September 14, 2016

Mr. Kevin Spiegel, Administrator
Erlanger Medical Center
975 E 3rd St
Chattanooga TN 37403

RE: 44-0104

Dear Mr. Spiegel:

The East Tennessee Region of Health Care Facilities conducted a complaint investigation on July 19, 2016. An on-site revisit was conducted on September 07, 2016. Based on the on-site revisit and review of your plan of correction, we are accepting your plan of correction and your facility is in compliance with all participation requirements as of September 07, 2016

If you have any questions, please contact the East Tennessee Regional Office by phone: 865-594-9396 or by fax: 865-594-5739.

Sincerely.

Tamra Turberville/cw

Tamra Turberville, RN
Regional Administrator
East TN Health Care Facilities

TT: cw

TN00039251

August 3, 2016

Tamra Turberville, RN
Regional Administrator
State of Tennessee Department of Health
East TN Health Care Facilities
Division of Health Licensure and Regulation
7175 Strawberry Plains Pike, Ste 103
Knoxville, TN 37914

Erlanger Health System
975 East Third Street
Chattanooga, TN 37403
Provider Number: 44-0104

Ms. Turberville,

Enclosed you will find the plan of correction for the finding during the complaint investigation conducted at Erlanger East Campus on July 19, 2016. You will receive a faxed copy today and a hard copy delivered tomorrow by FedEx. If you have any questions or need additional information please contact me at 423-778-3341.

Thank you,

Debbie Shepherd, BSN, RN
Erlanger Health System
Corporate Preparedness Officer/Corporate Safety Officer

PRINTED: 07/21/2016
FORM APPROVED

Division of Health Care Facilities

STATEMENT OF DEFICIENCIES AND PLAN OF CORRECTION	(X1) PROVIDER/SUPPLIER/CLIA IDENTIFICATION NUMBER:	(X2) MULTIPLE CONSTRUCTION A. BUILDING: 02 - EAST WOMENS PAVILION B. WING	(X3) DATE SURVEY COMPLETED
	TNP531140		C 07/19/2016

NAME OF PROVIDER OR SUPPLIER: ERLANGER MEDICAL CENTER

STREET ADDRESS, CITY, STATE, ZIP CODE: 975 E 3RD ST, CHATTANOOGA, TN 37403

(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
H 887	1200-8-1-.08 (17) Building Standards (17) The licensed contractor shall not install a system of water supply, plumbing, sewage, garbage or refuse disposal nor materially alter or extend any existing system until the architect or engineer submits complete plans and specifications for the installation, alteration or extension, to the department demonstrating that all applicable codes have been met and the department has granted necessary approval. (a) Before the hospital is used, Tennessee Department of Environment and Conservation shall approve the water supply system. (b) Sewage shall be discharged into a municipal system or approved package system where available; otherwise, the sewage shall be treated and disposed of in a manner of operation approved by the Department of Environment and Conservation and shall comply with existing codes, ordinances and regulations which are enforced by cities, counties or other areas of local political jurisdiction. (c) Water distribution systems shall be arranged to provide hot water at each hot water outlet at all times. Hot water at shower, bathing and hand washing facilities shall be between 105°F and 115°F. This Rule is not met as evidenced by: Based on testing and interview the facility failed to provide hot water at each hot water outlet at all times. Finds include:	H 887	H 887 1200-8-1-.08 (17) Building Standards **The findings included:** (C) Water distribution systems shall be arranged to provide hot water at each hot water outlet at all times. Hot water at shower, bathing and hand washing facilities shall be between 105 degrees F and 115 degrees F. The rule was not met as evidenced by: Based on testing and interview the facility failed to provide hot water at each hot water outlet at all times. **Plan of Correction Responsibility:** The Chief Operating Officer and the Vice President of Facilities, and Construction Services has the responsibility for the corrective action and ongoing compliance. **When/How Corrected:** The hot water temperature was temporarily corrected on July 19 by opening the hot water loop to the area affected and eliminating a mixing valve in the environmental services closet that had a significant crossover issue. This temporary correction provided a continuous hot water flow to the area. The affected area was the Medical/Surgical Unit on the Erlanger Women's East Campus, ground level.	July 19, 2016

Division of Health Care Facilities
LABORATORY DIRECTOR'S OR PROVIDER/SUPPLIER REPRESENTATIVE'S SIGNATURE: [signature] TITLE: Executive Vice President + Chief Medical Officer (X6) DATE: 8/3/2016

EVP/CMO 3 Aug 16

PRINTED: 07/21/2016
FORM APPROVED

Division of Health Care Facilities

STATEMENT OF DEFICIENCIES AND PLAN OF CORRECTION	(X1) PROVIDER/SUPPLIER/CLIA IDENTIFICATION NUMBER:	(X2) MULTIPLE CONSTRUCTION A. BUILDING: 02 - EAST WOMENS PAVILION B. WING	(X3) DATE SURVEY COMPLETED
	TNP531140		C 07/19/2016

NAME OF PROVIDER OR SUPPLIER: ERLANGER MEDICAL CENTER

STREET ADDRESS, CITY, STATE, ZIP CODE: 975 E 3RD ST CHATTANOOGA, TN 37403

(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
H 887	Continued From page 1 Testing and interview with maintenance, on 7/19/16 between 11:00 AM and 12:35 PM revealed the facility failed to maintain hot water in the surgical services area of the facility. The following hot water temperatures were identified: Kitchen of surgical services- 89.3 degrees at 12:31 PM Breakroom of surgical services- 100 degrees at 12:20 PM Patient room 8715- 79 degrees at 12:35 PM Patient room 8716- 80.3 at 12:27 PM Patient room 8718- 74.8 at 12:32 PM These findings were verified by maintenance and acknowledged by the executive assistant administrator via phone during the exit conference on 7/19/16.	H 887	The permanent corrective action plan is as follows: 1. A site visit by a local engineering company was conducted on July 25, 2016; 2. After review of the plans by the engineer, the recommendation of correction was to install a hot water recirculation line in the Medical/Surgical Unit on the Erlanger Women's East Campus, ground level. 3. The hot water recirculation line was installed on July 27, 2016. The hot water loop to the area will continue to remain open providing hot water until the recirculation line is balanced by the plumbing contractor onsite -- to be completed by August 30, 2016. 4. A high and low alarm for the hot water system will be added to the building management system for Erlanger Women's East by August 30, 2016. The installation of these alarms will notify engineering personnel of any out of range water temperature 24 hours per day/7 days/week. **Monitoring of the Corrective Action(s)** Monitoring will be ongoing (24 hours/day/7 days/week) by the energy management system for Erlanger Health System after the installation of the high and low alarm for the hot water system for the Erlanger Women's East building. Completion date August 30, 2016. In addition, the Erlanger building engineers will perform temperature checks on the hot water system as part of the daily building mechanical systems rounds.	July 25, 2016 July 27, 2016 August 30, 2016 August 30, 2016 Ongoing August 30, 2016 Ongoing

Supplemental #1 (Copy)

Erlanger Medical Center

CN1802-011

MAR 16 '18 AM 10:36

Supplemental #1
March 16, 2018
10:36 A.M.

