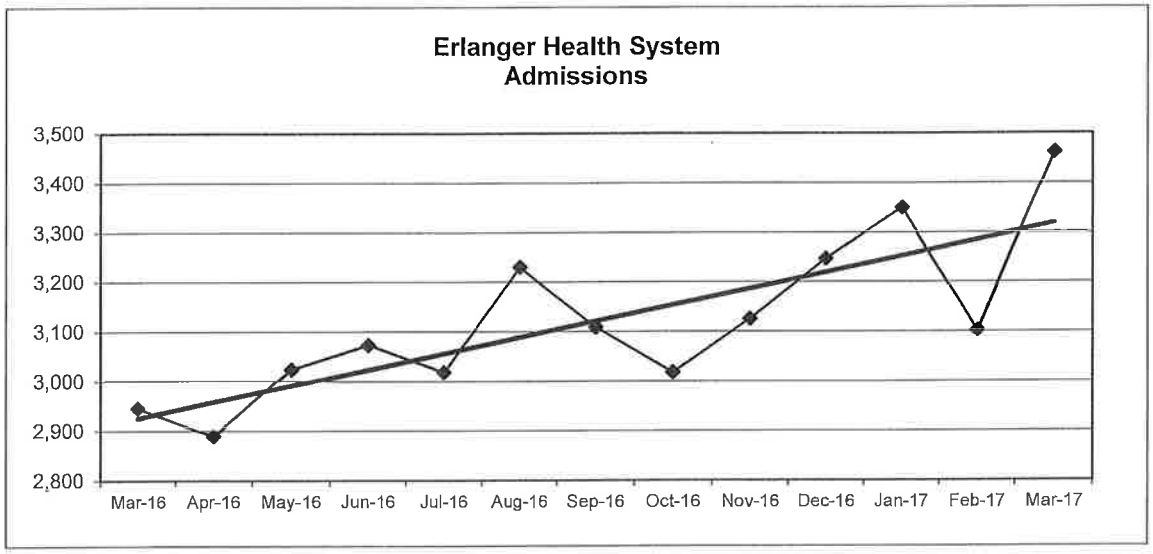
		YTD ACTUAL				
		EMC Charges	CUC Charges	SSDA Charges	Total Charges	Erlanger Cost
Hamilton County Free Care	$	8,923,376	225,858	0	9,149,235	4,391,633
Prisoner		2,983,771	0	0	2,983,771	1,432,210
Total Certified Hamilton County		11,907,147	225,858	0	12,133,006	5,823,843
Less: Appropriation		(1,115,627)	0	(9,374)	(1,125,000)	(1,125,000)
Net Certified Free Care	$	10,791,521	225,858	(9,374)	11,008,006	4,698,843

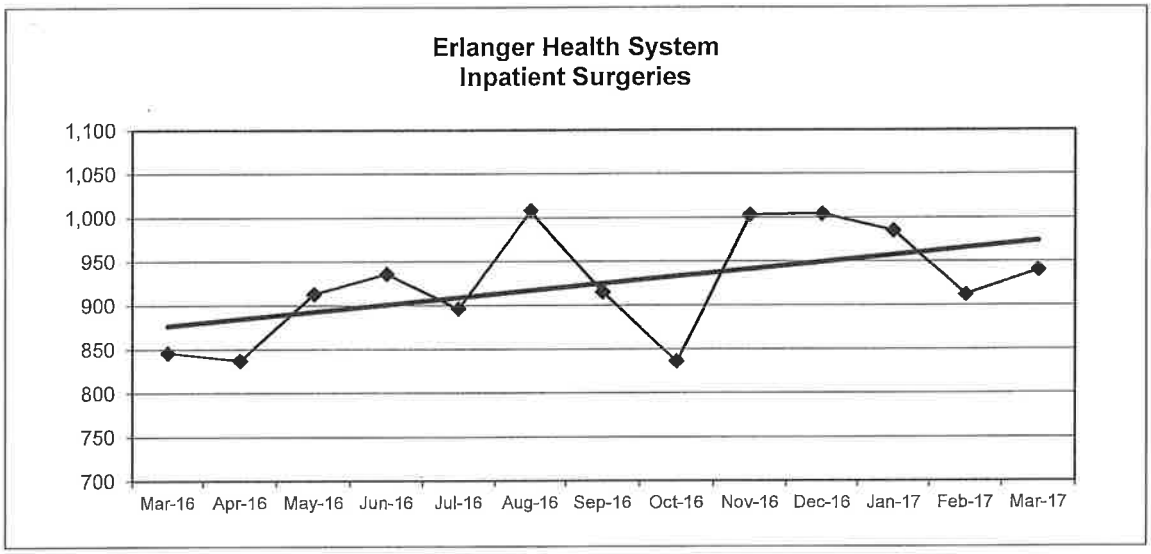
ERLANGER HEALTH SYSTEM
CONSOLIDATED STATISTICAL VOLUMES
FOR THE PERIOD ENDING JULY 2016 TO JUNE 2017

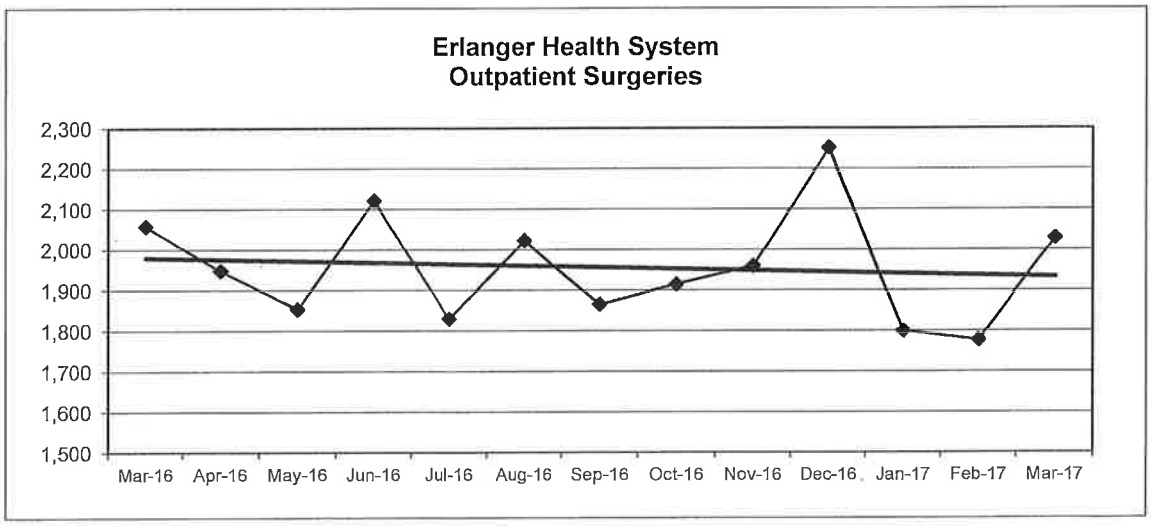
	03/31/2017					YTD THROUGH 03/31/2017				
	ACTUAL	BUDGET	VARIANCE	PRIOR YEAR	CHANGE	ACTUAL	BUDGET	VARIANCE	PRIOR YEAR	CHANGE
CENSUS										
LICENSED BEDS	788	788	0.0%	788	0.0%	788	788	0.0%	788	0.0%
BEDS IN SERVICE	657	569	15.5%	597	10.1%	657	569	15.5%	597	10.1%
AVERAGE DAILY CENSUS	515	488	5.6%	479	7.4%	498	481	3.6%	471	5.8%
OCCUPANCY PERCENTAGE	78.36%	85.71%	-8.6%	80.29%	-2.4%	75.84%	84.52%	-10.3%	78.89%	-3.9%
ADMISSIONS										
BEH	2,351	2,690	-12.6%	2,258	4.1%	21,397	22,508	-4.9%	20,851	2.6%
TCT	331	298	11.1%	343	-3.5%	2,812	2,660	5.7%	2,677	5.0%
EE	702	387	81.4%	275	155.3%	3,934	3,240	21.4%	2,432	61.8%
EN	54	52	3.8%	39	38.5%	360	465	-22.6%	276	30.4%
EN SENIOR'S PROGRAM	23	19	21.1%	30	-23.3%	157	192	-18.2%	192	-18.2%
TOTAL	3,461	3,446	0.4%	2,945	17.5%	28,660	29,065	-1.4%	26,428	8.4%
CASE MIX INDEX										
TOTAL PATIENT	1.65	1.57	5.4%	1.59	4.1%	1.65	1.57	5.2%	1.57	5.2%
TOTAL PATIENT EXCL NORMAL NEWBORN	1.77	1.72	2.8%	1.72	2.8%	1.78	1.72	3.2%	1.72	3.2%
TOTAL MEDICARE PATIENTS	1.97	1.90	3.5%	1.84	6.9%	1.94	1.90	2.0%	1.89	2.5%
BEH	1.94	1.82	6.7%	1.81	7.2%	1.91	1.82	4.8%	1.82	4.8%
TCT EXCL NORMAL NEWBORN	1.72	1.76	-2.3%	1.81	-5.0%	1.80	1.76	2.0%	1.76	2.0%
EE	0.92	0.70	31.1%	0.75	22.4%	0.86	0.77	11.5%	0.70	22.6%
PATIENT DAYS										
BEH	7,777	7,134	9.0%	7,519	3.4%	68,646	67,737	1.3%	66,244	3.6%
BEH ICU'S	3,609	2,809	28.5%	3,164	14.1%	29,282	25,366	15.4%	27,181	7.7%
TCT	683	797	-14.4%	765	-10.7%	6,191	6,224	-0.5%	6,142	0.8%
TCT PICU	233	243	-4.1%	239	-2.5%	2,091	1,899	10.1%	1,781	17.4%
TCT NICU	1,471	2,133	-31.0%	1,733	-15.1%	14,646	16,649	-12.0%	16,500	-11.2%
EE	1,426	1,049	35.9%	680	109.7%	8,640	7,205	19.9%	5,534	56.1%
EE NICU	105	149	-29.5%	104	1.0%	1,193	1,314	-9.2%	1,243	-4.0%
EN	335	352	-4.8%	305	9.8%	3,184	2,493	27.7%	1,922	65.7%
EN SENIOR'S PROGRAM	320	452	-29.2%	350	-8.6%	2,650	2,891	-8.3%	2,963	-10.6%
TOTAL	15,959	15,118	5.6%	14,859	7.4%	136,523	131,778	3.6%	129,510	5.4%
AVERAGE LOS										
TOTAL	4.55	4.28	6.3%	4.98	-8.6%	4.70	4.46	5.2%	4.82	-2.6%
MEDICARE	5.25	5.00	5.0%	5.07	3.6%	5.67	5.00	13.4%	4.98	13.9%
CASE MIX ADJUSTED	2.75	2.73	0.9%	3.13	-12.2%	2.84	2.84	0.0%	3.07	-7.5%
BEH	4.84	3.70	31.0%	4.73	2.4%	4.58	4.14	10.6%	4.48	2.1%
TCT	7.21	10.65	-32.3%	7.98	-9.6%	8.15	9.31	-12.4%	9.12	-10.6%
EE	2.03	2.71	-25.1%	2.47	-17.9%	2.20	2.22	-1.2%	2.28	-3.5%
SENIOR'S PROGRAM	13.91	23.79	-41.5%	11.67	19.3%	16.88	15.06	12.1%	15.43	9.4%
OBSERVATION DAYS										
BEH	439	551	-20.2%	506	-13.2%	4,099	4,746	-13.6%	4,355	-5.9%
TCT	135	97	39.1%	104	30.4%	949	647	46.7%	688	37.9%
EE	105	93	13.3%	81	30.5%	884	876	1.0%	568	55.7%
EN	13	1	1242.0%	1	1516.9%	31	45	-31.0%	35	-11.2%
TOTAL	693	742	-6.6%	691	0.3%	5,963	6,314	-5.6%	5,646	5.6%
UTILIZATION										
MEDICARE	24.3%	23.4%	3.8%	22.9%	6.1%	22.6%	23.4%	-3.4%	23.0%	-1.7%
MEDICARE MGT	12.1%	9.8%	23.5%	10.5%	15.2%	11.9%	9.8%	21.4%	10.6%	12.3%
MEDICAID/TENNCARE	23.0%	22.6%	1.8%	22.7%	1.3%	23.1%	22.6%	2.2%	23.4%	-1.3%
COMMERCIAL PAY	32.9%	33.4%	-1.5%	32.9%	0.0%	32.2%	33.4%	-3.6%	32.2%	0.0%
INDIGENT/SELF-PAY	5.7%	7.3%	-21.9%	7.4%	-23.0%	6.9%	7.3%	-5.5%	7.2%	-4.2%
OTHER	2.0%	3.6%	-45.8%	3.6%	-45.8%	3.3%	3.6%	-8.3%	3.7%	-10.8%
DISCHARGES BY FINANCIAL CLASS										
MEDICARE	886	868	2.1%	742	19.4%	6,868	7,320	-6.2%	6,594	4.2%
MEDICARE MGT	454	359	26.4%	321	41.4%	3,394	3,028	12.1%	2,671	27.1%
MEDICAID/TENNCARE	777	826	-5.9%	725	7.2%	6,938	6,965	-0.4%	6,324	9.7%
COMMERCIAL PAY	984	1,115	-11.8%	941	4.6%	8,794	9,406	-6.5%	8,468	3.8%
INDIGENT/SELF PAY	169	246	-31.4%	185	-8.6%	1,814	2,076	-12.6%	1,860	-2.5%
OTHER	31	32	-3.0%	25	24.0%	329	269	22.1%	235	40.0%
TOTAL	3,301	3,446	-4.2%	2,939	12.3%	28,137	29,065	-3.2%	26,152	7.6%

ERLANGER HEALTH SYSTEM
CONSOLIDATED STATISTICAL VOLUMES
FOR THE PERIOD ENDING JULY 2016 TO JUNE 2017

	03/31/2017					YTD THROUGH 03/31/2017				
	ACTUAL	BUDGET	VARIANCE	PRIOR YEAR	CHANGE	ACTUAL	BUDGET	VARIANCE	PRIOR YEAR	CHANGE
SURGICAL INPATIENTS										
BEH	701	795	-11.8%	768	-8.7%	6,493	7,060	-8.0%	6,819	-4.8%
OSC	119	165	-27.9%	N/A	N/A	1,076	1,264	-14.9%	N/A	N/A
TCT	65	69	-5.8%	60	8.3%	586	567	3.4%	492	19.1%
MEC	0	3	-100.0%	3	-100.0%	24	18	33.3%	18	33.3%
EE	55	26	111.5%	15	266.7%	307	220	39.5%	128	139.8%
PLAZA SURGERY	0	0	N/A	N/A	N/A	13	0	N/A	N/A	N/A
TOTAL SURGICAL INPATIENTS	940	1,058	-11.2%	846	11.1%	8,499	9,129	-6.9%	7,457	14.0%
SURGICAL OUTPATIENTS										
BEH	510	622	-18.0%	595	-14.3%	4,500	5,385	-16.4%	5,150	-12.6%
OSC	80	121	-33.9%	N/A	N/A	819	926	-11.6%	N/A	N/A
TCT	548	604	-9.3%	610	-10.2%	4,468	4,392	1.7%	4,437	0.7%
MEC	116	176	-34.1%	168	-31.0%	1,066	1,232	-13.5%	1,177	-9.4%
EE	447	457	-2.2%	377	18.6%	3,696	3,468	6.6%	2,859	29.3%
PLAZA SURGERY	328	363	-9.6%	308	6.5%	2,902	3,364	-13.7%	2,853	1.7%
TOTAL SURGICAL OUTPATIENTS	2,029	2,343	-13.4%	2,058	-1.4%	17,451	18,767	-7.0%	16,476	5.9%
TOTAL SURGICAL PATIENTS	2,969	3,401	-12.7%	2,904	2.2%	25,950	27,896	-7.0%	23,933	8.4%
TOTAL SURGICAL HOURS	5,187	5,499	-5.7%	4,804	8.0%	45,437	46,141	-1.5%	40,242	12.9%
ORTHOPEDIC INPATIENT SURGERIES	324	362	-10.5%	285	13.7%	2,652	2,991	-11.3%	2,160	22.8%
NEUROSURGERY INPATIENT SURGERIES	133	142	-6.3%	112	18.8%	1,184	1,265	-6.4%	1,081	9.5%
IP HEART/THORACIC SURGERIES WITH CABS/VALVES	67	34	97.1%	36	86.1%	390	299	30.4%	291	34.0%
DAVINCI PROCEDURES	106	71	49.3%	69	53.6%	891	626	42.3%	607	46.8%
BARIATRICS PROCEDURES	11	19	-42.1%	11	0.0%	191	166	15.1%	122	56.6%
CARDIAC CATH LAB PATIENTS	271	315	-14.0%	328	-17.4%	2,353	2,424	-2.9%	2,525	-6.8%
EE CARDIAC CATH LAB PATIENTS	69	38	81.6%	N/A	N/A	359	236	52.1%	N/A	N/A
SURGERY I/P HRS/PROCEDURE	2.72	2.46	10.7%	2.72	0.0%	2.65	2.48	7.2%	2.60	1.9%
SURGERY O/P HRS/PROCEDURE	1.29	1.24	4.8%	1.24	4.5%	1.31	1.25	4.5%	1.30	1.1%
BEH L&D (BIRTHS)	230	255	-9.8%	240	-4.2%	2,190	2,386	-8.2%	2,247	-2.5%
EE (BIRTHS)	231	211	9.5%	199	16.1%	1,969	2,040	-3.5%	1,965	0.2%
TOTAL BIRTHS	461	466	-1.1%	439	5.0%	4,159	4,426	-6.0%	4,212	-1.3%
PHYSICIAN PRACTICE OUTPATIENT VISITS	32,517	35,226	-7.7%	33,408	-2.7%	312,861	322,515	-3.0%	253,370	23.5%
HELICOPTER (PATS)										
HELICOPTER-LIFEFORCE	58	150	-61.3%	168	-65.5%	1,189	1,431	-16.9%	1,184	0.4%
HELICOPTER-OTHER VENDORS	58	24	141.7%	51	13.7%	457	219	108.7%	307	48.9%
TOTAL	116	174	-33.3%	219	-47.0%	1,646	1,650	-0.2%	1,491	10.4%
EMERGENCY ROOM VISITS										
BEH	4,120	4,633	-11.1%	4,137	-0.4%	37,313	44,245	-15.7%	39,511	-5.6%
TCT	3,886	4,065	-4.4%	4,188	-7.2%	31,867	29,858	6.7%	30,762	3.6%
EE	3,156	2,841	11.1%	2,784	13.4%	25,875	23,031	12.3%	22,572	14.6%
EN	1,274	1,420	-10.3%	1,355	-6.0%	11,257	11,403	-1.3%	10,883	3.4%
TOTAL	12,436	12,959	-4.0%	12,464	-0.2%	106,312	108,537	-2.0%	103,728	2.5%
EMERGENCY ROOM ADMITS										
BEH	1,467	1,570	-6.6%	1,380	6.3%	12,968	14,222	-8.8%	12,502	3.7%
TCT	238	185	28.6%	254	-6.3%	2,033	1,895	7.3%	1,992	2.1%
EE	290	169	71.6%	141	105.7%	1,830	1,394	31.3%	1,163	57.4%
EN	78	29	169.0%	62	25.8%	587	226	159.7%	478	22.8%
TOTAL	2,073	1,953	6.1%	1,837	12.8%	17,418	17,737	-1.8%	16,135	8.0%
DIVERT HOURS	0	0	N/A	4	N/A	0	0	N/A	4	N/A


Erlanger Health System
Admissions
3,500
3,400
3,300
3,200
3,100
3,000
2,900
2,800
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17

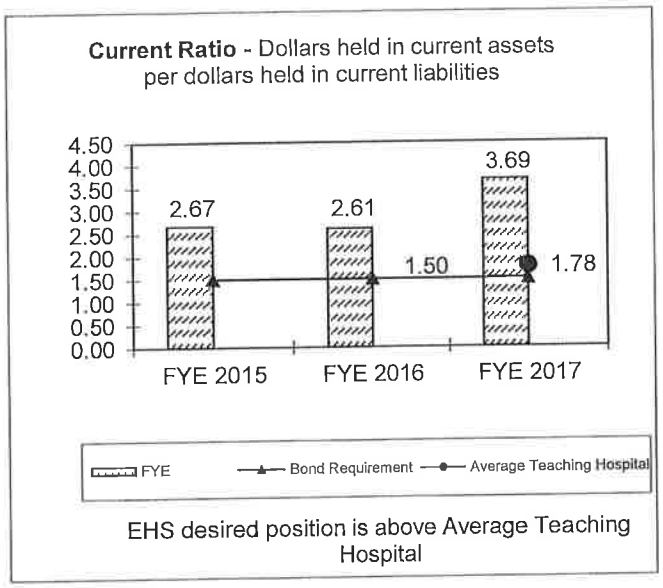

Erlanger Health System
Inpatient Surgeries
1,100
1,050
1,000
950
900
850
800
750
700
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17

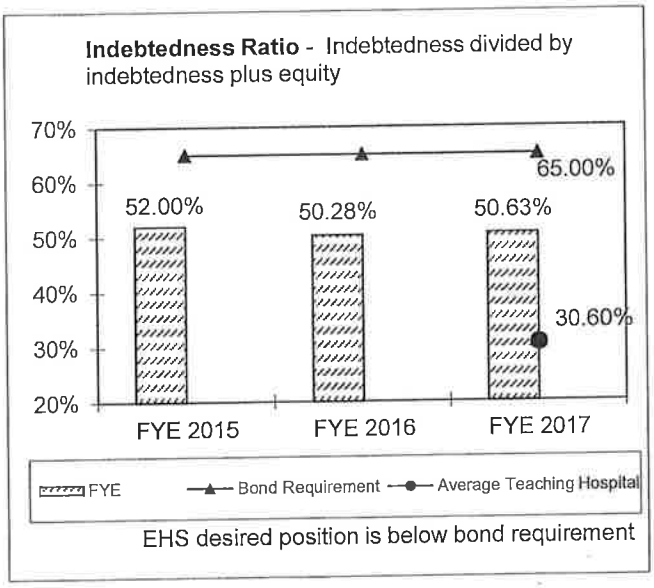

Erlanger Health System
Outpatient Surgeries
2,300
2,200
2,100
2,000
1,900
1,800
1,700
1,600
1,500
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17

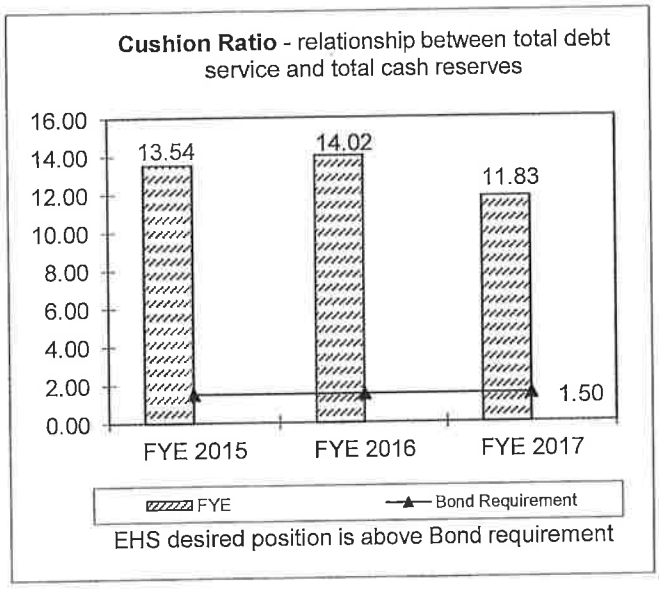
ERLANGER HEALTH SYSTEM
ERLANGER BLEDSOE
CONSOLIDATED STATISTICAL VOLUMES
FOR THE PERIOD JULY 2016 TO JUNE 2017

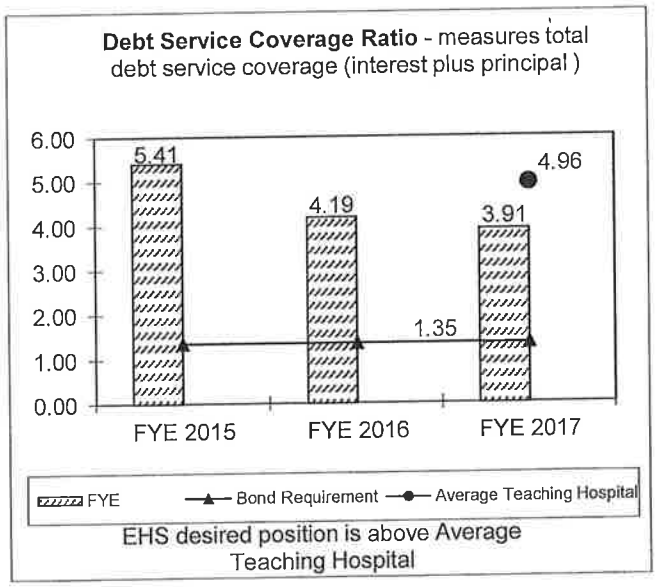
	03/31/2017					YTD THROUGH 03/31/2017				
	ACTUAL	BUDGET	CHANGE	PRIOR YEAR	CHANGE	ACTUAL	BUDGET	CHANGE	PRIOR YEAR	CHANGE
CENSUS										
LICENSED BEDS	25	25	0.0%	25	0.0%	25	25	0.0%	25	0.0%
BEDS IN SERVICE	25	25	0.0%	25	0.0%	25	25	0.0%	25	0.0%
AVERAGE DAILY CENSUS	10.97	5.54	98.1%	8.32	31.8%	8.45	5.54	52.6%	6.25	35.2%
OCCUPANCY PERCENTAGE	43.9%	22.1%	98.1%	33.3%	31.8%	33.8%	22.1%	52.6%	25.0%	35.2%
ADMISSIONS										
ROUTINE CARE	31	21	50.8%	19	63.2%	202	182	11.2%	183	10.4%
SWING BED UNIT	15	10	53.6%	14	7.1%	101	86	17.0%	94	7.4%
TOTAL	46	30	51.7%	33	39.4%	303	268	13.1%	277	9.4%
CASE MIX INDEX										
MEDICARE	0.97	1.03	-5.7%	0.92	5.6%	0.99	1.03	-3.9%	1.01	-2.0%
TOTAL PATIENT	1.00	1.02	-2.4%	0.95	4.8%	0.98	1.02	-3.5%	0.99	-0.6%
PATIENT DAYS										
ROUTINE CARE	126	58	117.5%	48	162.5%	633	512	23.6%	509	24.4%
SWING BED UNIT	214	114	88.2%	210	1.9%	1,682	1,005	67.3%	1,209	39.1%
TOTAL	340	172	98.1%	258	31.8%	2,315	1,517	52.6%	1,718	34.7%
AVERAGE LOS										
TOTAL	7.39	5.66	30.6%	7.82	-5.5%	7.64	5.66	35.0%	6.20	23.2%
ROUTINE CARE	4.06	2.82	44.2%	2.53	60.9%	3.13	2.82	11.2%	2.78	12.7%
SWING BED UNIT	14.27	11.64	22.5%	15.00	-4.9%	16.65	11.64	43.0%	12.86	29.5%
OBSERVATION DAYS										
ROUTINE CARE	27	28	-2.2%	40	-31.8%	174	244	-28.6%	259	-32.8%
GROSS REVENUE BY PAYER										
MEDICARE	29.7%	30.3%	-2.0%	31.1%	-4.5%	29.8%	30.3%	-1.7%	30.7%	-2.9%
MEDICARE MGT	7.1%	6.9%	2.9%	6.9%	2.9%	7.8%	6.9%	13.0%	5.7%	36.8%
MEDICAID/TENNCARE	22.3%	24.9%	-10.4%	23.6%	-5.5%	23.6%	24.9%	-5.2%	23.9%	-1.3%
COMMERCIAL PAY	30.2%	24.5%	23.3%	27.5%	9.8%	28.0%	24.5%	14.3%	28.1%	-0.4%
INDIGENT/SELF-PAY	9.3%	12.1%	-23.1%	9.3%	0.0%	9.6%	12.1%	-20.7%	10.3%	-6.8%
OTHER	1.4%	1.2%	16.7%	1.6%	-12.5%	1.2%	1.2%	0.0%	1.3%	-7.7%
DISCHARGES BY PAYER										
MEDICARE	27	19	41.3%	24	12.5%	185	169	9.6%	190	-2.6%
MEDICARE MGT	7	2	180.9%	4	75.0%	62	22	181.5%	36	72.2%
MEDICAID/TENNCARE	2	4	-51.8%	2	0.0%	20	37	-45.5%	17	17.6%
COMMERCIAL PAY	5	2	125.7%	3	66.7%	19	20	-3.0%	20	-5.0%
INDIGENT/SELF-PAY	0	2	-100.0%	0	N/A	3	21	-85.6%	5	-40.0%
OTHER	0	0	-100.0%	1	-100.0%	2	1	131.4%	1	100.0%
TOTAL	41	30	34.8%	34	20.6%	291	269	8.2%	269	8.2%
Bledsoe	494	477	3.5%	530	-6.8%	4,245	4,217	0.7%	4,196	1.2%
Sequatchie Valley	958	889	7.8%	898	6.7%	8,205	7,854	4.5%	7,809	5.1%
EMERGENCY ROOM VISITS	1,452	1,366	6.3%	1,428	1.7%	12,450	12,071	3.1%	12,005	3.7%

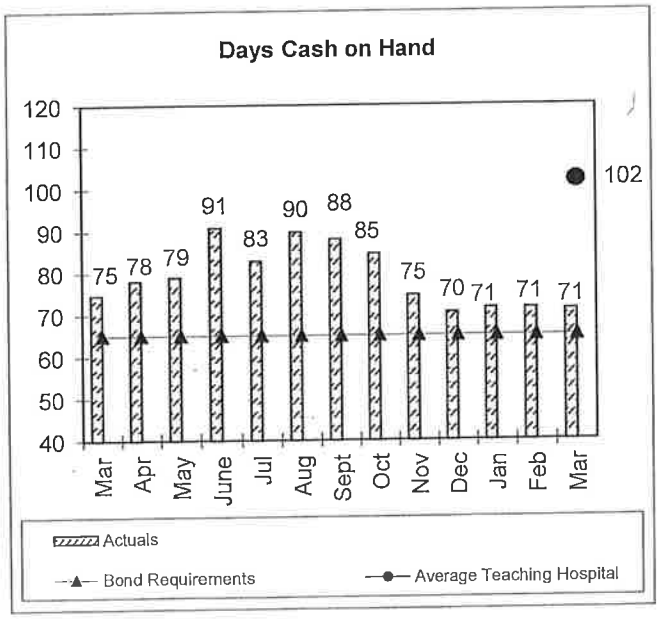
Erlanger Health System
Ratio Analysis
March 31, 2017

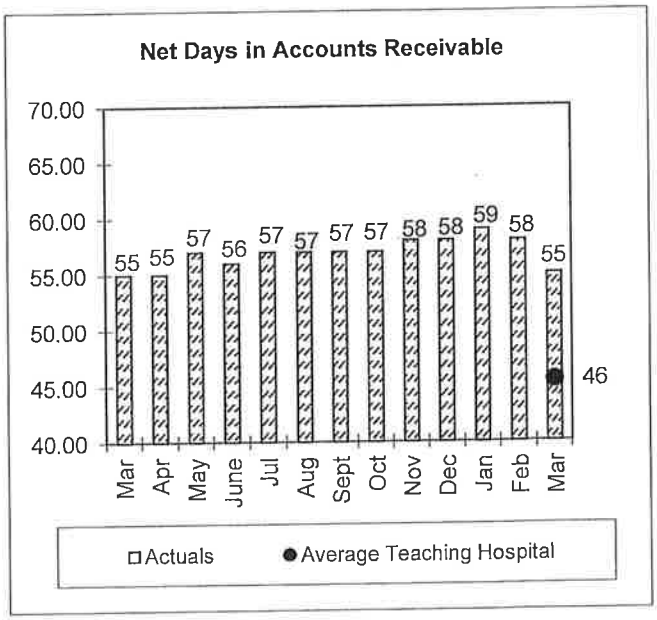




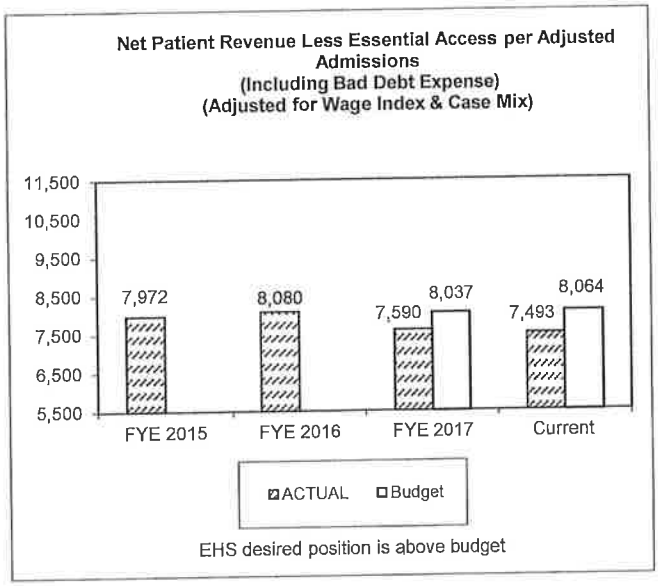


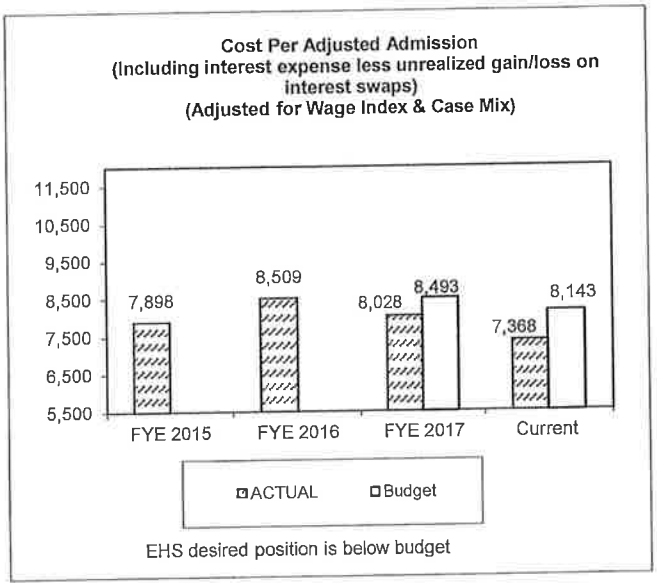


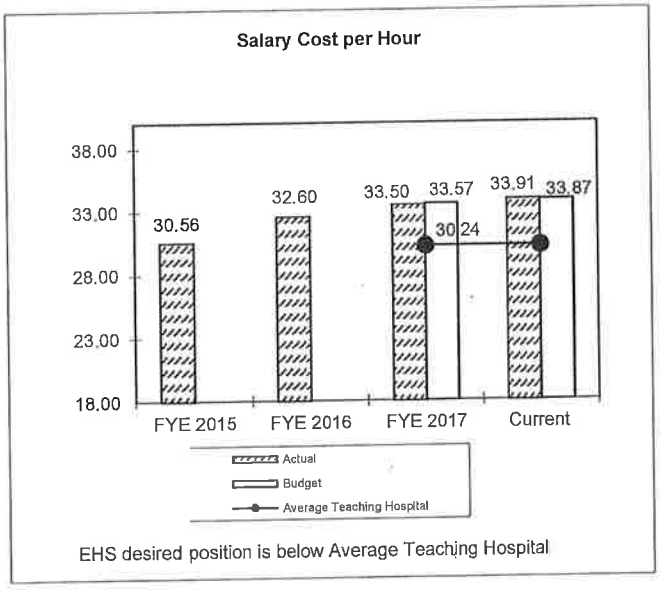


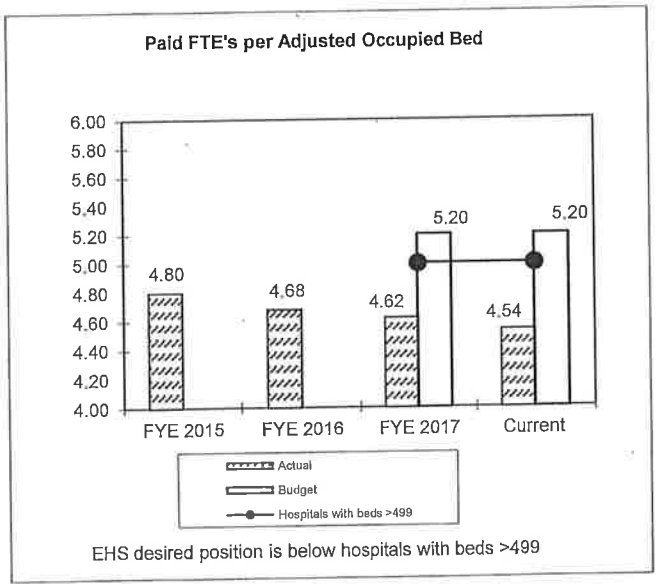


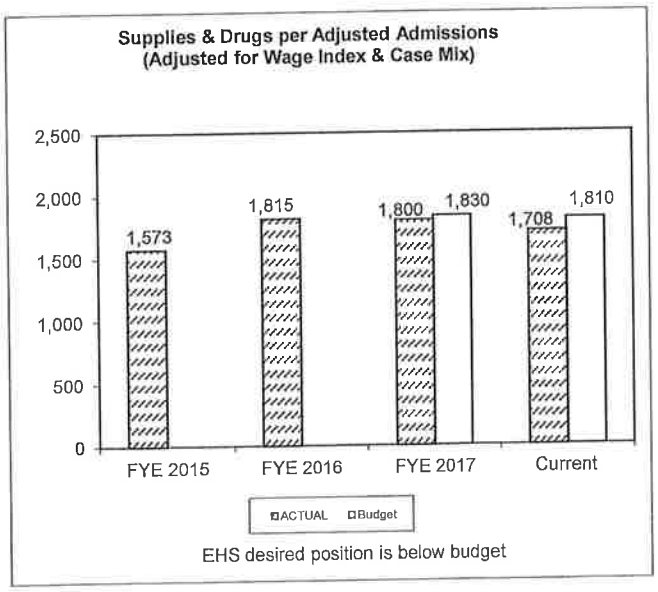
Erlanger Health System
Ratio Analysis
March 31, 2017