SUPPLEMENTAL INFORMATION

Chattanooga-Hamilton County Hospital Authority

D / B / A

Erlanger Medical Center - Provider Based ED / Trauma Center & Cardiac Catheterization Laboratory

Application To Initiate A

Provider Based (Free Standing) Emergency Department,

Cardiac Catheterization Laboratory

As

Erlanger Medical Center - Provider Based ED / Trauma Center & Cardiac Catheterization Laboratory

(Cleveland, Bradley County, TN)

Application Number CN1802-011

ERLANGER HEALTH SYSTEM
Chattanooga, Tennessee

Supplemental Responses To Questions Of The Tennessee Health Services & Development Agency

1.) Section A, Applicant Profile.

Please include a zip code for the applicant and submit a replacement page 3, labeled as 3R.

Response

The zip code has been added and the replacement page is attached to this supplemental information.

2.) Section A, Executive Summary.

It is noted the proposed satellite ED will be a designated as a Level IV trauma center. Please clarify if the designation will be for both adult and pediatric patients.

Please provide an overview of the five levels of trauma centers and elements that included in each.

What is the distance from the proposed satellite ED site to Tennova Healthcare Cleveland located at 2305 Chambliss Avenue, NW, Cleveland, TN, Erlanger Medical Center located at 975 East Third Street, Chattanooga, TN 37403 and Children's Hospital @ Erlanger 910 Blackford Street, Chattannoga, TN 37403? Also, in your response please note whether the distance is east or west of the proposed facility.

Please clarify if Erlanger Medical Center is a designated burn center. If not, where are burn patients referred for treatment?

Please indicate how many patients are referred to Erlanger Medical Center's Trauma Units in 2017 from Tennova Healthcare-Cleveland.

The open letter dated September 27, 2005 from Bradley County Mayor D. Gary Davis regarding charity care is noted. In 2016 what was Tennova Healthcare Cleveland's percentage of charity care in relation to gross sales compared to the hospital industry average

for Tennessee?

The bar chart displaying uncompensated care cost on page 6 is noted. Please clarify if contractual adjustments and provision for bad debt is included in the uncompensated care cost.

What is the difference between uncompensated care and charity care?

Please demonstrate how the applicant concluded the Erlanger East ED should accommodate a capacity of 25,000 ED visits per year under American College of Emergency Physicians (ACEP) standards.

It is noted 27.2% of ED patients out-migrated from the proposed service area in 2016. What is the data source?

What are the advantages for a service area patient in need of emergency services to bypass a full service hospital (Tennova Healthcare Cleveland) that has a diagnostic and therapeutic cath lab and go to a satellite ED?

The Option to Purchase Agreement between Cleveland Exit 20, GP and Erlanger Health System notes the remainder of the 15 acre parcel property (12.10 acres) will be used for health related purposes. Is the applicant planning to build a future hospital on the remaining parcel of land where the proposed satellite ED is planned to be located?

What experience does the applicant have in operating an FSED that also contains a cath lab? Are there any similar models currently located in Tennessee?

According to a recent article in the Cleveland Daily Banner (http://clevelandbanner.com/stories/exit-20,75023), it appears there are 200 acres of commercial and retail property at exit 20 that is being developed by Larry Armour (representative of Cleveland Exit 20, GP). In addition, there also appears to be a future 300 acre industrial park (Spring Branch Industrial Park) and two major hotels which will also be located near the exit. Please provide an overview of how these future developments

affected the decision to locate the proposed FSED on exit 22.

What is the distance from the proposed ED site to Chattanooga's Volkswagen Assembly plant?

According to TDOT, how many vehicles travel through the Exit 20 interchange daily.

The letter dated November 17, 2017 from Louie Alford, Bradley County Commission Chairman is noted. In the letter Mr. Alford states the following "it's reassuring to know a Level I Trauma Center would be available in life threatening situations". Please clarify if Mr. Alford was referring to the Erlanger Level I trauma center that already exists in Hamilton County, or if he is under the assumption the proposed Erlanger Bradley County satellite ED project will be a Level I trauma center.

The September 29, 2005 letter from the Bradley County Mayor is noted. Please provide support letters from the Bradley County Mayor or other public officials in support of the proposed ED/cath project.

Response

The provider based Cleveland ED will contain a Level IV trauma center, such designation will be for both adult & pediatric patients.

As requested, an overview of the five (5) levels of trauma centers is provided.

Trauma Center Levels

Trauma categories vary from state to state. Outlined below are common criteria for Trauma Centers verified by the American college of Surgeons (ACS) and also designated by states and municipalities. Facilities are designated/verified as Adult and/or Pediatric Trauma Centers. It is not uncommon for facilities to have different designations for each group (i.e.-a Trauma Center may be a Level I Adult facility and also a Level II Pediatric Facility).

Level I

A Level I Trauma Center is a comprehensive regional resource that is a tertiary care facility central to the trauma system. A Level I Trauma Center is capable of providing total care for every aspect of injury - from prevention through rehabilitation.

Elements of Level I Trauma Centers Include:

- 24-hour in-house coverage by general surgeons, and prompt availability of care in specialties such as orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology, internal medicine, plastic surgery, oral and maxillofacial, pediatric and critical care.
- Referral resource for communities in nearby regions.
- Provides leadership in prevention, public education to surrounding communities.
- Provides continuing education of the trauma team members.
- Incorporates a comprehensive quality assessment program.
- Operates an organized teaching and research effort to help direct new innovations in trauma care.
- Program for substance abuse screening and patient intervention.
- Meets minimum requirement for annual volume of severely injured patients.

Level II

A Level II Trauma Center is able to initiate definitive care for all injured patients.

Elements of Level II Trauma Centers Include:

- 24-hour immediate coverage by general surgeons, as well as coverage by the specialties of orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology and critical care.
- Tertiary care needs such as cardiac surgery, hemodialysis and microvascular surgery may be referred to a Level I Trauma Center.
- Provides trauma prevention and continuing education programs for staff.
- Incorporates a comprehensive quality assessment program.

Level III

A Level III Trauma Center has demonstrated an ability to provide prompt assessment, resuscitation, surgery,

intensive care and stabilization of injured patients and emergency operations.

Elements of Level III Trauma Centers Include:

- 24-hour immediate coverage by emergency medicine physicians and the prompt availability of general surgeons and anesthesiologists.
- Incorporates a comprehensive quality assessment program.
- Has developed transfer agreements for patients requiring more comprehensive care at a Level I or Level II Trauma Center.
- Provides back-up care for rural and community hospitals.
- Offers continued education of the nursing and allied health personnel or the trauma team.
- Involved with prevention efforts and must have an active outreach program for its referring communities.

Level IV

A Level IV Trauma Center has demonstrated an ability to provide advanced trauma life support (ATLS) prior to transfer of patients to a higher level trauma center. It provides evaluation, stabilization, and diagnostic capabilities for injured patients.

Elements of Level IV Trauma Centers Include:

- Basic emergency department facilities to implement ATLS protocols and 24-hour laboratory coverage. Available trauma nurse(s) and physicians available upon patient arrival.
- May provide surgery and critical-care services if available.
- Has developed transfer agreements for patients requiring more comprehensive care at a Level I or Level II Trauma Center.
- Incorporates a comprehensive quality assessment program.
- Involved with prevention efforts and must have an active outreach program for its referring communities.

Level V

A Level V Trauma Center provides initial evaluation, stabilization and diagnostic capabilities and prepares patients for transfer to higher levels of care.

Elements of Level V Trauma Centers Include:

- Basic emergency department facilities to implement ATLS

Protocols.
- Available trauma nurse(s) and physicians available upon patient arrival.
- After-hours activation protocols if facility is not open 24-hours a day.
- May provide surgery and critical-care services if available.
- Has developed transfer agreements for patients requiring more comprehensive care at a Level I though III Trauma Centers.

The distance from the proposed ED site to *Tennova Healthcare - Cleveland* at 2305 Chambliss Avenue, is approximately 6.5 miles northeast. The distance from the proposed ED site to *Erlanger Medical Center* at 975 East 3rd Street, is approximately 27.2 miles southeast. The distance from the proposed ED site to *Children's Hospital @ Erlanger* at 910 Blackford Street, is approximately 27.3 miles southeast.

Erlanger Medical Center is not a designated burn center. Burn patients are referred to Vanderbilt University Medical Center in Nashville, Tennessee, and also to Doctor's Hospital in Augusta, Georgia.

Erlanger Medical Center and *Children's Hospital @ Erlanger* receive trauma patients almost every day from Bradley County. Following is a summary of trauma patients received from Bradley County in CY 2016.

Trauma Patients From Bradley County For CY 2016

	Transfer From Tennova - Cleveland	Other (EMS, Helicopter, Private Vehicle, etc.)	Total
Adult	161	119	280
Pediatric	18	21	39
Total	179	140	319

These patient counts are consistent with national trauma data standards. It should be noted that the total number of EMS transports from Bradley County were 1,109 in 2017. The trauma transports are only a component of the total number of EMS transports.

Tennova Healthcare – Cleveland provided a total of $2,311,103 for inpatient and outpatient charity care in 2016, which represents 0.2% on gross revenue of $1,141,919,751, according to the 2016 Tennessee Joint Annual Report. Research on charity care (copy attached) shows that the parent organization to Tennova, Community Health Systems ("CHS"), provides a lower percentage of charity care at 0.35%, compared to the non-profit average of 5.21%.

Within the context of the executive summary (section A-3.A) of the CON application, the terms "charity care" and "uncompensated care" have been used interchangeably to indicate a very high level of health services which have been rendered, for which no compensation is received. Charity care is delivered with no expectation of compensation, and uncompensated care is delivered with some expectation of compensation. In 2017, the ED at *Erlanger East Hospital* had 34,799 visits and is expected to have 37,235 visits in 2018, which is significantly more than it was designed for. In 2017, the ED at *Erlanger East Hospital* had an occupancy rate of 116%, based on volume capacity as specified by ACEP.

As to how applicant concluded that *Erlanger East Hospital* had a capacity of 25,000 visits, this was an error. Using the standard number of rooms for ED design, as promulgated by the *American College of Emergency Physicians*, the standard number of visits for an ED with 17 spaces is 30,000. Applicant apparently obtained the number of 25,000 visits from the line in the table which specified 15 ED spaces (directly above the line for ED's with 17 spaces). With the estimated 37,000 visits (approximately) in 2018, this would make the ED at *Erlanger East Hospital* over capacity by approximately 23.3% (37,000 / 30,000 = 23.3%). Stated otherwise, the occupancy rate in 2018 is expected to be 123.3%.

For the table "Analysis Of ED Visits By Patient Destination" for the defined service area, which shows significant outmigration from the service area in 2016, the data source is the *Tennessee Hospital Association* (THA) Health Information Network, which aggregates data from the Tennessee *Hospital Discharge Database System* (HDDS).

It would be advantageous for a patient in need of trauma care to be seen at the proposed ED vs. a full service hospital (*Tennova Healthcare - Cleveland*) in order to avoid being taken to Chattanooga for care should trauma level services be required. With no trauma facilities in Bradley and Polk counties, the proposed ED can accelerate the care provided either on site or via the *Erlanger Trauma Network* when a higher level of care may be in order.

Erlanger Health System does not currently have a plan to build a hospital on the proposed site where the satellite ED/trauma center will be located.