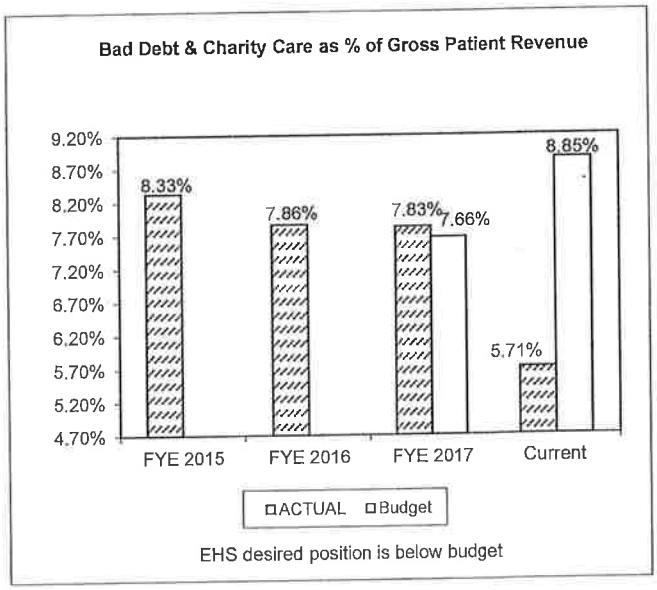












ERLANGER HEALTH SYSTEM
MARCH 2017

CURRENT MONTH
TENNCARE PAID CLAIMS & CHARITY LOSS
$5,946,410

YEAR TO DATE
TENNCARE PAID CLAIMS & CHARITY LOSS
$68,337,887

TOTAL YTD CORPORATE SOCIAL RESPONSIBILITY COSTS
$77,597,475

PATIENT #	DRG DESCRIPTION	ERLANGER COSTS	CASH RECEIVED	TENNCARE LOSS	CHARITY LOSS	TOTAL TENNCARE & CHARITY LOSS
#1	RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT >96 HOURS	52,231	23,392	28,839		28,839
#2	CORONARY BYPASS W CARDIAC CATH W MCC	57,338	30,496	26,842		26,842
#3	SEPTICEMIA OR SEVERE SEPSIS W MV >96 HOURS	52,734	25,313	27,422		27,422
#4	SPINAL PROCEDURES W CC OR SPINAL NEUROSTIMULATORS	37,368	14,318	23,050		23,050
#5	MAJOR BLADDER PROCEDURES W CC	58,101	14,196	43,905		43,905
#6	SEPTICEMIA OR SEVERE SEPSIS W/O MV >96 HOURS W MCC	31,437	6,781	24,656		24,656
#7	EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE	393,278	215,429	177,849		177,849
#8	G.I. HEMORRHAGE W CC	29,535	5,016	24,519		24,519
#9	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES W MCC	46,492	7,524	38,968		38,968
#10	EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE	102,226	66,573	35,653		35,653
#11	CARDIAC DEFIBRILLATOR IMPLANT W/O CARDIAC CATH W/O MCC	48,501	22,915	25,586		25,586
#12	TRAUMATIC STUPOR & COMA, COMA <1 HR W MCC	63,539	10,287	53,252		53,252
#13	KIDNEY & URETER PROCEDURES FOR NON-NEOPLASM W MCC	73,029	22,104	50,926		50,926
#14	POISONING & TOXIC EFFECTS OF DRUGS W MCC	53,662	9,081	44,582		44,582
#16	LIMB REATTACHMENT, HIP & FEMUR PROC FOR MULTIPLE SIGNIFICANT TRAUMA	52,081	20,881	31,200		31,200
#17	FOOT PROCEDURES W MCC	57,514	12,397	45,117		45,117
#18	FULL TERM NEONATE W MAJOR PROBLEMS	108,498	68,257	40,242		40,242
#19	LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCEDURE W/O CC/MCC	39,582	8,593	30,988		30,988
#20	INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W MCC	41,721	22,434	19,287		19,287
#21	PULMONARY EMBOLISM W MCC	52,764	6,493	46,271		46,271
#22	AORTIC AND HEART ASSIST PROCEDURES EXCEPT PULSATION BALLOON W MCC	108,530	19,520	89,010		89,010
#23	CESAREAN SECTION W CC/MCC	76,476	18,490	57,986		57,986
#24	REVISION OF HIP OR KNEE REPLACEMENT W CC	46,034	17,671	28,363		28,363
#25	RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT >96 HOURS	56,181	19,341	36,840		36,840
#26	SEPTICEMIA OR SEVERE SEPSIS W/O MV >96 HOURS W MCC	58,552	25,018	33,533		33,533
#27	ECMO OR TRACH W MV >96 HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	125,028	104,357	20,671		20,671
#28	PREMATURITY W/O MAJOR PROBLEMS	76,232	26,914	49,318		49,318
#29	CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W MCC	53,374	21,779	31,595		31,595
#30	PERITONEAL ADHESIOLYSIS W MCC	37,617	18,184	19,433		19,433
#31	EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE	113,153	80,518	32,635		32,635
#32	AMPUTATION FOR MUSCULOSKELETAL SYS & CONN TISSUE DIS W CC	30,887	9,595	21,291		21,291
	ALL OTHER TENNCARE PAID AND CHARITY W/O IN MARCH 2017	7,855,401	3,168,820	398,148	4,288,433	4,686,581
	TOTAL MARCH 2017	10,089,095	4,142,685	1,657,978	4,288,433	5,946,410
	YTD TENNCARE AND CHARITY (JULY 2016 - MARCH 2017)	102,901,889	34,564,002	19,892,565	48,445,322	68,337,887
	BAD DEBT, OUT OF STATE MEDICAID & OUTSTANDING TENNCARE COSTS					9,259,588
	TOTAL CORPORATE SOCIAL RESPONSIBILITY COSTS					77,597,475

1. Selected Accounting Policies

Organization

Erlanger Health System (the System) was created by a private act passed by the General Assembly of the State of Tennessee on March 11, 1976, and adopted by a majority of the qualified voters of Hamilton County, Tennessee on August 5, 1976. The System owns and or operates Baroness Erlanger Hospital, Willie D. Miller Eye Center, T.C. Thompson Children's Hospital, Erlanger East and Women's East Pavilion, Erlanger North Hospital, Erlanger Soddy Daisy (collectively "Erlanger Medical Center"), Southside/Dodson Avenue Health Centers, ContinuCare Home Health, Inc., Erlanger Health Plan Trust, and Erlanger Bledsoe. The System is considered the primary governmental unit for financial reporting purposes.

Charity Care

The System accepts patients regardless of their ability to pay. A patient is classified as a charity patient by reference to certain policies established by the County Auditor with regard to the Hamilton County indigent program or by the System for other patients of the System. Essentially, these policies define charity services as those services for which no minimal payment is anticipated. In assessing a patient's inability to pay, the System and the County utilize generally recognized poverty income levels, but also include certain cases where incurred charges are significant when compared to income of the patient. These charges are not included in net patient service revenue.

Investments

The System's investments are reported at fair market value based on quoted market prices in accordance with GASB Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools*. The System invests in governmental and municipal bonds, corporate bonds, equity securities and short-term investments.

Accounting Standards

Pursuant to GASB Statement No. 20, *Accounting and Financial Reporting for Proprietary Funds and Other Governmental Entities That Use Proprietary Fund Accounting*, the System has elected to apply the provisions of all relevant pronouncements of the Financial Accounting Standards Board (FASB), including those issued after November 30, 1989, that do not conflict with or contradict GASB pronouncements.

2. Net Patient Service Revenue

A reconciliation of the amount of services provided to patients at established rates to net patient service revenue as presented in the statements of revenue and expenses is as follows:

	Year to date March 31, 2017	Year to date March 31, 2016
Inpatient service charges	$ 1,162,259,412	$ 1,045,895,830
Outpatient service charges	987,814,001	853,193,131
Gross patient service charges	$ 2,150,073,413	$ 1,899,088,961
Less: Contractual adjustments and other discounts	1,354,751,937	1,178,751,161
Hamilton County charity care (net of appropriation of $1,125,000 in fiscal YTD 2017 and $1,125,000 in fiscal YTD 2016 from Hamilton County)	11,008,006	4,436,260
Bad debt	67,840,290	74,922,241
Other charity care	92,033,879	69,563,014
	1,525,634,112	1,327,672,676
Net patient service revenue	$ 624,439,301	$ 571,416,285

The Private Act of the State of Tennessee establishing the System obligates the System to make its facilities and patient care programs available to the indigent residents of Hamilton County to the extent of funds appropriated by Hamilton County and adjusted operating profits, as defined. The annual appropriation from Hamilton County is not to be less than $3,000,000 in each fiscal year without approval of the System, so long as the 1966 Hamilton County Sales Tax Agreement remains in effect. Due to the 1966 Hamilton County Sales Tax Agreement expiring in May 2011, the Hamilton County appropriation has been reduced from $3M to $1.5M for fiscal 2015 and fiscal 2016.

The other charity care amounts include free care provided to individuals from outside Hamilton County and medically indigent residents of Hamilton County not covered by the Hamilton County indigent program.

For fiscal 2016, Erlanger Medical Center recognized revenue of $7,777,863 for essential access payment.
Erlanger Medical Center recognized revenue of $14,086,341 from the Public Hospital Supplemental Payment Pool.
Trauma fund payments of $825,000 from the State of Tennessee have been recorded as revenue.

For fiscal 2017, Erlanger Medical Center recognized revenue of $7,777,863 for essential access payment.
Erlanger Medical Center recognized revenue of $15,894,865 from the Public Hospital Supplemental Payment Pool.
Trauma fund payments of $825,000 from the State of Tennessee has been recorded as revenue.
Disproportionate Share payments of $2,090,061 from the State of Tennessee were recognized as revenue.

3. Cash and Cash Equivalents

Cash and cash equivalents reported on the balance sheet include cash on hand and deposits with financial institutions including demand deposits and certificates of deposit. Cash and cash equivalents consist of the following:

	March 31, 2017	March 31, 2016
General Fund		
Demand deposits	$ 52,684,099	$ 44,210,599
Cash on hand	14,434	$ 14,109
Temporary investments	6,402,094	6,032,705
Total Cash and Temporary investments	$ 59,100,627	$ 50,257,413

Temporary investments include certificates of deposit and repurchase agreements. Demand deposits are insured by the Federal Deposit Insurance Corporation up to $250,000 per institution. Demand deposits, certificates of deposit and repurchase agreements are collateralized with securities held by a third party in the System's name.

4. Net Property, Plant and Equipment

Net property, plant and equipment consist of the following:

	March 31, 2017	March 31, 2016
Land and Improvements	$ 24,420,158	$ 21,826,024
Buildings	262,930,216	233,906,017
Equipment	435,390,614	395,094,039
	$ 722,740,988	$ 650,826,080
Less accumulated depreciation	(548,657,269)	(529,692,797)
	$ 174,083,719	$ 121,133,283
Construction in progress	42,829,592	49,436,246
	$ 216,913,311	$ 170,569,529

5. Assets Whose Use is Limited

Assets whose use is limited consist of the following:

	March 31, 2017	March 31, 2016
Investment Portfolio	$ 107,109,324	$ 106,642,520
Under trust indentures - held by trustees	25,333,708	57,466,606
Self Insurance Trust	4,386,961	5,278,532
HMO Trust	1,637,209	1,630,263
Restricted by others for specific purposes	179,391	267
	$ 138,646,593	$ 171,018,188
Less current portion	(4,407,797)	(4,502,982)
	$ 134,238,796	$ 166,515,206

Assets whose use is limited by the Board of Trustees for capital improvements consist primarily of United States Government and government agency obligations or other liquid assets, which are to be used for the replacement of property and equipment or for any other purposes so designated. In accordance with section 7 of the Act, the investment portfolio includes reserves for the payment of principal and interest on the 2014A series bond falling due during the 12 month period next succeeding the date of issuance of the 2014A series bonds.

Funds held by trustees under indenture are as follows:

	March 31, 2017	March 31, 2016
Construction and escrow fund	$ 14,731,448	$ 46,769,781
Debt service reserve fund	6,194,463	6,193,843
Interest and principal fund	4,407,797	4,502,982
Total funds held by trustees	$ 25,333,708	$ 57,466,606

The funds consist primarily of United States Government and government agency obligations. The debt service reserve fund is to be used only to make up any deficiencies in other funds related to the Hospital Revenue and Refunding Bonds Series 1997A and Series 1998A; the interest fund is to be used only to pay interest on the Series 1997A, Series 1998A, Series 2004 and Series 2014 bonds; and the construction fund contains the unspent proceeds related to the Series 2014A.

All funds are collateralized with securities held by the pledging financial institution's trust department or agent in the System's name.

6. Long-term Debt

Long-term debt consists of:

	March 31, 2017	March 31, 2016
$85,000,000 Revenue & Refunding Bonds Series 2004, net of bond discount of $254,473 in 2017 and $323,202 in 2016 and including bond issue premium of $582,516 in 2017 and $672,133 in 2016	31,976,630	36,188,931
$149,920,000 Hospital Revenue and Refunding Bonds Series 2014, including bond issue premium of $8,001,928 in 2017	157,921,928	158,212,908
Total Bonds Payable	189,898,558	194,401,839
Other	17,124,053	17,585,256
	$ 207,022,611	$ 211,987,095
Less current portion	(4,686,974)	(4,879,593)
	$ 202,335,637	$ 207,107,502

7. Pension Plan

The System sponsors a single employer defined benefit pension plan covering substantially all employees meeting certain eligibility requirements. In addition to normal retirement benefits, the plan also provides for early retirement, delayed retirement, disability and death benefits. The System's funding policy is to fund actuarially determined costs, using the projected unit credit method, as they accrue. The System has the right to amend, in whole or in part, any or all of the provisions of the plan. Further information about the plan is contained in the pamphlet, Pension Plan Summary Description, copies of which are available from the Pension Committee. The plan covers all employees hired prior to July 1, 2009. The plan was frozen on June 21, 2014.

Recently Issued or Effective Accounting Pronouncements: In June 2012, the Governmental Accounting Standards Board (GASB) issued Statement No. 68, Accounting and Financial Reporting for Pensions. Statement No. 68 provides guidance for improved accounting and financial reporting by state and local government entities related to pensions. It also replaces the requirements of GASB Statement No. 27 and Statement No. 50, as they relate to pensions that are provided through pension plans administered as trusts or equivalent arrangements that meet certain criteria. Additionally, the GASB issued Statement No. 71, Pension Transition for Contributions Made Subsequent to the Measurement Date, which is effective concurrent with Statement No. 68. Among other requirements, Erlanger Health System recorded a net pension liability that is based on fiduciary plan net position rather than on plan funding. Erlanger Health System adopted these Statements in 2015.

8. Postretirement Benefits Other Than Pensions

The System sponsors three defined benefit postretirement plans other than pensions for full-time employees who have reached retirement age, as defined. The respective plans provide medical, dental and life insurance benefits, along with a lump-sum cash payment for 20% of the hours in the participant's short term disability bank at retirement. The postretirement health and dental plan is contributory and contains other cost-sharing features, such as deductibles and coinsurance. The life insurance plan and the short term disability bank are noncontributory. The system adopted GASB 45 over FAS 106 effective fiscal year ending June 30, 2008. Effective January 1, 2015, the Health System has discontinued the Post Retirement Benefit Plan for all employees.

9. Investments in Affiliates

Cyberknife of Chattanooga, LLC

During fiscal year 2011, Cyberknife was capitalized by contributions from the Primary Health System and certain other minority partners. Cyberknife provides radiation therapy services, specifically robotic stereotactic radiosurgical services through the use of a cyberknife stereotactic radiosurgery system on the Primary Health System campus. At March 31, 2017, the Primary Health System owns 51% of Cyberknife's outstanding membership units.

UT-Erlanger Medical Group, Inc

The Medical Group was formed June 30, 2011 and provides professional healthcare services to the public and related services through its employed and contracted licensed physicians and other supporting healthcare providers. The Medical Group has no members; however, the Primary Health System may access the Medical Group's services. The Primary Health System is not entitled to any potential earnings of the Medical Group except for compensation for services rendered to the Medical Group on its behalf.

10. Medical Malpractice and General Liability Claims

As of January 1, 1976, the System adopted a self-insurance plan to provide for malpractice and general liability claims and expenses arising from services rendered subsequent to that date. In 1980, the System's Self-Insurance Trust Agreement was amended to include all coverages that a general public liability insurance policy would cover. In 1988, the Agreement was amended and restated to comply with amendments to the Tennessee Governmental Tort Liability Act and to formally include any claims and expenses related to acts of employees of the System. In accordance with Medicare and Medicaid regulations, the System is funding the estimated liabilities through an irrevocable trust fund with a bank. The annual deposit to the self-insurance trust fund is determined by management based on known and threatened claims, consultation with legal counsel and a report of an independent casualty actuary. Losses against the System are generally limited by the Tennessee Governmental Tort Liability Act to $300,000 for injury or death to any one person in any one, accident, occurrence or act and $700,000 in the aggregate. However, claims against health care practitioners are not subject to the foregoing limits applicable to the System. Any such individuals employed by the System are covered by the Trust to the limits set forth therein.

In the opinion of management, the trust fund assets are adequate at March 31, 2017, to cover potential liability and malpractice claims and expenses, which may have been incurred to that date.

The System provides for claims and expenses in the period in which the incidence related to such claims occur based on historical experience and consultation with legal counsel. It is the opinion of management that the estimated accrued malpractice cost at March 31, 2017 and 2015, respectively, is adequate to cover potential liability and malpractice claims, which may have been incurred but not reported to the System. The System is a defendant in certain litigation arising from the normal course of business. The opinion of management and counsel is that losses, if any, that may arise from such litigation will not be material to the financial statements of the System.

11. 403(b) Retirement Plan

The System has a 403(b) and 401(a) matching program. The plans are for the benefit of generally all employees 25 years of age or older with at least 12 months of employment. The System will match 50% of the eligible participant's contribution up to 2% of the employee's earnings. For eligible employees hired on/after July 1, 2009, the System will make contributions equal to 3% of their earnings. Active employees in the frozen pension plan are eligible for this 3% company contribution as of July 6, 2014. These contributions will be invested in the employees' 401(a) plan, regardless if the employee is making contributions. These employees will also have access to the 401(a) matching program. Additionally, active employees in the frozen pension plan that met the Rule of 75 as of the freeze date, will receive a 2.5% company contribution through fiscal 2019.

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY (d/b/a Erlanger Health System and Discretely Presented Component Units)

Audited Combined Financial Statements

Year Ended June 30, 2016

PYA

Certified Public Accountants

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY
(d/b/a Erlanger Health System)

Audited Combined Financial Statements

Years Ended June 30, 2016

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INDEPENDENT AUDITOR'S REPORT

To the Board of Trustees of
Chattanooga-Hamilton County Hospital Authority
(d/b/a Erlanger Health System):

Report on the Combined Financial Statements

We have audited the accompanying combined financial statements of the business-type activities of Chattanooga-Hamilton County Hospital Authority d/b/a Erlanger Health System (the Primary Health System) and its discretely presented component units, as of and for the year ended June 30, 2016, and the related notes to the combined financial statements, which collectively comprise the Primary Health System's basic combined financial statements as listed in the table of contents.

Management's Responsibility for the Combined Financial Statements

Management is responsible for the preparation and fair presentation of these combined financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of combined financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these combined financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combined financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combined financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the combined financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Primary Health System's preparation and fair presentation of the combined financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Primary Health System's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and

the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the combined financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the combined financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the discretely presented component units of the Primary Health System as of June 30, 2016, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information: Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis (shown on pages 3 through 10), the Schedule of Changes in Net Pension Liability and Related Ratios (shown on page 45) and the Schedule of Actuarial Contributions (shown on page 46) be presented to supplement the basic combined financial statements. Such information, although not a part of the basic combined financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic combined financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic combined financial statements, and other knowledge we obtained during our audit of the basic combined financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Pershing Yoakley & Associates PC

Knoxville, Tennessee
September 12, 2016

Management's Discussion and Analysis

MANAGEMENT'S DISCUSSION AND ANALYSIS

The discussion and analysis of Chattanooga-Hamilton County Hospital Authority d/b/a Erlanger Health System's financial performance provides an overview of financial activities for the fiscal year ended June 30, 2016.

Erlanger Health System (the Primary Health System) is the largest healthcare provider in Southeast Tennessee and the seventh largest public hospital nationwide. The Primary Health System maintains a number of very specialized clinical services such as Level I trauma, Level IV neonatal, kidney transplantation, a Regional Cancer Unit, a full service children's hospital, and open heart surgery, all of which are primarily serviced by five "Life Force" helicopters and supported by subspecialty physicians (residents, faculty and private attending physicians) located on its campuses.

OVERVIEW OF THE COMBINED FINANCIAL STATEMENTS

The combined financial statements consist of two parts: Management's Discussion and Analysis and the combined financial statements. The combined financial statements also include notes that explain in more detail some of the information in the combined financial statements.

The combined financial statements of the Primary Health System offer short-term and long-term financial information about its activities. The combined statements of net position include all of the Primary Health System's assets and liabilities and provide information about the nature and amounts of investments in resources (assets) and the obligations to the Primary Health System's creditors (liabilities). The assets and liabilities are presented in a classified format, which distinguishes between current and long-term assets and liabilities. It also provides the basis for computing rate of return, evaluating the capital structure of the Primary Health System and assessing the liquidity and financial flexibility of the Primary Health System.

All of the fiscal year's revenues and expenses are accounted for in the combined statements of changes in net position. These statements measure the success of the Primary Health System's operations and can be used to determine whether the Primary Health System has successfully recovered all of its costs through the services provided, as well as its profitability and credit worthiness.

The final required financial statement is the combined statement of cash flows. The primary purpose of this statement is to provide information about the Primary Health System's cash receipts, cash payments and net changes in cash resulting from operating, investing, non-capital financing and financing activities. The statement also provides answers to such questions as where did cash come from, what was cash used for, and what was the change in the cash balance during the reporting period?

The analysis of the combined financial statements of the Primary Health System begins on the next page. One of the most important questions asked about the Primary Health System's finances is "Is the financial condition of the Primary Health System as a whole better or worse as a result of the fiscal year's activities?" The combined statements of net position and the combined statements of changes in net position report information about the Primary Health System's activities in a way that will help answer this question. These two statements report the net position of the Primary Health System and changes in the net position. One can think of the Primary Health System's net position – the difference between assets and liabilities – as one way to measure financial health or financial position. Over time, increases or decreases in the Primary Health System's net position is one indicator of whether its financial health is improving or deteriorating. However, one will need to consider other non-financial factors such as changes in economic conditions, regulations and new or changed government legislation.

REPORTING ENTITY

The Chattanooga-Hamilton County Hospital Authority d/b/a Erlanger Health System (the Primary Health System) was created by a private act passed by the General Assembly of the State of Tennessee on March 11, 1976, and adopted by a majority of the qualified voters of Hamilton County, Tennessee on August 5, 1976. The Primary Health System is considered the primary governmental unit for financial reporting purposes. As required by generally accepted accounting principles, these financial statements present the Primary Health System and its component units. The component units discussed below are included in the Primary Health System's reporting entity because of the significance of their operational, financial or other relationships with the Primary Health System.

ContinuCare HealthServices, Inc., Cyberknife of Chattanooga, LLC (Cyberknife), UT-Erlanger Medical Group, Inc. (the Medical Group) and Erlanger Health Plan Trust are legally separate organizations for which the Primary Health System is either financially accountable or owns a majority interest. Accordingly, these organizations represent component units of the Primary Health System. The financial statements of Erlanger Health Plan Trust are blended with the financial statements of the Primary Health System, as the Board of Erlanger Health Plan Trust is substantially the same as that of the Primary Health System and the Primary Health System has operational responsibility.

During fiscal year 2011, Cyberknife was capitalized by contributions from the Primary Health System and certain other minority partners. Cyberknife provides radiation therapy services, specifically robotic stereotactic radiosurgical services through the use of a Cyberknife stereotactic radiosurgery system on the Primary Health System's campus. At June 30, 2016, and 2015, the Primary Health System owned 51% of Cyberknife's outstanding membership units.

The Medical Group was formed on June 30, 2011 and will provide professional healthcare and related services to the public through its employed and contracted licensed physicians and other supporting healthcare providers. The Medical Group has no members; however, the Primary Health System may access the Medical Group's services. The Medical Group is currently not active.

KEY FINANCIAL INDICATORS

The following key financial indicators are for Erlanger Health System as a whole. They are inclusive of the Primary Health System, ContinuCare HealthServices, Inc., and the 51% controlling share of Cyberknife of Chattanooga, LLC.

- Excess revenues over expenses for Erlanger Health System for fiscal year 2016 is $25 million compared to excess of revenue over expenses of $37 million for fiscal year 2015.

- Excess revenues over expenses from operations for Erlanger Health System for fiscal year 2016 is $30 million compared to excess of revenue over expenses of $48 million for fiscal year 2015.

- Total cash and investment reserves at June 30, 2016 are $102 million (excluding $107 million in capital investment funds and $50 million of funds held by Trustees or restricted by donors or others).

- Net days in accounts receivable for Erlanger Health System (utilizing a three month rolling average of net revenue) is 56 days at June 30, 2016 compared to 47 days at June 30, 2015.

- For fiscal year 2016, Erlanger Health System recognized $18.2 million in public hospital supplemental payments from the State of Tennessee compared to $18.8 million in fiscal year 2015.

- For fiscal year 2016, Erlanger Health System recognized $10.4 million in essential access payments from the State of Tennessee compare to $17.4 million in fiscal year 2015.

- For fiscal year 2016, Erlanger Health System recognized $15.1 million in disproportionate share payments from the State of Tennessee. Erlanger Health System did not recognize any such payments for fiscal year 2015.

- For fiscal year 2016, Erlanger Health System recognized $1.1 million in trauma fund payments from the State of Tennessee compared to $1.1 million in fiscal year 2015.

The required bond covenant ratios for fiscal year 2016 compared to bond requirements are as follows:

	June 30, 2016	*Master Trust Indenture*	*Bond Insurer Requirements 04 Series*
Debt service coverage ratio	4.19	1.10	1.35
Current ratio	2.61	N/A	1.50
Days cash on hand	91	N/A	65 days
Indebtedness ratio	50%	N/A	65%

The trust indentures and related documents underlying the bonds contain certain covenants and restrictions. For fiscal year 2016, Erlanger Health System met all required debt covenants.

NET POSITION

Erlanger Health System's net position for the combined Primary Health System and Aggregate Discretely Presented Component Units increased by approximately $26 million in fiscal year 2016. Our analysis focuses on the net position (Table 1) and changes in net position (Table 2) of the Primary Health System's operating activities. Discussion focuses on the Primary Health System and its blended component units.

Net position for the Primary Health System increased from $211 million as of June 30, 2015 to $236 million as of June 30, 2016. The current ratio (current assets divided by current liabilities) decreased from 2.67 in 2015 to 2.56 in 2016 for the Primary Health System.

Table 1- Net Position (in Millions)

	June 30, 2016		*June 30, 2015*	
	Primary Health System	*Discretely Presented Component Units*	*Primary Health System*	*Discretely Presented Component Units*
Current and other assets	**$ 444**	**$ 14**	$ 442	$ 13
Capital assets	**186**	**8**	142	8
Total assets	**630**	**22**	585	21
Deferred ouflows of resources	**15**	**-**	6	-
	$ 645	**$ 22**	$ 590	$ 21

	June 30, 2016		*June 30, 2015*	
	Primary Health System	*Discretely Presented Component Units*	*Primary Health System*	*Discretely Presented Component Units*
Long-term debt outstanding	$ **208**	$ **-**	$ 213	$ -
Other liabilities	**197**	**6**	163	6
Total liabilities	**405**	**6**	376	6
Deferred inflows of resources	**4**	**-**	4	-
	$ **409**	$ **6**	$ 380	$ 6
Net position				
Net investment in capital assets	$ **17**	$ **5**	$ 2	$ 5
Restricted, expendable	**3**	**-**	3	-
Unrestricted	**216**	**11**	206	10
Total net position	$ **236**	$ **16**	$ 211	$ 15

Days in cash decreased from 104 days as of June 30, 2015 to 90 days as of June 30, 2016 for the Primary Health System resulting from increased investment in capital.

Days in net accounts receivable for the Primary Health System were 51 days as of June 30, 2015 and 58 days at June 30, 2016, with the increase being attributed to increased volumes.

Capital assets for the Primary Health System were $186 million as of June 30, 2016. Additions for fiscal year 2016 totaled $31 million while $3 million of assets were retired or sold. Depreciation expense was $25 million for the Primary Health System. Retirement of assets reduced accumulated depreciation by $3 million in fiscal year 2016. Construction in progress was $50 million as of June 30, 2016. Included in construction in progress is the Erlanger East expansion totaling $32 million.

Long-term debt outstanding amounted to $208 million as of June 30, 2016 compared to $213 million as of June 30, 2015.

Other liabilities for the Primary Health System were $197 million as of June 30, 2016 compared to $163 million as of June 30, 2015, due in part to increased net pension liability.

CHANGES IN NET POSITION

The focus for Erlanger Health System's management team during fiscal year 2016 was to increase the Primary Health System's volumes in a number of key product lines in a flat market, improve relationships with stakeholders, and improve operating efficiencies.

Table 2- Changes in Net Position (in Millions)

	June 30, 2016		*June 30, 2015*	
	Primary Health System	*Discretely Presented Component Units*	*Primary Health System*	*Discretely Presented Component Units*
Net patient revenue	**$ 778**	**$ 11**	$ 670	$ 11
Other revenue	**15**	**22**	16	18
Total revenue	**793**	**33**	686	29
Expenses:				
Salaries	**406**	**14**	333	14
Supplies and other expenses	**174**	**13**	139	10
Purchased services	**160**	**3**	141	3
Depreciation and amortization	**25**	**1**	25	1
Total expenses	**765**	**31**	638	28
Operating income revenues in excess of (less than) expenses	**28**	**2**	48	1
Nonoperating gains	**4**	(1)	1	-
Interest expense and other	**(7)**	-	(12)	-
Operating/capital contributions	**(0)**	-	-	-
Change in net position	**$ 25**	**$ 1**	$ 37	$ 1

Net patient service revenue for the Primary Health System increased from $670 million in fiscal year 2015 to $778 million in fiscal year 2016. Admissions for fiscal year 2016 were 35,758 compared to 33,340 for fiscal year 2015, a 7.3% increase. Observation days decreased from 7,836 for fiscal year 2015 to 7,637 for fiscal year 2016, or by 2.5%. Air ambulance flights increased from 1,994 flights for fiscal 2015 to 2,190 flights for fiscal year 2016, or by 9.8%. Medicare case mix index decreased from 1.88 for fiscal year 2015 to 1.87 for fiscal year 2016. Total surgical inpatients increased from 9,856 for fiscal year 2015 to 10,143 for fiscal 2016, or by 2.9%. Total surgical outpatients for fiscal year 2016 increased by 15.0% over the prior year. Total emergency room visits were 154,907 for fiscal year 2016, a 2.7% increase over fiscal year 2015. Physician practice outpatient visits have increased from 289,578 in fiscal 2015 to 351,875 in fiscal 2016, or by 21.5%. Cardiac cath lab patients were 3,438 for fiscal year 2016, a 20.0% increase over fiscal year 2015.

Salaries for the Primary Health System increased from $333 million in fiscal year 2015 to $406 million in fiscal year 2015. Staffing was in concert with the increased volumes. Paid FTE's per adjusted occupied bed decreased from 4.8 in fiscal year 2015 to 4.7 in fiscal year 2016, however, salary cost for fiscal year 2016 per hour increased by 6.7% over the prior year. A market

adjustment was implemented in July 2015 for bedside nurses. A 3% raise for all other eligible employees was implemented in January 2016.

Supplies and other expenses increased from $139 million for fiscal year 2015 to $174 million in fiscal year 2016. Supplies and drug costs trended with the volume increases. Supplies and drugs per adjusted admission for the Primary Health System increased from $1,573 in fiscal year 2015 to $1,815 in fiscal year 2016 resulting from higher implant costs due to increased surgery volumes. Drug costs increased also due to expansion of the infusion center.

Purchased services increased from $141 million in fiscal year 2015 to $160 million in fiscal year 2016 due in part to an increase in contracted hospitalist fees resulting from increased volumes and increased outside legal fees.

Depreciation and amortization expense was $25 million in fiscal year 2016 and was consistent with the prior year.

Interest expense, including gain (or loss) on mark-to-market of interest rate swaps in 2015, decreased from $12 million in fiscal year 2015 to $7 million in fiscal year 2016 due to capitalized interest expense associated with the expansion of Erlanger East Hospital. The Series 2014 Bonds issued in December 2014 resulted in $71 million in additional debt. The interest rate swaps agreements were terminated in fiscal year 2015.

OUTLOOK

The State of Tennessee continues to review the TennCare program (the State's Medicaid program). For fiscal years 2012 and 2013, the State passed a Hospital Coverage Fee to offset shortfalls in the State's budget for TennCare. The fee has remained intact and TennCare rates were stable in fiscal years 2014 - 2016. There could be possible TennCare rate changes in fiscal year 2017 as a result of rate variation initiatives. CMS has notified the State of their intention to change the methodology of the supplemental pools. The TennCare waiver has been extended through September 30, 2016 while CMS and the State negotiate the new methodology. Out-of-state Medicaid and TennCare changes would affect the Primary Health System's bottom line with TennCare and Medicaid patients representing approximately 23% of the payer mix. Self-pay patients represent approximately 7% of the charge utilization. Healthcare reform and future changes in Medicare regulations could also have an adverse effect on the Primary Health System's future operations since Medicare represents approximately 34% of the payer mix.

During fiscal year 2014, the Primary Health was added as a participant to the Public Hospital Supplemental Payment Pool for public hospitals in Tennessee through a collaborative effort with local Mayors, State Senators and Representatives, Hamilton County Medical Society, Board members, physicians and hospital leadership. The inclusion of the Primary Health System in the

pool netted $18.8 million of additional federal funding for fiscal year 2015 and $18.2 million for fiscal year 2015. The Primary Health System will receive this funding annually as long as the current TennCare waiver is intact. Funding of $20.6 for fiscal year 2017 was received in August 2016.

The Primary Health System recognized Essential Access payments totaling $10.4 million from the State of Tennessee for fiscal year 2016, a decrease of $7.1 million from fiscal year 2015. Disproportionate share payments were not approved by the Federal government for fiscal year 2014 and funds received during 2015 were deferred until 2016 based on management's evaluation. Disproportionate share payments of $15.1 million were recorded in fiscal year 2016. Additionally, the Primary Health System recognized trauma funding of $1.1 million in fiscal years 2016 and 2015. Payments from the State of Tennessee for the fiscal year 2017 are expected to be consistent with the fiscal year 2016. Due to the 1966 Hamilton County Sales Tax Agreement expiring in May 2011, the Hamilton County appropriations to the Primary Health System have been reduced from $3 million to $1.5 million.

The focus of Erlanger Health System's CEO and leadership team for fiscal year 2016 has been top-line, sustainable growth, cost containment and strengthened physician relations. The strategic plans put in place this fiscal year have yielded strong positive results and enabled investment in Erlanger and the community. The health system has infused $71 million from bond sales into major growth initiatives.

Fiscal year 2017 will reflect continued growth based on initiatives completed to date and others in the process of being completed. In particular, the surgery expansion at the main campus is expected to be a strong contributor to health system performance as is the $50 million expansion at Erlanger East, where a full service hospital will be made available for the first time to residents of East Hamilton County. While the response to opening of the emergency department at Erlanger East Hospital over the last several years has been far stronger than originally anticipated, establishing a full service hospital is a different challenge, requiring effective execution on a much broader stage. During fiscal 2017, the Primary Health System will implement the ambulatory module of Epic. The inpatient module of Epic will be implemented in fiscal 2018. A strong team and support cast are in place; however, the complexities of the challenge are magnified as an array of programs and services and providers need to coordinate efforts to execute successfully. Competition and related market place additional challenges and risks to the mix. An effective team is in place to accelerate effective execution of this endeavor.

Audited Combined Financial Statements

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY
(d/b/a Erlanger Health System)

Combined Statements of Net Position

	June 30, 2016	
	Primary Health System	*Discretely Presented Component Units*
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 90,387,026	$ 3,393,643
Temporary investments	2,743,655	5,450,986
Patient accounts receivable, net	123,074,843	1,775,904
Estimated amounts due from third party payers	8,000,119	-
Due from other governments	254,856	496,216
Inventories	16,027,986	1,258,727
Receivable from Walker County, Georgia	8,705,000	-
Other current assets	19,756,209	1,435,555
TOTAL CURRENT ASSETS	268,949,694	13,811,031
NET PROPERTY, PLANT AND EQUIPMENT	186,065,992	7,992,444
LONG-TERM INVESTMENTS, for working capital	850,871	-
ASSETS LIMITED AS TO USE	157,641,228	-
OTHER ASSETS:		
Prepaid bond insurance	721,060	-
Equity in discretely presented component units	15,592,240	-
Other assets	12,820	509,405
TOTAL OTHER ASSETS	16,326,120	509,405
TOTAL ASSETS	629,833,905	22,312,880
DEFERRED OUTFLOWS OF RESOURCES		
Deferred pension adjustments	13,312,023	-
Deferred amounts from debt refunding	1,580,780	-
TOTAL DEFERRED OUTFLOWS OF RESOURCES	14,892,803	-
COMBINED ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	$ 644,726,708	$ 22,312,880

See notes to combined financial statements.

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY
(d/b/a Erlanger Health System)

Combined Statements of Net Position - Continued

	June 30, 2016	
	Primary Health System	*Discretely Presented Component Units*
LIABILITIES		
CURRENT LIABILITIES:		
Accounts payable and accrued expenses	$ 67,607,554	$ 1,470,211
Accrued salaries and related liabilities	28,370,165	1,161,977
Due to other governments	496,216	254,856
Current portion of long-term debt and capital leases	4,726,161	2,513,748
Other current liabilities	3,727,483	297,008
TOTAL CURRENT LIABILITIES	104,927,579	5,697,800
LONG-TERM DEBT AND CAPITAL LEASE OBLIGATIONS	208,003,442	3,606
NET PENSION LIABILITY	66,838,386	-
OTHER LONG-TERM LIABILITIES	25,532,353	310,791
TOTAL LIABILITIES	405,301,760	6,012,197
DEFERRED INFLOWS OF RESOURCES		
Deferred pension adjustments	511,392	-
Deferred gain from sale-leaseback	3,006,213	-
TOTAL DEFERRED INFLOWS OF RESOURCES	3,517,605	-
NET POSITION:		
Unrestricted	215,326,506	10,776,642
Net investment in capital assets	17,320,388	5,524,041
Restricted expendable:		
Health plan trust	1,633,882	-
Donor restricted	1,626,567	-
TOTAL NET POSITION	235,907,343	16,300,683
COMBINED LIABILITES, DEFERRED OUTFLOWS OF RESOURCES AND NET POSITION	$ 644,726,708	$ 22,312,880

See notes to combined financial statements.