We anticipate that the proposed ED/trauma center will be located central to the hub of economic and commercial development in Bradley County. The site was selected in order to foster access to those in need from both Polk and Bradley counties, particularly as growth increases and commercial and industrial development progresses.

The distance from the location of the proposed ED/trauma center to Chattanooga's Volkswagen assembly plant is approximately 12.1 miles.

There is not a TDOT station located at Exit 20 on Interstate 75 for traffic counts. According to TDOT station no. 000060, located approximately 3.7 miles north of Exit 20, in 2016 there was an average of 49,171 vehicles per day. According to TDOT station no. 000206, located approximately 4.9 miles south of Exit 20, in 2016 there was an average of 61,530 vehicles per day. Therefore, the number of vehicles passing through Exit 20 is somewhere between 49,171 - 61,530 vehicles per day, or an average of 55,350 vehicles per day.

Erlanger Health System has significant experience in operating a free-standing ED with Erlanger Bledsoe Hospital's FSED in Dunlap, Sequatchie County, Tennessee. Erlanger does not have experience with this unique combination of services, specifically an FSED with a cardiac catheterization laboratory. *Erlanger* does operate a cardiac catheterization laboratory at *Erlanger East Hospital*, where therapeutic procedures are performed and no open heart surgery is performed. We are not aware of any other hospital in Tennessee which currently operates and FSED with a cardiac catheterization laboratory.

Mr. Louie Alford, Bradley County Commission Chair, was referring to the proposed Level IV trauma center to be developed by Erlanger in Bradley County.

Attached to this supplemental information is a letter of support from Dr. David Darden, in a letter to the editor of the Cleveland Daily Banner. Applicant is currently in the process of obtaining additional letters of support from elected officials and others, and they will be provided prior to the Agency hearing date on which this CON application is considered.

3.) Section A, Project Details, Item 4.A (Type Of Ownership).

Please provide documentation of the active status of the entity from the Secretary of State's website.

Please describe the existing or proposed ownership structure of the applicant.

Response

The *Chattanooga-Hamilton County Hospital Authority* D/B/A *Erlanger Health System*, is a political sub-division of the State of Tennessee. It is a governmental unit. The hospitals which comprise *Erlanger Health System* are all part of, and fully owned by, the hospital authority. They operate as components of the hospital authority. The hospital authority was created by a private act of the *Tennessee General Assembly* in 1977 (Private Chapter No. 125, Senate Bill No. 1499, Private Acts of 1977, as amended). A copy of the Act along with a certificate of the Secretary of State in 1977, Gentry Crowell, was provided with the CON application.

Due to the creation of the hospital authority by the *Tennessee General Assembly* and being a political sub-division of the *State of Tennessee*, the hospital authority does not derive it's legal authorization to conduct business through the Secretary of State's office, as would normally be represented by a corporate legal entity. Notwithstanding the foregoing, however, the Chattanooga-Hamilton County Hospital Authority has registered with the *Secretary of State* for the State of Tennessee's office as a Nonprofit Corporation. A copy of a recent *Certificate of*

Existence/Authorization is attached to this supplemental information.

4.) Section A, Project Details, Item B.

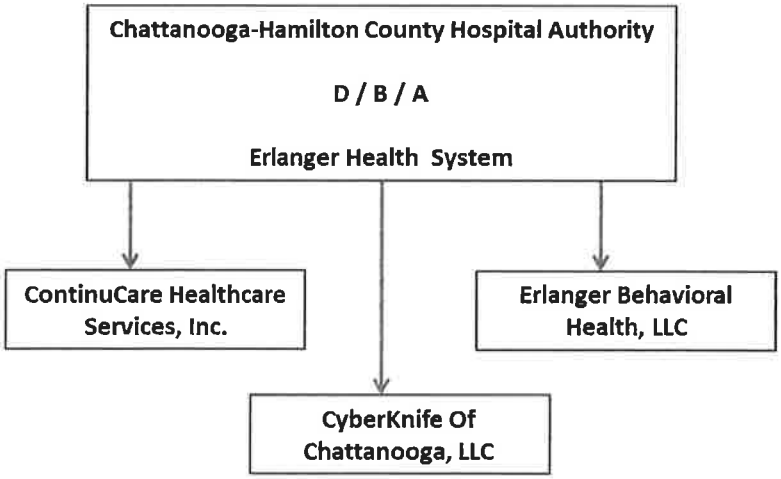
Please describe the existing ownership structure of the applicant, including an ownership structure organizational chart.

Response

The *Chattanooga-Hamilton County Hospital Authority* D/B/A *Erlanger Health System*, is a political 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, and operate as 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, *CyberKnife Of Chattanooga, LLC*, and *Erlanger Behavioral Health, LLC*.

The ownership structure organizational chart is below.



5.) Section A, Project Details, Item 6.A (Legal Interest In The Site).

The option to purchase between Cleveland Exit 20, GP, and Erlanger Health System is noted. Please provide

a deed that confirms Cleveland Exit 20, GP, has control of the proposed site.

It appears the applicant does not currently own the property for the proposed project. Please check "B. Option To Purchase" and submit a replacement page 15 labeled as 15R.

Please clarify what is currently located on the 15 acre parcel the applicant will purchase that includes the proposed project's 2.9 acre lot.

Please describe the exit (to include the business and traffic lights) where the proposed ED will be located.

Response

As requested, a copy of the deed showing that Cleveland Exit 20, GP, has control of the proposed site is attached to this supplemental information.

A replacement page "15-R" has been corrected and is attached to this supplemental information.

Currently, the 15 acre parcel which applicant will purchase, is vacant.

Exit 20 and Cherokee Gateway Blvd., where the proposed ED/trauma center will be located, is a major interchange running North and South which was recently completed, connecting with US Interstate 75 (running North and South) via US Highway 74/Tennessee Highway 40 (running East and West). The location affords easy access to those in need of trauma/emergency care from both Bradley and Polk counties. Some 500 acres of planned development are in process at, or contiguous to, the site by private and public developers. Currently, the area is home to automobile dealers and a regional movie theatre. Traffic lights are posted at the US Interstate 75 interchange, and also at Cherokee Gateway Blvd.

6.) Section A, Item 6.B(1), Plot Plan.

The plot plan is noted. Please label the names of the streets, roads or highway that cross or border the site and submit a revised plot plan.