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY
(d/b/a Erlanger Health System)

Combined Statements of Changes in Net Position

	Year Ended June 30, 2016	
	Primary Health System	*Discretely Presented Component Units*
OPERATING REVENUE:		
Charges for services:		
Net patient service revenue	$ 778,002,400	$ 11,463,849
Other revenue	14,980,073	21,808,250
TOTAL OPERATING REVENUE	792,982,473	33,272,099
OPERATING EXPENSES:		
Salaries, wages and benefits	406,325,308	14,117,579
Supplies and other expenses	170,844,193	12,861,808
Purchased services	159,746,508	2,761,900
Insurance and taxes	3,195,380	343,725
Depreciation	24,912,090	1,240,327
TOTAL OPERATING EXPENSES	765,023,479	31,325,339
OPERATING INCOME	27,958,994	1,946,760
NONOPERATING REVENUE (EXPENSES):		
Gain on disposal of assets	877,611	5,592
Interest and investment income, net of fees	1,998,866	81,385
Net gain from discretely presented component units	1,114,224	-
Interest expense	(6,546,731)	(126,948)
Provision for income taxes	-	(553,540)
NET NONOPERATING REVENUE (EXPENSES)	(2,556,030)	(593,511)
INCOME BEFORE CONTRIBUTIONS	25,402,964	1,353,249
Operating distributions	(429,104)	(178,000)
Capital contributions	221,306	-
CHANGE IN NET POSITION	25,195,166	1,175,249
NET POSITION AT BEGINNING OF YEAR	210,712,177	15,125,434
NET POSITION AT END OF YEAR	$ 235,907,343	$ 16,300,683

See notes to combined financial statements.

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY
(d/b/a Erlanger Health System)

Combined Statement of Cash Flows

Primary Health System	*Year Ended June 30, 2016*
CASH FLOWS FROM OPERATING ACTIVITIES:	
Receipts from third-party payers and patients	$ 748,652,990
Payments to vendors and others for supplies, purchased services, and other expenses	(324,781,774)
Payments to and on behalf of employees	(403,108,228)
Other receipts	16,894,391
NET CASH PROVIDED BY OPERATING ACTIVITIES	37,657,379
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:	
Contributions to other organizations	(429,104)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:	
Acquisition and construction of capital assets, net	(65,714,585)
Proceeds from sale of assets	749,604
Principal paid on bonds, capital lease obligations and other	(4,863,355)
Interest payments on long-term debt	(9,582,409)
Capital contributions	221,306
NET CASH USED IN CAPITAL AND RELATED FINANCING ACTIVITIES	(79,189,439)
CASH FLOWS FROM INVESTING ACTIVITIES:	
Interest, dividends, and net realized gains (losses) on investments	1,998,866
Change in temporary and long-term investments for working capital	(11,389)
Payments received on note receivable	8,840,000
Net cash transferred from assets limited as to use	28,878,211
NET CASHPROVIDED BY INVESTING ACTIVITIES	39,705,688
INCREASE IN CASH AND CASH EQUIVALENTS	(2,255,476)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	92,642,502
CASH AND CASH EQUIVALENTS AT END OF YEAR	$ 90,387,026

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY
(d/b/a Erlanger Health System)

Combined Statement of Cash Flows - Continued

Primary Health System	*Year Ended June 30, 2016*
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:	
Operating income	$ 27,958,994
Adjustments to reconcile operating income to net cash provided by operating activities:	
Depreciation	24,912,090
Pension adjustments	5,821,326
Gain on disposal of assets	(464,756)
Changes in assets and liabilities:	
Patient accounts receivable, net	(29,287,384)
Estimated amounts due from third party payers, net	(2,600,248)
Inventories and other assets	(10,909,394)
Accounts payable and accrued expenses	17,139,289
Accrued salaries and related liabilities	9,038,406
Other current and long-term liabilities	(3,950,944)
NET CASH PROVIDED BY OPERATING ACTIVITIES	$ 37,657,379

NOTE A--SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity: The Chattanooga-Hamilton County Hospital Authority d/b/a Erlanger Health System (the Primary Health System) was created by a private act passed by the General Assembly of the State of Tennessee on March 11, 1976, and adopted by a majority of the qualified voters of Hamilton County, Tennessee on August 5, 1976. The Chattanooga-Hamilton County Hospital Authority consists of the Primary Health System and its aggregate discretely presented component units as disclosed below.

The Primary Health System provides comprehensive healthcare services throughout Hamilton and Bledsoe counties, as well as outlying areas in southeastern Tennessee and north Georgia. These services are provided primarily through the hospital and other facilities located on the Baroness campus of Erlanger Medical Center. The Primary Health System also operates other hospitals and clinics throughout the area. The Primary Health System is considered the primary governmental unit for financial reporting purposes. As required by accounting principles generally accepted in the United States of America, these combined financial statements present the Primary Health System and its component units. The component units discussed below are included in the Primary Health System's reporting entity because of the significance of their operational or financial relationships with the Primary Health System.

The primary mission of the Primary Health System and its component units is to provide healthcare services to the citizens of Chattanooga, Hamilton County and the surrounding area. Only those activities directly associated with this purpose are considered to be operating activities. Other activities that result in gains or losses unrelated to the Primary Health System's primary mission are considered to be nonoperating.

Erlanger Health Plan Trust, ContinuCare HealthServices, Inc., Cyberknife of Chattanooga, LLC, and UT-Erlanger Medical Group, Inc. are legally separate organizations which the Primary Health System has determined are component units of the Primary Health System.

Blended Component Units: The financial statements of Erlanger Health Plan Trust include assets limited as to use totaling $1,633,882 as of June 30, 2016 and net investment gain totaling $10,466 for the year ended June 30, 2016 that are blended in the combined financial statements of the Primary Health System. The board of the Erlanger Health Plan Trust is substantially the same as that of the Primary Health System and the Primary Health System has operational responsibility.

Discretely Presented Component Units: The discretely presented component units' column in the combined financial statements includes the financial data of the Primary Health System's other component units. They are reported in a separate column to emphasize that they are legally

separate from the Primary Health System. See the combined, condensed financial information in Note O.

1. ContinuCare HealthServices, Inc. and subsidiary (ContinuCare) provide health and supportive services to individuals in their homes in the Hamilton County and north Georgia areas. ContinuCare also provides retail pharmacy goods and services at four locations in Hamilton County. The Primary Health System owns 100% of the stock of ContinuCare. Separately audited financial statements for ContinuCare HealthServices, Inc. may be obtained by mailing a request to 1501 Riverside Drive, Suite 140, Chattanooga, Tennessee 37406.

2. Cyberknife of Chattanooga, LLC (Cyberknife) provides radiation therapy services, specifically robotic stereotactic radiosurgical services, through the use of a cyberknife stereotactic radiosurgery system on the Primary Health System's campus. The Primary Health System owns 51% of Cyberknife's outstanding membership units and Cyberknife is fiscally dependent on the Primary Health System.

   A condition of admission as a Member of Cyberknife, is to deliver limited guaranties, guaranteeing pro-rata repayment of indebtedness of Cyberknife incurred to finance its equipment costs and its working capital needs. As of June 30, 2016, total debt outstanding was $2,492,581 with payments due through 2017. Management believes that the Primary Health System will not be required to make any payments related to the guarantee of this indebtedness.

3. UT-Erlanger Medical Group, Inc. (the Medical Group) was formed on June 30, 2011 and will provide professional healthcare and related services to the public through employed and contracted licensed physicians and other supporting healthcare providers. The Medical Group has no members; however, the Primary Health System may access the Medical Group's services. The Primary Health System is not entitled to any potential earnings of the Medical Group except for compensation for services rendered to the Medical group on its behalf. However, based upon the significance of the Medical Group's potential operation to the Primary Health System, management believes its exclusion would be misleading and as such, includes the Medical Group as a component unit. The Medical Group is currently not active.

Erlanger Health System Foundations (the Foundation): The Foundation assists the Primary Health System to promote and develop charitable and educational opportunities as they relate to healthcare services provided by the Primary Health System. The Primary Health System is not financially accountable for the Foundation and as a result, the Foundation has not been included in the combined financial statements.

No contributions from the Foundation were recognized as contribution revenue by the Primary Health System for the year ended June 30, 2016. The Primary Health System provided support to the Foundation of $662,000 in 2016.

Use of Estimates: The preparation of the combined financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the combined financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Enterprise Fund Accounting: The Primary Health System and its blended component units utilize the enterprise fund method of accounting whereby revenue and expenses are recognized on the accrual basis using the economic resources measurement focus.

Recently Issued or Effective Accounting Pronouncements: In February 2015, the Governmental Accounting Standards Board (GASB) issued Statement No. 72, *Fair Value Measurement and Application.* Statement No. 72 defines fair value and describes how fair value should be measured, what assets and liabilities should be measured at fair value, and what information about fair value should be disclosed in the notes to the financial statements. This statement was adopted by the Primary Health System during 2016 and included the required additional disclosures in the combined financial statements.

Net Patient Service Revenue/Receivables: Net patient service revenue is reported on the accrual basis in the period in which services are provided at rates which reflect the amount expected to be collected. Net patient service revenue includes amounts estimated by management to be reimbursable by third-party payer programs under payment formulas in effect. Net patient revenue also includes an estimated provision for bad debts based upon management's evaluation of collectability based upon the age of the receivables and other criteria, such as payer classification and management's assumptions about conditions it expects to exist and courses of action it expects to take. The Primary Health System's policies do not require collateral or other security for accounts receivable, although the Primary Health System routinely accepts assignment or is otherwise entitled to receive patient benefits payable under health insurance programs, plans or policies. Supplemental payments from the State of Tennessee are recognized when determinable over the period to which they pertain (see Note B).

Charity Care: The Primary Health System accepts patients regardless of their ability to pay. A patient is classified as a charity patient by reference to certain policies established by the County Auditor with regard to the Hamilton County indigent program or by the Primary Health System for other patients. Essentially, these policies define charity services as those services for which minimal payment is anticipated. In assessing a patient's inability to pay, the County and the

Primary Health System utilize the generally recognized poverty income levels, but also include certain cases where incurred charges are significant when compared to the income of the patient. These charges are not included in net patient service revenue.

Cash Equivalents: The Primary Health System considers all highly liquid investments with maturities of three months or less when purchased, excluding amounts whose use is limited by board designation, held by trustees under indenture agreement, or otherwise restricted as to use, to be cash equivalents.

Inventories: Inventories consist principally of medical and surgical supplies, general store supplies, and pharmacy items and are stated at lower of cost (first-in, first-out) or fair market value.

Investments: The Primary Health System's investments (including assets limited as to use) are reported at fair market value. Assets limited as to use include funds designated by the Board, funds held by trustees under trust indentures, and funds restricted by donors or grantors for specific purposes. The Primary Health System considers those investments with maturities of more than three months when purchased, maturing in more than one year and whose use is not limited by board designation, held by trustees under indenture agreement, or otherwise restricted as to use, to be long-term investments.

Temporary Investments: The Primary Health System considers all highly liquid investments with maturities of less than three months when purchased and maturing in less than one year, excluding amounts whose use is limited by board designation, held by trustees under indenture agreement, or otherwise restricted as to use, to be temporary investments.

Net Property, Plant and Equipment: Property, plant and equipment is recorded on the basis of cost. Donated assets are recorded at their fair market value at the date of donation. Leases that are substantially installment purchases of property are recorded as assets and amortized over the lessor of their estimated useful lives or the lease term which range from three to twenty years; related amortization is included in depreciation expense. Depreciation expense is computed over estimated service lives of the respective classes of assets using the straight-line method. The Primary Health System has established a capitalization threshold for property, plant and equipment of $2,500 except for computer equipment, which has a threshold of $1,000. Interest expense and interest income on borrowed funds related to construction projects are capitalized during the construction period, if material. Costs of maintenance and repairs are charged to expense as incurred.

The Primary Health System reviews the carrying value of capital assets if facts and circumstances indicate that recoverability may be impaired. A capital asset is considered impaired when its service utility has declined significantly and unexpectedly. The Primary

Health System did not experience any prominent events or changes in circumstances affecting capital assets which would require determination as to whether impairment of a capital asset has occurred during the year ended June 30, 2016.

Prepaid Bond Insurance: Financing costs related to insurance associated with bond issues are being amortized over the terms of the respective debt issues by the effective interest method.

Compensated Absences: The Primary Health System recognizes an expense and accrues a liability for employees' paid annual leave and short-term disability in the period in which the employees' right to such compensated absences is earned. Liabilities expected to be paid within one year are included as accrued salaries and related liabilities in the accompanying combined statements of net position.

Pensions: Pension amounts (net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, fiduciary net position of the Primary Health System's pension plan and additions to or deductions from the plan's fiduciary net position) have been determined on the same basis as they are reported by the Plan. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value

Income Taxes: The Primary Health System is exempt from income taxes under Section 501(a) as an organization described in Section 501(c)(3) of the Internal Revenue Code (IRC). In addition, it qualifies for exemption from federal income taxes pursuant to IRC Section 115 as an instrumentality of the State of Tennessee. Therefore, no provision for income taxes has been recognized in the accompanying combined financial statements for the Primary Health System.

As a for-profit entity, ContinuCare is subject to state and federal income taxes. ContinuCare HealthServices, Inc. and its subsidiary file consolidated federal income tax returns separately from the Primary Health System. At June 30, 2016, ContinuCare had no significant uncertain tax positions. Tax returns for the years ended June 30, 2013 through 2016 are subject to examination by taxing authorities.

As a limited liability corporation, Cyberknife, is subject to State of Tennessee income taxes. At June 30, 2016 Cyberknife had no significant uncertain tax positions. Tax returns for the years ended June 30, 2013 through 2016 are subject to examination by taxing authorities.

Contributed Resources: Resources restricted by donors for specific operating purposes are held as restricted funds and are recognized as operating or capital contributions in the accompanying combined financial statements. When expended for the intended purpose, they are reported as operating distributions and are recognized as other operating revenue. When an expense is incurred for purposes for which both restricted and unrestricted resources are available, restricted

resources are used first. Contributed resources consist of amounts restricted by donors for specific purposes. Fundraising expenses are netted against contributions recognized.

Net Position: The net position of the Primary Health System is classified into three components. *Net investment in capital assets* consists of capital and other assets net of accumulated depreciation and reduced by the current balances of any outstanding borrowings used to finance the purchase or construction of those assets. The *restricted expendable* net position consists of assets that must be used for a particular purpose that are either externally imposed by creditors, grantors, contributors or laws or regulations of other governments or imposed by law through constitutional provisions or enabling legislation. *The unrestricted net position* is remaining assets that do not meet the definition of *net investment in capital assets* or *restricted expendable.*

Fair Value of Financial Instruments: The carrying amounts reported in the combined statements of net position approximate fair value except as described below.

The carrying value of long-term debt and capital lease obligations (including the current portion) was $212,729,603 as of June 30, 2016. The estimated fair value of long-term debt and capital lease obligations (including current portion) was $230,778,250 at June 30, 2016. The fair value of long-term debt related to fixed interest long-term debt and capital lease obligations was estimated using discounted cash flows, based on the Primary Health System's incremental borrowing rates or from quotes obtained from investment advisors. The fair value of long-term debt related to variable rate debt approximates its carrying value.

Subsequent Events: The Primary Health System evaluated all events or transactions that occurred after June 30, 2016 through September 12, 2016, the date the combined financial statements were available to be issued and noted no events that required recognition or disclosure in the combined financial statements except as disclosed in Note N.

NOTE B--NET PATIENT SERVICE REVENUE

A reconciliation of the amount of services provided to patients at established rates by the Primary Health System to net patient service revenue as presented in the combined statements of revenue, expenses and changes in net position for the year ended June 30, 2016 is as follows:

	Primary Health System
Inpatient service charges	$ 1,410,727,138
Outpatient service charges	1,148,094,992
Gross patient service charges	2,558,822,130

	Primary Health System
Less: Contractual adjustments and other discounts	1,575,527,537
Charity care	119,836,064
Provision for bad debts	85,456,129
	1,780,819,730
Net patient service revenue	$ 778,002,400

Charity Care and Community Benefit: The Private Act of the State of Tennessee establishing the Primary Health System obligates the Primary Health System to make its facilities and patient care programs available to the indigent residents of Hamilton County to the extent of funds appropriated by Hamilton County and adjusted operating profits, as defined. The annual appropriation from Hamilton County totaled $1,500,000 for fiscal year 2016. Total charity care charges for services provided to the certified indigent residents of Hamilton County (net of the appropriation) were approximately $8,319,000 for the year ended June 30, 2016 for the Primary Health System.

In addition to charity care provided to specific patients within the hospital setting, the Primary Health System also provides unreimbursed services to the community which includes free and low cost health screenings. The Primary Health System also hosts health fairs and helps sponsor many other events that are free to the public and are spread throughout the year in various community locations.

The Primary Health System's Community Relations department includes HealthLink Plus, a free adult membership program with over 8,000 members in the Chattanooga Statistical Metropolitan Service Area. The Community Relations department hosts several free community events throughout the year utilizing the services of physicians, nurses, volunteers, educators, registered dietitians, social workers, secretaries and management personnel of the Primary Health System.

The Primary Health System's consumer call center, Erlanger HealthLink (423-778-LINK) is a free call center staffed by RN's to answer health questions, offer free physician referrals and to register participants in the programs offered by Community Relations, Women's & Infant Services and other departments and divisions of the Primary Health System.

Uncompensated Care Costs: The following table summarizes the estimated total uncompensated care costs (based on the ratio of total operating revenue and expenses) provided by Erlanger Medical Center as defined by the State of Tennessee for the year ended June 30, 2016:

Uncompensated cost of TennCare/Medicaid	$	30,965,861
Traditional charity uncompensated costs		35,185,333
Bad debt cost		24,563,521
Total estimated uncompensated care costs	$	90,714,715

The uncompensated cost of TennCare/Medicaid is estimated by taking the estimated cost of providing care to the TennCare/Medicaid patients less payments from the TennCare and Medicaid programs. The payments exclude revenues from essential access and other, one-time supplemental payments from TennCare of approximately $10,371,000 for the year ended June 30, 2016 and such payments are not guaranteed for future periods.

Revenue from Significant Payers: Gross patient service charges related to the Medicare program accounted for approximately 30.1% of the Primary Health System's patient service charges for the year ended June 30, 2016. Gross patient service charges related to the TennCare/Medicaid programs accounted for approximately 23.0% of the Primary Health System's patient service charges for the year ending June 30, 2016. TennCare typically reimburses providers at an amount less than their cost of providing services to TennCare patients. At June 30, 2016, the Primary Health System has a credit concentration related to the Medicare and TennCare programs.

During 2016, the Primary Health System recognized revenue from these programs related to trauma fund payments of approximately $1,080,000. Further, during 2016, the Primary Health System recognized disproportionate share payments of approximately $15,130,000 which includes approximately $5,085,000 received in 2015. Recognition of the 2015 payment was deferred until 2016 and is based on management's continued evaluation. Such amounts are subject to audit and potential recoupments although management believes it has meritorious defenses against any such recoupments. Future distributions under these programs are not guaranteed. In 2016 the Primary Health System also received and recognized a net payment of $18,207,056 from the Public Hospital Supplemental Payment Pool. Such amounts are expected to be received as long as the current TennCare waiver is intact.

Laws and regulations governing the Medicare and TennCare/Medicaid programs are complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates, as they relate to revenue recognized from these programs, will change by a material amount in the near term. The estimated reimbursement amounts are adjusted in subsequent periods as cost reports are prepared and filed and as final settlements are determined. Final determination of amounts earned under prospective payment and cost reimbursement activities is subject to review by appropriate governmental authorities or their agents. Management believes that adequate provisions have been made for adjustments that may result from final determination of amounts earned under Medicare and Medicaid programs. The effect of prior year cost report settlements, or changes in estimates, increased net patient service revenue by approximately $3,190,000 in 2016.

The Primary Health System has also entered into reimbursement agreements with certain commercial insurance companies, health maintenance organizations and preferred provider organizations. The basis for reimbursement under these agreements includes prospectively determined rates, per diems and discounts from established charges.

NOTE C--CASH AND CASH EQUIVALENTS

Cash and cash equivalents reported on the combined statements of net position include cash on hand and deposits with financial institutions including demand deposits and certificates of deposit, as well as, money market accounts that are held in investment accounts and meet the definition of a cash equivalent.

Cash and cash equivalents consist of the following:

	Primary Health System
Demand deposits	$ 90,375,572
Cash on hand	11,454
	$ 90,387,026

Bank balances consist of the following:

	Primary Health System
Insured (FDIC)	$ 535,615
Collateralized under the State of Tennessee Bank Collateral Pool	91,499,430
	$ 92,035,045

The Primary Health System's deposits would be exposed to custodial credit risk if they are not covered by depository insurance and the deposits are uncollateralized or are collateralized with securities held by the pledging financial institution's trust department or agent but not in the depositor government's name. The risk is that, in the event of the failure of a depository financial institution, the Primary Health System will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party.

NOTE D--DISAGGREGATION OF RECEIVABLE AND PAYABLE BALANCES

Patient Accounts Receivable, Net: Patient accounts receivable and related allowances are as follows:

	Primary Health System
Gross patient accounts receivable	$ 471,635,785
Estimated allowances for contractual adjustments and uncollectible accounts	(348,560,942)
Net patient accounts receivable	$ 123,074,843

Other Current Assets: Other current assets consist of the following:

	Primary Health System
Prepaid expenses	$ 5,165,306
Other receivables	14,590,903
Total other current assets	$ 19,756,209

Accounts Payable and Accrued Expenses: Accounts payable and accrued expenses consist of the following:

	Primary Health System
Due to vendors	$ 60,368,930
Other	7,238,624
Total accounts payable and accrued expenses	$ 67,607,554

Other Long-Term Liabilities: Other long-term liabilities, and the related activity, consist of the following:

	Balance at Beginning of Year	*Unearned Revenue Recognized*	*Payments /Other*	*Balance at End of Year*
Compensated absences	$ 10,638,408	$ -	$ 6,392,217	$ 17,030,625
Medical malpractice	4,934,900	-	37,500	4,972,400
Job injury program	1,253,139	-	-	1,253,139
Deferred revenue	2,580,036	(393,607)	-	2,186,429
Other	89,760	-	-	89,760
Total other long-term liabilities	$ 19,496,243	$ (393,607)	$ 6,429,717	$ 25,532,353

NOTE E--NET PROPERTY, PLANT AND EQUIPMENT

Net property, plant and equipment activity for the Primary Health System consisted of the following:

	Balance at June 30, 2015	*Additions*	*Reductions/ Transfers*	*Balance at June 30, 2016*
Capital assets:				
Land and improvements	$ 20,992,928	$ 664,758	$ (88,400)	$ 21,569,286
Buildings	229,751,179	24,673	3,936,780	233,712,632
Equipment	387,378,986	3,634,501	19,121,352	410,134,839
	638,123,093	4,323,932	22,969,732	665,416,757
Accumulated depreciation :				
Land and improvements	(8,780,699)	(287,365)	242,294	(8,825,770)
Buildings	(179,046,470)	(6,270,262)	54,509	(185,262,223)
Equipment	(319,102,026)	(18,354,463)	2,530,956	(334,925,533)
	(506,929,195)	(24,912,090)	2,827,759	(529,013,526)
Capital assets net of accumulated depreciation	131,193,898	(20,588,158)	25,797,491	136,403,231
Construction in progress	10,932,463	64,399,785	(25,669,487)	49,662,761
	$ 142,126,361	$ 43,811,627	$ 128,004	$ 186,065,992

Construction in progress at June 30, 2016 consists of various projects for additions and renovations to the Primary Health System's facilities and computer systems. The estimated cost to complete construction projects is approximately $42,000,000. During 2016, the Primary Health System capitalized interest expense of approximately $3,300,000 on construction projects, net of interest income of approximately $300,000 earned on construction funds.

NOTE F--INVESTMENTS AND ASSETS LIMITED AS TO USE

The Primary Health System invests primarily in United States government and agency obligations, municipal bonds and short-term money market investments that are in accordance with the Primary Health System's investment policy. The carrying and estimated fair values for long-term investments, and assets limited as to use, by type are as follows:

	Primary Health System
U.S. Treasury notes	$ 39,303,272
U.S. Government agency obligations	83,978,073
Municipal bonds	23,177,684
Corporate bonds	526,965
Bond mutual funds	5,175,552
Cash equivalents	6,330,553
Total investments and assets limited as to use	$ 158,492,099

Assets limited as to use are designated for the following purposes:

	Primary Health System
Capital investment funds	$ 107,430,593
Under bond indentures - held by trustees	
Debt service reserve fund	6,196,128
Construction fund	37,066,811
Self-insurance trust	5,313,814
Health plan trust	1,633,882
	$ 157,641,228

Assets limited as to use for capital investment are to be used for the replacement of property and equipment or for any other purposes so designated. The debt service reserve fund is to be used only to make up any deficiencies in other funds related to the Hospital Revenue and Refunding Bonds Series 2004. The construction fund may be used for various construction and renovation projects related to the Series 2014 bonds.

The Primary Health System's investment policy specifies the types of investments which can be included in board-designated assets limited as to use, as well as collateral or other security requirements. The investment policy also specifies the maximum maturity of the portfolio of board-designated assets. Assets limited as to use and held by trustees are invested as permitted by the bond indenture.

Custodial Credit Risk: The Primary Health System's investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the Primary Health System, and are held by either the counterparty or the counterparty's trust department or agent but not in the Primary Health System's name. The risk is that, in the event of the failure of

the counterparty to a transaction, the Primary Health System will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. Substantially all of the Primary Health System's investments, including assets limited as to use, are uninsured or unregistered. Securities are held by the counterparty, or by its trust department or agent, in the Primary Health System's name.

Concentration of Credit Risk: This is the risk associated with the amount of investments the Primary Health System has with any one issuer that exceeds 5% or more of its total investments. Investments issued or explicitly guaranteed by the U.S. Government and investments in mutual funds, external investment pools, and other pooled investments are excluded from this requirement. The Primary Health System's investment policy does not restrict the amount that may be held for any single issuer. At June 30, 2016, none of the Primary Health System's investments with any one issuer exceed 5% of its total investments except certain U.S. Government agency obligations.

Credit Risk: This is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Primary Health System's investment policy provides guidelines for its fund managers and lists specific allowable investments. The credit risk profile of the Primary Health System's investments, including assets limited as to use (excluding U.S. Government securities), as of June 30, 2016, is as follows:

		Rating				
Investment Type	***Total***	***AAA***	***AA***	***A***	***BBB***	***N/A***
U.S. Government agency obligations	$ 83,978,073	$ 82,371,518	$ 1,606,555	$ -	$ -	$ -
Municipal bonds	23,177,684	11,246,929	11,930,755	-	-	-
Corporate bonds	526,965	-	-	526,965	-	-
Bond mutual funds	5,175,552	5,175,552	-	-	-	-
Cash equivalents	6,330,553	-	-	-	-	6,330,553
Total investments	$ 119,188,827	$ 98,793,999	$ 13,537,310	$ 526,965	$ -	$ 6,330,553

Interest Rate Risk: This is the risk that changes in interest rates will adversely affect the fair value of an investment. The Primary Health System's investment policy authorizes a strategic asset allocation that is designed to provide an optimal return over the Primary Health System's investment horizon and within specified risk tolerance and cash requirements. The distribution of the Primary Health System's investments, including assets limited as to use, by maturity as of June 30, 2016, is as follows:

		Remaining Maturity				
Investment Type	*Total*	*12 months or less*	*13-24 Months*	*25-60 Months*	*Over 60 Months*	*N/A*
U.S. Treasury notes	$ 39,303,272	$ 2,183,788	$ 7,570,078	$ 29,549,406	$ -	$ -
U.S. Government agency obligations	83,978,073	26,799,542	3,321,322	1,821,198	52,036,011	-
Municipal bonds	23,177,684	16,236,876	4,663,614	2,277,194	-	-
Corporate bonds	526,965	526,965	-	-	-	-
Bond mutual funds	5,175,552	-	-	-	-	5,175,552
Cash equivalents	6,330,553	6,330,553	-	-	-	-
Total investments	$ 158,492,099	$ 52,077,724	$ 15,555,014	$ 33,647,798	$ 52,036,011	$ 5,175,552

NOTE G--LONG-TERM DEBT

Long-term debt at June 30, 2016 consists of the following:

Revenue and Refunding Bonds, Series 2014A, including bond premium of $8,220,163	$ 158,140,163
Revenue and Refunding Bonds, Series 2004, net of bond discount of $306,042 and including bond issue premium of $649,729	36,183,687
Total bonds payable	194,323,850
2014B Note payable	12,000,000
Other loans	188,397
Capital leases - Note L	6,217,356
	212,729,603
Less: current portion	(4,726,161)
	$ 208,003,442

On December 1, 2014, the Primary Health System issued $149,920,000 Series 2014A bonds for the purpose of advance refunding $20,615,000 of the outstanding Series 2004 bonds (described below), $30,300,000 of the outstanding Series 2000 bonds, $17,375,000 of the Series 1998A bonds, and $27,465,000 of the outstanding Series 1997A bonds. The Primary Health System also utilized the proceeds to pay certain issuance costs and deposited a portion of the bond proceeds in the amount of $71,000,000 into a construction fund. The advance refunding of the of the Series 2004 bonds, Series 1998A bonds, and 1997A bonds resulted in a loss of $1,116,755 that is reported as a deferred outflow of resources and will be amortized over the term of the Series 2014A bonds.

The Series 2014A bonds consist of series bonds maturing annually beginning October 1, 2016 through 2034 and term bonds maturing on October 1, 2039 and 2044. The term bonds are

subject to mandatory sinking fund redemption beginning October 1, 2035. The Series 2014A bonds are also subject to redemption by the Primary Health System at any interest payment date at a redemption price equal to the principal amount plus accrued interest.

Interest rates for the Series 2014A bonds are as follows:

Series bonds	3.0% to 5.0%
Term bonds	4.125% to 5.0%

In conjunction with the issuance of the Series 2014A bonds, the Primary Health Systems issued a $12,000,000 note payable (2014B note) through a financial institution to advance refund the remaining $11,775,000 of outstanding Series 1997A bonds and pay issuance costs. Principal payments of $100,000 are due annually beginning October 1, 2018 until the maturity date of October 1, 2021. The 2014B note bears interest, payable monthly, at a variable rate equal to the 1-month London Interbank Offered Rate plus a margin ranging from .73% to 2.25% based on the debt rating of the Primary Health System. The applicable interest rate at June 30, 2016 was 1.46%.

On January 1, 2004, the Primary Health System issued $85,000,000 insured Series 2004 bonds for the purpose of refunding $80,925,000 of the total outstanding Series 1993 bonds. The Primary Health System also utilized the proceeds to pay certain issuance costs and establish a debt service fund. The outstanding Series 2004 bonds mature annually on October 1 through 2022 in varying amounts. The Series 2004 bonds maturing after October 1, 2019 may be redeemed by the Primary Health System after October 1, 2019 at a redemption price equal to the principal amount plus accrued interest. Interest rates for the outstanding Series 2004 bonds range from 4.0% to 5.0%.

During 2015, a portion of the Series 2004 bonds totaling $20,615,000 were defeased with the issuance of the Series 2014A bonds proceeds through the deposit of funds into an irrevocable escrow account in amounts sufficient to pay the principal and interest when due. A portion of the defeased Series 2004 bonds totaling $9,460,000 has been redeemed. The escrow balance for payment of the remaining principal and interest totaled $12,170,595 at June 30, 2016.

The Series 2014A bonds, Series 2004 bonds and 2014B note were issued on parity, with respect to collateral, and are also secured by a mortgage on a portion of the Primary Health System's main campus. The trust indentures and related documents underlying the bonds contain certain covenants and restrictions. As of June 30, 2016, management believes the Primary Health System is in compliance with all such covenants.

Long-term debt activity for the Primary Health System for the year ended June 30, 2016 consisted of the following:

	Balance at June 30, 2015	*Additions/ Amortizations*	*Reductions/ Accretions*	*Balance at June 30, 2016*
Bonds Payable				
Series 2014	$ 158,431,142	$ -	$ 290,979	$ 158,140,163
Series 2004	40,429,666	68,637	4,314,616	36,183,687
Total bonds payable	198,860,808	68,637	4,605,595	194,323,850
2014B Note payable	12,000,000	-	-	12,000,000
Other loans	644,749	-	456,352	188,397
Capital leases	6,379,360	-	162,004	6,217,356
Total long-term debt	$ 217,884,917	$ 68,637	$ 5,223,951	$ 212,729,603

The Primary Health System's scheduled principal and interest payments (estimated for variable rate debt based on rates at June 30, 2016) on bonds payable and other long-term debt (excluding capital leases) are as follows:

Year Ending June 30,	*Principal*	*Interest*	*Total*
2017	$ 4,643,397	$ 9,067,848	$ 13,711,245
2018	4,575,000	8,874,446	13,449,446
2019	5,060,000	8,654,716	13,714,716
2020	5,295,000	8,414,249	13,709,249
2021	5,540,000	8,162,454	13,702,454
2022-2026	25,645,000	37,160,231	62,805,231
2027-2031	27,005,000	32,460,701	59,465,701
2032-2036	34,305,000	25,038,116	59,343,116
2037-2041	43,215,000	15,958,313	59,173,313
2042-2045	42,665,000	4,396,875	47,061,875
TOTAL	$ 197,948,397	$ 158,187,949	$ 356,136,346

NOTE H--PENSION PLAN

Plan Description: The Primary Health System sponsors the Chattanooga-Hamilton County Hospital Authority Pension Retirement Plan & Trust (the Plan), a single-employer, non-contributory defined benefit pension plan covering employees meeting certain age and service requirements.

The Primary Health System has the right to amend, in whole or in part, any or all of the provisions of the Plan. Effective July 1, 2009, the Plan was amended to be closed to new

employees or rehires, and to further clarify the maximum years of service to be 30. During June 2014, the Plan was amended to freeze the accrual of additional benefits.

Benefits Provided: In addition to normal retirement benefits, the Plan also provides for early retirement, disability and death benefits. Retirement benefits are calculated as a percent of the employee's average monthly salary for the last 10 calendar years (prior to June 2014) times the employee's years of service. Employees earn full retirement benefits after 30 years of service. Early retirement benefits are available once an employee has reached age 55 and 10 years of service at a reduced rate based on age. Disability retirement benefits are available after 3 years of credited service, determined in the same manner as retirement benefits and are payable at the normal retirement date. Death benefits equal the actuarial equivalent value of the employee's vested accrued benefit as of the date of death. An employee who terminates service for other reasons after three years of credited service will receive retirement benefits at the normal retirement date.

Employees Covered: At July 1, 2016, the following employees were included in the Plan:

Active employees	1,916
Inactive employees with deferred benefits	1,386
Inactive employees currently receiving benefits	173
	3,475

Contributions: The Primary Health System has no legal or Plan requirements to fund the Plan and funds the Plan as contributions are approved by the Board of Trustees based on an actuarially determined rate recommended by an independent actuary. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned during the year with an additional amount to finance any unfunded accrued liability.

Net Pension Liability: The Primary Health System's net pension liability was measured as of June 30 2016, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of July 1, 2016. The total pension liability in the actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.5%
Salary increases	N/A
Investment rate of return	7.5%
Discount rate	7.5%

Mortality rates were based on the RP-2014 Mortality for Employees, Healthy Annuitants, and Disabled Annuitants, with generational projection per MP-2015.

The long-term expected rate of return on pension plan investments was determined by applying the most recent capital market assumptions, as developed by the investment manager, using a building block approach. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized as follows:

Asset Class	*Target Allocation*	*Long-term Expected Real Rate of Return*
Large cap equity	15.00%	8.00%
Alternative investments	35.00%	7.00%
Mid/Small cap equity	10.00%	8.75%
International equity	20.00%	7.50%
Fixed income	15.00%	6.70%
Real estate	5.00%	5.19%

The pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees assuming the actuarially determine contributions are made each year, although not required by the funding policy. Therefore, the discount rate for determining the total pension liability is equal to the long-term expected rate of return on pension plan investments.

Changes in the Net Pension Liability:

Changes in the Primary Health System's net pension liability are as follows for the year ended June 30, 2016:

	Total Pension Liability	*Plan Fiduciary Net Position*	*Net Pension Liability*
Balance, June 30, 2015	$ 128,113,247	$ 76,255,784	$ 51,857,463
Interest	9,054,674	-	9,054,674
Liability gains or losses	3,599,202	-	3,599,202
Assumptions changes	(329,629)	-	(329,629)
Benefit payments	(15,040,450)	(15,040,450)	-
Administrative expenses	-	(592,487)	592,487
Investment income	-	5,213,980	(5,213,980)
Investment gains or losses	-	(9,278,173)	9,278,173
Employer contributions	-	2,000,004	(2,000,004)
Balance, June 30, 2016	$ 125,397,044	$ 58,558,658	$ 66,838,386

The following presents the net pension liability of the Primary Health System calculated using the current discount rate of 7.5 percent, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.5%) or 1-percentage-point higher (8.5%) than the current rate:

	1% Decrease 6.5%	*Current Rate 7.5%*	*1% Increase 8.5%*
Net pension liability	$ 75,140,950	$ 66,838,386	$ 59,541,706

Pension Expense and Deferred Outflows and Deferred Inflows of Resources: For the year ended June 30, 2016, the Primary Health System recognized pension expense totaling $7,821,331. At June 30, 2016, the Primary Health System reported deferred outflows of resources and deferred inflows of resources from the following sources:

	Deferred Outflows	*Deferred Inflows*
Differences between expected and actual experience	$ 2,852,480	$ 250,151
Changes of assumptions	1,478,851	261,241
Differences between projected and actual earnings	8,980,692	-
	$ 13,312,023	$ 511,392

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ending June 30,	
2017	$ 3,388,150
2018	3,388,150
2019	3,388,150
2020	2,636,181

NOTE I--OTHER RETIREMENT PLANS

The Primary Health System maintains and administers defined contribution plans under Section 403(b) and 401(a) of the IRC which provides for voluntary contributions by employees. The Plans are for the benefit of all employees 25 years of age or older with at least 12 months of employment.