Response

As requested, a revised plot plan is attached to this supplemental information.

7.) Section A, Item 6.B(2), Floor Plan.

Please complete the following chart for the hospital ED's the applicant proposes to decompress and the proposed ED.

Patient Care Areas other than Ancillary Services	# Current Hospital ED	# Current Combined EDs	# Proposed Satellite ED	# Proposed Combined EDs
Exam/Treatment Rooms				
Multipurpose				
Gynecological				
Holding/Secure/Psychiatric				
Isolation				
Orthopedic				
Trauma				
Other				
Triage Stations				
Decontamination Rooms/Stations				
Total				
Useable SF of Main and Satellite ED's				

In April 2016, a revised publication of the Emergency Department Design: A Practical Guide to Planning was released. Please complete the following chart using pages 116 and 117 of the publication.

Emergency Department Design: A Practical Guide to Planning, 2016, American College of Emergency Physicians-High and Low Estimates for dept. areas and beds							
Projected Annual Visit	*Dept. Gross Area*		*Bed Quantities*				
	Low Range	*High Range*	*Low Range Bed Qty.*	*Low Range Visits/Bed*	*High Range Bed Qty.*	*High Range Visits/Bed*	*Estimated Area /Bed*
Erlanger Main Campus							
Erlanger							

East							
Other							
Applicant- Satellite ED							
Projected Visits Yr. 1	*Total Gross Square Footage*	*Beds*			*Visits Per Bed*		*Estimated Area /Bed*

What are the dimensions of the proposed project's waiting room? How many people will it accommodate?

Response

As requested, the chart showing the current configuration of the ED's has been completed.

Patient Origin For Erlanger Bledsoe / Sequatchie Valley Regional Hospital

	========== Erlanger Med Ctr	Current ED's Children's @ Erlanger	========== Erlanger East	Total Current ED's	Proposed ED	Total Proposed Combined ED's
Exam / Treatment Rooms	27	13	18	58	7	65
Multi-Purpose	6	4		10		10
Gynecological	1			1		1
Holding / Secure / Psychiatric			1	1	1	2
Isolation		2		2	1	3
Orthopedic				0		0
Trauma	1	2		3	1	4
Other		8		8	4	12
Triage Stations	2	2	2	6	1	7
Decontamination Rooms / Stations	1		1	2	1	3
Total	38	31	22	91	16	107
Useable SF Of Main & Satellite ED's	22,632	13,591	23,535	59,758	12,383	72,141

In discussion with Mark Farber on Tuesday, March 6, 2018, he indicated that we didn't need to complete the second chart of this question, which is titled "*Emergency Department Design: A Practical Guide to Planning*".

The waiting room for the proposed ED is approximately 250 SF and is planned for 16 people.

8.) Section A, Project Details, Item 10(a), Bed Complement Data Chart.

The bed complement data chart is noted. However, the beds total 748 not 788. Please correct and resubmit

a replacement page 20 labeled 20R.

Response

As requested, a replacement page 20-R is attached to this supplemental information.

9.) Section B, Need, Item 1 (Project Specific Criteria - Freestanding).

Please complete the following questions from the *Guide For Free-Standing Emergency Departments*.

Response

As requested, the criteria addressed by the *Guide For Free-Standing Emergency Departments* have been completed.

1. Determination of Need in the Proposed Service Area

The applicant must demonstrate need for an emergency department in **at least one** of the following ways: *geographic isolation, capacity challenges, and/or low quality of care at existing emergency department (ED) facilities in the proposed service area.* Applicants are not required to address and provide data for all three categories. However, the applicant's ability to demonstrate need in multiple categories may strengthen the application.

A. Geographic Isolation

Check the Box that Applies:

[X] The applicant is demonstrating geographic isolation for the proposed service area. If this box is checked the applicant must provide the information below.

[ ] The applicant is not demonstrating geographic isolation for the proposed service area.

Data:

Utilizing the following table, provide the number of existing ED facilities in the proposed service area, as well as the distance of the proposed FSED from these 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. Add as many rows and/or columns to the table as necessary to adequately address this portion of the Determination of Need Standard.

Existing ED Facilities and Distance from the Proposed FSED

Emergency Department	Bradley County	Polk County	Distance from

			Proposed FSED Site

Data Source:
Licensure facility search, Joint Annual Reports (JAR), MapQuest, Other GPS searching

https://apps.health.tn.gov/facilityListings/

https://apps.health.tn.gov/PublicJARS/Default.aspx

Response

The "system of care" for trauma patients fell apart for Bradley County residents and the region when *Tennova* (CHS) acquired *Bradley Memorial Hospital* and subsequently closed its Level III trauma center. See attached report on the *Tennessee Trauma System*. The closure of the Level III trauma center deprived Bradley County residents of trauma care, effectively isolating them from life -saving services. The "geographic isolation" has necessitated that patients requiring trauma care be transported to Hamilton County, to Erlanger, the only Level I trauma center in the entire region, for needed care. In response to growing demand, Erlanger also moved its *LifeForce* air medical service to Cleveland's Regional Jetport in 2016; it now provides free emergency transport to Erlanger for city residents in need. As a result, the Level I trauma center at Erlanger is now over run by demand for services.

With the closure of *Copper Basin Medical Center*, residents of Polk County have also become geographically isolated with respect to their ability to access essential emergency services. Also, the closest trauma center for Polk County residents closed when *Tennova* (CHS) acquired *Bradley Memorial Hospital*. *Erlanger Health System* staff worked with *Copper Basin* officials in an attempt to remedy issues relating to emergency care for residents; however, no solution to the long term sustainability was available. The applicant met with HSDA to explore options and attended

licensure hearings pertaining to *Copper Basin Medical Center*. A copy of the agreement between *Copper Basin Medical Center* and *Erlanger Medical Center* is attached to this supplemental information.

The evidence of "geographic isolation" for Bradley and Polk counties is demonstrated by closure of the trauma center at *Bradley Memorial Hospital* and the closure of *Copper Basin Medical Center*. The project proposed herein will resolve issues relating to "geographic isolation" for Bradley and Polk County residents. At the same time, the proposed plan will help mitigate overcrowding at *Erlanger Medical Center*, *Children's Hospital @ Erlanger* and *Erlanger East Hospital*.