The Primary Health System matches 50% of each participant's contribution up to 2% of the participant's earnings. For eligible employees hired on or after July 1, 2009, the Primary Health System will make profit sharing contributions equal to 3% of their earnings, regardless if the employee is making contributions. Additionally, active employees in the frozen pension plan will receive an additional 2.5% contribution through fiscal year 2019. Employer and employee contributions to the plans were approximately $2,140,000 and $8,250,000, respectively for the year ended June 30, 2016.

NOTE J--MEDICAL MALPRACTICE AND GENERAL LIABILITY CLAIMS

As of January 1, 1976, the Primary Health System adopted a self-insurance plan to provide for malpractice and general liability claims and expenses arising from services rendered subsequent to that date. In 1980, the Primary Health System's Self-Insurance Trust Agreement (the Agreement) was amended to include all coverages that a general public liability insurance policy would cover. In 1988, the Agreement was amended and restated to comply with amendments to the Tennessee Governmental Tort Liability Act and to formally include any claims and expenses related to acts of employees of the Primary Health System. The Primary Health System is funding actuarial estimated liabilities through a revocable trust fund with a bank. The trust assets are included as a part of assets limited as to use in the accompanying combined statements of net position. Such amounts in the trust can be withdrawn by the Primary Health System only to the extent there is an actuarially determined excess. The annual deposit to the self-insurance trust fund is determined by management based on known and threatened claims, consultation with legal counsel, and a report of an independent actuary. Losses against the Primary Health System are generally limited by the Tennessee Governmental Tort Liability Act to $300,000 for injury or death to any one person in any one occurrence or $700,000 in the aggregate. However, claims against healthcare practitioners are not subject to the foregoing limits applicable to the Primary Health System. Any such individuals employed by the Primary Health System, excluding employed physicians for which the Primary Health System has purchased insurance coverage, are covered by the Trust to the limits set forth therein.

In the opinion of management, the revocable trust fund assets are adequate at June 30, 2016 to cover potential liability and malpractice claims and expenses that may have been incurred to that date.

The Primary Health System provides for claims and expenses in the period in which the incidence related to such claims occur based on historical experience and consultation with legal counsel. It is the opinion of management that the reserve for estimated losses and loss adjustment expense at June 30, 2016 is adequate to cover potential liability and malpractice claims which may have been incurred but not reported (IBNR) to the Primary Health System. Such reserve for IBNR claims reflects a discount rate of 5.5% based on the Primary Health System's expected investment return during the payout period.

NOTE K--COMMITMENTS AND CONTINGENCIES

Litigation: The Primary Health System is subject to claims and suits which arise in the ordinary course of business. In the opinion of management, the ultimate resolution of such pending legal proceedings has been adequately provided for in its combined financial statements, and will not have a material effect on the Primary Health System's results of operations or financial position.

Workers Compensation: The Primary Health System has a job injury program to provide benefits to workers injured in employment-related accidents. This program provides medical and indemnity benefits to employees injured in the course of employment for a period up to 24 months from the date of injury. The Primary Health System has recorded a projected liability that is included in other long-term liabilities in the combined statements of net position. The projected liability was discounted using a 4% rate of return at June 30, 2016.

Healthcare Benefits: The Primary Health System maintains a self-insured healthcare plan to provide reimbursement for healthcare expenses for covered employees. The Primary Health System has estimated and recorded a liability for claims incurred but not reported in the combined financial statements.

Service Agreements: The Primary Health System has entered into various long-term service agreements. Early termination of the agreements could result in fees, penalties and reimbursement of various renovation expenses.

Electronic Health Records: The American Recovery and Reinvestment Act of 2009 and the Health Information Technology for Economic and Clinical Health (HITECH) Act established incentive payments under the Medicare and Medicaid programs for healthcare providers that use certified Electronic Health Record (EHR) technology. To qualify for incentive payments, healthcare providers must meet designated EHR meaningful use criteria as defined by the Centers for Medicare & Medicaid Services (CMS). Incentive payments are awarded to healthcare providers who have attested to CMS that applicable meaningful use criteria have been met. Compliance with meaningful use criteria is subject to audit by the federal government or its designee and incentive payments are subject to adjustment in a future period. Beginning October 1, 2015, healthcare providers are subject to a payment adjustment for services provided to Medicare patients if EHR meaningful use criteria are not met each year unless a hardship exemption is requested and approved.

Regulatory Compliance: The healthcare industry is subject to numerous laws and regulations of federal, state and local governments. These laws and regulations include, but are not necessarily limited to, matters such as licensure, accreditation, government healthcare program participation requirements, reimbursement for patient services, Medicare fraud and abuse, and most recently under the Provision of Health Insurance Portability and Accountability Act of 1996, matters

related to patient records, privacy and security. Recently, government activity has increased with respect to investigations and allegations concerning possible violations of fraud and abuse statutes and regulations by healthcare providers, such as the Medicare Recovery Audit Contractor Program. Violations of these laws and regulations could result in expulsion from government healthcare programs together with the imposition of significant fines and penalties, as well as significant repayments for patient services previously billed. Compliance with such laws and regulations can be subject to future government review and interpretation as well as regulatory actions unknown or unasserted at this time.

In the normal course of business, the Primary Health System continuously monitors and investigates potential issues through its compliance program. Management believes that the Primary Health System is in compliance with applicable laws and regulations or has reported any amounts payable related to known violations, including amounts identified through the Medicare Recovery Audit Contractor program, or similar initiatives, and any settlements will not have a significant impact on the combined financial statements. However, due to the uncertainties involved and the status of ongoing investigations, management's estimate could change in the near future and the amount of the change could be significant.

Health Care Reform: In March 2010, Congress adopted comprehensive healthcare insurance legislation, Patient Care Protection and Affordable Care Act and Health Care and Education Reconciliation Act. The legislation, among other matters, is designated to expand access to coverage to substantively all citizens through a combination of public program expansion and private industry health insurance. Changes to existing TennCare and Medicaid coverage and payments are also expected to occur as a result of this legislation. Implementing regulations are generally required for these legislative acts, which are to be adopted over a period of years and, accordingly, the specific impact of any future regulations is not determinable.

NOTE L--LEASES

Capital: During 2012, the Primary Health System entered into an agreement to sell certain professional office buildings (POBs) and concurrently entered into agreements to lease space from the purchaser. The sales price of the POBs was approximately $13,333,000, and a gain of approximately $6,695,000 was realized. Since the Primary Health System is leasing back certain space, a portion of the gain has been deferred and is being recognized over the terms of the leases. Amortization of the deferred gain is included in non-operating revenue (expenses) for the year ended June 30, 2016. The leases entered into (or committed to) under this sale/leaseback agreement include certain leases which meet the criteria for capitalization. Interest on these leases has been estimated at 7% per annum.

During 2011, the Primary Health System acquired a parcel of land from the Industrial Development Board of the City of Chattanooga, Tennessee for a nominal amount. The Primary Health System also entered into a project development agreement with a developer to facilitate final design, financing and construction of a medical office building for the benefit of Volkswagen Group of America Chattanooga Operations, LLC (Volkswagen) on this land. The Primary Health System has entered into a forty-year ground lease, with the option of two ten-year renewal terms, of the parcel to the developer. Additionally, in 2012, the Primary Health System has entered into a twenty year lease with the developer for certain space in the medical office building for a wellness center and other operations under a capital lease agreement.

The following is a summary of the net book value of property under capital leases by major classes at June 30, 2016:

	Primary Health System
Buildings	$ 6,599,976
Equipment	79,333
	6,679,309
Less: accumulated amortization	(1,931,330)
	$ 4,747,979

The following is a schedule of future minimum lease payments under capital leases:

Year Ending June 30,	
2017	$ 729,999
2018	744,453
2019	759,311
2020	774,587
2021	790,291
2022-2026	3,676,681
2027-2031	3,915,513
2032-2033	525,606
Total minimum lease payments	11,916,441
Less: amount representing interest	(5,699,085)
Present value of minimum lease payments	$ 6,217,356

Operating: The Primary Health System rents office space and office equipment under non-cancelable operating leases through 2033, containing various lease terms. The leases have other

various provisions, including sharing of certain executory costs. Rent expense under operating leases was approximately $13,770,000 in 2016.

Future minimum lease commitments for all non-cancelable leases with terms in excess of one year are as follows:

Year Ending June 30,	
2017	$ 10,098,527
2018	8,043,773
2019	7,722,607
2020	5,980,454
2021	4,022,310
Thereafter	19,354,204
	$ 55,221,875

Rental Revenues: The Primary Health System leases office space to physicians and others under various lease agreements with terms in excess of one year. Rental revenue recognized for the years ended June 30, 2016 totaled approximately $2,962,000. The following is a schedule of future minimum lease payments to be received:

Year Ending June 30,	
2017	$ 2,117,501
2018	402,827
2019	184,753
2020	136,991
2021	85,615
Thereafter	286,010
	$ 3,213,697

NOTE M--FAIR VALUE MEASUREMENTS

The Primary Health System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets or liabilities; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

The Primary Health System has the following recurring fair value measurements as of June 30, 2016:

	Carrying Value	*Level 1*	*Level 2*	*Level 3*
U.S. Treasury obligations	$ 39,303,272	$ 39,303,272	$ -	$ -
U.S. government agency obligations	83,978,073	-	83,978,073	-
Municipal bonds	23,177,684	-	23,177,684	-
Corporate bonds	526,965	-	526,965	-
Bond mutual funds	5,175,552	5,175,552	-	-
Cash and cash equivalents	6,330,553	6,330,553	-	-

The fair value of investments in U.S. government agency bonds, municipal bonds and corporate bonds is estimated based on matrix pricing of similar assets or market corroborated pricing.

NOTE N--MANAGEMENT AGREEMENT

On April 13, 2011, the Primary Health System's Board of Trustees approved a resolution authorizing a management agreement (the Agreement) between the Primary Health System, Hutcheson Medical Center, Inc. and affiliates (collectively, Hutcheson) and the Hospital Authority of Walker, Dade and Catoosa Counties in Georgia (the Hospital Authority).

Under the terms of the Agreement, the Primary Health System proposed general operating policies and directives for Hutcheson; was responsible for the day-to-day management of Hutcheson and provided oversight of ancillary aspects of Hutcheson, such as physician practices, education, research, and clinical services. The Agreement's initial term was to be through March 31, 2021 with the Primary Health System to have the option to extend the agreement for two additional five year terms. The Primary Health System was authorized to terminate the Agreement, without cause, upon written notice at any point subsequent to May 25, 2013. Upon such termination, Hutcheson was to be obligated to make a Termination Payment to the Primary Health System consisting of all expenses then owed by Hutcheson and any outstanding advances under a Line of Credit Agreement, discussed below. Hutcheson could also terminate the agreement without cause at any point subsequent to May 25, 2013 by paying the Termination Payment, as well as the lesser of a) $1,000,000 per year for each year the Agreement has been in place, or b) $1,000,000 less any management fees paid in each Agreement year.

In addition to the Agreement, the Primary Health System agreed to extend a Line of Credit (the Line) to the Hospital Authority. The maximum amount available under the Line was $20,000,000 and at June 30, 2016, the draws on the Line totaled $20,000,000. The Line called for interest only payments each month on the outstanding balance, based on the London InterBank Offered Rate plus 4% or a rate of 5%, whichever is greater. However, any unpaid interest through March 31, 2013 was deferred and to be paid over a twelve-month period

commencing on that date. All outstanding draws were due at the maturity date, which is consistent with the Agreement termination dates, discussed above.

The Line was secured by a Security Agreement on the primary Hutcheson medical campus. Further, the Counties of Walker and Catoosa, Georgia (collectively, the Counties) provided additional security in the form of guarantees under an Intergovernmental Agreement. Under the Intergovernmental Agreement, the Counties each agreed to a maximum liability of $10,000,000 to secure the line. The form of such guarantee was at the option of the Counties and was to become enforceable upon a notice of default delivered by the Primary Health System. The form of the guarantee selected by the Counties can include a) a payment of 50% by each County of the amounts owing under the Line, b) payments as they become due up to the respective $10,000,000 limits or c) after non-Judicial foreclosure under the Security Agreement, each County could elect to pay 50% of any deficiency between the amount outstanding under the Line and the then fair market value. Both Counties previously agreed to levy annual property taxes, if needed to honor these guarantees.

In June 2013, the Agreement was modified to allow Hutcheson to issue requests for proposals for the lease or sale of Hutcheson properties without creating a breach of the Agreement. As part of the Agreement, Hutcheson committed to obtain alternative financing and repay the line of credit upon the earlier of the replacement financing being obtained by Hutcheson, or June 1, 2014. In August of 2013, however, Hutcheson terminated the Agreement. In response thereto, the Primary Health System declared Hutcheson to be in default under the Agreement and made formal demand of Hutcheson as to all amounts then due and payable. In February 2014, the Primary Health System filed suit against Hutcheson in order to collect the moneys, including principal, interest and penalties, then due. In response to such filing, Hutcheson has asserted multiple counter claims against the Primary Health System alleging mismanagement and other failures under the Agreement. Additionally, another senior creditor has filed a separate lawsuit against the Primary Health System alleging priority over the Primary Health System's security interest and, presumably, the County guarantees relating to Hutcheson. The litigation was filed in the United States District Court in the Northern District of Georgia, Rome Division.

During the pendency of the litigation, Hutcheson's operating entities (Hutcheson Medical Center, Inc. and Hutcheson Medical Division, Inc., but not the Hospital Authority) filed for Chapter 11 bankruptcy protection in the Northern District of Georgia. Such filing automatically stayed the pending litigation to the extent it pertained to Hutcheson's operating entities. On September 15, 2015, the Bankruptcy Court did appoint a Chapter 11 Trustee in order to facilitate a sale of Hutcheson's interests and to consider conversion to a Chapter 7 under the Bankruptcy Code. Following the filing of adverse proceedings by the Primary Health System against the Hutcheson entities with the Bankruptcy Court, the parties reached an agreement as to the sale and disposition of the entities' primary assets, including its skilled nursing facility and acute care hospital. As a result of the same, the Primary Health System was paid a total of $2,590,000 from

such sale and, further, the Bankruptcy Court made various findings of fact to enable the Primary Health System to pursue its guarantees against Walker and Catoosa County. Per the Agreement and the Line, the Counties were entitled to and did receive a credit against their guarantees. The Primary Health System remains tangentially involved in the bankruptcy action to ensure that any of its interests remain adequately protected. That portion of the litigation relating to the Hospital Authority, which is unable to seek bankruptcy protection under Georgia law, did continue for a period of time parallel to the bankruptcy proceeding and ultimately resulted in judgment in the Primary Health System's favor in the amount of $36,500,000. The Hospital Authority is apparently judgment-proof and has no material assets at this point. The Primary Health System remains a judgment creditor against the Hospital Authority.

Regions Bank (Regions) is also a creditor of Hutcheson and initiated related litigation in the U.S. District Court for the Northern District of Georgia in Rome (Case No. 4:14-cv-00191) against the Primary Health System in its effort to protect its interest, if any, in the litigation. Specifically, Regions claims the Primary Health System's interest is subordinate to its interest and seeks a declaration of such priority. Regions claims that Hutcheson owes Regions in excess of $22.3 million that is allegedly a senior debt to the debt Hutcheson owes to the Primary Health System. Regions further claims that the Primary Health System's attempted foreclosure constitutes a breach of the Management Agreement to which Regions is allegedly a third party beneficiary and related contracts. Regions filed a Motion for a temporary restraining order on July 28, 2014, seeking to enjoin the foreclosure proceedings. The Court denied Regions Motion for a temporary restraining order as moot in light of the injunctive relief it granted to Hutcheson in the related litigation. Regions filed a second Motion for a temporary restraining order on October 15, 2014, which was heard on October 24, 2014. The Court again denied the Motion for a temporary restraining order as moot due to the injunctive relief granted to Hutcheson in the related litigation. The Primary Health System filed a Motion to Dismiss in the Regions suit, which was granted on October 29, 2014 and dismissed all claims against the Primary Health System in their entirety. Regions appealed the dismissal to the 11th Circuit. As part of the agreement reached in the adverse action filed by the Primary Health System in the Bankruptcy Court (as referenced above), Regions agreed to dismiss its appeal with prejudice.

On or about December 28, 2015, Erlanger filed suit against Walker County in the United States District Court for the Northern District of Georgia in Rome (Case No. 4:15-cv-00250) to enforce its guarantee on the remaining amount of $8,705,000 (in consideration of the credit referenced above). On August 23, 2016, the Court granted the Primary Health System's motion for summary judgment for such amount. Shortly thereafter, Walker County filed a notice of appeal to the Eleventh Circuit Court of Appeals. Walker County's brief is currently due on October 3, 2016.

Rather than file suit directly against Catoosa County, the Primary Health System worked with and negotiated a settlement agreement resolving all claims under the guarantee as to Catoosa County for the lump-sum payment of $6,250,000. Such amounts were paid in full in 2016.

NOTE O--CONDENSED FINANCIAL INFORMATION

The following is condensed, financial information related to the discretely presented component units as of and for the year ended June 30, 2016:

	ContinuCare	*Cyberknife*
Due from other governments	$ 70,516	$ 425,700
Other current assets	12,526,838	787,977
Total Current Assets	12,597,354	1,213,677
Net property, plant and equipment	4,942,125	3,050,319
Other assets	460,454	48,951
Total Assets	$ 17,999,933	$ 4,312,947
Due to other governments	$ 254,856	$ -
Other current liabilities	2,787,377	2,655,567
Total Current Liabilities	3,042,233	2,655,567
Long-term debt and capital lease obligations	314,397	-
Total Liabilities	3,356,630	2,655,567
Net position		
Unrestricted	9,725,951	1,050,691
Net investment in capital assets	4,917,352	606,689
Total Net Position	14,643,303	1,657,380
Total Liabilities and Net Position	$ 17,999,933	$ 4,312,947
Year Ended June 30, 2016		
Net patient and operating revenue	$ 31,067,632	$ 2,204,467
Operating expenses:		
Salaries, wages and benefits	13,865,466	252,113
Supplies and other expenses	15,284,704	682,729
Depreciation	582,102	658,225
Total Operating Expenses	29,732,272	1,593,067
Operating Income	1,335,360	611,400

	ContinuCare	*Cyberknife*
Nonoperating expenses	(469,918)	(123,593)
Operating distributions	-	(178,000)
Change in Net Position	865,442	309,807
Net Position at Beginning of Period	13,777,861	1,347,573
Net Position at End of Period	$ 14,643,303	$ 1,657,380

ContinuCare owes the Primary Health System for various services, supplies, and rents provided, or expenses paid on its behalf. Actual expenses incurred related to these services were approximately $2,386,000 in 2016. In addition, ContinuCare provides staffing, contract nurse visits, and administrative services to the Primary Health System. Revenues from such services were approximately $530,000 for the year ended June 30, 2016. Amounts due at June 30, 2016 are included in amounts due to/from other governments in the accompanying combined financial statements.

The Primary Health System owes Cyberknife for radiation services provided by Cyberknife to the Primary Health System's patients. Revenues related to those services provided to the Primary Health System were approximately $2,200,000 in 2016. Amounts due at June 30, 2016 are included in amounts due to/from other governments in the accompanying combined financial statements.

Required Supplementary Information

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY
(d/b/a Erlanger Health System)

Schedule of Changes in Net Pension Liability and Related Ratios

Year Ended June 30, 2016

	2015	*2016*
Total pension liability		
Interest	$ 9,278,335	$ 9,054,674
Differences between expected and actual experience	(386,473)	3,599,202
Changes of assumptions or inputs	2,284,765	(329,629)
Benefit payments	(13,308,452)	(15,040,450)
Net change in total pension liability	(2,131,825)	(2,716,203)
Total pension liability, beginning of year	130,245,072	128,113,247
Total pension liability, end of year	$128,113,247	$125,397,044
Plan fiduciary net position		
Contributions - employer	$ 1,000,000	$ 2,000,004
Net investment income, net	3,325,595	(4,064,193)
Benefit payments	(13,308,452)	(15,040,450)
Administrative expense	(515,072)	(592,487)
Net change in plan fiduciary net position	(9,497,929)	(17,697,126)
Plan fiduciary net position, beginningof year	85,753,713	76,255,784
Plan fiduciary net position, end of year	$ 76,255,784	$ 58,558,658
Net pension liability, end of year	$ 51,857,463	$ 66,838,386
Fiduciary net position as a percentage of the total pension liability	59.52%	46.70%
Covered-employee payroll	$115,717,311	$117,027,000
Net pension liability as a percentage of covered-employee payroll	44.81%	57.11%

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY
(d/b/a Erlanger Health System)

Schedule of Actuarial Contributions

Year Ended June 30, 2016

	2016	*2015*	*2014*	*2013*	*2012*	*2011*	*2010*	*2009*	*2008*	*2007*
Actuarially determined contributions	$ 4,957,642	$ 4,364,255	$ 12,832,292	$ 11,165,101	$ 10,367,973	$ 8,833,977	$ 7,501,004	$ 7,192,948	$ 6,731,386	$ 8,261,320
Actual employer contributions	2,000,004	1,000,000	-	11,165,101	10,367,970	8,833,977	7,501,004	7,192,000	6,172,593	7,590,497
Contribution deficiency	$ 2,957,638	$ 3,364,255	$ 12,832,292	$ -	$ 3	$ -	$ -	$ 948	$ 558,793	$ 670,823
Covered-employee payroll	$117,026,565	$115,717,311	$121,093,695	$138,807,819	$147,947,134	$144,176,724	$139,291,860	$138,478,848	$127,662,977	$134,278,637
Contributions as a percentage of covered-employee payroll	1.71%	0.86%	0.00%	8.04%	7.01%	6.13%	5.39%	5.19%	4.84%	5.65%

Notes to Schedule:

Valuation date:	Actuarially determined contribution rates are calculated as of June 30, one year prior to the end of the fiscal year in which contributions are reported.
Actuarial cost method:	Entry age normal
Amortization method:	Level dollar, closed
Amortization period:	18 years
Asset valuation method:	4-year smoothed market
Inflation:	2.5%
Lump sum interest rate:	4.0%
Salary increases:	N/A
Investment rate of return:	7.25%
Retirement age:	Normal retirement at 65 years, early retirement at 55 years with 10 years of service
Mortality:	RP-2014 Mortality for Employees, Health Annuitants, and Disabled Annuitants with general projection per MP-2015 in 2016 RP-2014 Mortality for Employees, Health Annuitants, and Disabled Annuitants with general projection per MP-2014 in 2015 RP-2000 Mortality for Employees, Health Annuitants, and Disabled Annuitants projected to 2018 per Scale AA in 2014

Description	Section / Item
List Of Erlanger Patient Transfer Agreements	B-III-1

Division of Health Care Facilities

STATEMENT OF DEFICIENCIES AND PLAN OF CORRECTION	(X1) PROVIDER/SUPPLIER/CLIA IDENTIFICATION NUMBER:	(X2) MULTIPLE CONSTRUCTION A. BUILDING: _____ B. WING _____	(X3) DATE SURVEY COMPLETED
	TNP5315		05/17/2017

NAME OF PROVIDER OR SUPPLIER: ERLANGER BLEDSOE HOSPITAL

STREET ADDRESS, CITY, STATE, ZIP CODE: 71 WHEELERTOWN AVENUE, PIKEVILLE, TN 37367

(X4) ID PREFIX TAG	SUMMARY STATEMENT OF DEFICIENCIES (EACH DEFICIENCY MUST BE PRECEDED BY FULL REGULATORY OR LSC IDENTIFYING INFORMATION)	ID PREFIX TAG	PROVIDER'S PLAN OF CORRECTION (EACH CORRECTIVE ACTION SHOULD BE CROSS-REFERENCED TO THE APPROPRIATE DEFICIENCY)	(X5) COMPLETE DATE
P 001	1200-8-30 Initial During a licensure survey completed on 5/17/17 at Erlanger Bledsoe Hospital, no deficiencies were cited under Chapter 1200-8-30, Standards for Pediatric Emergency Care Facilities.	P 001		

Division of Health Care Facilities

LABORATORY DIRECTOR'S OR PROVIDER/SUPPLIER REPRESENTATIVE'S SIGNATURE | TITLE | (X6) DATE

TN Department of Health

May 24, 2017

Ms. Stephanie Boynton, Administrator
Erlanger Bledsoe Hospital
71 Wheelertown Avenue
Pikeville TN 37367

RE: TNP5315

Dear Ms. Boynton:

The East Tennessee Regional Office conducted a licensure survey at your facility on May 17, 2017. As a result of the survey, no deficiencies were cited under Standards of Pediatric Emergency Care (1200-8-30).

If our office may be of assistance to you, please feel free to call (865) 594-9396.

Sincerely,

Tamra Turberville/cw

Tamra Turberville, RN, MSN
Public Health Regional Regulatory Program Manger

TT: cw

Department of Health & Human Services
Centers for Medicare & Medicaid Services
61 Forsyth Street, SW, Suite 4T20
Atlanta, Georgia 30303-8909

June 15, 2017

Stephanie Boynton, CEO
Erlanger Bledsoe Hospital
71 Wheelertown Avenue
Pikeville, TN 37367

Dear Mrs. Boynton:

I am pleased to inform you that as a result of the validation survey conducted on May 17, 2017, by the Tennessee State Agency, your facility was found in compliance with the Medicare requirements to participate as a Hospital and will continue to be deemed to meet applicable Medicare requirements based upon accreditation by the Joint Commission.

Enclosed is a listing of the standard level deficiencies and life safety deficiencies found by the Tennessee State Agency. Since your hospital is in compliance, you do not have to submit a plan for correcting any of the Medicare deficiencies cited. However, you may wish to submit a plan of correction to include with any public disclosures. The plan of correction can be submitted to the address above or faxed to 443-380-5912. You may also email to jacqueline.whitlock@cms.hhs.gov. If you have any questions, please contact Jackie Whitlock at (404) 562- 7437.

Sincerely,

J. Whitlock
for Sandra M. Pace
Associate Consortium Administrator
Division of Survey & Certification

cc: Joint Commission
Tennessee State Agency

Description	Section / Item
Statement Of Deficiencies & Plan Of Correction	B-III-4

MediTract

Current Patient Transfer Agreements

Contract Number	Contract Type	Vendor Other Party	Department	Status	Effective Date	Expiration Date
2002.1292C	Patient Transfer	Life Care Center of	8028 - Patient Logistics	Current	01/01/1995	Evergreen
2002.1293C	Patient Transfer	Marshall Medical Center	8028 - Patient Logistics	Current	02/01/2000	Evergreen
2002.1294C	Patient Transfer	Life Care Center of Red	8028 - Patient Logistics	Current	01/01/1995	Evergreen
2002.1306C	Patient Transfer	Tender Loving Care	8028 - Patient Logistics	Current	01/01/1995	Evergreen
2002.1317C	Patient Transfer	LaFayette Health Care	8028 - Patient Logistics	Current	01/31/1995	Evergreen
2002.1321C	Patient Transfer	Jefferson Memorial	8028 - Patient Logistics	Current	10/22/2004	Evergreen
2002.1336C	Patient Transfer	Mountain Creek Manor	8028 - Patient Logistics	Current	01/20/1995	Evergreen
2002.1337C	Patient Transfer	Murphy Medical Center	8028 - Patient Logistics	Current	04/01/2000	Evergreen
2002.1342C	Patient Transfer	Northside Hospital	8028 - Patient Logistics	Current	04/10/1992	Evergreen
2002.1363C	Patient Transfer	Renaissance	8028 - Patient Logistics	Current	04/26/1990	Evergreen
2002.1372C	Patient Transfer	Rivermont Convalescent	8028 - Patient Logistics	Current	01/25/1995	Evergreen
2002.1384C	Patient Transfer	The Health Center at	8028 - Patient Logistics	Current	06/18/2012	Evergreen
2002.1385C	Patient Transfer	Shepherd Hills Health	8028 - Patient Logistics	Current	01/25/1995	Evergreen
2002.1388C	Patient Transfer	Methodist Medical Center	8028 - Patient Logistics	Current	02/06/2002	Evergreen
2002.1389C	Patient Transfer	Brookewood Medical	8028 - Patient Logistics	Current	06/27/2012	Evergreen
2002.1390C	Patient Transfer	Continuum Care	8028 - Patient Logistics	Current	02/01/1999	Evergreen
2002.1430C	Patient Transfer	Bledsoe Community	8028 - Patient Logistics	Current	06/27/2012	Evergreen
2002.1446C	Patient Transfer	The University of	8028 - Patient Logistics	Current	05/29/2002	Evergreen
2002.1461C	Patient Transfer	Erlanger Bledsoe	8028 - Patient Logistics	Current	10/01/2001	Evergreen
2002.1483C	Patient Transfer	Cookeville Regional	8028 - Patient Logistics	Current	02/10/2010	Evergreen
2002.1498C	Patient Transfer	Scott County Hospital	8028 - Patient Logistics	Current	01/11/2001	Evergreen
2002.1499C	Patient Transfer	Wellmont Health	8028 - Patient Logistics	Current	06/30/2001	Evergreen
2002.1502C	Patient Transfer	Laughlin Memorial	8028 - Patient Logistics	Current	11/23/2011	Evergreen
2002.1508C	Patient Transfer	Dialysis Clinic, Inc	7158 - Renal Transplant Administration	Current	03/23/1998	Evergreen
2002.1539C	Patient Transfer	Fort Sanders Park West	8028 - Patient Logistics	Current	10/22/1999	Evergreen
2002.1550C	Patient Transfer	Johnson City Medical	8028 - Patient Logistics	Current	05/29/2002	Evergreen
2002.1594C	Patient Transfer	St Barnabas Nursing	8028 - Patient Logistics	Current	01/25/1995	Evergreen
2002.1599C	Patient Transfer	North Jackson Hospital	8028 - Patient Logistics	Current	02/01/2000	Evergreen
2002.1605C	Patient Transfer	National Health Care of	8028 - Patient Logistics	Current	05/17/2012	Evergreen
2002.1606C	Patient Transfer	National Health Care of	8028 - Patient Logistics	Current	05/22/2012	Evergreen
2002.1607C	Patient Transfer	National Healthcare of	8028 - Patient Logistics	Current	06/20/2012	06/19/2018
2002.1608C	Patient Transfer	National Health Care of	8028 - Patient Logistics	Current	05/15/2012	Evergreen
2002.1623C	Patient Transfer	Shriners Hospitals for	8028 - Patient Logistics	Current	07/01/2000	Evergreen
2002.1634C	Patient Transfer	Rhea Medical Center	8028 - Patient Logistics	Current	02/06/2002	Evergreen
2002.1636C	Patient Transfer	Rhea County Medical Center	7158 - Renal Transplant Administration	Current	09/01/1989	Evergreen
2002.1650C	Patient Transfer	Siskin Hospital for	8028 - Patient Logistics	Current	02/09/1990	Evergreen
2002.1670C	Patient Transfer	Alexian Village of	8028 - Patient Logistics	Current	01/01/1995	Evergreen
2002.1685C	Patient Transfer	Blount Memorial Hospital	8028 - Patient Logistics	Current	02/07/2001	Evergreen

SEP 11 '17 PM12:00

Current Patient Transfer Agreements

Contract Number	Contract Type	Vendor Other Party	Department	Status	Effective Date	Expiration Date
2002.1714C	Patient Transfer	Columbia Indian Path	8028 - Patient Logistics	Current	01/13/1997	Evergreen
2002.1715C	Patient Transfer	Columbia East Ridge	8028 - Patient Logistics	Current	03/31/1998	Evergreen
2002.1716C	Patient Transfer	East Ridge Hospital	8028 - Patient Logistics	Current	10/22/1996	Evergreen
2002.1717C	Patient Transfer	NovaMed Eye and Laser	8028 - Patient Logistics	Current	06/27/2002	Evergreen
2002.1750C	Patient Transfer	Jamestown Regional	8028 - Patient Logistics	Current	05/14/2012	Evergreen
2002.1753C	Patient Transfer	Cartersville Medical	8028 - Patient Logistics	Current	05/21/2012	Evergreen
2002.1766C	Patient Transfer	Healthsouth Chattanooga	8028 - Patient Logistics	Current	04/13/1999	Evergreen
2002.2377C	Patient Transfer	St Mary's Health System,	8028 - Patient Logistics	Current	04/01/2003	Evergreen
2002.2531C	Patient Transfer	Memorial Healthcare	8028 - Patient Logistics	Current	02/01/2015	Evergreen
2002.2697C	Patient Transfer	Redmond Regional	8028 - Patient Logistics	Current	01/17/2012	Evergreen
2002.2699C	Patient Transfer	Murray Medical Center	8028 - Patient Logistics	Current	12/05/2011	Evergreen
2002.2700C	Patient Transfer	Medical Center of	8028 - Patient Logistics	Current	04/17/2015	Evergreen
2002.2702C	Patient Transfer	Lincoln County Health	8028 - Patient Logistics	Current	11/30/2011	Evergreen
2002.2703C	Patient Transfer	Hamilton Medical Center	8028 - Patient Logistics	Current	11/22/2011	Evergreen
2002.2704C	Patient Transfer	Fannin Regional Hospital	8028 - Patient Logistics	Current	06/18/2012	Evergreen
2002.2706C	Patient Transfer	Cumberland Medical	8028 - Patient Logistics	Current	12/02/2011	Evergreen
2002.2707C	Patient Transfer	Copper Basin Medical	8028 - Patient Logistics	Current	12/01/2011	Evergreen
2002.2830C	Patient Transfer	Gordon Hospital	8028 - Patient Logistics	Current	07/01/2012	Evergreen
2002.2854C	Patient Transfer	Chattanooga	8028 - Patient Logistics	Current	07/25/2012	Evergreen
2002.2891C	Patient Transfer	DeKalb Regional Medical	8028 - Patient Logistics	Current	09/28/2008	09/27/2017
2002.3545C	Patient Transfer	Cleveland Tennessee	8028 - Patient Logistics	Current	11/15/2016	11/14/2019
2002.4049C	Patient Transfer	Vanderbilt University	8028 - Patient Logistics	Current	07/01/2008	Evergreen
2002.4234C	Patient Transfer	Physicians Surgery	8028 - Patient Logistics	Current	04/13/2015	04/12/2059
2002.4267C	Patient Transfer	Parkridge Medical Center	8028 - Patient Logistics	Current	05/18/2012	Evergreen
2002.4290C	Patient Transfer	Sweetwater Dialysis Center	7157 - Renal Transplant Donor	Current	06/19/2009	Evergreen
2002.4833C	Patient Transfer	Eye Surgery Center of	8028 - Patient Logistics	Current	10/23/2014	Evergreen
2002.5425C	Patient Transfer	Renaissance Surgery	8028 - Patient Logistics	Current	02/16/2012	Evergreen
2002.6387C	Patient Transfer	East Tennessee Regional Hospitals	8413 - Disaster Management & EOC	Current	10/10/2014	Evergreen
2002.6972C	Patient Transfer	Kidney Center of North	8028 - Patient Logistics	Current	05/18/2015	Evergreen
2002.6973C	Patient Transfer	Kidney Center of	8028 - Patient Logistics	Current	05/18/2015	Evergreen
2002.6974C	Patient Transfer	Kidney Center of	8028 - Patient Logistics	Current	05/18/2015	Evergreen
2002.6975C	Patient Transfer	Kidney Center of	8028 - Patient Logistics	Current	05/18/2015	Evergreen
2002.6976C	Patient Transfer	Chattanooga Kidney	8028 - Patient Logistics	Current	04/20/2015	Evergreen
2002.6977C	Patient Transfer	Chattanooga Kidney	8028 - Patient Logistics	Current	05/18/2015	Evergreen
2002.707C	Patient Transfer	Kindred Hospital	8028 - Patient Logistics	Current	10/01/2001	Evergreen
2002.7238C	Patient Transfer	Vascular Institute of	8028 - Patient Logistics	Current	01/21/2016	Evergreen
					No. Of Contract:	**74**

State of Tennessee
Health Services and Development Agency
Andrew Jackson, 9th Floor, 502 Deaderick Street, Nashville, TN 37243
www.tn.gov/hsda Phone: 615-741-2364 Fax: 615-741-9884

October 1, 2017

Joseph Winick
Erlanger Health System
975 East 3rd Street
Chattanooga, TN 37403

RE: Certificate of Need Application – Erlanger Sequatchie Valley Regional Hospital - CN1709-027

The relocation and replacement of a critical access hospital consisting of 25 licensed inpatient beds which will include the initiation of (MRI) magnetic resonance imaging services and surgical services. The critical access hospital is currently located at 71 Wheelertown Avenue, Pikeville (Bledsoe County), TN 37367 and will be relocated to 17399 Rankin Avenue, Dunlap (Sequatchie County), TN 37327. The applicant is owned by the Chattanooga-Hamilton County Hospital Authority d/b/a Erlanger Health System. The estimated project cost is $32,653,836.

Dear Mr. Winick:

This is to acknowledge the receipt of supplemental information to your application for a Certificate of Need. Please be advised that your application is now considered to be complete by this office.

Your application is being forwarded to Trent Sansing at the Tennessee Department of Health for Certificate of Need review by the Division of Policy, Planning and Assessment. You may be contacted by Mr. Sansing or someone from his office for additional clarification while the application is under review by the Department. Mr. Sansing's contact information is Trent.Sansing@tn.gov or 615-253-4702.

In accordance with Tennessee Code Annotated, §68-11-1607, et seq., as amended by Public Chapter 780, the 60-day review cycle for this project will begin on October 1, 2017. The first 60 days of the cycle are assigned to the Department of Health, during which time a public hearing may be held on your application. You will be contacted by a representative from this Agency to establish the date, time and place of the hearing should one be requested. At the end of the 60-day period, a written report from the Department of Health or its representative will be forwarded to this office for Agency review. You will receive a copy of their findings. The Health Services and Development Agency will review your application on December 13, 2017.

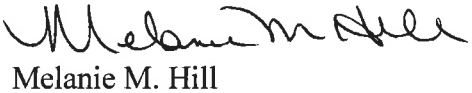
Any communication regarding projects under consideration by the Health Services and Development Agency shall be in accordance with T.C.A. § 68-11-1607(d):

(1) No communications are permitted with the members of the agency once the Letter of Intent initiating the application process is filed with the agency. Communications between agency members and agency staff shall not be prohibited. Any communication received by an agency member from a person unrelated to the applicant or party opposing the application shall be reported to the Executive Director and a written summary of such communication shall be made part of the certificate of need file.

(2) All communications between the contact person or legal counsel for the applicant and the Executive Director or agency staff after an application is deemed complete and placed in the review cycle are prohibited unless submitted in writing or confirmed in writing and made part of the certificate of need application file. Communications for the purposes of clarification of facts and issues that may arise after an application has been deemed complete and initiated by the Executive Director or agency staff are not prohibited.

Should you have questions or require additional information, please contact me.

Sincerely,



Melanie M. Hill
Executive Director

cc: Trent Sansing, TDH/Health Statistics, PPA

State of Tennessee
Health Services and Development Agency
Andrew Jackson, 9th Floor, 502 Deaderick Street, Nashville, TN 37243
www.tn.gov/hsda Phone: 615-741-2364 Fax: 615-741-9884

MEMORANDUM

TO: Trent Sansing, CON Director
Office of Policy, Planning and Assessment
Division of Health Statistics
Andrew Johnson Tower, 2nd Floor
710 James Robertson Parkway
Nashville, Tennessee 37243

FROM: Melanie M. Hill
Executive Director

DATE: October 1, 2017

RE: Certificate of Need Application
Erlanger Sequatchie Valley Regional Hospital - CN1709-027

Please find enclosed an application for a Certificate of Need for the above-referenced project.

This application has undergone initial review by this office and has been deemed complete. It is being forwarded to your agency for a sixty (60) day review period to begin on October 1, 2017 and end on December 1, 2017.

Should there be any questions regarding this application or the review cycle, please contact this office.

Enclosure

cc: Joseph Winick

SEP 7 '17 AM 1:08

LETTER OF INTENT
TENNESSEE HEALTH SERVICES & DEVELOPMENT AGENCY

The Publication of Intent is to be published in The Dunlap Tribune, a newspaper of general circulation in Sequatchie County, Tennessee, on or before September 7, 2017, for one day.

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This is to provide official notice to the Health Services & Development Agency and all interested parties, in accordance with T.C.A. § 68-11-1601 *et. seq.*, and the Rules of the Health Services & Development Agency, that Erlanger Sequatchie Valley Regional Hospital, with an ownership type of governmental, and to be managed by itself, intends to file an application for a Certificate of Need ("CON") to construct a regional community hospital (critical access hospital), with a total complement of twenty-five (25) inpatient beds, to include services for inpatients, outpatients, emergency medical services, and magnetic resonance imaging (MRI) in Dunlap, Sequatchie County, Tennessee.

This facility will replace the existing Erlanger Bledsoe Hospital, located at 71 Wheelertown Avenue, Pikeville, TN 37367. The new Erlanger Sequatchie Valley Regional Hospital, MRI and equipment will be located at 17399 Rankin Avenue, Dunlap, Sequatchie County, Tennessee, 37327, otherwise described as map 041, parcels 021.00 and 020.01, at the Sequatchie County Tax Assessor's Office.

A companion CON application will be filed with the Health Services & Development Agency for a new provider based emergency department in Pikeville, Tennessee, to replace the existing provider based emergency department located at 16931 Rankin Avenue, Dunlap, Sequatchie County, Tennessee.

The total project cost is estimated to be $ 32,653,836.

The anticipated date of filing the application is September 12, 2017.

The contact person for this project is Joseph M. Winick, Sr. Vice President, Erlanger Health System, 975 East 3rd Street, Chattanooga, Tennessee, 37403, and by phone at (423) 778-7274.

Joseph M. Winick	September 6, 2017 Date:	Joseph.Winick@erlanger.org E-Mail:

==========

The Letter Of Intent must be <u>filed in triplicate</u> and <u>received between the first and the tenth</u> day of the month. If the last day for filing is a Saturday, Sunday or State Holiday, filing must occur on the preceding business day. File this form at the following address:

Health Services & Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, Tennessee 37243

==========

The published Letter Of Intent must contain the following statement pursuant to T.C.A. §68-11-1607(c)(1): (A) Any health care institution wishing to oppose a Certificate of Need application must file a written notice with the Health Services and Development Agency no later than fifteen (15) days before the regularly scheduled Health Services and Development Agency meeting at which the application is originally scheduled; and (B) Any other person wishing to oppose the application must file written objection with the Health Services and Development Agency at or prior to the consideration of the application by the Agency.

==========

Supplemental #1

Chattanooga-Hamilton Co Hospital Authority dba Erlanger Sequatchie Valley Regional Hospital (Dunlap)

CN1709-027

SEP 22 '17 AM 10:08

SUPPLEMENTAL #1
September 22, 2017
10:08 am

SUPPLEMENTAL INFORMATION

Chattanooga-Hamilton County Hospital Authority

D / B / A

Erlanger Sequatchie Valley Regional Hospital

Application To Relocate & Replace Existing

Inpatient Acute Medical / Surgical Services From

Erlanger Bledsoe Hospital
(Pikeville, Bledsoe County, TN)

To

Erlanger Sequatchie Valley Regional Hospital
(Dunlap, Sequatchie County, TN)

Application Number CN1709-027

ERLANGER HEALTH SYSTEM
Chattanooga, Tennessee

Supplemental Responses To Questions Of The Tennessee Health Services & Development Agency

1.) Section A, Executive Summary, A - Overview.

On page 7 the applicant references construction cost of $19,958,999. However, the construction cost listed in the Project Cost Chart is 19,959,500. Please clarify.

What was the original licensed bed capacity of Erlanger Bledsoe Hospital?

Please indicate what is planned for the existing critical access hospital in Pikeville (Bledsoe County) once the structure is vacated.

Response

The construction cost shown on page 7 is a typographical error, the amount shown on the *Project Cost Chart* is correct.

The original licensed bed capacity of *Erlanger Bledsoe Hospital* was thirty-two (32) beds.

If these CON applications are approved, when the facility for *Erlanger Bledsoe Hospital* is vacated, it is anticipated that the premises will renovated and adapted for use by the *Bledsoe County Nursing Home*, which is currently attached to the hospital facility.

2.) Section A, 5-Executive Summary, B-Rationale For Approval, 1-Need.

Please provide a detailed narrative with calculations displayed that explains how the gross bed need was calculated, why patient days based on 1-4 days length of stay (LOS), was utilized, how the gross bed need based on LOS of 1-4 days was calculated, how market share adjustment of 50% was selected, and how the estimated beds using the EBH Census Estimate was calculated.

Response

The average length of stay for critical access hospitals is set to a maximum by CMS, at 4 days. Therefore, the inpatient hospital discharges from the service area which comprise LOS between 1-4 days is the target patient population to be served by this hospital.

The market share assumption of 50% represents an estimate which is assumed. We agreed that we should not assume a market share rate any greater than 50%, however, there is a real possibility that market share could be higher.

As an illustration for how the gross bed need was calculated, for 2014, the total patient days for the service area was 27,521. This was divided by 365 days in a year, to determine the average number of beds to be occupied daily. As per note 2 in the table … in 2014, 9,664 patient days were explained in which patients had an LOS 1-4, which is 35.1% of the total number of 27,521 patient days for the service area (9,664 / 27,521 = 35.1%). The 9,664 patient days for LOS 1-4 was multiplied by the market share assumption of 50% to obtain 4,830 patient days (9,664 x 50% = 4,830).

For the swing bed adjustment, in 2015 the total patient days for swing beds was 61%, although we assumed only 35% for this need model. Therefore, the number of patient days is estimated at 1,691 (4,830 x 35% = 1,691). This yields a total estimated patient days for 2014 of 6,521 (4,830 + 1,691 = 6,521). The total estimated patient days are then divided by 365 days in a year, to yield the estimated beds occupied each day at 17.9 (6,521 / 365 = 17.9). Then the 17.9 estimated beds occupied was divided by .80 to adjust for 80% occupancy, which results in a final adjusted bed need estimate of 22.3 acute care beds (17.9 / .80 = 22.3).

The methodology outlined is applicable to all years in the table in the CON application.

3.) Section A, Project Details, Item B.

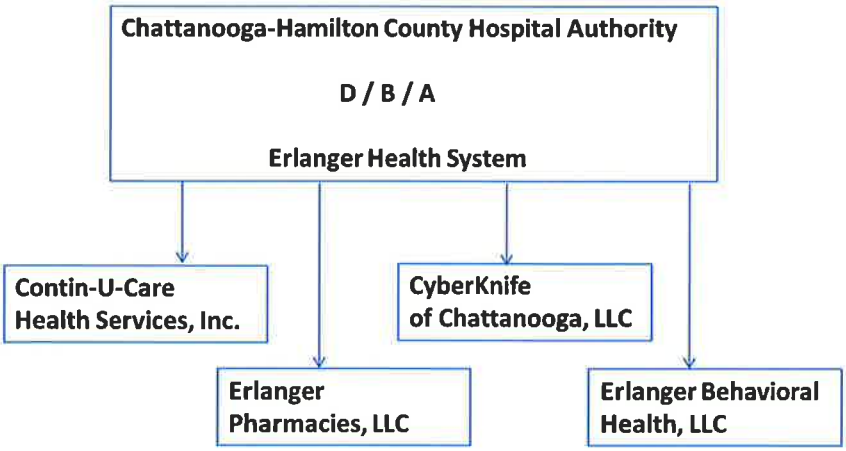
Please describe the existing ownership structure of the applicant, including an ownership structure organizational chart.

Response

The *Chattanooga-Hamilton County Hospital Authority* D/B/A *Erlanger Health System*, is a sub-division of the State of Tennessee. It is a governmental unit. The hospitals which comprise Erlanger Health System are all part of the hospital authority, they operate as revenue center components of the hospital authority.

The organizational structure is comprised of one (1) legal entity, the hospital authority, which has an ownership interest in the following legal entities. These other legal entities are Contin-U-Care Health Services, Inc. (home health), Erlanger Pharmacies, LLC, CyberKnife Of Chattanooga, LLC, and Erlanger Behavioral Health, LLC.

The ownership structure organizational chart is below.



4.) Section A, Project Details, Item 6.B-2, Floor Plan.

Please provide a revised floor plan which includes legible labeling of patient care rooms (noting private or semi-private), ancillary areas, equipment areas, etc.

Response

As requested, a floor plan is attached to this supplemental information.

5.) Section A, Project Details, Item 10(c), Bed Complement

Data Chart.

The applicant lists two outstanding Certificate of Need projects. However, the outstanding Certificate of Need projects listed are those of Erlanger Medical Center that has common ownership. Please submit a replacement page 17 listing only those Certificate of Need projects for the applicant.

Response

As requested, the CON's not related to Erlanger Bledsoe Hospital have been removed from the list, and a replacement page 20 is attached to this CON application.

6.) Section A, Project Details, Item 6.A (Legal Interest In The Site).

The option to lease agreement between Sequatchie County and Erlanger Health System is noted. Please provide a deed that confirms Sequatchie County has control of the proposed site.

Response

As requested, a copy of the deed for the property is attached to this supplemental information.

7.) Section B, Need, Item A (Specific Service Criteria-MRI).

Please provide a detailed narrative with calculations that demonstrates how the three county service area will generate 5,106 MRI procedures in 2022 and how the projected utilization of 2,553 MRI procedures for the hospital by 2022 was determined.

Response

The service area MRI total procedures was calculated using the Agency's data for MRI utilization for 2015 … *Number Of Procedures By Patient Destination - 2015*. For Bledsoe County there were 924, Sequatchie County 1,374, and Grundy County 1,284 … for a service area total of 3,582.

This yields a use rate of .084553 (3,582 / 42,364 = .084553).

Knowing that MRI utilization is increasing at a rate faster than other healthcare services, we adjusted the use rate by 30% to account for growth in utilization of this technology (.084553 x 1.30 = .109918). The adjustment to the use rate is based primarily on research which shows that over a 10 year period, MRI utilization had increased by 300%, or roughly 30% per year (copy of article attached).*(1)* We adopted a rate of only 30% to allow for growth in a rural service area. In 2020, the estimated 4,806 procedures is the result (43,936 x .109918 = 4,806). These same calculations are applicable to 2021 and 2022.

For the MRI unit to be located at *Erlanger Sequatchie Valley Regional Hospital*, the market share assumption is 50%, which is the same as the market share assumption for the inpatient bed need calculation. Thus, a projected utilization of 2,523 procedures in 2020, 2,539 in 2021, and 2,553 in 2021.

8.) Section B, Need, Item B.

Please identify the source of the county health rankings.

Response

The county health rankings were obtained from the internet site for County Health Rankings & Roadmaps, which is a program of the *Robert Wood Johnson Foundation*. Following is the web address …

http://www.countyhealthrankings.org/

9.) Section B, Need, Item C.

Please complete the following chart.

PATIENT ORIGIN FOR ERLANGER BLEDSOE/ SEQUATCHIE VALLEY REGIONAL HOSPITAL

Utilization Data	Bledsoe	Grundy	Sequatchie	Service	Other	Total

1 Smith-Bindman, Rebecca. *Rising Use Of Diagnostic Medical Imaging In A Large Integrated Health System*. Health Affairs, 2008 Nov-Dec, pp. 1491-1502.

	County	County	County	Area	Area	
2014 IP Admits						
2014 % of Total						
2015 IP Admits						
2015 % of Total						
2016 IP Admits						
2016 % of Total						
Year 1 IP Admits						
Year 1 % of Total						
Year 2 IP Admits						
Year 2 % of Total						

Response

As requested, the chart appears below.

Patient Origin For Erlanger Bledsoe / Sequatchie Valley Regional Hospital

	Bledsoe	Grundy	Sequatchie	Svc. Area	Other	Total
2014 - I/P Admits	282		39	321	20	341
2014 - % Of Total	82.7%	0.0%	11.4%	94.1%	5.9%	100.0%
2014 - I/P Admits	314	1	32	347	32	379
2014 - % Of Total	82.8%	0.3%	8.4%	91.6%	8.4%	100.0%
2014 - I/P Admits	261	3	47	311	29	340
2014 - % Of Total	76.8%	0.9%	13.8%	91.5%	8.5%	100.0%
Year 1 - I/P Admits	300	100	375	775	67	842
Year 1 - % Of Total	35.6%	11.9%	44.5%	92.0%	8.0%	100.0%
Year 2 - I/P Admits	310	68	387	765	94	859
Year 2 - % Of Total	36.1%	7.9%	45.1%	89.1%	10.9%	100.0%

10.) Section B, Need, Item D (Service Area Demographics).

Please complete the following chart.

Demographic Data	Bledsoe County	Grundy County	Sequatchie County	Service Area	State of TN Total
65 + Pop. - 2017					
65+ Pop. - 2021					
65+ Population % Change (2017-2021)					
65+ Population % of Total Population					

Response

As requested, the chart appears below.

	Demographic Data - Age 65 +				
	Bledsoe	Grundy	Sequatchie	Svc. Area	Tennessee Total
Pop. Age 65 + (2017)	2,450	2,845	3,055	8,350	1,078,446
Pop. Age 65 + (2021)	2,720	3,070	3,513	9,303	1,227,838
65 + Pop. % Change (2017-2021)	11.0%	7.9%	15.0%	11.4%	13.9%
66 + Pop. % Of Total Population	20.8%	23.3%	21.9%	22.0%	17.9%

11.) Section B, Need, Item F.

Please complete the following charts.

Historical and Projected Inpatient Utilization

Bed Type	Year 2014	Year 2015	Year 2016	Year 1	Year 2
Acute/Swing					
Beds					
Acute Admissions					
Swing Admissions					
Total Admissions					
Acute Average Daily Census (ADC)					
Swing ADC					
Total ADC					
Acute Average Length of Stay (ALOS)					
Swing ALOS					
Total ALOS					
Acute %Occupancy					
Swing %Occupancy					
Total %Occupancy					

Projected Surgical Cases

	No. of Rooms	Year 1 IP Cases	Year 1 OP Cases	Year 1 Total Cases	Year IP Cases	Year 2 OP Cases	Year 2 Total Cases
Operating Rooms							
Procedure Rooms							
Total Surgical Suite							

Projected Imaging Scans

Department	Year 1 Scans	Year 2 Scans
Magnetic Resonance Imaging (MRI)		

Erlanger Sequatchie Valley and Satellite ED Historical and Projected Utilization

	Actual			Projected		
Year	**2014**	**2015**	**2016**	**Yr. 1**	**Yr.2**	**Yr. 5**
Main Campus Visits						
Main Campus Rooms						
Main Campus Visits/ Room						
Satellite Visits						
Satellite Rooms						
Satellite Visits Per Room						
Total Visits						
Total Rooms						
Total Visits Per Room						

Please provide details of the methodology, data sources, assumptions, and rationale to project utilization in Year One and Year Two of all the above charts. Include in the discussion how the applicant projected inpatient utilization that has not attained 30% occupancy in the last three years at the Bledsoe County location will increase to over 60% occupancy in the Sequatchie County location.

Response

As requested, the charts appear below.

Hisotrical & Projected Inpatient Utilization

	2014	2015	2016	Year 1	Year 2
Beds	25	25	25	25	25
Acute Admissions	217	293	229	617	629
Swing Admissions	79	116	115	225	230
Total Admissions	296	409	344	842	859
Acute Average Daily Census	1.54	2.15	1.79	5.49	5.59
Swing ADC	2.67	3.35	4.55	9.54	9.73
Total ADC	4.21	5.50	6.34	15.03	15.32
Acute Average Length Of Stay	2.6	2.7	2.8	3.2	3.2
Swing ALOS	12.3	10.5	14.5	15.5	15.4
Total ALOS	5.2	4.9	6.7	6.5	6.5
Acute Occupancy %	6.1%	8.6%	7.1%	21.9%	22.4%
Swing Occupancy %	10.7%	13.4%	18.2%	38.2%	38.9%
Total % Occupancy	16.8%	22.0%	25.4%	60.1%	61.2%

Projected Surgical Cases

	No. Of Rooms	Yr 1 - I/P	Yr 1 - O/P	Yr 1 - Total	Yr 2 - I/P	Yr 2 - O/P	Yr 2 - Total
Operating Rooms	2	-	273	273	-	312	312
Procedure Rooms	1	-	91	91	-	104	104
Total - Surgical Suite	3	-	364	364	-	416	416

Projected Imaging Scans

	Yr 1 Scans	Yr 2 Scans
Magnetic Resonance Imaging (MRI)	2,523	2,539

Erlanger Squatchie Valley & Satellite ED -- Historical & Projected Utilization

	========== Actual ==========			========= Projected =========		
	2014	2015	2016	Year 1	Year 2	Year 5
Main Campus Visits	6,105	5,341	5,546	11,000	11,220	11,907
Main Campus Rooms	5	5	5	9	9	9
Main Campus Visits / Room	1,221.0	1,068.2	1,109.2	1,222.2	1,246.7	1,323.0
Satellite Visits	3,842	9,581	10,229	5,600	5,678	5,918
Satellite Rooms	5	5	5	7	7	7
Satellite Visits Per Room	768.4	1,916.2	2,045.8	800.0	811.1	845.4
Total Visits	9,947	14,922	15,775	16,600	16,898	17,825
Total Rooms	10	10	10	16	16	16
Total Visits Per Room	994.7	1,492.2	1,577.5	1,037.5	1,056.1	1,114.1

12.) Section B, Economic Feasibility, Item A (Project Cost Chart).

The Project Cost Chart should reflect the cost of the project to the applicant. It appears that much of the cost in this chart is the cost to Sequatchie County. Since the applicant is leasing the hospital from Sequatchie County, the lease expense is what should be considered in determining facility cost. Below is the Agency rule on project cost for guidance:

0720—9—.01 DEFINITIONS. The following terms shall have the following meanings.

(4) "Capital expenditure"
(c) Lease, loan, or gift. In calculating the value of a lease, loan, or gift, the "cost" is the fair market value of the above-described expenditures. In the case of a lease, the cost is the fair market value of the lease or the total amount of the lease payment, whichever is greater.

If necessary, please make the appropriate changes and submit a revised Project Costs Chart.

Response

The hospital lease will be a "turn key" arrangement. In other words, all of the equipment (including MRI, CT, etc.), furniture and fixtures will be included in the lease payment to Sequatchie County. The initial lease term will be for ten (10) years. The monthly lease payment to Sequatchie County will $146,204, for a total of $17.54 million over the initial lease term. This is less than the total project cost of $32.65 million shown on the *Project Cost Chart*. As per the rule cited in the question, the chart should reflect the greater amount. Therefore, the *Project Cost Chart* is unchanged.

13.) Section B, Economic Feasibility, Item B (Funding).

The applicant should discuss how it will fund the project and provide a breakdown between leased items and purchased items.

Response

The hospital lease will be a "turn key" arrangement. All of the equipment (including MRI, CT, etc.), furniture and fixtures will be included in the lease payment to

Sequatchie County. As such, the hospital will not be "purchasing" anything, and will be "leasing" everything from Sequatchie County.

14.) Section B, Economic Feasibility, Item C (Historical Data Chart) And Item D (Projected Data Chart).

For both the Historical Data Chart and the Projected Data Chart, please explain what the differences are between the Total Facility Chart and the Project Only Chart.

Response

For the *Historical Data Charts*, the "total facility" chart is for *Erlanger Bledsoe Hospital* and the satellite ED in Dunlap, Tennessee; and the "project only" chart is for *Erlanger Bledsoe Hospital*, main campus only.

For the *Projected Data Charts*, the "total facility" chart is for *Erlanger Sequatchie Valley Regional Hospital* and the satellite ED in Pikeville; and the "project only" chart is for *Erlanger Sequatchie Valley Regional Hospital*, satellite ED only.

15.) Section B, Economic Feasibility, Item E (Average Gross Charge, Average Deduction From Operating Revenue, and Average Net Charge).

The table on page 94 appears to be incorrect. Please complete the table for the gross charge, deduction from revenue, and average net charge from the project's Historical and Projected Data chart and submit a replacement page 94.

Response

As requested, the revised table appears below.

	Previous Year	*Current Year*	*Year 1*	*Year 2*	*% Change -- Current Year To Year 2*
Gross Charge (Gross Operating Revenue / Utilization Data)	69,164	78,072	51,876	54,686	-20.9%
Deduction From Revenue (Total Deductions / Utilization Data)	47,425	56,641	35,497	37,943	-20.0%
Average Net Charge (Net Oper. Revenue / Utilization Data)	21,739	21,431	16,379	16,743	-22.9%

16.) Section B, Orderly Development, Item 4.

It is noted the hospital license provided is out of date. Please provide a copy of the current license.

It is noted the applicant is Joint Commission accredited. Please provide documentation of the current accreditation and a copy of the latest survey.

Response

The license for *Erlanger Bledsoe Hospital* for 2017-2018 is attached to this supplemental information.

A copy of the letter from *The Joint Commission* documenting current accreditation for *Erlanger Bledsoe Hospital*, is attached to this supplemental information. Also, a copy of the survey report is attached to this supplemental information.

17.) Section B, Quality Measures.

Please discuss the applicant's commitment to the proposal in meeting appropriate quality standards by addressing each of the following factors:

(a) Whether the applicant commits to maintaining an actual payor mix that is comparable to the payor mix projected in its CON application, particularly as it relates to Medicare, TennCare/Medicaid, Charity Care, and the Medically Indigent;

(b) Whether the applicant commits to maintaining staffing comparable to the staffing chart presented in its CON application;

(c) Whether the applicant will obtain and maintain all applicable state licenses in good standing;

(d) Whether the applicant will obtain and maintain TennCare and Medicare certification(s), if participation in such programs was indicated in the application;

(e) Whether an existing healthcare institution applying for a CON has maintained substantial compliance with applicable federal and state regulations for the three years prior to the CON application. In the event of non-compliance, the nature of non-compliance and corrective action shall be considered;

(f) Whether an existing health care institution applying for a CON has been decertified within the prior three years. This provision shall not apply if a new, unrelated owner applies for a CON related to a previously decertified facility;

(g) Whether the applicant will participate, within 2 years of implementation of the project, in self-assessment and external peer assessment processes used by health care organizations to accurately assess their level of performance in relation to established standards and to implement ways to continuously improve.

a. This may include accreditation by any organization approved by Center for Medicare and Medicaid Services (CMS) and other nationally recognized programs. The Joint Commission or its successor would be acceptable if applicable. Other acceptable organizations may include, but are not limited to, the following:

American College of Radiology for Positron Emission Tomography, Magnetic Resonance Imaging and Outpatient Diagnostic Center projects.

Response

(a) The applicant commits to maintaining a payor mix consistent with that detailed in the application, as it relates to Medicare, TennCare/Medicaid, Charity Care, and the Medically Indigent.

(b) The applicant commits to maintaining staffing comparable to the staffing chart presented in the CON application.

(c) The applicant will obtain and maintain all

applicable state licenses in good standing.

(d) The applicant will obtain and maintain TennCare and Medicare certifications.

(e) The applicant has maintained substantial compliance with applicable federal and state regulation for the three years prior to the CON application.

(f) The applicant has not been decertified within the prior three years.

(g) The applicant will participate, within 2 years of implementation of the project, in self-assessment and external peer assessment processes used by health care organizations to accurately assess its level of performance in relation to established standards and to implement ways to continuously improve.

18.) Proof Of Publication.

Please submit a copy of the full page of the newspaper in which the notice of affidavit which is supplied by the newspaper as proof of the publication of the letter of intent.

Response

The *Affidavit Of Publication* is attached to this supplemental information.

10:08 am

SEP 22 '17 AM 10:0

A F F I D A V I T

STATE OF TENNESSEE |
|
COUNTY OF HAMILTON |

NAME OF FACILITY Erlanger Sequatchie Valley Regional Hospital

I, Joseph M. Winick, after first being duly sworn, State under oath that I am the applicant named in this Certificate of Need application or the lawful agent thereof, that I have reviewed all of the supplemental information submitted herewith, and that it is true, accurate, and complete.

SIGNATURE

SWORN to and subscribed before me this 21 of September (Month), 2017 (Year), a Notary Public in and for the State of Tennessee, County of Hamilton.

SHELIA HALL STATE OF TENNESSEE NOTARY PUBLIC HAMILTON COUNTY

Shelia Hall
NOTARY PUBLIC

My commission expires June 9 (Month / Day), 2018.

SUPPLEMENTAL #1

September 22, 2017

10:08 am

TABLE OF ATTACHMENTS

SUPPLEMENTAL #1

September 22, 2017
10:08 am

Description	Section / Item
Floor Plan	A-6.B-2
Replacement Page (20-R)	A-10(c)
Special Warranty Deed	A-6.A
Hospital License	B-4
Joint Commission - Letter Of Accreditation	B-4
Joint Commission - Survey Report	B-4

Affidavit Of Publication
Letters Of Support

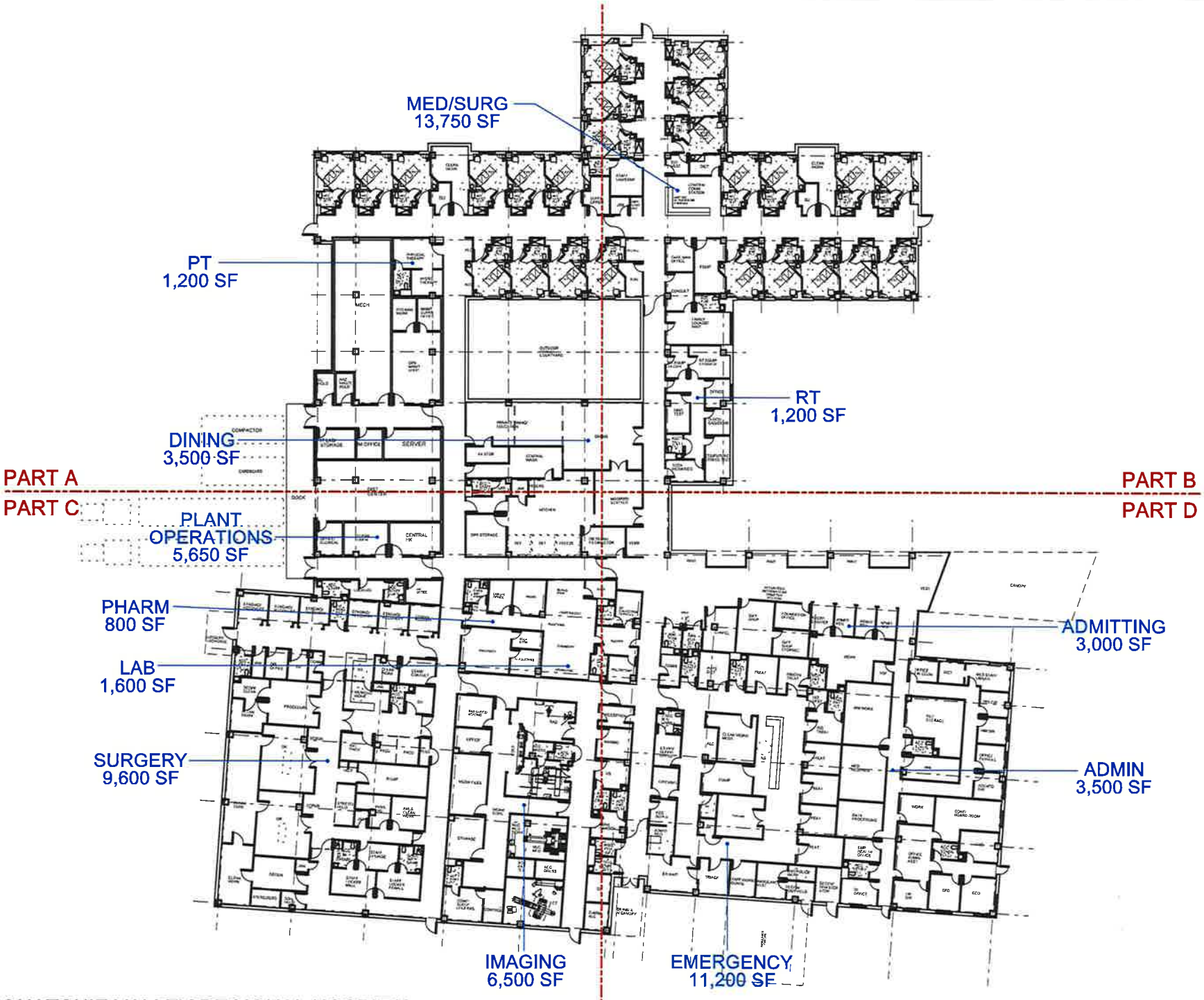
Article

Rising Use Of Diagnostic Medical Imaging In A Large Integrated Health System

SUPPLEMENTAL #1

September 22, 2017
10:08 am

ATTACHMENTS



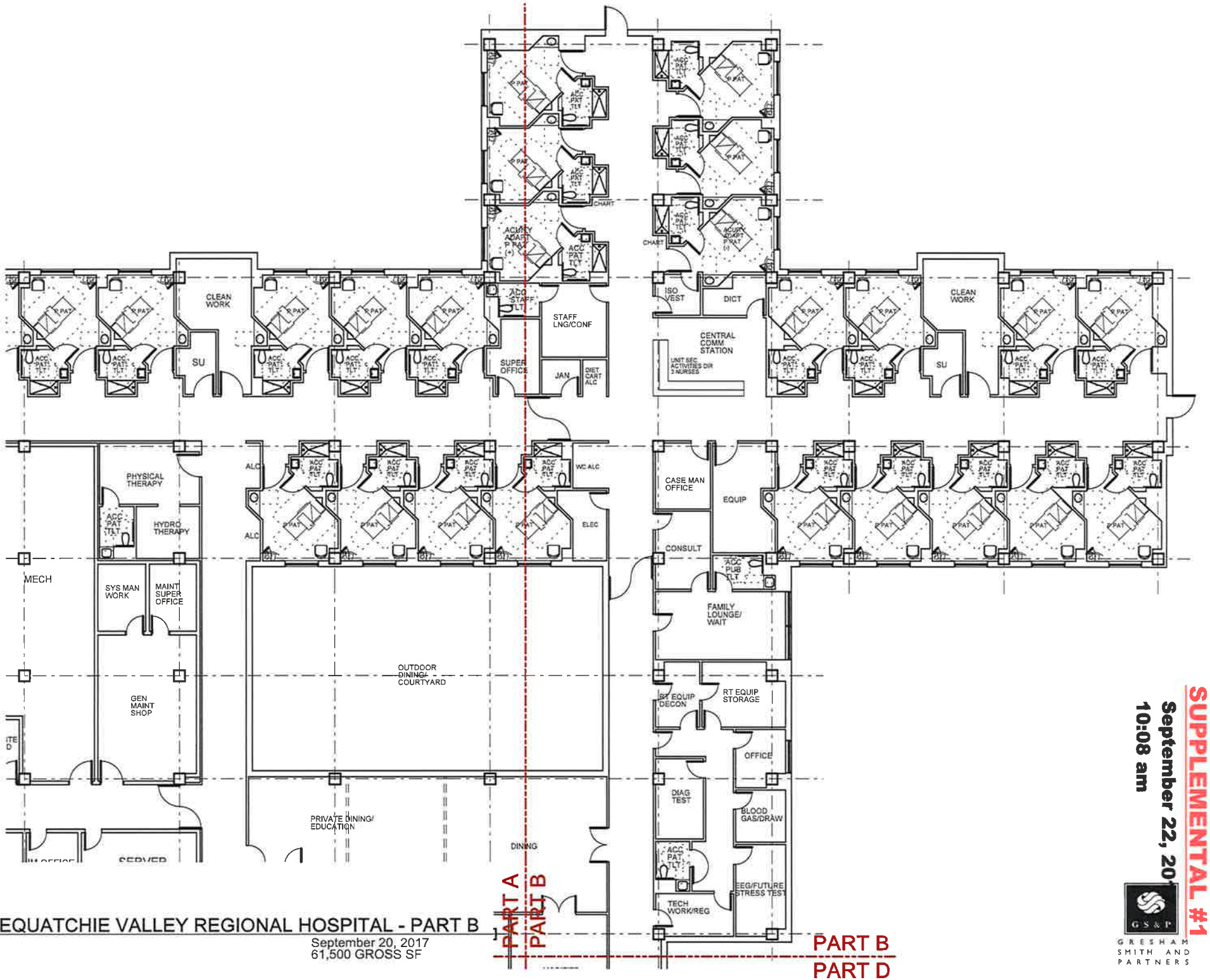
1 SEQUATCHIE VALLEY REGIONAL HOSPITAL

September 20 , 2017
61,500 GROSS SF

SUPPLEMENTAL #1

September 22, 2017
10:08 am

GRESHAM SMITH AND PARTNERS



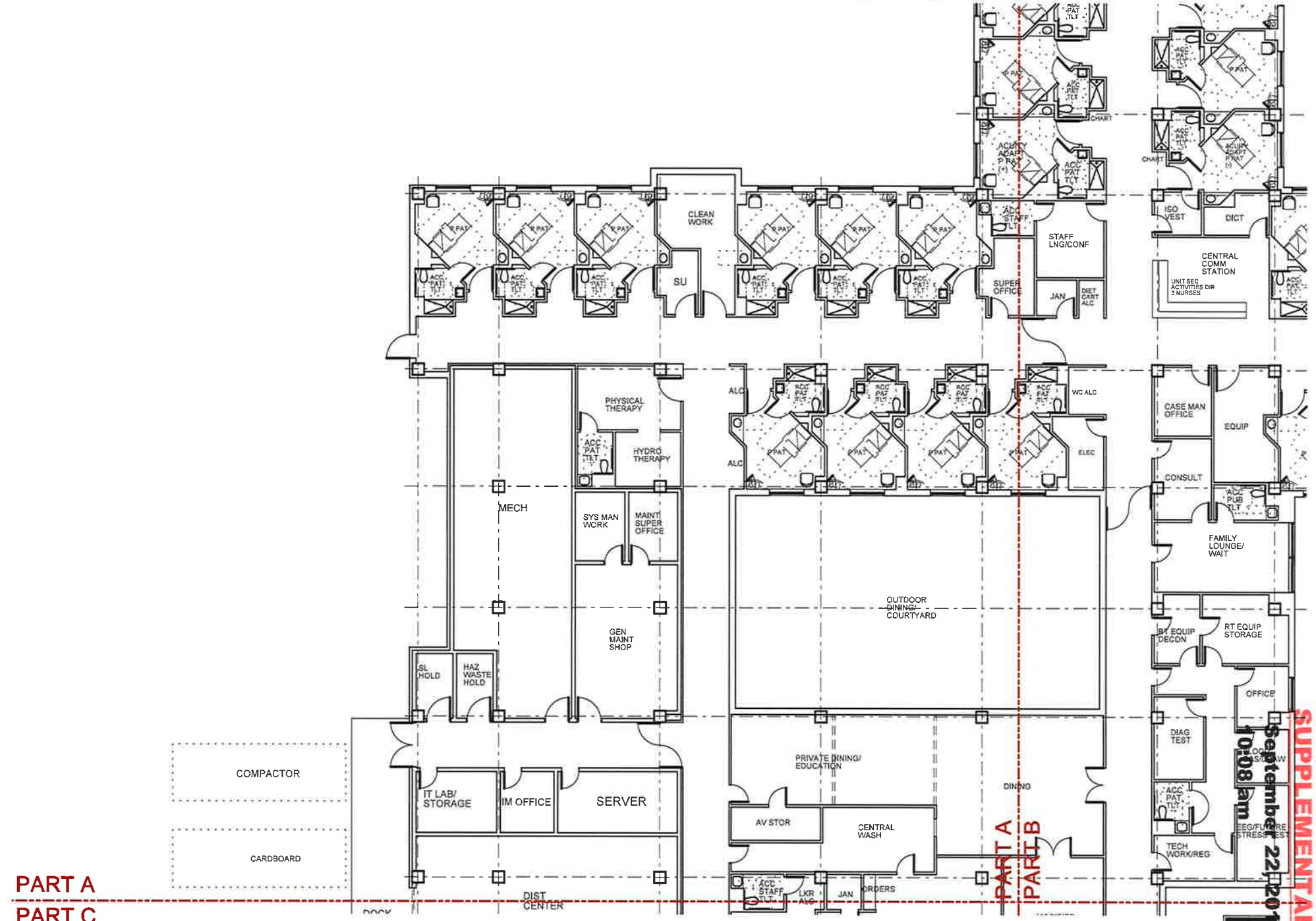
B SEQUATCHIE VALLEY REGIONAL HOSPITAL - PART B

September 20, 2017
61,500 GROSS SF

SUPPLEMENTAL #1

September 22, 20
10:08 am

GS&P
GRESHAM SMITH AND PARTNERS



A SEQUATCHIE VALLEY REGIONAL HOSPITAL - PART A

September 20, 2017
61,500 GROSS SF

PART A

PART C

SUPPLEMENTAL #1

© SEQUATCHIE VALLEY REGIONAL HOSPITAL - PART C

September 20, 2017

61,500 GROSS SF

PART D

D SEQUATCHIE VALLEY REGIONAL HOSPITAL - PART D

September 20, 2017
61,500 GROSS SF

SUPPLEMENTAL #1

September 22, 201
10:08 am

GS&P
GRESHAM SMITH AND PARTNERS

C. Please identify all the applicant's outstanding Certificate of Need projects that have a licensed bed change component. If applicable, complete chart below.