As requested, the table has been completed.

Existing ED Facilities and Distance from the Proposed FSED

Emergency Department	Bradley County	Polk County	Distance from Proposed FSED Site
Tennova Healthcare - Cleveland	XX		6.5 miles

B. Capacity Challenges: Wait Times and Visits Per Treatment Room

Check the Box that Applies:

[X] The applicant is demonstrating capacity challenges in the proposed service area. If this box is checked the applicant must provide the information below.

[ ] The applicant is not demonstrating capacity challenges in the proposed service area.

Data:

1. Wait Times

To demonstrate wait times in the proposed service area and demonstrate need, complete the below table for each existing ED facility in the proposed service area.

Wait Times at Existing ED Facilities in the Proposed Service Area

Measure	Emergency Department	Year(s)	ED Time	Tennessee Average	National Average
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					

Data Source:

Centers for Medicare and Medicaid Services (CMS)

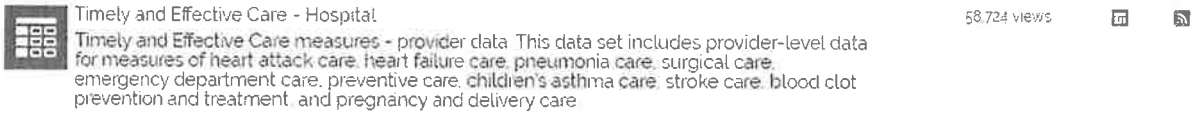
https://data.medicare.gov/data/hospital-compare

Directions for Accessing Data:

The above measures are found in the category "Timely and Effective Care – Hospital" within the Hospital Compare website, link above.

i. From the homepage select "Time & Effective Care" in the dropdown menu next to "in category".

ii. Select "Timely and Effective Care – Hospital".



iii. Use the top bar to filter the results by State, ZIP Code, County Name, and Measure ID, and/or Measure Name. Use the scroll bar at the bottom of the page to access Measure ID and Measure Name.

Note: Data provided on the CMS Hospital Compare website does have a three to six month lag. In order to account for this delay, applicants may supplement CMS data with other more timely data.

Data:

Response

Emergency Department overcrowding is an ongoing problem across the country, and ED overcrowding can harm patients. The front door of the hospital … the ED … has become more difficult to access. The *National Emergency Department Overcrowding Scale* (*"NEDOCS"*) is a quantitative, prospectively validated index utilized to approximate the degree of ED overcrowding in large academic ED's. At *Erlanger Medical Center*, a Level I trauma center serving southeast Tennessee, the *NEDOCS* score by shift, by month, reflects an ED with significant capacity issues as objectively measured.

As shown in the attachment, the Level I trauma center at *Erlanger Medical Center's* ED is overcrowded, severely overcrowded or dangerously overcrowded more than 65% of the time, 24/7, shift by shift. For the only adult trauma center in the region, this is a serious problem that is compounded by the fact that *Erlanger Medical Center* is also the safety net for the regional service area of southeast Tennessee, serving the emergency needs of the underserved and others without the means to access other providers. Patients in need are challenged to access the ED's at *Erlanger Medical Center*. *Erlanger Health System* is already building a behavioral health hospital in an effort to provide some relief. Still, capacity challenges remain.

It is vital that capacity be available when a trauma patient is brought to Erlanger Medical Center. In 2017, more than 25,000 patients were transported to *Erlanger* via EMS.

For *Erlanger East Hospital* and *Children's Hospital @ Erlanger*, a state designated Comprehensive Regional Pediatric Center, the problems of capacity are similar. ED utilization continues to grow. *Erlanger* today is in the top 10 busiest ED's in the United States. Building an ED and trauma center in Bradley County is the best way to remedy the problems associated with overcrowding and to decompress utilization so that the patient is treated in their own community. With the ED/trauma center as proposed, we can address problems associated with geographic isolation and overcrowding at the same time. Need is apparent when you see a community, a service area with in excess of 100,000 people, with no trauma facility. In McMinn County, Tennessee, *Starr Regional Medical Center* has a designated Level III trauma center with a population of approximately 53,000.

For the operating metrics within this criterion, data is presented below for the five (5) primary ED indicators which are identified, for *Erlanger Medical Center* and *Tennova Healthcare - Cleveland*. It should be noted that longer wait times are expected for a Level I trauma center such as *Erlanger Medical Center*, however, long wait times would not be expected for a general community hospital with no trauma center, as is the case with *Tennova Healthcare - Cleveland*.

As requested, the table of emergency department indicators has been completed. It should be noted that the ED at *Erlanger* has lower "thru-put" times than *Tennova Healthcare - Cleveland*, even though *Erlanger* have a Level I trauma center which would expectedly increase the time values reported.

Indicator	Description	Year	Erlanger Med. Ctr.	Tennova - Cleveland	State Of Tennessee	U. S.
ED-1	Median Time From ED Arrival To ED Departure For Admitted Patients	2016	327 min.	401 min.	330 min.	336 min.
ED-2	Median Time From Admit Decision To ED Departure For Admitted Patients	2016	190 min.	206 min.	136 min.	137 min.
OP-18	Median Time From ED Arrival To ED Departure For Discharged ED Patients	2016	138 min.	207 min.	166 min.	172 min.
OP-20	Door To Diagnostic Evaluation By A Qualified Medical Professional	2016	29 min.	19 min.	26 min.	27 min.
OP-22	ED Patient Left Without Being Seen	2016	2%	5%	2%	2%

Notes >> 1.) The State of Tennessee averages for each hospital are different due to the classification of each hospital, based on ED visit volume.

The only other ED in the service area is *Tennova Healthcare - Cleveland*, and it is approximately 6.5 miles from the proposed location of *Erlanger Bradley County*, however, it does not provide trauma services. Also, for illustrative purposes, *Erlanger East Hospital* in Hamilton County, is approximately 16.7 miles from the proposed location, and efforts are underway to have it designated as a Level III trauma center.

2. Visits Per Treatment Room

Complete the following table to provide data on the number of visits per treatment room per year for each of the existing ED facilities in the service area. For this analysis, service area is defined as including all of any county included in the ZIP Code area.