CON Number	CON Expiration Date	Total Licensed Beds Approved

11. Home Healthcare Organizations - Home Health Agency, Hospice Agency (excluding Residential Hospice), identify the following by checking all that apply:

SUPPLEMENTAL #1

September 22, 2017
10:08 am

This Instrument Prepared By:	Send Tax Bills To:	Map & Parcel No
STEPHEN T. GREER, P.C.	Sequatchie Associates, Inc.	Map 041
ATTORNEYS AT LAW	P.O. Box 897	Parcels 021.00 &
P. O. BOX 756	Dunlap, TN 37327	020.01
DUNLAP, TENNESSEE 37327		
423/949-3621		

SPECIAL WARRANTY DEED

FOR AND IN CONSIDERATION of One ($1.00) Dollar, cash in hand paid, and other good and valuable considerations, **MOUNTAIN VALLEY BANK, a Tennessee banking corporation,** has bargained and sold, and by these presents does transfer and convey unto **SEQUATCHIE ASSOCIATES, INC., a Tennessee corporation,** its successors and assigns, the following described real estate located in the 4th Civil District of Sequatchie County, Tennessee, and more particularly described as follows:

TRACT ONE: Map 41 Parcel 21.00

BEGINNING at a ½" diameter rebar set in the west margin of U.S. Highway 127, and being the old right-of-way of the CSX Railway, said rebar also being the northeast corner of Treva Keener, (Deed Book 56, page 117, ROSCT); thence leaving said highway with Keener North 83° 08' 26" West, 174.77 feet to a 1" diameter steel pipe found, being the northeast corner of James Reed (Deed Book 121, page 679, ROSCT); thence leaving Keener with Reed North 83° 08' 26" West, 311.70 feet to a 1" diameter steel pipe found, being the northeast corner of Avery Hickey, (Deed Book 87, page 370, ROSCT); thence leaving Reed with Hickey North 83° 14' 04" West, 303.33 feet to an iron pin found, being the northeast corner of Geneva Custer, (Deed Book 56, page 283, ROSCT); thence leaving Hickey with Custer North 80° 12' 21" West, 68.08 feet to a 1 ½" diameter steel pipe found; thence North 04° 37' 35" East, 180.16 feet to an iron pin found; thence North 84° 55' 09" West, 733.81 feet to a rock found at a fence corner, being the northeast corner of Dunlap Industries, (Deed Book 85, page 157, ROSCT); thence leaving Custer with Dunlap Industries North 86° 13' 05" West, 465.68 feet to a steel fence post found, being the northeast corner of Tecumseh Products, (Deed Book 41, page 745, ROSCT); thence leaving Dunlap Industries with Tecumseh North 85° 42' 41" West, passing an iron pin found at 366.80 feet, in all 500.52 feet to a ½" diameter rebar set, said rebar being 30.00 feet from the center line passageway of Tram Trail; thence along Tram Trail North 08° 08' 43" East, 37.47 feet to a point; thence North 03° 10' 08" East, 30.36 feet to a ½" diameter rebar set, being 30.00 feet from the center line passageway of Tram Trail and also being in the south line of Lisa Gonsalves, et al, (Deed book 118, page 366, ROSCT); thence leaving Tram Trail with Gonsalves South 87° 06' 29" East, passing an iron pin found at 118.05 feet, in all 753.41 feet to a point; thence South 87° 42' 38" East, 411.45 feet to a point; thence South 87° 11' 38" East, 535.35 feet to an iron pin found; thence South 85° 51' 56" East, 288.35 feet to a ½" diameter rebar set; thence South 87° 30' 01" East, 677.51 feet to a 2" diameter pipe found in the western right of way of U.S. Highway 127; thence along said highway South 21° 18' 11" West, 380.53 feet to the point of **BEGINNING**, containing 10.45 acres, as shown on survey by Allen Neil, RLS #1704, dated 04/13/2006 [*]

the western right of way of U.S. Highway 127; thence along said highway South 21° 18' 11" West, 380.53 feet to the point of **BEGINNING**, containing 10.45 acres, as shown on survey by Allen Nail, RLS #1794, dated 04/13/2005

SUPPLEMENTAL #1 [2]
September 22, 2017
10:08 am

TRACT TWO: Map 41 Parcel 20.01

BEGINNING at a ½" diameter rebar set in the western margin of U.S. Highway 127, and also being the southeast corner of Carlyle Bryant (Deed Book 116, page 267, ROSCT; thence with said highway South 21° 14' 40" West, 223.80 feet to a 2" diameter pipe found in the northeast corner of Brenda Lambert (Deed Book 100, page 240, ROSCT); thence leaving said highway with Lambert North 87° 30' 01" West, 677.51 feet to a ½" diameter rebar set; thence North 85° 51' 56" West, 288.35 feet to an iron pin found; thence North 87° 11' 38" West, 155.82 feet to a ½"

SUPPLEMENTAL #1
September 22, 2017
10:08 am

diameter rebar set; thence leaving Lambert with a new severance line of Lisa Gonsalves,(Deed Book 118, page 366, ROSCT); North 05° 01' 30" East, 199.92 feet to a ½" diameter rebar set in the line of Richard C. Bryant, (Deed Book 92, page 322, ROSCT); thence with Bryant South 87° 35' 49" East, 570.45 feet to an iron pin found in the southwest corner of Bryant Oil Company, Inc., (Deed Book 53, page 364, ROSCT); thence leaving Bryant with Bryant Oil Company, Inc., South 87° 35' 43" East, 325.09 feet, to a steel stake found in the southwest corner of Carlyle Bryant, (Deed Book 116, page 267, ROSCT); thence leaving Bryant Oil Company, Inc. With Carlyle Bryant South 87° 49' 36" East, 289.14 feet to the point of **BEGINNING**, containing 5.50 acres as surveyed by Allen Nall, RLS# 1794, dated April 19, 2005.

For prior title, see Trustee's Deed recorded in Book 277, pages 607, *et. seq.*, in the Register's Office of Sequatchie County, Tennessee.

TO HAVE AND TO HOLD said parcel of land, with the appurtenances, estate, title and interest thereto belonging, to the said Grantees, their heirs and assigns forever. And the Grantor does further covenant and bind itself and its representatives and assigns, to warrant and forever defend the title to said land to the said Grantees, their heirs and assigns, against the lawful claims of all persons claiming by, through, or under it, but not otherwise.

WITNESS its hand this the 31 day of December, 2013.

MOUNTAIN VALLEY BANK

By: Wendell A. Billingsley
WENDELL A. BILLINGSLEY, President/CEO

STATE OF TENNESSEE)
COUNTY OF SEQUATCHIE)

On this 31st day of December, 2013, before me personally appeared Wendell A. Billingsley, with whom I am personally acquainted and who, upon oath, acknowledged himself to be the President/CEO of Mountain Valley Bank, a Tennessee banking corporation, and as such Officer, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the Corporation by himself as such President/CEO.

WITNESS my hand and official seal, at Dunlap, this 31st day of December, 2013..

Diane M. Harmon
NOTARY PUBLIC
My Comm. Expires: 11/26/2017

DIANE M. HARMON
STATE OF TENNESSEE NOTARY PUBLIC

[*]

SUPPLEMENTAL #1

September 22, 2017
10:08 am

I, or we, hereby swear or affirm that the actual consideration for this transfer or value of the property transferred whichever is greater is **$375,000.00**, which amount is equal or greater than the amount which the property transferred would command at a fair voluntary sale.

AFFIANT

Sworn to and subscribed before me,
this the 31st day of December, 2013.

NOTARY PUBLIC OR REGISTER OF DEEDS
My Comm. Expires: 11/26/2017

DIANE M. HARMON
STATE OF TENNESSEE NOTARY PUBLIC
SEQUATCHIE COUNTY

deedMVB to Seq. Assoc.

BK/PG: 316/676-678
13002615

3 PGS:AL-WARRANTY DEED	
AVIS BATCH: 39181	12/31/2013 - 10:46 AM
VALUE	375000.00
MORTGAGE TAX	0.00
TRANSFER TAX	1387.50
RECORDING FEE	15.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1405.50

STATE OF TENNESSEE, SEQUATCHIE COUNTY
CONNIE E GREEN
REGISTER OF DEEDS

SUPPLEMENTAL #1
September 22, 2017
10:08 am

Property Type: 08 Commercial

ASSESSOR OF PROPERTY - PROP

18 HICKEY CIR
Property Address
Ownership and Mailing Address

SEQUATCHE ASSOCIATES INC
P O BOX 697
DUNLAP TN 37327

Subdivision
BK PG BLOCK
All Subdiv
BK PG BLOCK
Additional Description
Dimensions

DWELLING DATA

Improv Type		Lower Level	
Stories		Heating/Air	
Exterior Wall		Attic	
Heating Fuel			
Year Built	Eff Yr Built	Rooms	Bedrooms
Full Baths	Half Baths	Add'l Fixtures	Total Fixtures
Wood FP Stacks	Openings	Add'l Sty	PreFab Add'l Sty
Info Src Occ	Rental: Src	Year	Amount Sched
Foundation		Floor Finish	
Floor System		Interior Finish	
Party Wall		Paint/Decor	
Struct. Frame		Bath Tile	
Roof Framing		Electrical	
Roof Cov/Deck		Shape	
Cab/Millwork			

Quality		Condition		Class:
Prorate	Date	Factor	% Comp	Cost & Design 0
Depr: Physical	Other Phys	Functional	External	% Good 100

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
						2011		1.00

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete
RCN					Dwelling Factor
RCNLD					Dwelling Value

AREAS: Lower Floor First & Above Area % SFLA Rate RCN

OUTBUILDINGS and YARDITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Ra
1	U	ZZ	15		0	0	10.45	6,500.00							100	6,500
					Totals:		10.45									

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
12/31/2013	315	676	375,000	375,000	V	WD	P	SEQUATCHE ASSOCIATES I
09/29/2010	277	607	520,000	520,000	V	TR	P	MOUNTAIN VALLEY BANK
04/18/2005	190	457	350,000	350,000	V	WD	P	CATE FORREST F III
07/11/2000	MS56	117						LAMBERT BRENDA ETAL

CA330TN

State of Tennessee

SUPPLEMENTAL #1

September 22, 2017
10:08 am

Property Type: **08 Commercial** — **ASSESSOR OF PROPERTY - PROF**

TRAM TRAIL
Property Address

Ownership and Mailing Address

SEQUATCHIE ASSOCIATES INC
P O BOX 697
DUNLAP TN 37327

Subdivision
BK PG BLOCK
All Subdiv
BK PG BLOCK
Additional Description
Dimensions

DWELLING DATA

Improv Type		Lower Level	
Stories		Heating/Air	
Exterior Wall		Attic	
Heating Fuel			
Year Built	Eff Yr Built	Rooms	Bedrooms
Full Baths	Half Baths	Add'l Fixtures	Total Fixtures
Wood FP Stacks	Openings	Add'l Sty	PreFab Add'l Sty
Info Src Occ	Rental: Src	Year	Amount Sched
Foundation		Floor Finish	
Floor System		Interior Finish	
Party Wall		Paint/Decor	
Struct. Frame		Bath Tile	
Roof Framing		Electrical	
Roof Cov/Deck		Shape	
Cab/Millwork			

Quality Condition Class
Prorate Date Factor % Comp Cost & Design 0
Depr. Physical Other Phys Functional External % Good 100

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
						2011		1.00

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete
RCN					Dwelling Factor
RCNLD					Dwelling Value

AREAS: Lower Floor First & Above Area % SFLA Rate RCN

CONTRIBUTORY STRUCTURES

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd

WORKSHEET

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Ra
1	U	ZZ	15		0	0	5.5	6,500.00							100	6,500
					Totals:		5.5									

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
12/31/2013	315	676	375,000	375,000	V	WD	P	SEQUATCHIE ASSOCIATES
09/29/2010	277	607	520,000	520,000	V	TR	P	MOUNTAIN VALLEY BANK
05/13/2005	192	116	100,000	100,000	V	WD	M	CATE FORREST F III

Board for Licensing Health Care Facilities

State of Tennessee

0000000005

No. of Beds 0025

DEPARTMENT OF HEALTH

This is to certify, that a license is hereby granted by the State Department of Health to

CHATTANOOGA-HAMILTON COUNTY HOSPITAL AUTHORITY, ERLANGER to conduct and maintain a

Hospital ERLANGER BLEDSOE

Located at 71 WHEELERTOWN AVENUE, PIKEVILLE

County of BLEDSOE, *Tennessee.*

This license shall expire MAY 21, 2018, *and is subject to the provisions of Chapter 11, Tennessee Code Annotated. This license shall not be assignable or transferable, and shall be subject to revocation at any time by the State Department of Health, for failure to comply with the laws of the State of Tennessee or the rules and regulations of the State Department of Health issued thereunder.*

In Witness Whereof, we have hereunto set our hand and seal of the State this 1ST *day of* MAY, 2017.

In the Distinct Category(ies) of: CRITICAL ACCESS HOSPITAL
PEDIATRIC BASIC HOSPITAL

By Vincent J. Davis, MPH
DIRECTOR, DIVISION OF HEALTH CARE FACILITIES

By John J. Dreyzehner, MD
COMMISSIONER

SUPPLEMENTAL #1
September 22, 2017
10:08 am

F011

SUPPLEMENTAL #1
September 22, 2017
10:08 am

June 22, 2017

Re: # 7809
CCN: #441306
Program: Critical Access Hospital
Accreditation Expiration Date: March 30, 2020

Kevin M. Spiegel
President and CEO
Chattanooga Hamilton County Hospital Authority
975 East Third Street
Chattanooga, Tennessee 37403

Dear Mr. Spiegel:

This letter confirms that your March 27, 2017 - March 29, 2017 unannounced full resurvey was conducted for the purposes of assessing compliance with the Medicare conditions for critical access hospitals, including your swing bed service, through The Joint Commission's deemed status survey process.

Based upon the submission of your evidence of standards compliance on June 15, 2017, the Joint Commission is granting your organization an accreditation decision of Accredited with an effective date of March 30, 2017.

The Joint Commission is also recommending your organization for continued Medicare certification effective March 30, 2017. Please note that the Centers for Medicare and Medicaid Services (CMS) Regional Office (RO) makes the final determination regarding your Medicare participation and the effective date of participation in accordance with the regulations at 42 CFR 489.13. Your organization is encouraged to share a copy of this Medicare recommendation letter with your State Survey Agency.

This recommendation applies to the following locations:

Chattanooga Hamilton County Hospital Authority
d/b/a Erlanger Bledsoe Internal & Pediatric Medicine
136 Wheelertown Avenue, Pikeville, TN, 37367

Chattanooga Hamilton County Hospital Authority
d/b/a Erlanger Sequatchie Valley Emergency Department
16931 Rankin Avenue, Dunlap, TN, 37327-7029

Chattanooga Hamilton County Hospital Authority
d/b/a UT Erlanger Cardiology at Erlanger Bledsoe
121 Wheelertown, Pikeville, TN, 37367

SUPPLEMENTAL #1
September 22, 2017
10:08 am

Erlanger Bledsoe Hospital
71 Wheelertown Avenue, Pikeville, TN, 37367

Please be assured that The Joint Commission will keep the report confidential, except as required by law or court order. To ensure that The Joint Commission's information about your organization is always accurate and current, our policy requires that you inform us of any changes in the name or ownership of your organization or the health care services you provide.

Sincerely,

Mark Pelletier

Mark G. Pelletier, RN, MS
Chief Operating Officer
Division of Accreditation and Certification Operations

cc: CMS/Central Office/Survey & Certification Group/Division of Acute Care Services
CMS/Regional Office 4 /Survey and Certification Staff

SUPPLEMENTAL #1
September 22, 2017
10:08 am

Official Accreditation Report

Chattanooga Hamilton County Hospital Authority
975 East Third Street
Chattanooga, TN 37403

Organization Identification Number: 7809

Evidence of Standards Compliance (60 Day) Submitted: 6/15/2017

Executive Summary

Program(s)	Submit Date
Hospital Accreditation Critical Access Hospital Accreditation	6/15/2017

Hospital Accreditation :	As a result of the accreditation activity conducted on the above date(s), there were no Requirements for Improvement identified.
Critical Access Hospital Accreditation :	As a result of the accreditation activity conducted on the above date(s), there were no Requirements for Improvement identified.

If you have any questions, please do not hesitate to contact your Account Executive.

Thank you for collaborating with The Joint Commission to improve the safety and quality of care provided to patients.

Requirements for Improvement – Summary

As a result of the accreditation activity conducted, there were no Requirements for Improvement identified.

Program	Standard	Level of Compliance
HAP	EC.02.02.01	Compliant
HAP	EC.02.03.03	Compliant
HAP	EC.02.03.05	Compliant
HAP	EC.02.04.03	Compliant
HAP	EC.02.05.01	Compliant
HAP	EC.02.05.05	Compliant
HAP	EC.02.05.07	Compliant
HAP	EC.02.05.09	Compliant
HAP	EC.02.06.01	Compliant
HAP	EC.02.06.05	Compliant
HAP	IC.02.01.01	Compliant
HAP	IC.02.02.01	Compliant
HAP	IM.02.01.03	Compliant
HAP	LD.01.03.01	Compliant
HAP	LD.04.01.05	Compliant
HAP	LS.01.01.01	Compliant
HAP	LS.01.02.01	Compliant
HAP	LS.02.01.10	Compliant
HAP	LS.02.01.20	Compliant
HAP	LS.02.01.30	Compliant
HAP	LS.02.01.34	Compliant
HAP	LS.02.01.35	Compliant
HAP	MM.01.01.01	Compliant
HAP	MM.01.01.03	Compliant
HAP	MM.03.01.01	Compliant
HAP	MM.03.01.03	Compliant
HAP	MM.04.01.01	Compliant
HAP	MS.01.01.01	Compliant
HAP	MS.03.01.01	Compliant
HAP	MS.08.01.03	Compliant
HAP	NPSG.03.06.01	Compliant
HAP	NPSG.15.01.01	Compliant

HAP	PC.01.02.03	Compliant
HAP	PC.01.02.07	Compliant
HAP	PC.01.03.01	Compliant
HAP	PC.02.01.03	Compliant
HAP	PC.02.01.11	Compliant
HAP	PC.02.02.03	Compliant
HAP	PC.02.03.01	Compliant
HAP	PC.03.05.03	Compliant
HAP	RC.01.01.01	Compliant
HAP	RC.02.01.01	Compliant
HAP	RI.01.01.01	Compliant
HAP	UP.01.03.01	Compliant
HAP	WT.01.01.01	Compliant
HAP	WT.04.01.01	Compliant
CAH	EC.02.02.01	Compliant
CAH	EC.02.03.03	Compliant
CAH	EC.02.03.05	Compliant
CAH	EC.02.04.03	Compliant
CAH	EC.02.05.01	Compliant
CAH	EC.02.05.05	Compliant
CAH	EC.02.05.09	Compliant
CAH	LD.04.03.09	Compliant
CAH	LS.02.01.10	Compliant
CAH	LS.02.01.35	Compliant
CAH	MM.03.01.01	Compliant
CAH	MM.03.01.03	Compliant
CAH	MM.05.01.01	Compliant
CAH	MM.05.01.11	Compliant
CAH	NPSG.03.05.01	Compliant
CAH	NPSG.03.06.01	Compliant
CAH	PC.01.02.01	Compliant
CAH	PC.04.01.05	Compliant
CAH	RC.01.01.01	Compliant
CAH	RI.01.01.03	Compliant

CoP: §485.618 **Tag:** C-0200 **Deficiency:** Compliant

Corresponds to: CAH

Text: §485.618 Condition of Participation: Emergency Services

The CAH provides emergency care necessary to meet the needs of its inpatients and outpatients.

CoP Standard	Tag	Corresponds to	Deficiency
§485.618(b)	C-0202	CAH - MM.03.01.03/EP2	Compliant

CoP: §485.623 **Tag:** C-0220 **Deficiency:** Compliant

Corresponds to: CAH

Text: §485.623 Condition of Participation: Physical Plant and Environment

CoP Standard	Tag	Corresponds to	Deficiency
§485.623(d)(1)	C-0231	CAH - EC.02.03.03/EP3, EC.02.03.05/EP2, LS.02.01.10/EP10, LS.02.01.35/EP4	Compliant
§485.623(b)(2)	C-0223	CAH - EC.02.02.01/EP5	Compliant
§485.623(b)(1)	C-0222	CAH - EC.02.04.03/EP3, EC.02.05.05/EP6, EC.02.05.09/EP5	Compliant

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CoP: §485.638 **Tag:** C-0300 **Deficiency:** Compliant

Corresponds to: CAH

Text: §485.638 Condition of Participation: Clinical Records

CoP Standard	Tag	Corresponds to	Deficiency
§485.638(a)(4)(iv)	C-0307	CAH - RC.01.01.01/EP11	Compliant

CoP: §482.13 **Tag:** A-0115 **Deficiency:** Compliant

Corresponds to: HAP

Text: §482.13 Condition of Participation: Patient's Rights

A hospital must protect and promote each patient's rights.

CoP Standard	Tag	Corresponds to	Deficiency
§482.13(e)(4)(i)	A-0166	HAP - PC.03.05.03/EP2	Compliant
§482.13(c)(2)	A-0144	HAP - NPSG.15.01.01/EP2	Compliant

CoP: §482.23 **Tag:** A-0385 **Deficiency:** Compliant

Corresponds to: HAP

Text: §482.23 Condition of Participation: Nursing Services

The hospital must have an organized nursing service that provides 24-hour nursing services. The nursing services must be furnished or supervised by a registered nurse.

CoP Standard	Tag	Corresponds to	Deficiency
§482.23(c)(6)(ii)(D)	A-0413	HAP - MM.03.01.01/EP2	Compliant
§482.23(c)(3)	A-0406	HAP - MM.04.01.01/EP13	Compliant
§482.23(b)(4)	A-0396	HAP - PC.01.03.01/EP1	Compliant

CoP: §482.24 **Tag:** A-0431 **Deficiency:** Compliant

Corresponds to: HAP

Text: §482.24 Condition of Participation: Medical Record Services

The hospital must have a medical record service that has administrative responsibility for medical records. A medical record must be maintained for every individual evaluated or treated in the hospital.

CoP Standard	Tag	Corresponds to	Deficiency
§482.24(c)(1)	A-0450	HAP - RC.01.01.01/EP19	Compliant
§482.24(b)	A-0438	HAP - RC.01.01.01/EP8	Compliant

CoP: §482.25 **Tag:** A-0489 **Deficiency:** Compliant

Corresponds to: HAP

Text: §482.25 Condition of Participation: Pharmaceutical Services

The hospital must have pharmaceutical services that meet the needs of the patients. The institution must have a pharmacy directed by a registered pharmacist or a drug storage area under competent supervision. The medical staff is responsible for developing policies and procedures that minimize drug errors. This function may be delegated to the hospital's organized pharmaceutical service.

CoP Standard	Tag	Corresponds to	Deficiency
§482.25(b)(2)(iii)	A-0504	HAP - MM.03.01.01/EP6	Compliant
§482.25(b)(2)(i)	A-0502	HAP - MM.03.01.01/EP3	Compliant
§482.25(b)(3)	A-0505	HAP - MM.03.01.01/EP8	Compliant
§482.25(b)	A-0500	HAP - MM.03.01.01/EP5	Compliant

CoP: §482.41 **Tag:** A-0700 **Deficiency:** Compliant

Corresponds to: HAP - EC.02.06.01/EP1

Text: §482.41 Condition of Participation: Physical Environment

The hospital must be constructed, arranged, and maintained to ensure the safety of the patient, and to provide facilities for diagnosis and treatment and for special hospital services appropriate to the needs of the community.

CoP Standard	Tag	Corresponds to	Deficiency
§482.41(a)	A-0701	HAP - EC.02.02.01/EP5, EC.02.05.01/EP8, EC.02.06.01/EP1, EP26	Compliant
§482.41(b)(1)(ii)	A-0710	HAP - LS.02.01.30/EP3, EP11	Compliant
§482.41(c)		HAP - EC.02.05.09/EP7	Compliant
§482.41(b)(1)(i)	A-0710	HAP - EC.02.03.03/EP1, LS.02.01.10/EP1, EP5, EP7, EP10, LS.02.01.20/EP11, EP36, LS.02.01.30/EP18, EP19, LS.02.01.34/EP4, LS.02.01.35/EP4, EP5, EP6, EP14, EP10, EP11	Compliant
§482.41(d)(2)	A-0724	HAP - EC.02.03.05/EP3, EP15, EP16, EC.02.04.03/EP3, EC.02.05.05/EP6, EC.02.05.09/EP5	Compliant
§482.41(d)(4)	A-0726	HAP - EC.02.05.01/EP16	Compliant

CoP: §482.42 **Tag:** A-0747 **Deficiency:** Compliant

Corresponds to: HAP - IC.02.01.01/EP1, IC.02.02.01/EP4, EC.02.05.01/EP15, EC.02.06.05/EP2

Text: §482.42 Condition of Participation: Infection Control

The hospital must provide a sanitary environment to avoid sources and transmission of infections and communicable diseases. There must be an active program for the prevention, control, and investigation of infections and communicable diseases.

CoP: §482.51 **Tag:** A-0940 **Deficiency:** Compliant

Corresponds to: HAP - IC.02.02.01/EP2, EP4

Text: §482.51 Condition of Participation: Surgical Services

If the hospital provides surgical services, the services must be well organized and provided in accordance with acceptable standards of practice. If outpatient surgical services are offered the services must be consistent in quality with inpatient care in accordance with the complexity of services offered.

CoP: §485.635 **Tag:** C-0270 **Deficiency:** Compliant

Corresponds to: CAH

Text: §485.635 Condition of Participation: Provision of Services

SUPPLEMENTAL #1
September 22, 2017
10:08 am

CoP Standard	Tag	Corresponds to	Deficiency
§485.635(c)(4)(ii)	C-0292	CAH - LD.04.03.09/EP6	Compliant
§485.635(a)(3)(iv)	C-0276	CAH - MM.03.01.01/EP3, MM.05.01.11/EP2	Compliant

CoP: §482.12 **Tag:** A-0043 **Deficiency:** Compliant

Corresponds to: HAP - LD.01.03.01/EP12

Text: §482.12 Condition of Participation: Governing Body

There must be an effective governing body that is legally responsible for the conduct of the hospital. If a hospital does not have an organized governing body, the persons legally responsible for the conduct of the hospital must carry out the functions specified in this part that pertain to the governing body.

CoP: §482.22 **Tag:** A-0338 **Deficiency:** Compliant

Corresponds to: HAP

Text: §482.22 Condition of Participation: Medical staff

The hospital must have an organized medical staff that operates under bylaws approved by the governing body, and which is responsible for the quality of medical care provided to patients by the hospital.

CoP Standard	Tag	Corresponds to	Deficiency
§482.22(c)	A-0353	HAP - MS.01.01.01/EP1, EP5	Compliant
§482.22(c)(5)(i)	A-0358	HAP - PC.01.02.03/EP4, MS.01.01.01/EP16	Compliant

SUPPLEMENTAL #1

September 22, 2017
10:08 am

STATE OF TENNESSEE, BLEDSOE COUNTY:

This is to certify that I, Sandra S. Dodson, published the attached notice in *The Dunlap Tribune*, a newspaper published in Sequatchie County, Tennessee, for 1 ~~consecutive~~ weeks, beginning the 7TH day of SEPTEMBER, 2017, as required by law.

This 8TH day of SEPTEMBER, 2017.

Sandra S. Dodson
Publisher

Sworn and subscribed to before me this 8th day of September, 2017.

Kathy J. Mitchell
Notary Public

KATHY J. MITCHELL
STATE OF TENNESSEE NOTARY PUBLIC
BLEDSOE COUNTY

My commission expires: 7/25/20

NOTIFICATION OF INTENT TO APPLY FOR A CERTIFICATE OF NEED

This is to provide official notice to the Health Services & Development Agency and all interested parties, in accordance with T.C.A. § 68-11-1601 et. seq., and the Rules of the Health Services & Development Agency, that Erlanger Sequatchie Valley Regional Hospital, with an ownership type of governmental, and to be managed by itself, intends to file an application for a Certificate of Need ("CON") to construct a regional community hospital (critical access hospital), with a total complement of twenty-five (25) inpatient beds, to include services for inpatients, outpatients, emergency medical services, and magnetic resonance imaging (MRI) in Dunlap, Sequatchie County, Tennessee.

This facility will replace the existing Erlanger Bledsoe Hospital, located at 71 Wheelertown Avenue, Pikeville, TN 37367. The new Erlanger Sequatchie Valley Regional Hospital, MRI and equipment will be located at 17399 Rankin Avenue, Dunlap, Sequatchie County, Tennessee, 37327, otherwise described as map 041, parcels 021.00 and 020.01, at the Sequatchie County Tax Assessor's Office.

A companion CON application will be filed with the Health Services & Development Agency for a new provider based emergency department in Pikeville, Tennessee, to replace the existing provider based emergency department located at 16931 Rankin Avenue, Dunlap, Sequatchie County, Tennessee.

The total project cost is estimated to be $32,653,836.

The anticipated date of filing the application is September 12, 2017.

The contact person for this project is Joseph M. Winick, Sr. Vice President, Erlanger Health System, 975 East 3rd Street, Chattanooga, Tennessee, 37403, and by phone at (423) 778-7274.

Upon written request by interested parties, a local Fact-Finding public hearing shall be conducted. Written requests for hearing should be sent to:

Health Services & Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, Tennessee 37243

Pursuant to T.C.A. § 68-11-1607(c)(1): (A) Any health care institution wishing to oppose a Certificate Of Need application must file a written notice with the Health Services and Development Agency no later than fifteen (15) days before the regularly scheduled Health Services and Development Agency meeting at which the application is originally scheduled; and (B) Any other person wishing to oppose the application must file written objection with the Health Services and Development Agency at or prior to the consideration of the application by the Agency.

SUPPLEMENTAL #1
September 22, 2017
10:08 am

9/15/2017

To Whom It May Concern:

Erlanger Behavioral Health fully supports the proposal to build a new hospital in Dunlap, replacing Erlanger Bledsoe hospital, and to place a free-standing Emergency Room in Pikeville. The new hospital will reduce health disparities among the rural population by increasing accessibility to emergency management and Erlanger's trauma services. It will provide surgical and outpatient services otherwise not available to the local residents without traveling. Erlanger's behavioral health resources will be available to the Dunlap and Pikeville facilities.

This project will expand resources and accessibility of needed services to the rural community provided in a state-of-the-art facility.

Sincerely,

Jennie Mahaffey, M.D.
Medical Director
Erlanger Behavioral Health
979 East 3rd Street, Suite B-1010
Office: (423)778-2965
Fax: (423)778-2966

SUPPLEMENTAL #1

September 22, 2017
10:08 am

Greg B. Wilson Van Buren County Mayor
P.O. Box 217
Spencer, TN 38585

Phone (931)-946-2314
e-mail- mayorgwilson@outlook.com

September 05, 2017

Erlanger Health System
Stephanie Boynton,

I am writing on behalf of the citizens of Van Buren County, in support of the Regional Hospital to be located in Dunlap, TN. I strongly support this endeavor and the focus on reducing Health disparities in this regional concept. I further support clinics in the outlying counties as well. This regional concept is much needed in this area.

Through this letter be it known Van Buren County will support the efforts of Erlanger Health Systems. We look forward to the opportunity to help eliminate Health disparities in our community and achieving Health equality.

Sincerely,
Greg Wilson
Van Buren County Mayor

SUPPLEMENTAL #1
September 22, 2017
10:08 am

Bledsoe County Courthouse
P.O. Box 149
Pikeville, TN 37367

Bledsoe County, Tennessee

Gregg Ridley, County Mayor

Phone 423-447-6855
Fax 423-447-7265
E-mail: *bledsoemayor@bledsoe.net*

August 29, 2017

Dear Ms. Boynton,

Please accept this communication as an expression of support for Erlanger's Sequatchie Valley Medical Enhancement Project to be located in Sequatchie and Bledsoe Counties. The project will consist of a new twenty-five bed critical access hospital to be constructed in Dunlap, and a newly built emergency department in Pikeville.

The current medical facility, Erlanger Bledsoe is located in Pikeville, and is approaching fifty-years in operation, while utilizing the original structure. The current building is in need of substantial modernization, in order to maintain desired current hospital standards. By locating the new hospital in Dunlap, the newly constructed modern medical facility will centralize health care, in a center location, for the entire Sequatchie Valley.

The central location will offer enhanced accessibility throughout the region. The residents of Pikeville, Bledsoe County, and surrounding areas will have improved access to "State of the Art" emergency services linked to trauma services provided by Erlanger. With this new proximity, the hospital will become more economically viable, allowing for essential services, such as surgery and outpatient care that will limit the need for area residents to leave the Sequatchie Valley, in order to receive their healthcare services.

Erlanger's management of this new centrally located facility will be beneficial to the entire region. Our residents will gain access to a broad range of medical programs and services, such as trauma care and specialty physicians located in Chattanooga.

As Bledsoe County Mayor, I have had the privilege of working with Erlanger for eleven years. Erlanger has demonstrated their commitment to the region and to the citizens they serve. I believe Erlanger's continued operation will launch better health care to more people in the surrounding areas, and provide much needed health care to our rural region.

Sincerely,

Gregg Ridley
Bledsoe County Mayor

22 Cherry Street East
P.O. Box 595
Dunlap, Tennessee 37327

SUPPLEMENTAL #4
September 22, 2017
10:08 am

Phone: (423) 949-3479
Fax: (423) 949-2579
seqexec@bledsoe.net

Sequatchie County Executive

August 29, 2017

To whom it may concern;

Re: Letter of Support to build a new full service 25 bed critical access hospital in Dunlap and a new Emergency Department to be built in Pikeville.

In regards to the above captioned, we are in full support of the capital outlay commitment that will be required to achieve needed quality healthcare here in the Sequatchie Valley. Here are a few of the reasons why;

- The current Erlanger Bledsoe facility is nearly 50 years old and is in need of substantial modernization to meet current hospital standards.
- Placing the new hospital in Dunlap will centralize the hospital in the Sequatchie Valley, making it more accessible to more people throughout the region. Residents of Pikeville, Bledsoe County and the surrounding area will have improved access to "state of the art" emergency services linked to trauma services provided by Erlanger.
- With increased access, the hospital will be economically viable.
- The new hospital will provide essential services that will limit the need for area residents to leave the valley for their healthcare. This will include surgery and outpatient services.
- It will be beneficial for the hospital to be operated by Erlanger to gain access to a broad range of program and services including trauma care and specialty physicians located in Chattanooga. Erlanger has demonstrated its commitment to the region and to those served. Approval will help to bring health care services to more people in the surrounding area
- It is vital that residents in rural areas have access to needed medical care.

If you have any questions, please do not hesitate calling me personally at 423-949-3479 or e- mailing me at seqexec@bledsoe.net.

Thank you.

D. Keith Cartwright
Sequatchie County Executive

SUPPLEMENTAL #1

September 22, 2017
10:08 am

OUR MISSION STATEMENT:
To Be The Leader In Providing Comprehensive, High Quality, Community-Oriented Healthcare With The Goal of Being The Primary Care Medical Home of Choice In The Communities We Serve By Providing Quality Health Services With Justice, Equality, and Respect.

September 15, 2017

Ms. Stephanie Boynton, CEO
Erlanger Bledsoe Hospital
71 Wheelertown Avenue
Pikeville, TN 37367

Dear Stephanie;

I am pleased to write this letter in support of your hospital initiatives. Placing the hospital in Dunlap will centralize the hospital in the Sequatchie Valley, making it more accessible to more people throughout the region. The new hospital will provide essential services that will limit the need for area residents to leave the valley for their healthcare. We appreciate and support the mission, value and quality of services that it brings to the residents and communities we serve.

Residents of Pikeville, Bledsoe County and the surrounding area will have improved access to "state of the art" emergency services linked to trauma services provided by Erlanger. Approval will help to bring health care services to more people in the surrounding area. It is vital that residents in rural areas have access to needed medical care.

These initiatives will continue to support our mission to provide quality care and expanded access to our region. Our organization appreciates the opportunity to work in partnership and collaboration on an ongoing basis to improve access and the quality of care for the populations we serve.

Sincerely,

Angel Moore, Esq.
Chief Executive Officer
Erlanger Community Health Centers

Dodson Avenue: 200 Dodson Avenue ■ Chattanooga, TN 37406 ■ (423) 778-2800
Southside Community Location: 100 E. 37th Street ■ Chattanooga, TN 37410 ■ (423) 778-2700

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September 22, 2017
10:08 am

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Rising Use Of Diagnostic Medical Imaging In A Large Integrated Health System

The use of imaging has skyrocketed in the past decade, but no one patient population or medical condition is responsible

Rebecca Smith-Bindman, Diana L. Miglioretti, and Eric B. Larson

Rebecca Smith-Bindman, An associate professor, Radiology and Biomedical Imaging; Epidemiology and Biostatistics; and Obstetrics, Gynecology, and Reproductive Medicine, at the University of California, San Francisco;
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Abstract

Go to:

Little has been published characterizing specific patterns of the dramatic rise in diagnostic imaging during the past decade. In a large health plan, 377,048 patients underwent 4.9 million diagnostic tests from 1997 through 2006. Cross-sectional imaging nearly doubled over those years, rising from 260 to 478 examinations per thousand enrollees per year. Imaging with computed tomography (CT) doubled, and imaging with magnetic resonance imaging (MRI) tripled. Cross-sectional studies added to existing studies instead of replacing them, and the annual per enrollee cost of radiology imaging more than doubled. The dramatic rise in imaging raises both costs and radiation exposure.

The use of diagnostic imaging has increased dramatically over the past decade, contributing to medical costs and to medical exposure to ionizing radiation.[1] The recent overview from the Medicare Payment Advisory Commission (MedPAC) to the Centers for Medicare and Medicaid Services (CMS) reported that the rise in volume of imaging services per Medicare beneficiary outstripped the growth of all other services physicians provide.[2] Several factors have contributed to this increase, including wider availability of technology, increased demand by patients and physicians, favorable reimbursement, and improvements in the technology resulting in a lower threshold for using it.

Several studies have documented the increase in imaging over time, but relatively little has been published characterizing patterns of imaging in detail—specifically, how imaging patterns vary by patient factors, imaging modality, or the anatomic area being imaged.[3] This type of analysis would allow those interested in cost containment to understand where most imaging—and most expense—occurs. Further, it is largely unknown whether newer and more expensive imaging tests are replacing or being used in addition to older tests, such as x-rays. To achieve the important goal of overall cost containment, newer imaging tests should replace older and potentially less accurate exams, not supplement them.

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This study aimed to determine temporal patterns of diagnostic medical imaging and how these patterns vary by patients' age and sex, imaging modality, and anatomic area. Further, we wanted to determine whether the rise in use of imaging was due to an increase in the proportion of patients being imaged or a greater number of imaging tests being performed per person per condition.

Study Data And Methods

Go to:

We evaluated trends in diagnostic imaging among members of Group Health Cooperative, a large, mixed-model, nonprofit health care system providing integrated care and coverage to approximately 10 percent of Washington State residents. Group Health provides care through its own facilities, including twenty-eight primary care or family medical centers, five specialty medical centers, and two hospitals; it has affiliations with forty-five other major institutions for selected specialty services unavailable at Group Health. Group Health has complete and comprehensive automated information systems that capture enrollees' receipt of diagnostic imaging studies, allowing the use of imaging to be assessed per patient over time. We assessed patterns of imaging in each year from 1997 to 2006.

■ Characterizing patterns of imaging

All imaging examinations were coded in Group Health automated systems using standardized *International Classification of Diseases*, Ninth Revision (ICD-9), and *Current Procedural Terminology*, Fourth Edition (CPT-4), codes. All imaging examinations were grouped into nonoverlapping anatomic areas (abdomen, breast, cardiac, central nervous system [CNS], chest, endocrine, extremity, obstetrical, spine, vascular, and other) and imaging modality categories as computed tomography (CT), magnetic resonance imaging (MRI), ultrasound, nuclear medicine (NM), radiography (x-ray films), and arteriography. CT, MRI, and ultrasound were combined into a single cross-sectional imaging category. For subanalyses, x-ray exams of the abdomen were subdivided into those with and without contrast (that is, using oral or intravenous agents). Imaging examinations were included irrespective of the specialty that conducted or interpreted the examination.

■ Defining "utilization."

For each Group Health member, for each year of the study, we assessed the use of imaging tests during each day of the study period, by modality and anatomic area, and within defined age strata. If multiple examinations within the same modality and anatomic area were recorded on the same day, they were collapsed into a single examination to avoid overcounting examinations that might have occurred only once.

■ Analysis

We calculated the number of imaging tests per thousand enrollees per year, stratified by anatomic area, modality, and year. These rates were calculated overall and stratified within age groups. These rates were also calculated among elderly enrollees, defined as those age sixty-five and older. We calculated the proportion of patients who underwent any imaging and any cross-sectional imaging within each year, by defined age strata. Among patients who underwent cross-sectional abdominal imaging and CNS imaging, we calculated the annual mean number of abdominal and CNS tests, respectively, per patient to estimate the amount of repeat imaging. We focused on the most frequent anatomic area (CNS) and the one for which we suspected that repeat imaging would be common (abdomen). All rates were standardized to the age distribution in 2000 using direct standardization. To simplify the exhibits, we did not show results in the figures for imaging tests that accounted for a small proportion of the total.

■ Costs

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To estimate the costs associated with the increase in imaging over time, we calculated radiology costs per enrollee for each year of the study, basing costs on the Medicare fee reimbursement schedule in 2006. By choosing to estimate costs using a single-year fee schedule, we are focusing on the increase in real costs associated with the increased volume of examinations per enrollee. To estimate the cost of each examination, we included a global cost covering both the technical and professional components. We calculated the change in cost over time using compound annual growth.

■ Study population

Our study population consisted of 377,048 patients enrolled in Group Health between 1997 and 2006 who underwent approximately 4.9 million imaging examinations over the ten years of the study. Slightly more than half of the enrollees (54 percent) were female, and the age of the enrollees increased over time.[5] Overall, 13 percent of enrollees were minorities, including African Americans (3 percent), Asian and Pacific Islanders (3 percent), Hispanic (2 percent), and mixed race (5 percent).

Study Results

Go to:

Between 1997 and 2006, imaging increased for nearly every imaging modality studied (Exhibit 1). Cross-sectional imaging approximately doubled, increasing from 260 to 478 examinations per thousand enrollees (average 9 percent annual increase). Ultrasound increased 5 percent per year, from 157 to 225 examinations per thousand patients per year; CT increased 14 percent per year, from 81 to 181 examinations; and MRI increased 26 percent per year, from 22 to 72 examinations. Over the ten-year period studied, ultrasound increased by nearly 40 percent, CT doubled, and MRI nearly tripled. Utilization of NM examinations remained stable, varying between thirty-two and thirty-five imaging tests per thousand patients per year, with no temporal trend. Overall rates of imaging were approximately twice as high among elderly enrollees, but trends were similar.[6] Total use of x-ray exams was much higher than for other imaging tests and accounted for the greatest number of imaging studies during each year studied. However, because of its dramatic rise, cross-sectional imaging accounted for a larger proportion of examinations over time, increasing from approximately one in four imaging examinations (24 percent) in 1997 to one in three (35 percent) by 2006. In terms of cost, cross-sectional imaging accounted for 54.0 percent of total imaging costs in 1997, whereas it accounted for 70.2 percent of total imaging costs in 2006.

EXHIBIT 1
Cross-Sectional Imaging Tests Per Thousand Enrollees Per Year, 1997-2006

The total number of imaging tests increased markedly with age, and the types of tests used varied with age (Exhibit 2). Cross-sectional imaging accounted for around 15 percent of examinations among children and 30-40 percent among adults.

EXHIBIT 2
Number Of Imaging Tests Per Thousand Enrollees Per Year, By Modality And Age, 2000-2006

To try to ascertain whether a change in the distribution of diseases might explain the increase in imaging over time, we evaluated the use of all imaging examinations by anatomic area.[7] No large changes were seen in the distribution of which anatomic sites were being imaged. The extremities and chest were the most common areas imaged during each year studied, and imaging increased modestly over time across

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all anatomic areas.

For each imaging modality we evaluated the trends in imaging stratified by anatomic area to determine if the increases in the use of specific imaging modalities were limited to selected anatomic areas. Imaging with CT and MRI increased consistently across all anatomic areas. Rates of imaging with CT and MRI were two- to threefold higher, and the increase in imaging was faster among elderly enrollees compared with younger patients (Exhibit 3). For ultrasound, imaging patterns were less consistent across different anatomic areas, with the only dramatic increase occurring for cardiac imaging (echocardiography), which increased approximately 10 percent annually.[8] This resulted in a tripling of the number of echocardiography examinations over the years studied. Breast imaging (mammography, which uses x-rays) demonstrated a consistent 5 percent annual increase. Imaging with x-rays remained relatively stable over time, with one significant change.[9] Concomitant with the dramatic rise in abdominal CT, we found a substantial decline in abdominal x-ray examinations involving use of oral or intravenous contrast.[10] This was the only decrease in imaging we could document across all imaging modalities and all anatomic areas studied.

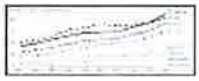

EXHIBIT 3
Computed Tomography (CT) And Magnetic Resonance Imaging (MRI) Among Plan Enrollees Age Sixty-Five And Older, By Anatomic Area, 1997-2006

Because of the overall increase in imaging, concomitant with greater use of more expensive technologies, the annual per enrollee cost of radiology imaging more than doubled over the decade of the study. Mean annual cost increased from $229 per enrollee in 1997 to $463 per enrollee in 2006 (Exhibit 4). The costs associated with imaging of different anatomic areas varied, with particularly high growth in spending for the CNS and spine (annual increases of 12 percent, Exhibit 5). Cardiac and chest were the next most costly and showed the second highestannual increase (9 percent). The increase in costs associated with these anatomic areas resulted from the greater use of advanced and expensive imaging tests.

EXHIBIT 4
Annual Imaging Costs Per Health Plan Enrollee, 1997-2006

EXHIBIT 5
Annual Imaging Costs Per Health Plan Enrollee, By Anatomic Area, 1997-2006

The observed increase in cross-sectional imaging was due to increases in both the proportion of patients imaged and the number of imaging studies per patient. For example, the proportion of patients who underwent at least one cross-sectional imaging test in a year increased from 13.5 percent in 1997 to 21.0 percent in 2006. Among patients age sixty-five and older, the proportion who underwent at least one cross-sectional imaging test was even higher and increased from 26.9 percent in 1997 to 40.6 percent in 2006. The frequency of repeat imaging also increased over time. For example, among patients who underwent cross-sectional imaging of the abdomen, the median number of cross-sectional imaging tests increased 30 percent from 2.2 in 1997 to 2.9 in 2006 (Exhibit 6). Approximately 5 percent of patients underwent more than five cross-sectional imaging tests annually. Among patients who underwent CT, approximately 1 percent had more than ten CT scans annually.

EXHIBIT 6

Number Of Repeat Imaging Tests Within One Year Among Enrollees Who Underwent Abdominal Or Central Nervous System (CNS) Imaging, 1997-2006

Discussion

Go to:

Based on MedPAC's reports to Congress, Medicare spending for imaging services has been growing rapidly over the past decade.[11] For example, between 2000 and 2005, spending for imaging services more than doubled from $6.6 billion to $13.7 billion, an average annual growth rate twice the overall rate of growth in physician fee schedule services. In 2005 imaging services represented an estimated 14 percent of 2005 spending included in the sustainable growth rate (SGR) calculation, but represented 27 percent of the total increase in such spending between 2004 and 2005. The majority of the growth occurred for advanced imaging, including CT and MRI.

Our results build on these findings in several important ways. First, MedPAC reported the doubling in imaging-related spending only among the elderly and within four relatively broad categories. We have expanded on these results by completing detailed analysis across the entire age spectrum and broken down by anatomic area and modality. This level of detail is important, because imaging rates tend to be higher among the elderly, and trends in imaging may differ by age group and anatomic area (crudely reflecting different disease groups). Although absolute imaging rates differed by sex, age group, anatomic area, and modality, we found substantial and similar trends of increasing use across all groups, especially for MRI and CT. We demonstrated a decline in use for remarkably few tests. The

> *"Legislative efforts that focus entirely on self-referral are likely not sufficient to limit the drivers of imaging."*

broad patterns of increasing imaging among every group studied makes it clear that no single group—defined by age, sex, or disease—can be the single target of efforts to reduce the use of imaging. Our results also provide evidence that newer and more expensive technologies are being used widely as additions to the older tests, with relatively little substitution of the newer tests for the older ones. This pattern is often seen with the development of new technology.[12]

Second, previous studies on imaging trends have focused on the Medicare fee- for-service (FFS) population or patients with generous private insurance.[13] In these cases, clear financial incentives encourage increasing imaging. This is the first study to document the pattern of imaging over time in a managed care setting where no such financial incentives exist. We found rising use of imaging services among health maintenance organization (HMO) members, closely paralleling the trends found in FFS Medicare or privately insured populations. This suggests that incentives in a managed care model will not necessarily suffice to change the forces leading to increased use of advanced imaging techniques. Practice patterns occurring within the general FFS environment almost certainly extend to the managed care setting through clinical practice patterns, standards of care, and patients' expectations.

Third, and closely related, MedPAC, the American College of Radiology, and others have raised concern that self-referral could be contributing to the increase in imaging.[14] Although the Stark amendments prohibit physicians from making referrals to institutions with which they have a financial relationship, data from California suggest that physicians exploit broad exceptions to this law to self-refer patients for imaging, contributing to rising imaging rates.[15] It has been suggested that the increasing trend

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toward nonradiologist-ownership of imaging equipment may further exacerbate utilization resulting from self-referral. Yet we found a dramatic rise in the use of advanced imaging procedures in an environment with no opportunity to profit from self-referral. Thus, legislative efforts that focus entirely on self-referral are likely not sufficient to limit the drivers of imaging.

■ Rising disease prevalence

A rise in the prevalence of certain conditions and illnesses has been hypothesized to have contributed to the increase in imaging. Our detailed analyses by anatomic area do not support this hypothesis: we found no consistent shift in where in the body imaging occurred. However, we found dramatic differences in the cost of imaging associated with different anatomic areas, with the most dramatic increases for imaging of the CNS, spine, chest, and cardiac system; this primarily reflects greater relative use of CT and MRI as well as ultrasound for cardiac imaging. This suggests that certain physicians are embracing the new technology more rapidly, perhaps with greater discretionary spending in these areas.

■ Why the increase in CT and MRI?

Why have imaging rates increased so dramatically for CT and MRI, despite their high costs? One obvious explanation is that the techniques have improved so much over time that physicians may be using them for concerns that might not have prompted imaging in the past. For example, CT's speed and resolution for detecting pulmonary embolism have improved so dramatically over the past decade that CT is now the primary method used to evaluate this condition, and this has undoubtedly contributed to the dramatic rise in costs associated with imaging of the chest. However, for other areas, such as spine imaging, it is hard to document clear evidence of improved accuracy or outcomes that would have prompted such a dramatic increase in imaging based on the improvements in the technology. Patient-generated demand, physicians' fear of medical malpractice law-suits, and repeated surveillance among certain groups of patients (for example, those with cancer) almost certainly have also contributed to the increase, although it was not possible for us to quantify the importance of each. Improvements in resolution might have also led to identifying more lesions suspicious for cancer, which could have resulted in additional imaging tests for surveillance.

The supply of CT and MRI scanners has also increased dramatically, which might have contributed to further use of and spending on these services. Within Group Health, the availability of CT and MRI increased over time; thus, the dramatic rise may in part reflect pent-up demand. Rapid growth in the volume of these tests may also signal that Medicare's payments for these services are too high relative to the effort needed to provide them, and the difference in their profitability may therefore in part drive the use of these technologies. Within the radiology community, the profit margin is considered greatest for MRI (where we saw the steepest rise in imaging), followed by CT (where we saw the next-largest increase). Although such financial incentives might not have contributed directly to imaging in our managed care setting, widespread financial incentives in the FFS environment could affect clinical practice standards that extend into the managed care setting. The reimbursement schemes used by the CMS should not provide inappropriate incentives for growth in volume and intensity.

■ Connection with improved outcomes?

Our study cannot address the appropriateness of the documented increase in imaging use or whether this increase was associated with improvements in patient outcomes. Some have argued that the increase in imaging reflects improved patient care, while others have argued that the costs associated with imaging are rising out of proportion to any possible benefit. The truth likely lies somewhere between these two extremes. However, even if imaging is beneficial, the dramatic increases in costs cannot be sustained;

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thus, studies of patient outcomes are essential to help determine when imaging use is most likely to lead to improved outcomes at a cost we can afford, and conversely where value is limited or not existent. Whatever the financial structure where the imaging is provided (HMO, FFS, self-pay, or no pay), someone is bearing the substantial costs of the increase in imaging.

> *"The increased dose per CT exam, with the increased number of exams, has pushed radiation exposure into the range of concern."*

■ Increased radiation exposure

One potential harm of increased CT use bears special mention, because it is an extremely important measure of health care quality. Although CT is considered by many one of the most important technological advances in medicine, it is associated with substantial radiation exposure.[16] Radiation is of concern because extensive epidemiologic evidence has linked exposure to ionizing radiation to the subsequent development of cancer. Further, irrespective of the number of CT examinations performed, the dose per examination has also increased dramatically over the past decade, coincident with technical advances. Thus, the increased dose per exam, compounded with the increased number of examinations, has likely pushed radiation exposure into the range where carcinogenesis is of concern. David Brenner suggests that about one-third of all CT scans are unnecessary and that overusing these tests may raise the total public risk of cancer deaths due to radiation exposure in the coming decades.[17] Fred Mettler estimates that the amount of radiation from clinical imaging examinations experienced by the U.S. public has increased more than 600 percent in the past two decades.[18] Thus, diagnostic testing may expose some patients to needless risk, in addition to generating unwarranted costs. The dramatic rise in CT usage across all age groups and anatomic areas should prompt researchers to assess and quantify the risks and benefits of using it.

■ Strengths and limitations

Our study's several strengths include using data from a large integrated health care system with near-complete capture of imaging examinations, allowing us to examine detailed patterns of use by patient characteristics and across different modalities. Our study's limitations include that we likely missed imaging examinations that were not included as benefits provided by Group Health, such as coronary calcification scoring. No physician group recommends these screening studies, and Group Health does not perform them; thus, we have no way to assess how many of them might have been performed. Second, we included only a single imaging examination of the same type and anatomic area on each day of the study period. This may result in the occasional undercounting of studies. Third, use of imaging at Group Health might not be representative of imaging in other locations or within other medical fee structures. In particular, imaging rates tend to be lower in managed care settings than in FFS settings; thus, imaging rates might be even higher in other settings. However, we found that the trends in imaging among elderly Group Health enrollees resembled those documented by others among Medicare beneficiaries.

Lastly, there are numerous ways to calculate the costs associated with medical imaging, and each will reflect a different perspective (patient, provider, third-party payer, society) and emphasize a different aspect of costs (fixed equipment costs, variable costs such as payment for contrast, or professional costs related to the interpretation of the images). Changes in imaging patterns (greater reliance on outpatient imaging), differences in the reimbursement trends based on these patterns, and differences in the relative value units (RVUs) associated with specific tests can all make the interpretation of costs difficult. To simplify interpretation of the cost data, we used a single reimbursement scheme across all years of the

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study. This reflects an overview of the resource use associated with imaging. The costs cannot be seen as reflecting actual costs, but they can provide insight into the relative costs of imaging. Using this methodology, we found that the cost of imaging more than doubled over the decade of the study. Different methodologies of calculating costs might yield different results but should not affect trends, and the conclusion that the costs of imaging increased dramatically over the past ten years is unlikely to change.

Health care payers have used numerous strategies to try to slow down the soaring use of imaging, which is contributing to the rise in health care costs. The ideal way to curtail medical imaging would decrease costly yet inappropriate or ineffective imaging, while maintaining and increasing the use of imaging associated with improved health outcomes. Unfortunately, it is difficult to identify which imaging tests are most beneficial, and strategies that rely on financial disincentives tend to decrease imaging across the board, instead of selectively reducing unnecessary imaging. Cost-effectiveness and patient outcome studies are essential to decide how best to use imaging technology. Several recent studies have begun to tackle when and how best to use imaging for particular clinical questions, such as mild head trauma.[19] Given the unrelenting rise in health care spending, continued increases in imaging seem unsustainable; thus, these studies are necessary to help direct how and when to use imaging. In the absence of such studies, we should consider the development of multidisciplinary consensus processes aimed at identifying excess imaging, and perhaps use wide spread variation in testing as targets for focused efforts. At a minimum, we must consider how to limit the strong financial incentives contributing to the dramatic rise in CT and MRI.

Acknowledgments

Go to:

The authors gratefully acknowledge the help of Jane Grafton and Debbie Seger in completing the analyses for this paper.

Footnotes

Go to:

An earlier version of this paper was presented at the Fourteenth Annual HMO Research Network Conference, "Partnerships in Translation: Advancing Research and Clinical Care," 13-16 April 2008, in Minneapolis, Minnesota.

Contributor Information

Go to:

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NOTES

Go to:

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SEP 22 '17 AM10:00

SUPPLEMENTAL #1
September 22, 2017
10:08 am

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5. See Online Exhibit 1, available at http://content.healthaffairs.org/cgi/content/full/27/6/1491/DC1.

6. See Online Exhibit 2; ibid.

7. See Online Exhibit 3; ibid.

8. See Online Exhibit 4; ibid.

9. See Online Exhibit 5; ibid.

10. See Online Exhibit 6; ibid.

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19. Smits M, et al. External Validation of the Canadian CT Head Rule and the New Orleans Criteria for CT Scanning in Patients with Minor Head Injury. Journal of the American Medical Association. 2005;294(12):1519–1524. [PubMed]

Supplemental #2

Erlanger Sequatchie Valley Regional Hospital

CN1709-027

SEP 28 '17 AM 10:30

SUPPLEMENTAL #2
September 28, 2017
10:30 am

SUPPLEMENTAL INFORMATION *(No. 2)*

Chattanooga-Hamilton County Hospital Authority

D / B / A

Erlanger Sequatchie Valley Regional Hospital

Application To Relocate & Replace Existing

Inpatient Acute Medical / Surgical Services From

Erlanger Bledsoe Hospital
(Pikeville, Bledsoe County, TN)

To

Erlanger Sequatchie Valley Regional Hospital
(Dunlap, Sequatchie County, TN)

Application Number CN1709-027

ERLANGER HEALTH SYSTEM
Chattanooga, Tennessee

Supplemental Responses To Questions Of The Tennessee Health Services & Development Agency

1.) **Section B, Need, Item A (Service Specific Criteria - MRI).**

The narrative that provides calculations that demonstrates how the three county service area will generate MRI procedures and how the projected utilization of MRI procedures for the hospital was determined is noted. The applicant projected 4,806 procedures in 2020 (43,936 x .109918). However, the equation provided calculates as 4,829 procedures in 2020 rather than 4,806. Please clarify.

In addition, in 2020 to project 2,523 MRI procedures with a 50% market share, the total overall MRI utilization would need to be 5,046 rather than 4,806. Please clarify.

Also, the applicant projects 2,539 procedures in the Year 2021 using the same use rate above and a market share of 50%. However, using the use rate above (.109918) and the 2021 projected population of the service area of 43,938 (page 77 of the application) multiplied by a 50% market share, the projection calculates to 2,418 MRI procedures in Year 2021 rather than 2,539. Please clarify.

Response

The number contained in the table was an error, it should be 4,829 procedures as pointed out in the question. A revised table appears below.

Pertainng to the second and third parts of this question, it should be noted that the table contains the population based estimate as well as a growth rate for the MRI technology component equal to 5% (see note 1 on the table), this is added to the population based estimate to arrive at the service area total. The unit estimate is 50% of the service area estimated total MRI procedures. The additional 5% per year in MRI estimated procedures is reasonable due to the increasing rate of adoption for this technology (please see MRI utilization growth article submitted with supplement no. 1).

Estimated MRI Utilization
For THE Three (3) County Service Area

CY	Pop.	Project Year	Est. Pop. MRI Proc's	Growth Rate MRI Proc's	Service Area MRI Proc's	Est. Unit MRI Proc's
2020	43,936	1	4,829	241	5,070	2,535
2021	44,198	2	4,835	242	5,077	2,539
2022	44,460	3	4,863	243	5,106	2,553

(*) *NOTES* (1) Estimated growth for MRI procedures is set 5%, compared to actual growth rate of 10%.
(2) Market share is assumed at 50% for the service area.

2.) Section B, Need, Item C.

It is noted the applicant designated the year 2014 for the years 2015 and 2016 in the requested patient origin chart in Supplemental #1.Please complete the following chart by correcting the 2015 and 2016 rows of data.

PATIENT ORIGIN FOR ERLANGER BLEDSOE/
SEQUATCHIE VALLEY REGIONAL HOSPITAL

Utilization Data	Bledsoe County	Grundy County	Sequatchie County	Service Area	Other Area	Total
2014 IP Admits						
2014 % of Total						
2015 IP Admits						
2015 % of Total						
2016 IP Admits						
2016 % of Total						
Year 1 IP Admits						
Year 1 % of Total						
Year 2 IP Admits						
Year 2 % of Total						

In addition, please provide the data source for the above chart.

Why is the data in the above chart different from Joint Annual Report data?

Response

As requested, the chart has been corrected to reflect the proper years and appears below. The data source for this chart is Erlanger's internal data. The data reflects calendar year totals and admissions, whereas the Joint Annual Report data reflects fiscal year and discharges.

Patient Origin For Erlanger Bledsoe / Sequatchie Valley Regional Hospital

	Bledsoe	Grundy	Sequatchie	Svc. Area	Other	Total
2014 - I/P Admits	282		39	321	20	341
2014 - % Of Total	82.7%	0.0%	11.4%	94.1%	5.9%	100.0%
2015 - I/P Admits	314	1	32	347	32	379
2015 - % Of Total	82.8%	0.3%	8.4%	91.6%	8.4%	100.0%
2016 - I/P Admits	261	3	47	311	29	340
2016 - % Of Total	76.8%	0.9%	13.8%	91.5%	8.5%	100.0%
Year 1 - I/P Admits	300	100	375	775	67	842
Year 1 - % Of Total	35.6%	11.9%	44.5%	92.0%	8.0%	100.0%
Year 2 - I/P Admits	310	68	387	765	94	859
Year 2 - % Of Total	36.1%	7.9%	45.1%	89.1%	10.9%	100.0%

3.) Section B, Need, Item F.

As requested in supplemental #1 please provide details (narrative) of the methodology, data sources, assumptions, and rationale to project utilization in Year One and Year Two for acute and swing beds, surgical cases, MRI imaging scans, and the Erlanger Sequatchie Valley ED and Satellite ED. Please include in the inpatient discussion how the applicant projected inpatient utilization that has not attained 30% occupancy in the last three years at the Bledsoe County location and how will it will increase to over 60% occupancy at the Sequatchie County location.

Response

Acute Bed Need Methodology

According to the *Acute Care Bed Need Projections For 2017 and 2022* (based on 2015 Hospital JAR Reports), prepared by the *Tennessee Dept. of Health, Division of Health Statistics*, the bed need for the service area is eleven (11) acute care beds. This is due to the limitation

of the Tennessee bed need methodology which allocates bed need by the county in which the hospital is located. Since *Erlanger Bledsoe Hospital* is located in Bledsoe County and no hospitals are located in either Grundy County or Sequatchie County, the Tennessee methodology only recognizes acute care bed need for Bledsoe County.

With the constraint imposed by the Tennessee methodology, in a telephone conversation with Mark Farber in February, 2017, it was agreed that we should prepare an acute care bed need estimate based on utilization data from the THA inpatient data.

It should be noted that *Erlanger Bledsoe Hospital* is a critical access hospital. As such, all twenty-five (25) beds may also be utilized as "swing beds", which can accommodate either acute care or skilled nursing patients. This is very beneficial to the hospital as well as community, and is not considered in the Tennessee bed need methodology. Further, the swing beds help to keep patients in the community and discharged home.

The following table shows the adjusted bed need for the three (3) county service area.

Summary Of Inpatient Utilization
For The Three (3) County Service Area
[Excluding Pyschiatry, Substance Abuse & Rehabilitation]

		========== CY ==========			Projected
		2014	2015	2016	2022
Total	Discharges	5,849	5,915	5,708	6,029
	Patient Days	27,521	28,761	27,705	29,035
	ALOS	4.7	4.9	4.9	4.8
Total	**Gross Bed Need**	75.4	78.8	75.9	79.5
	Occupancy Adjustment	80%	80%	80%	80%
	Adjusted Bed Need	94.3	98.5	94.9	99.4
	Est. % Pt. Days -- LOS 1-4 (*)	35.1%	35.1%	35.1%	35.1%
	Est. Pt. Days (LOS 1-4)	9,660	10,095	9,724	10,191
	Est. Service Area Population	42,102	42,364	42,626	44,200
	Growth Rate - Population		0.6%	0.6%	3.7%
	Est. Use Rate - Discharges	0.138925	0.139623	0.133909	0.136417
	Est. Use Rate - Patient Days	0.653674	0.678902	0.649955	0.651815
LOS 1-4	**Gross Bed Need**	26.5	27.7	26.6	27.9
	Occupancy Adjustment	80%	80%	80%	80%
	Adjusted Bed Need	33.1	34.6	33.3	34.9
EBH	Market Share Adjustment (50%)	4,830	5,048	4,862	5,096
Census	Population Growth Adjustment (3.7%)				189
Estimate	Swing Bed Adjustment (35%)	1,691	1,767	1,702	1,850
	Estimated Patient Days	6,521	6,815	6,564	7,135
	Estimated Beds	17.9	18.7	18.0	19.5
	Occupancy Adjustment	80%	80%	80%	80%
	Estimated Beds - Adjusted	22.3	23.3	22.5	24.4

(*) *NOTES* (1) Please note that for a critical access hospital, CMS requires that ALOS not be more than 4 days (96 hours).
(2) Estimated percent of patient days pertaining to LOS 1-4 is derived from the ratio in CY 2014 (9664/27521).
(3) Actual swing bed utilization for Erlanger Bledsoe Hospital in 2015 was 61%.
(4) Population data obtained from Tennessee Dept. of Health, *Tennessee Population Estimates 2017 and 2021*.

The average length of stay for critical access hospitals is set to a maximum by CMS, at 4 days. Therefore, the inpatient hospital discharges from the service area which comprise LOS between 1-4 days is the target patient population to be served by this hospital.

The market share assumption of 50% represents an estimate which is assumed. We agreed that we should not

assume a market share rate any greater than 50%, however, there is a real possibility that market share could be higher.

As an illustration for how the gross bed need was calculated, for 2014, the total patient days for the service area was 27,521. This was divided by 365 days in a year, to determine the average number of beds to be occupied daily. As per note 2 in the table … in 2014, 9,664 patient days were explained in which patients had an LOS 1-4, which is 35.1% of the total number of 27,521 patient days for the service area (9,664 / 27,521 = 35.1%). The 9,664 patient days for LOS 1-4 was multiplied by the market share assumption of 50% to obtain 4,830 patient days (9,664 x 50% = 4,830).

For the swing bed adjustment, in 2015 the total patient days for swing beds was 61%, although we assumed only 35% for this need model. Therefore, the number of patient days is estimated at 1,691 (4,830 x 35% = 1,691). This yields a total estimated patient days for 2014 of 6,521 (4,830 + 1,691 = 6,521). The total estimated patient days are then divided by 365 days in a year, to yield the estimated beds occupied each day at 17.9 (6,521 / 365 = 17.9). Then the 17.9 estimated beds occupied was divided by .80 to adjust for 80% occupancy, which results in a final adjusted bed need estimate of 22.3 acute care beds (17.9 / .80 = 22.3).

The methodology outlined is applicable to all years in the table. Re-location of the hospital from Bledsoe County to Sequatchie County will result in significantly higher utilization of the facility from being centrally located in this rural service area. The occupancy will grow from 30% currently to approximately 60% upon re-location to Sequatchie County.

Surgery

All of the surgery at *Erlanger Sequatchie Valley Regional Hospital* is expected to be performed on an outpatient basis. The primary surgical group for *Erlanger Health System* is *University Surgical Associates* ("USA"). Extensive discussions were held with USA pertaining to how *Erlanger Sequatchie Valley Regional Hospital* could be utilized for surgical cases. During those discussions, an

article appeared in the *Journal Of The American Medical Association* pertaining to surgery at critical access hospitals which played a significant role (copy attached).*(1)* This research identified several procedures which could be performed at critical access hospitals, as follows …

- Appendectomy
- Cholecystectomy
- Colectomy
- Hernia Repair

The surgical volumes were determined in consultation with USA as to what the surgeons believed would be reasonable to perform at *Erlanger Sequatchie Valley Regional Hospital*, a critical access hospital.

MRI Methodology

The service area MRI total procedures was calculated using the Agency's data for MRI utilization for 2015 … *Number Of Procedures By Patient Destination - 2015*. For Bledsoe County there were 924, Sequatchie County 1,374, and Grundy County 1,284 … for a service area total of 3,582. This yields a use rate of .084553 (3,582 / 42,364 = .084553).

Knowing that MRI utilization is increasing at a rate faster than other healthcare services, we adjusted the use rate by 30% to account for growth in utilization of this technology (.084553 x 1.30 = .109918). The adjustment to the use rate is based primarily on research which shows that over a 10 year period, MRI utilization had increased by 300%, or roughly 30% per year. We adopted a rate of only 30% to allow for growth in a rural service area. In 2020, the estimated 4,806 procedures is the result (43,936 x .109918 = 4,829). These same calculations are applicable to 2021 and 2022.

For the MRI unit to be located at *Erlanger Sequatchie Valley Regional Hospital*, the market share assumption is 50%, which is the same as the market share assumption for the inpatient bed need calculation. Thus, a projected

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1 Ibrahim, Andrew M. *Association Of Hospital Critical Access Status With surgical Outcomes & Expenditures Among Medicare Beneficiaries*. Journal Of The American Medical Association, May 17, 2016, vol. 315 – number 19, pp. 2095-2103.

utilization of 2,523 procedures in 2020, 2,539 in 2021, and 2,553 in 2021.

Emergency Departments

The projected utilization for the ED at *Erlanger Sequatchie Valley Regional Hospital* is estimated at 2% growth per year, and the projected utilization for the provider based ED in Bledsoe County is estimated at 1.4% growth per year.

4.) Section B, Economic Feasibility, Item E.

The revised table on page 94 is noted. However, the gross charge ($69,164) and average net charge ($21,739) for the previous year column appears to be calculated incorrectly. Please revise and submit a replacement page 94 (94-R2).

Response

As requested, the table has been corrected and a replacement page is attached to this supplemental information.

5.) Section B, Quality Measures.

Please discuss the applicant's commitment to the proposal in meeting appropriate quality standards by addressing the following factor:

(a) Whether the applicant will participate, within 2 years of implementation of the project, in self-assessment and external peer assessment processes used by health care organizations to accurately assess their level of performance in relation to established standards and to implement ways to continuously improve.

(g) This may include accreditation by any organization approved by Center for Medicare and Medicaid Services (CMS) and other nationally recognized programs. The Joint Commission or its successor would be acceptable

if applicable. Other acceptable organizations may include, but are not limited to, the following:

American College of Radiology for Positron Emission Tomography, Magnetic Resonance Imaging and Outpatient Diagnostic Center projects;

Response

The applicant will participate, within 2 years of implementation of the project, in self-assessment and external peer assessment processes used by healthcare organizations to accurately assess its level of performance in relation to established standards and to implement ways to continuously improve.

Erlanger Bledsoe Hospital and it's provider based ED are currently accredited by *The Joint Commission*. If approved, *Erlanger Sequatchie Valley Regional Hospital* and it's provider based ED will also be accredited by *The Joint Commission*, as are all Erlanger facilities. *The Joint Commission* is a CMS approved accreditation organization.

SUPPLEMENTAL #2
September 28, 2017
10:30 am

SEP 28 '17 AM 10:30

A F F I D A V I T

STATE OF TENNESSEE |
|
COUNTY OF HAMILTON |

NAME OF FACILITY Erlanger Sequatchie Valley Regional Hospital

I, Joseph M. Winick, after first being duly sworn, State under oath that I am the applicant named in this Certificate of Need application or the lawful agent thereof, that I have reviewed all of the supplemental information submitted herewith, and that it is true, accurate, and complete.

SIGNATURE

SWORN to and subscribed before me this 26 of September (Month), 2017 (Year), a Notary Public in and for the State of Tennessee, County of Hamilton.

SHELIA HALL STATE OF TENNESSEE NOTARY PUBLIC HAMILTON COUNTY

Shelia Hall
NOTARY PUBLIC

My commission expires June 9 (Month / Day), 2018.

SUPPLEMENTAL #2

September 28, 2017
10:30 am

ATTACHMENTS

5. **A. Please identify the project's average gross charge, average deduction from operating revenue, and average net charge using information from the Projected Data Chart for Year 1 and Year 2 of the proposed project. Please complete the following table.**

	Previous Year	*Current Year*	*Year 1*	*Year 2*	*% Change -- Current Year To Year 2*
Gross Charge (Gross Operating Revenue / Utilization Data)					
Deduction From Revenue (Total Deductions / Utilization Data)					
Average Net Charge (Net Oper. Revenue / Utilization Data)					

Response

As requested, the table has been completed.

	Previous Year	*Current Year*	*Year 1*	*Year 2*	*% Change -- Current Year To Year 2*
Gross Charge (Gross Operating Revenue / Utilization Data)	98,182	78,072	51,876	54,686	-29.9%
Deduction From Revenue (Total Deductions / Utilization Data)	67,468	56,641	35,497	37,943	-33.0%
Average Net Charge (Net Oper. Revenue / Utilization Data)	30,714	21,431	16,379	16,743	-21.9%

B. Provide the proposed charges for the project and discuss any adjustment to current charges that will result from the implementation of the proposal. Additionally, describe the anticipated revenue from the project and the impact on existing patient charges.

Response

Please see the list of average patient charges below, by service line for *Erlanger Bledsoe Hospital*. Applicant does revise it's patient charge structure on a periodic basis (i.e.-annually) during the budget cycle each fiscal year. However, applicant does not anticipate any changes to existing patient charges specifically as a result of this project.

SUPPLEMENTAL #2
September 28, 2017
10:30 am

Original Investigation

Association of Hospital Critical Access Status With Surgical Outcomes and Expenditures Among Medicare Beneficiaries

Andrew M. Ibrahim, MD; Tyler G. Hughes, MD; Jyothi R. Thumma, MPH; Justin B. Dimick, MD, MPH

Supplemental content at jama.com

CME Quiz at jamanetworkcme.com and CME Questions page 2119

IMPORTANCE Critical access hospitals are a predominant source of care for many rural populations. Previous reports suggest these centers provide lower quality of care for common medical admissions. Little is known about the outcomes and costs of patients admitted for surgical procedures.

OBJECTIVE To compare the surgical outcomes and associated Medicare payments at critical access hospitals vs non-critical access hospitals.