Visits Per Treatment Room in Existing ED Facilities in the Proposed Service Area

Emergency Department	Year(s)	Total Visits	# of Rooms	# of Visits/Room	ACEP-Low to High Range

Data Source:
Hospital Joint Annual Report, Search site

https://apps.health.tn.gov/PublicJARS/Default.aspx

American College of Emergency Physicians (ACEP), Emergency Department Design – A Practical Guide to Planning for the Future, Second Edition, pages 116-117.

Response

It is noted that the ED at *Tennova - Cleveland* is below it's assigned utilization of 1,596 visits per treatment room as determined by the ACEP standard, however, the need for *Erlanger* to decompress the volume at it's ED's in Hamilton County, along with the significant volume of outmigration from the service area … more than demonstrate the need for a provider based ED with trauma center at *Erlanger Bradley County*.

As requested, the chart for *Visits Per Treatment Room In Existing ED Facilities In The Proposed Service Area* has been completed.

Visits Per Treatment Room In Existing ED Facilities In The Proposed Service Area

Emergency Department	Year(s)	Total Visits	No. Of Rooms	No. Of Visits Per Room	ACEP - Low To High Range No. Of Rooms
Tennova	2014	49,791	42	1,186	31
Healthcare -	2015	50,533	42	1,203	33
Cleveland	2016	48,501	42	1,155	31

C. Low Quality of Care at Existing Emergency Departments in the Service Area

Note: The host hospital ED should NOT be demonstrating low quality of care. This applies to other operators in the proposed service area.

Check the Box that Applies:

[X] The applicant is demonstrating low quality of emergency care in the proposed service area. If this box is checked the applicant must provide the information below.

[ ] The applicant is *not* demonstrating low quality of emergency care in the proposed service area.

Data:

If the applicant is demonstrating low quality of care, complete the following table for each existing ED facility in the proposed service area. The Joint Commission's "Hospital Outpatient Core Measure Set" is utilized to demonstrate the quality of care provided by EDs. 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. It is the responsibility of the applicant to provide data on the existing facilities in the proposed service area what quartile is applicable for each measure. For this analysis, service area is defined as including all of any county included in a ZIP Code area.

Quality of Care Provided at Existing ED Facilities in the Proposed Service Area

Measure	Emergency Department	Year(s)	ED Time	Check (X) Applicable Quartile			
				Below 1st Quartile	Between 1st Quartile and Median	Between Median and 3rd Quartile	Above 3rd Quartile
OP-1: Median Time to Fibrinolysis							
OP-2: Fibrinolytic Therapy Received Within 30 Minutes							
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							

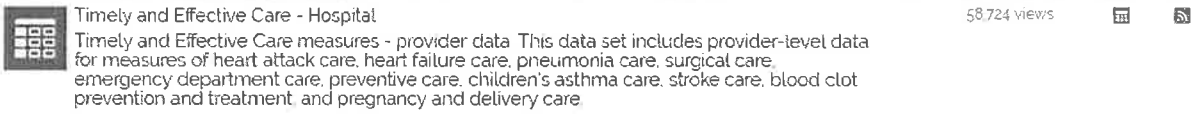
Data Source:
Centers for Medicare and Medicaid Services (CMS)

https://data.medicare.gov/data/hospital-compare

Directions for Accessing Data:
The above measures are found in the category "Timely and Effective Care – Hospital" within the Hospital Compare website, link above.

i. From the homepage select "Time & Effective Care" in the dropdown menu next to "in category".

ii. Select "Timely and Effective Care – Hospital".



iii. Use the top bar to filter the results by State, ZIP Code, County Name, and Measure ID, and/or Measure Name. Use the scroll bar at the bottom of the page to access Measure ID and Measure Name.

Note: Data provided on the CMS Hospital Compare website does have a three to six month lag. In order to account for this delay, applicants may supplement CMS data with other more timely data.

Response

Data comparing quality measures for *Tennova Healthcare – Cleveland* with those of Tennessee and nationally reflect longer treatment times, on average, for most metrics. These scores likely contribute to the high degree of outmigration that occurs from the service area for emergency services.

Supplemental #1
March 16, 2018
10:36 A.M.

As requested, the chart for "*Quality Of Care Provided At Existing ED Facilities In The Proposed Service Area*" has been completed.

Quality Of Care Provided At Existing ED Facilities In The Proposed Service Area

Measure	Emergency Department	Year(s)	ED Time	Below 1st Quartile	Between 1st Quartile & Median	Between Median & 3rd Quartile	Above 3rd Quartile
				========= Check (XX) For Applicable Quartile =========			
OP-1 Median Time To Fibrinolysis	Tennova	2016	(*)				
OP-2 Fibrinolytic Therapy Received Within 30 Minutes	Healthcare -	2016	(*)				
OP-4 Aspirin At Arrival	Cleveland	2016	100 min.				XX
OP-5 Median Time To ECG	"	2016	4 min.		XX		
OP-18 Median Time From ED Arrival To Departure For ED Discharges	"	2016	207 min.				XX
OP-20 Door To Diagnostic Evaluation	"	2016	19 min.		XX		
OP-21 Median Time To Pain Mgmt. For Long Bone Fract	"	2016	94 min.				XX
OP-23 ED-Head CT Or MRI Scan Results For Strokes	"	2016	88 min.			XX	

(*) This indicator is not available.

It should be noted that with these indicators, a lower time is desirable and a higher time value is less desirable. Therefore, the higher quartiles represent higher time values, which is less desirable. So that the quartile rankings may be fully understood, we have provided our quartile data for the State of Tennessee.

Tennessee Hospital CMS Measures
Emergency Department Score Rankings

Measure ID	25th	50th	75th	# Providers	Measure Description
	========== Percentile ==========				
OP_1	19	20	25	5	Median time to Fibrinolysis
OP_2	73	80	82	5	Fibrinolytic therapy received within 30 minutes of ED arrival
OP_4	93.25	97	99	82	Aspirin at arrival
OP_5	4	6	9	82	Median time to ECG
OP_18	111	129	157.5	99	Median time from ED arrival to ED departure for discharged ED patients
OP_20	15	21	27.5	99	Door to diagnostic eval for patients discharged from the ED
OP_21	39.75	52	61.25	96	Median time to pain medicine for Long Bone Fractures
OP_23	68	82.5	91	42	Head CT results for Stroke Patients

D. Other Applicable Data Related to Need and Capacity

Check the Box that Applies:

[X] The applicant is providing additional data related to need and capacity. If this box is checked the applicant must provide the information below.