DESIGN, SETTING, AND PARTICIPANTS Cross-sectional retrospective review of 1 631 904 Medicare beneficiary admissions to critical access hospitals (n = 828) and non-critical access hospitals (n = 3676) for 1 of 4 common types of surgical procedures—appendectomy, 3467 for critical access and 151 867 for non-critical access; cholecystectomy, 10 556 for critical access and 573 435 for non-critical access; colectomy, 10 198 for critical access and 577 680 for non-critical access; hernia repair, 4291 for critical access and 300 410 for non-critical access—between 2009 and 2013. We compared risk-adjusted outcomes using a multivariable logistical regression that adjusted for patient factors (age, sex, race, Elixhauser comorbidities), admission type (elective, urgent, emergency), and type of operation.

EXPOSURES Undergoing surgical procedures at critical access vs non-critical access hospitals.

MAIN OUTCOMES AND MEASURES Thirty-day mortality, postoperative serious complications (eg, myocardial infarction, pneumonia, or acute renal failure and a length of stay >75th percentile). Hospital costs were assessed using price-standardized Medicare payments during hospitalization.

RESULTS Patients (mean age, 76.5 years; 56.2% women) undergoing surgery at critical access hospitals were less likely to have chronic medical problems, and they had lower rates of heart failure (7.7% vs 10.7%, $P < .0001$), diabetes (20.2% vs 21.7%, $P < .001$), obesity (6.5% vs 10.6%, $P < .001$), or multiple comorbid diseases (% of patients with ≥2 comorbidities; 60.4% vs 70.2%, $P < .001$). After adjustment for patient factors, critical access and non-critical access hospitals had no statistically significant differences in 30-day mortality rates (5.4% vs 5.6%; adjusted odds ratio [OR], 0.96; 95% confidence interval [CI], 0.89-1.03; $P = .28$). However, critical access vs non-critical access hospitals had significantly lower rates of serious complications (6.4% vs 13.9%; OR, 0.35; 95% CI, 0.32-0.39; $P < .001$). Medicare expenditures adjusted for patient factors and procedure type were lower at critical access hospitals than non-critical access hospitals ($14 450 vs $15 845; difference, −$1395, $P < .001$).

CONCLUSIONS AND RELEVANCE Among Medicare beneficiaries undergoing common surgical procedures, patients admitted to critical access hospitals compared with non-critical access hospitals had no significant difference in 30-day mortality rates, decreased risk-adjusted serious complication rates, and lower-adjusted Medicare expenditures, but were less medically complex.

JAMA. 2016;315(19):2095-2103. doi:10.1001/jama.2016.5618

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Critical access hospital designation was created to help ensure access to the more than 59 million people living in rural populations.[1] Established in 1997 under the Medicare Rural Hospital Flexibility Program when policy makers were worried these hospitals would close due to financial hardship, the critical access hospital provision entitled hospitals to increased reimbursements if they had fewer than 25 inpatient beds and were located more than 35 miles away from another hospital.[2] More than 1300 hospitals enrolled in this program, but concern about the resultant Medicare budget growing to more than $9 billion annually led government agencies and advisory groups to call for modification and even elimination of the critical access designation.[3-6] Advocates for critical access hospitals argue that changes would be disruptive to communities that heavily rely on them for their health care.[7,8]

Debates about the value of critical access hospitals continue with limited evidence about the clinical outcomes and costs to Medicare in these settings. Increased mortality rates and worse process of care measures have been reported for common medical admissions at critical access hospitals[9,10]; however, far less is known about patients undergoing surgical procedures. To date the largest study of surgical outcomes captures only approximately one-third of critical access hospitals and lacks postdischarge follow-up and payment information.[11] Nevertheless, this single study found no difference in postoperative mortality rates suggesting that critical access hospitals may provide comparable surgical care with their acute care counterparts. Whether these findings are representative of surgical care across all critical access hospitals and what the costs are to Medicare remain unknown.

The purpose of this study was to evaluate outcomes and costs among Medicare beneficiaries undergoing surgical procedures at critical access and non-critical access hospitals.

Methods

Data Source and Hospital Designation

Data from the Medicare Provider Analysis and Review (MEDPAR) file between 2009 and 2013[26] were used for this study. This represented 5 years of the most recent data available and also a time period after nearly all (1277 of 1333; 95.7%) of the current critical access hospitals had undergone designation.[12] MEDPAR Hospital provider numbers that included "13" in the third and fourth positions were identified as critical access hospitals.[13] This study was approved by the University of Michigan Investigational Review Board and deemed exempt due to use of secondary data.

Identification of Procedures and Study Cohort

Using procedure codes from the *International Classification of Diseases, Ninth Revision, Clinical Modification* (*ICD-9-CM*), a subset of general surgery procedures that would be commonly performed at both critical access and non-critical access hospitals were identified. Because larger, complex operations (eg, pancreatic and esophageal resection) are not typically performed at critical access hospitals, the most common operations performed in that setting were chosen; appendectomy (*ICD-9-CM* codes 47.01, 47.09, 47.11, 47.19), cholecystectomy (*ICD-9-CM* codes 51.22, 51.23, 51.24), colectomy (*ICD-9-CM* codes 45.70, 45.71, 45.72, 45.73, 45.74, 45.75, 45.76, 45.79, 17.31 to 17.39, 45.80) and hernia repair (*ICD-9-CM* codes 53.41, 53.42, 53.43, 53.49, 53.51, 53.59, 53.61, 53.62, 53.63, 53.69). These operations represent the 4 most common inpatient general surgery procedures performed at critical access hospitals. In review of the data, 0.004% of patients were missing information on race, and they were excluded.

Outcome Variables

Outcomes between critical access and non-critical access hospitals were assessed by determining rates of mortality, overall complications, serious complications, reoperations, and readmissions. Mortality in the hospital was determined by vital status at the time of discharge. Additionally, the Medicare beneficiary denominator file was used to ascertain any mortality occurring within 30 days of the index operation. The latter approach identified patients who died after discharge from their index admission or after transfer to another facility.

Complications were identified with *ICD-9-CM* codes using methods previously described and validated.[14,15] Overall complications included pulmonary failure, pneumonia, myocardial infarction, deep venous thrombosis, acute renal failure, postoperative hemorrhage, surgical-site infection, and gastrointestinal bleeding. Serious complications were defined as having at least 1 complication and a length of stay higher than the 75th percentile for the specific procedure that was performed previously in the administrative claims databases to improve specificity.[16,17]

Similarly, reoperation and readmission within 30 days was identified using *ICD-9-CM* codes in methods that have been previously used for surgical cohorts.[18,19] Outcomes were reported for all procedures combined as well as for each procedure group. Patients who were transferred during hospitalization were categorized based on the location of their index operation.

Medicare Payments

Medicare payments from MEDPAR were used to explore if location of care—critical access vs non-critical access hospitals—was associated with any difference in expenditures. Because there is wide variation in hospital charges that may not reflect the actual financial expense to Medicare, the analysis herein used Medicare payments. The total episode payment was defined as the sum of diagnosis related group payments, outlier payments, and payments for readmissions within 30 days of discharge.

To compare Medicare expenditures at critical access hospitals with non-critical access hospitals, actual payments (unadjusted) and price-standardized payments were examined. Actual Medicare payments were chosen because they represent the bottom line to Medicare, ie, as the actual

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amount paid to the hospital. For additional comparison, price-standardized payments were also evaluated.

This analysis was done because payments from Medicare are determined in part by geography (to account for variation in cost of living and the wage index) and the setting in which they provide care (eg, if hospitals care to a disproportionate share of low-income patients or participate in graduate medical education.) By removing these intended adjustments, the comparison of price-standardized amounts provides better insight into differences in resource use between critical access and non-critical access hospitals. For price standardization, this study used methods described initially by the Medicare Payment Advisory Commission[21,22] and later by the Dartmouth Institute to account for these adjustments,[22] as has been done in multiple previous reports using MEDPAR data to examine payments for surgical procedures.[17,23] Furthermore, because data were assessed over a 5-year period, payment amounts were adjusted to 2013 dollars to account for inflation.

Statistical Analysis

The first step of the analysis compared hospital and patient characteristics for critical access and non-critical access hospitals. Hospital characteristics included bed size, teaching status, geography, staffing ratios, surgical volume, and frequency of each procedure type. These were compared using χ^2 and Wilcoxon rank sum tests as appropriate. Similar comparisons of patient characteristics were carried out including age, sex, race, comorbidities, admission type, distance traveled to hospital for care, and destination after discharge (eg, home, transferred, skilled nursing facility.)

The second step of the analysis was to determine whether a difference existed in clinical outcomes or Medicare payments at critical access vs non-critical access hospitals. To evaluate postoperative outcomes, a multivariable logistical regression model was created with each outcome (eg, all complications, mortality, readmission, etc) as a dependent variable. The model was developed using a backward stepwise logistic regression including multiple patient and operation-level variables such as age, sex, race, comorbidities (as outlined previously by Elixhauser et al[24] and Southern et al[25]), admission type (elective, urgent, emergency), and a variable indicating the type of operation. Secular trends were accounted for by including the year of operation as a categorical variable. The model was then used to calculate a risk-adjusted rate for each outcome.

Multiple strategies were used to evaluate the statistical performance of the regression models. First, discrimination was assessed with receiver operating characteristic curves and a *C* statistic was calculated for each outcome (average *C* statistic of 0.77; eTable1 in the Supplement). Next, the calibration of each model was evaluated with a goodness-of-fit test that demonstrated a good match between observed and expected outcomes across all deciles of risk. For each independent variable, the variation inflation factor was calculated with no evidence of multicollinearity (all variance inflations factors were <1.3; eTable2 in the Supplement).

To test for possible nesting effects of patients within hospitals, a 2-tier hierarchical model was created using patient factors (level 1) and hospital factors (level 2). There was no difference in these point estimates generated by the hierarchical model compared with the multivariable regression model that used robust standard errors to account for clustering (eTable3 in the Supplement). Finally, the day of admission (weekday vs weekend) was added into the regression model and demonstrated no significant effect on the results (eTable4 in the Supplement).

Medicare payments were then compared between critical access and non-critical access hospitals. After log transformation to account for their nonparametric distribution, payments were compared in 3 different forms: (1) actual Medicare payments before any adjustment; (2) after risk-adjustment for patient characteristics, procedure type, and type of admission; and (3) after additional price standardization. To adjust for clustering within hospitals, robust standard errors were used for all models.

All reported *P* values were 2-sided and a value of <.05 was used as threshold for significance. All statistical analyses were completed with STATA version 14 (STATA Corp).

Results

Significant differences existed between patients treated at critical access vs non-critical access hospitals. Patients undergoing surgical procedures at critical access hospitals were less likely to have common or multiple comorbid conditions (Table 1). They had lower rates of heart failure, diabetes, obesity, or multiple comorbidities (% of patients with ≥2 comorbidities; 60.4% vs 70.2%, $P < .001$). Emergency operations were more common at non-critical access hospitals (44.6% vs 27.4%, $P < .001$). When comparing discharge destination, patients treated at critical access hospitals were less likely to use skilled nursing care (27.1% vs 37.9%, $P < .001$). A higher proportion of patients at critical access hospitals were transferred to another acute care hospital than those treated in non-critical access hospitals (4.7% vs 0.8%, $P < .001$).

Non-critical access hospitals had significant structural differences compared with critical access hospitals. Non-critical access hospitals on average had more operating rooms (8 vs 2), more inpatient beds (>250 beds; 28.6% vs 0.0%) and higher nursing ratios (Table 2). Despite size and resource differences, both types of hospitals performed a similar proportion of the 4 operations examined (eg, colectomy represented approximately 36% of surgical volume for both types of hospitals). Non-critical access hospitals had a higher annual median surgical volume than critical access hospitals (1624 vs 140, $P < .001$). Of the 1277 hospitals with a critical access designation during the study period, 828 (64.8%) performed at least 1 of the 4 operations examined.

For common surgical procedures, patients at critical access hospitals had either no significantly different or lower risk-adjusted clinical outcomes compared with

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Table 1. Patient Characteristics at Critical Access and Non-Critical Access Hospitals[a]

	No. (%) of Patients		
	Critical Access Hospitals	Non-Critical Access Hospitals	*P* Value
No. of patients	28 512	1 603 392	
Demographic characteristics			
Age, mean (SD), y	76.5 (7.6)	75.7 (7.4)	<.001
Men	12 497 (43.8)	701 101 (43.7)	.72
White	27 454 (96.3)	1 391 263 (86.8)	<.001
Comorbidities[b]			
Hypertension	16 548 (58.0)	1 024 777 (63.9)	<.001
Fluid and electrolyte disorders	6141 (21.5)	443 694 (27.7)	<.001
Diabetes	5747 (20.2)	347 990 (21.7)	<.001
Chronic pulmonary disease	4389 (15.4)	289 450 (18.1)	<.001
Deficiency anemias	4096 (14.4)	251 775 (15.7)	<.001
Hypothyroidism	3597 (12.6)	213 397 (13.3)	.001
Congestive heart failure	2195 (7.7)	171 694 (10.7)	<.001
Metastatic cancer	1813 (6.4)	115 959 (7.2)	<.001
Obesity	1844 (6.5)	170 456 (10.6)	<.001
Depression	1770 (6.2)	106 464 (6.6)	.003
Renal failure	1605 (5.6)	165 317 (10.3)	<.001
Other neurological disorders	1516 (5.3)	80 775 (5.0)	.04
Weight loss	1268 (4.4)	156 976 (9.8)	<.001
Peripheral vascular disease	1239 (4.3)	108 594 (6.8)	<.001
Valvular disease	931 (3.3)	87 020 (5.4)	<.001
Solid tumor	701 (2.5)	46 157 (2.9)	<.001
Rheumatoid arthritis	665 (2.3)	41 442 (2.6)	.005
Coagulopathy	578 (2.0)	71 822 (4.5)	<.001
Liver disease	531 (1.9)	42 907 (2.7)	<.001
Psychoses	495 (1.7)	28 348 (1.8)	.68
Elixhauser comorbidities			
0	4311 (15.1)	145 727 (9.1)	<.001
1	6990 (24.5)	332 621 (20.7)	<.001
≥2	17 211 (60.4)	1 125 044 (70.2)	<.001
Discharge location			
Home	19 214 (67.4)	962 837 (60.1)	<.001
Skilled nursing facility, rehabilitation	7724 (27.1)	607 525 (37.9)	<.001
Transferred	1348 (4.7)	12 506 (0.8)	<.001
Other	148 (0.5)	3688 (0.2)	<.001
Hospice	77 (0.3)	16 996 (1.1)	<.001
Distance traveled for care, median (IQR), miles	6.5 (1.6-14.4)	6.8 (3-17)	<.001
Distance traveled for care, mi			
<10	17 370 (60.9)	982 559 (61.3)	.22
≥10 to <30	8665 (30.4)	385 295 (24.0)	<.001
≥30 to <60	1223 (4.3)	118 491 (7.4)	<.001
>60	1255 (4.4)	116 887 (7.3)	<.001
Type of admission			
Emergency	7822 (27.4)	714 792 (44.6)	<.001
Urgent	8162 (28.6)	235 218 (14.7)	<.001
Elective	12 528 (43.9)	653 382 (40.7)	<.001
Type of operation			
Appendectomy	3467 (12.2)	151 867 (9.5)	<.001
Cholecystectomy	10 556 (37.0)	573 435 (35.8)	<.001
Colectomy	10 198 (35.8)	577 680 (36.0)	.36
Hernia repair	4291 (15.1)	300 410 (18.7)	<.001

Abbreviation: IQR, interquartile range.

Conversion factor: to convert miles to kilometers, multiply by 1.6.

[a] Data are from Medicare Claims, 2009-2013.[26]

[b] Comorbid diseases as defined by the Healthcare Cost and Utilization Project, of note, deficiency anemias are categorized to contrast acute blood loss anemia. Similarly, *Other neurologic disorders* describes a group of chronic underlying neurologic diseases (eg, Alzheimer) as opposed acute process (eg, acute cerebral vascular accident). Full definitions of codes used can be found here: https://www.hcup-us.ahrq.gov/toolssoftware/comorbidity/comorbidity.jsp.

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Table 2. Hospital Characteristics at Critical Access and Non-Critical Access Hospitals[a]

	No. (%) of Critical Access Hospitals (n = 828)	No. (%) of Non-Critical Access Hospitals (n = 3676)	P Value
No. of patients	28 512	1 603 392	
Ownership			
For-profit	33 (4.0)	890 (25.2)	
Nonprofit	467 (57.0)	2105 (59.7)	<.001
Other	319 (38.9)	531 (15.1)	
Beds			
<250	828 (100.0)	2516 (71.4)	
≥250 to <500	0	744 (21.1)	<.001
>500	0	266 (7.5)	
Geographic region, No. (%)			
Northeast	51 (6.2)	522 (14.8)	
Midwest	450 (54.9)	801 (22.7)	<.001
South	147 (17.9)	1559 (44.2)	
West	171 (20.9)	644 (18.3)	
Surgical volume per hospital, median (IQR)[b]	140 (56-278)	1624 (650-3669)	<.001
Surgical volume of Medicare patients per hospital, median (IQR)			
Appendectomy	3 (1-6)	26 (7-59)	<.001
Cholecystectomy	8 (3-18)	100 (27-228)	<.001
Colectomy	8 (2-18)	92 (21-226)	<.001
Hernia repair	3 (1-7)	44 (11-116)	<.001
Teaching hospital	43 (5.3)	1121 (31.8)	<.001
No. of operating rooms, median (IQR)	2 (2-3)	8 (4-13)	<.001
Nurse ratio (patient census/nurses), median (IQR)[c]	9 (4-14)	7 (5-9)	<.001

Abbreviation: IQR, interquartile range.

[a] Data are from Medicare Claims, 2009-2013[26] and the American Hospital Association.[27]

[b] Data reported to the American Hospital Association, represents annual volume of surgical procedures performed.

[c] Nursing ratio was determined using data from the American Hospital Association and represents the patient census divided by number of nurses.

non-critical access hospitals. Critical access hospitals had lower rates of in-hospital mortality (2.9% vs 3.9%; adjusted odds ratio [OR], 0.69; 95% CI, 0.62-0.77; $P < .001$) and no difference in 30-day mortality (5.4% vs 5.6%; OR, 0.96; 95% CI, 0.89-1.03; $P = .28$). Critical access hospitals also had lower rates of serious complications (6.4% vs 13.9%; OR, 0.35; 95% CI, 0.32-0.39; $P < .001$) and overall complications (17.5% vs 25.4%; OR, 0.55; 95% CI, 0.52-0.58; $P < .001$). In contrast, critical access hospitals had higher rates of readmission within 30 days than non-critical access hospitals (14.7% vs 13.3%; OR, 1.13; 95% CI, 1.08-1.18; $P < .001$). Repeat subgroup analysis for each individual procedure (appendectomy, cholecystectomy, colectomy, hernia repair) demonstrated similar findings (Table 3). Unadjusted rates of clinical outcomes are reported in eTable 5 in the Supplement.

Critical access hospitals had lower Medicare payments for common surgical procedures than non-critical access hospitals. When examining all procedures combined, actual Medicare payments at critical access hospitals were $5980 lower than non-critical access hospitals ($15 094 vs $21 074, $P < .001$). After both risk-adjustment and price-standardization, payments to critical access hospitals remained lower than non-critical access hospitals ($14 450 vs $15 845; difference −$1395, $P < .001$). Similar differences were found between payments across each of the procedures examined individually (Table 4).

Discussion

This study had 2 principal findings regarding how surgical care is delivered at critical access hospitals. First, the study found that performance of 4 common surgical procedures at critical access hospitals was associated with no difference in 30-day mortality and lower complication rates compared with non-critical access hospitals. Second, despite the reimbursement structure for critical access hospitals established in the Medicare Rural Hospital Flexibility Program, there was no evidence of higher expenditures for common surgical procedures. Both of these findings contrast previously published literature about nonsurgical admissions in these same settings and inform legislators about the valuable role critical access hospitals provide in the US health care system.

Previous studies examining outcomes at critical access hospitals have raised concern about the quality of care provided. A recent study of Medicare beneficiaries admitted for acute myocardial infarction, heart failure, or pneumonia to critical access hospitals reported worse mortality rates and lower adherence to process measures of care.[9] A follow-up study for the same medical conditions from 2002 to 2010 found that mortality rates at critical access hospitals actually increased, despite additional funding for quality improvement efforts.[10] However, these differences in

Table 3. Postperative Complications at Critical Access and Non-Critical Access Hospitals[a]

	Risk Adjusted Rates (95% CI), %				
	Critical Access Hospitals (n = 28 512)	Non-Critical Access Hospitals (n = 1 603 392)	Absolute Difference	Risk-Adjusted Odds Ratio[b]	P Value
All Procedures Combined					
Mortality, 30-d	5.4 (5.1 to 5.7)	5.6 (5.5 to 5.7)	−0.2 (−0.5 to 0.2)	0.96 (0.89 to 1.03)	.28
Mortality, in-hospital	2.9 (2.6 to 3.1)	4.0 (3.9 to 4.1)	−1.1 (−1.3 to −0.8)	0.69 (0.62 to 0.77)	<.001
Any complication	17.5 (16.9 to 18.2)	25.4 (25.3 to 25.6)	−7.9 (−8.6 to −7.2)	0.55 (0.52 to 0.58)	<.001
Serious complications	6.4 (5.9 to 6.8)	13.9 (13.7 to 14.1)	−7.5 (−7.9 to −7.0)	0.35 (0.32 to 0.39)	<.001
Reoperations	0.6 (0.5 to 0.7)	0.6 (0.6 to 0.6)	0.0 (−0.1 to 0.1)	0.98 (0.81 to 1.20)	.88
Readmissions	14.7 (14.2 to 15.2)	13.3 (13.2 to 13.4)	1.4 (0.9 to 2.0)	1.13 (1.08 to 1.18)	<.001
Appendectomy					
Mortality, 30-d	2.7 (2.1 to 3.3)	3.1 (3.0 to 3.2)	−0.4 (−0.9 to 0.2)	0.86 (0.68 to 1.10)	.23
Mortality, in-hospital	1.4 (0.9 to 1.8)	2.1 (2.0 to 2.2)	−0.8 (−1.2 to −0.4)	0.61 (0.44 to 0.84)	.003
Any complication	13.7 (12.5 to 15.0)	20.8 (20.6 to 21.1)	−7.1 (−8.3 to −5.8)	0.53 (0.46 to 0.61)	<.001
Serious complications	6.4 (5.5 to 7.3)	12.8 (12.6 to 13.0)	−6.4 (−7.3 to −5.4)	0.39 (0.32 to 0.47)	<.001
Reoperations	0.3 (0.1 to 0.5)	0.5 (0.4 to 0.5)	−0.1 (−0.3 to 0.1)	0.71 (0.40 to 1.29)	.26
Readmissions	10.7 (9.6 to 11.7)	11.2 (11.0 to 11.3)	−0.5 (−1.6 to 0.6)	0.95 (0.85 to 1.06)	0.37
Cholecystectomy					
Mortality, 30-d	3.3 (2.9 to 3.7)	3.6 (3.5 to 3.7)	−0.3 (−0.7 to 0.1)	0.90 (0.79 to 1.03)	.12
Mortality, in-hospital	1.3 (1.1 to 1.5)	2.2 (2.1 to 2.2)	−0.9 (−1.1 to −0.6)	0.58 (0.47 to 0.72)	<.001
Any complication	13.2 (12.4 to 14.0)	21.7 (21.5 to 21.9)	−8.6 (−9.3 to −7.8)	0.48 (0.45 to 0.52)	<.001
Serious complications	5.0 (4.5 to 5.5)	12.1 (11.9 to 12.3)	−7.1 (−7.7 to −6.6)	0.32 (0.28 to 0.36)	<.001
Reoperations	0.2 (0.1 to 0.3)	0.3 (0.3 to 0.3)	−0.1 (−0.2 to 0.1)	0.75 (0.49 to 1.16)	.20
Readmissions	15.0 (14.2 to 15.7)	12.8 (12.7 to 12.9)	2.2 (1.4 to 2.9)	1.21 (1.14 to 1.28)	<.001
Colectomy					
Mortality, 30-d	9.2 (8.5 to 9.8)	9.1 (9.0 to 9.2)	0.0 (−0.6 to 0.7)	1.00 (0.92 to 1.10)	.93
Mortality, in-hospital	5.3 (4.8 to 5.8)	6.9 (6.8 to 7.0)	−1.6 (−2.1 to −1.0)	0.73 (0.65 to 0.83)	<.001
Any complication	23.7 (22.7 to 24.7)	31.6 (31.4 to 31.8)	−8.0 (−8.9 to −6.9)	0.59 (0.54 to 0.63)	<.001
Serious complications	7.6 (6.9 to 8.3)	16.1 (15.9 to 16.2)	−8.4 (−9.1 to −7.7)	0.36 (0.32 to 0.40)	<.001
Reoperations	1.1 (0.9 to 1.4)	1.0 (0.9 to 1.1)	0.1 (−0.1 to 0.4)	1.16 (0.92 to 1.46)	.22
Readmissions	16.7 (15.8 to 17.5)	14.8 (14.7 to 14.9)	1.8 (0.9 to 2.7)	1.15 (1.08 to 1.23)	<.001
Hernia Repair					
Mortality, 30-d	3.6 (3.0 to 4.2)	3.7 (3.6 to 3.8)	−0.1 (−0.7 to 0.5)	0.96 (0.79 to 1.17)	.68
Mortality, in-hospital	1.9 (1.4 to 2.4)	2.6 (2.5 to 2.7)	−0.7 (−1.1 to −0.2)	0.71 (0.55 to 0.93)	.01
Any complication	16.3 (15.2 to 17.4)	22.9 (22.7 to 23.2)	−6.6 (−7.7 to −5.5)	0.58 (0.52 to 0.64)	<.001
Serious complications	7.0 (6.1 to 7.8)	13.7 (13.5 to 13.9)	−6.7 (−7.5 to −5.9)	0.38 (0.33 to 0.45)	<.001
Reoperations	0.5 (0.3 to 0.7)	0.6 (0.6 to 0.6)	−0.1 (−0.3 to 0.1)	0.84 (0.53 to 1.32)	.45
Readmissions	12.3 (11.3 to 13.3)	12.3 (12.1 to 12.4)	0.1 (−1.0 to 1.1)	1.01 (0.91 to 1.11)	.91

[a] Data are from Medicare Claims, 2009-2013.[26]

[b] Risk-adjustment for patient characteristics, procedure type, and type of admission.

mortality between critical access vs non-critical access hospitals have not been observed for surgical procedures. For example, work done by Gadzinski and colleagues[11] evaluated patients in the National Inpatient Sample, a 20% stratified sampled of nonfederal hospitals in the United States, and found no difference in in-hospital mortality for multiple surgical procedures.

The present study goes beyond these findings by assessing a wider range of surgical outcomes and evaluating all critical access hospitals in the United States performing common surgical procedures in Medicare beneficiaries.

Although the data from this study cannot identify a clear mechanism for the contrast between medical and surgical outcomes, the findings do suggest several possible explanations. First, with surgery, critical access hospitals have the opportunity to select appropriate candidates before deciding whether to operate. In this study, critical access hospitals generally operated on fewer complex patients (vs non-critical access hospitals) and demonstrated relatively low postoperative transfer rates (4.8% in this study compared with ≤29% reported for medical admissions[9,10]). These findings are consistent with the dual role rural surgeons perform in providing safe local care on appropriately selected patients but also in triaging higher-risk patients to larger centers before an operation. For medical conditions, which are less elective than the surgical procedures that we studied it is often not possible to make decisions before hospitaliza tion occurs.

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Table 4. Payments per Patient for Surgical Admission at Critical Access and Non-Critical Access Hospitals[a]

	Mean Payments (95% CI), $			
	Critical Access Hospitals (n = 28 512)	Non-Critical Access Hospitals (n = 1 603 392)	Difference	P Value
All Procedures Combined				
Actual Medicare payments[b]	15 094 (14 890-15 297)	21 074 (21 030-21 118)	−5980	<.001
Risk-adjusted payments[c]	15 787 (15 692-15 882)	19 437 (19 416-19 457)	−3650	<.001
Risk-adjusted and price-standardized payments[d]	14 450 (14 377-14 522)	15 845 (15 830-15 860)	−1395	<.001
Appendectomy				
Actual Medicare payments[b]	13 103 (12 578-13 627)	17 163 (17 046-17 281)	−4061	<.001
Risk-adjusted payments[c]	13 861 (13 628-14 094)	16 230 (16 173-16 287)	−2369	<.001
Risk-adjusted and price-standardized payments[d]	12 553 (12 376-12 730)	13 471 (13 429-13 513)	−918	<.001
Cholecystectomy				
Actual Medicare payments[b]	11 960 (11 683-12 238)	17 696 (17 633-17 758)	−5735	<.001
Risk-adjusted payments[c]	12 301 (12 199-12 404)	16 581 (16 559-16 604)	−4280	<.001
Risk-adjusted and price-standardized payments[d]	11 378 (11 301-11 455)	13 607 (13 590-13 624)	−2229	<.001
Colectomy				
Actual Medicare payments[b]	19 924 (19 547-20 301)	27 129 (27 044-27 214)	−7205	<.001
Risk-adjusted payments[c]	21 147 (20 979-21 315)	24 668 (24 630-24 707)	−3521	<.001
Risk-adjusted and price-standardized payments[d]	19 104 (18 976-19 232)	19 863 (19 834-19 891)	−759	<.001
Hernia Repair				
Actual Medicare payments[b]	13 104 (12 563-13 644)	18 137 (18 044-18 230)	−5033	<.001
Risk-adjusted payments[c]	13 465 (13 251-13 679)	16 645 (16 602-16 687)	−3180	<.001
Risk-adjusted and price-standardized payments[d]	12 624 (12 459-12 788)	13 785 (13 753-13 817)	−1161	<.001

[a] Data are from Medicare Claims, 2009-2013.[26]

[b] Total Medicare payment to hospital before any adjustments

[c] Payment adjusted for patient characteristics, procedure type, and type of admission.

[d] Payment priced standardized for hospital and geographic variation and adjusted for patient characteristics, procedure type, and type of admission.

Second, this study only includes a subset of relatively well-resourced critical access hospitals; ie, those with the capabilities to perform inpatient general surgery. These hospitals likely have more staff and resources than do the larger population of critical access hospitals that offer medical care.

Another important finding from this study was that critical access hospitals were less likely to refer patients to rehabilitation or skilled nursing facilities after discharge. Although this finding may simply represent a healthier patient population or less complex surgical procedures at critical access hospitals, it could also reflect limited access to postdischarge care that has been previously described in rural settings.[28] Specifically, patients were much less likely to be discharged to postacute care facilities (27.1% vs 37.9%) from critical access than from non-critical access hospitals. This lower use of postdischarge care at critical access hospitals could in turn account for the higher rate of readmission observed in this study.

This study should be interpreted within the context of certain limitations. First, administrative data have well-known limitations for assessing comorbid conditions and ascertaining complications of care factors.[29,30] To minimize any potential coding bias, this study used selected codes from the Complication Screening Project that significantly increase the specificity of detecting complications in claims data.[14,15] In addition, an extended length-of-stay criteria was applied to increase the specificity of the complication measures. This approach has been demonstrated to more accurately capture complicated hospital courses.[31] Moreover, other sources of data (eg, clinical registries) with more detailed clinical and payer information do not include the majority of rural and critical access hospitals.[32,33]

Second, because non-critical access hospitals are reimbursed based on disease severity and have more resources, they may be more thoroughly documenting diagnoses codes. As a result, this study could potentially overestimate complication rates and comorbidities of patients treated at non-critical access hospitals. However, the comparisons between critical access vs non-critical access hospitals were consistent in measures that were not sensitive to this type of coding bias (eg, mortality rates, reoperations, expenditures) making the differences found in this study unlikely to be due to documentation alone.

Finally, by using Medicare data, this study population did not include many younger patients who also seek care at critical access hospitals. Although this group of younger patients is important to evaluate, the Medicare Rural Affordability Program in the Balanced Budget Act of 1997 was specifically designed for Medicare beneficiaries and as such, evaluation in Medicare data are most relevant to policy makers.

This study may have important policy implications for payers and policy makers responding to mandates in the Affordable Care Act to evaluate health care services for rural Americans. First, patients in rural settings are sometimes

reluctant to travel for surgical care, even when told it would lead to a better outcome.[34] These same patients may often prefer follow-up locally, independent of where their initial operation occurred. Recent evidence suggests that, among patients requiring rehospitalization, admission to the same hospital where they had surgery improved survival.[35] Maintaining payment policies that secure safe, local surgical care allows rural clinicians to accommodate strong patient preferences without putting them at increased risk of undergoing common operations. Second, although currently exempt from Hospital-Value Based Purchasing, and many other payment reforms, these findings suggest that critical access hospitals may benefit from participating in these reforms. By providing comparable outcomes at a lower cost for common surgical procedures, critical access hospitals may find it profitable to enroll in bundled payment programs.

Third, although only a minority of critical access hospitals (≈5%) are currently participating in Medicare accountable care organizations (ACOs), they may find that creating a network relationship with larger facilities located in the nearest metropolitan area could facilitate the important role they are already playing in triaging and transferring patients to higher levels of care when needed. Nevertheless, critical access hospitals and rural surgical practices may have difficulty meeting the reporting and regulatory requirements of these new payment models.

Conclusions

Among Medicare beneficiaries undergoing common surgical procedures, patients admitted to critical access hospitals compared with non-critical access hospitals had no significant difference in 30-day mortality rates, decreased risk-adjusted serious complication rates, and lower-adjusted Medicare expenditures, but were less medically complex.

ARTICLE INFORMATION

Author Contributions: Dr Ibrahim and Ms Thumma had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.
Study concept and design: Ibrahim, Hughes, Dimick.
Acquisition, analysis, or interpretation of data: Ibrahim, Thumma, Dimick.
Drafting of the manuscript: Ibrahim, Thumma, Dimick.
Critical revision of the manuscript for important intellectual content: Ibrahim, Hughes, Dimick.
Statistical analysis: Ibrahim, Thumma, Dimick.
Obtained funding: Dimick.
Administrative, technical, or material support: Dimick.
Study supervision: Hughes, Dimick.

Conflict of Interest Disclosures: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Dr Dimick is a cofounder and has a financial interest in ArborMetrix Inc, which had no role in the analysis herein, and has received grant support from the Agency for Healthcare Research and Quality, personal fees from the National Institutes of Health, and honoraria from Stanford and Emory universities and the University of Texas. No other disclosures were reported.

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Role of the Funder/Sponsor: The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

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Southern Hills Surgery Center
CN1411-047A
Docket No.: 25.00-131649J

Supplemental #3

Erlanger Sequatchie Valley Regional Hospital

CN1709-027

SEP 29 '17 AM 11:01

SUPPLEMENTAL #3
September 29, 2017
11:01 am

SUPPLEMENTAL INFORMATION *(No. 3)*

Chattanooga-Hamilton County Hospital Authority

D / B / A

Erlanger Sequatchie Valley Regional Hospital

Application To Relocate & Replace Existing

Inpatient Acute Medical / Surgical Services From

Erlanger Bledsoe Hospital
(Pikeville, Bledsoe County, TN)

To

Erlanger Sequatchie Valley Regional Hospital
(Dunlap, Sequatchie County, TN)

Application Number CN1709-027

ERLANGER HEALTH SYSTEM
Chattanooga, Tennessee

Supplemental Responses To Questions Of The Tennessee Health Services & Development Agency

1.) Section B, Economic Feasibility, Item E (Average gross Charge, average deduction from operating revenue, and average net charge).

The revised table on page 94R2 is noted. However, the gross charge ($69,164) and average net charge ($21,739) for the previous year column appears to be calculated incorrectly because it was taken from the "Total Facility" Historical Data Chart rather than the "Project Only" Historical Data Chart. The correct previous year average gross charge from the "Project Only" Historical Data Chart = $69,018 ($28,228,188 Gross Revenue/409 Admissions), Average Deduction from Revenue = $47,426 ($19,397,222 Total Deductions/409 Admissions), and Average Net Operating Revenue= $21,592 ($8,830,966 Net Operating Revenue/409 Admissions). Please revise and submit a replacement page 94 (94-R3).

Response

As requested, the table has been corrected and a replacement page is attached to this supplemental information.

ATTACHMENTS

5. A. Please identify the project's average gross charge, average deduction from operating revenue, and average net charge using information from the Projected Data Chart for Year 1 and Year 2 of the proposed project. Please complete the following table.

	Previous Year	*Current Year*	*Year 1*	*Year 2*	*% Change -- Current Year To Year 2*
Gross Charge (Gross Operating Revenue / Utilization Data)					
Deduction From Revenue (Total Deductions / Utilization Data)					
Average Net Charge (Net Oper. Revenue / Utilization Data)					

Response

As requested, the table has been completed.

	Previous Year	*Current Year*	*Year 1*	*Year 2*	*% Change -- Current Year To Year 2*
Gross Charge (Gross Operating Revenue / Utilization Data)	69,018	78,072	51,876	54,686	-29.9%
Deduction From Revenue (Total Deductions / Utilization Data)	47,426	56,641	35,497	37,943	-33.0%
Average Net Charge (Net Oper. Revenue / Utilization Data)	21,592	21,431	16,379	16,743	-21.9%

B. Provide the proposed charges for the project and discuss any adjustment to current charges that will result from the implementation of the proposal. Additionally, describe the anticipated revenue from the project and the impact on existing patient charges.

Response

Please see the list of average patient charges below, by service line for *Erlanger Bledsoe Hospital*. Applicant does revise it's patient charge structure on a periodic basis (i.e.-annually) during the budget cycle each fiscal year. However, applicant does not anticipate any changes to existing patient charges specifically as a result of this project.

SUPPLEMENTAL #3
September 29, 2017
11:01 am

A F F I D A V I T

STATE OF TENNESSEE |
|
COUNTY OF HAMILTON |

NAME OF FACILITY Erlanger Sequatchie Valley Regional Hospital

I, Joseph M. Winick, after first being duly sworn, State under oath that I am the applicant named in this Certificate of Need application or the lawful agent thereof, that I have reviewed all of the supplemental information submitted herewith, and that it is true, accurate, and complete.

SIGNATURE

SWORN to and subscribed before me this 29 of September (Month), 2017 (Year), a Notary Public in and for the State of Tennessee, County of Hamilton.

SHELIA HALL
STATE OF TENNESSEE NOTARY PUBLIC
HAMILTON COUNTY

Shelia Hall
NOTARY PUBLIC

My commission expires June 9 (Month / Day), 2018.