[ ] The applicant is not providing additional data related to need and capacity.

Data:

The applicant may provide data relevant to patient acuity levels, age of patients, percentage of behavioral health patients, and existence of specialty modules at existing EDs in the proposed service area to demonstrate capacity challenges. If the applicant is providing additional data, at a minimum, complete the following table for all ED facilities in the proposed service area. Other relevant categories may be added to the table by the applicant.

Additional Data to Demonstrate Need in the Proposed Service Area

Emergency Department	% of *Behavioral Health Patients	Statewide Average	% of Patients Level I or II	Statewide Average	% of Patients Ages 65+	Statewide Average

Data Source:

Hospital Discharge Data System (HDDS)

Note: 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 HDDS data.

Response

The absence of trauma facilities in Bradley County has necessitated that the EMS service transport the patient to Erlanger's Level I trauma center in Hamilton County. Likewise, the closure of *Copper Basin Medical Center* has isolated residents from ED services and for trauma care. The movement of patients from Bradley and Polk Counties to facilities in Hamilton County has served to create overcrowded conditions at *Erlanger Medical Center's* Level I trauma service, at Children's Hospital @ Erlanger, and at *Erlanger East Hospital*. *Erlanger East Hospital* is the next closest facility to Bradley and Polk County residents. The absence of appropriate facilities and questions related to the quality of care provided has caused the "system of care" for residents to fail, with no remedy in sight. As a result, the most appropriate solution is to add essential facilities and services, as contemplated by this CON application.

As requested, the chart *Additional Data To Demonstrate Need In The Proposed Service Area* has been completed.

Additional Data To Demonstrate Need In The Proposed Service Area

Emergency Department	% Behavioral Health Patients	Statewide Average	ED Patient Level Of Care 1 Or 2	Statewide Average	% Patients Age 65+	Statewide Average
Tennova Healthcare - Cleveland	3.6%	3.3%	7.7%	8.8%	19.0%	17.6%

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 or above capacity. This applies to any Erlanger hospital that the applicant has indicated the proposed project will assist in decompressing ED patient volumes.

Check the Box that Applies:

[X] The applicant is demonstrating the need to decompress volumes at the host hospital ED. If this box is checked the applicant must provide the information below.

[ ] The applicant is not demonstrating the need to decompress volumes at the host hospital ED.

A. Visits Per Treatment Room

Data:

The applicant should provide data on the number of visits per treatment room per year at the relevant existing ED facility. This number should be compared to the ACEP guidelines found in Emergency Department Design – A Practical Guide to Planning for the Future, Second Edition, Table 5.2, pages 109-112. Complete the following two tables in order to demonstrate host hospital ED capacity. In order to determine if the host hospital is a low, medium, or high range hospital, utilize Table 5.2, pages 109-112 in the ACEP Guidelines. The results for the majority of the factors in the second table determine the range selected for the first table.

Host Hospital ED Visits Per Treatment Room

Emergency Department Design: A Practical Guide to Planning, American College of Emergency Physicians – Estimates for Emergency Department Areas and Beds				
Most Recent Year Annual Visits	Dept. Gross Area	Bed Quantities		
	Low, Medium, or High Range	Low, Medium, or High Range Bed Qty.	Low, Medium, or High Range Visits/Beds	Estimated Area/Bed

Factor	Result
% Emergency Department Patients Admitted as Inpatients	
Length of Stay (Hours) in ED	
% of ED Patients seen in Private Rooms	
% of patients that will be moved from patient rooms to inner waiting or results waiting areas	
% of observation and extended stay patient remaining in ED	
# Average Minutes an ED patient admitted as an inpatient remains in ED	
Average turnaround time (minutes) for results for lab and imaging studies	
% of behavioral health ED patients	
% of ED patients either ESI 4 or 5	
% of ED patients Age 65+	
% of imaging studies performed in ED	
Provisions in ED for family consult/grieving rooms	
Availability of geriatric specialty area	
Availability of pediatric specialty area	
Availability of prisoner/detention patient specialty area	
Availability of administrative/teaching specialty area	

Data Source:

Hospital Joint Annual Report Search Site

https://apps.health.tn.gov/PublicJARS/Default.aspx

Hospital Internal Records
Hospital Discharge Data System (HDDS)
American College of Emergency Physicians (ACEP), Emergency Department Design – A Practical Guide to Planning for the Future, Second Edition, pages 109-112

Response

Expansion of facilities at *Erlanger Medical Center*, *Children's Hospital @ Erlanger* and *Erlanger East Hospital*, while providing additional capacity, will not address the void in emergency facilities for Polk County residents. Likewise, expansion in place will not remedy the absence of trauma facilities in Bradley County. Already, far too many patients in need of emergency or trauma service outmigrate by choice, or by necessity, to *Erlanger* facilities. The most appropriate solution is to develop a provider based satellite ED/trauma center in Bradley County as proposed herein.

NEDOCS utilization data already shows that the ED/Level I trauma center at Erlanger Medical Center is overcrowded, severely overcrowded or dangerously overcrowded, most often. The situation is similar at *Erlanger East Hospital* and at *Children's Hospital @ Erlanger*. A plan to decompress the volume via the development of a provider based free-standing ED/trauma center is the most effective solution. Providing needed care in the patient's own community is the most effective solution to ensure the efficient and effective development of the regional healthcare delivery system.

As requested, the chart *Host Hospital Visits Per Treatment Room* has been completed, along with the supporting chart listing various factors for designation of ED's as High, Medium or Low range.

Host Hospital ED Visits Per Treatment Room

Emergency Department Design: A Practical Guide To Planning, American College Of Emergency Physician - Estimates For Emergency Department Areas & Beds

				========== Bed Quantities ==========		
	Most Recent Year Annual Visits (2017)	Dept. Gross Area (Sq. Feet)	Low, Medium Or High Range Factor	Low, Medium Or High Range Bed Quantity	Low, Medium Or High Range Visits / Bed	Estimated Area / Bed
Erlanger Medical Center ED	49,815	22,632	Mid-Range	34	1,465	666
Children's @ Erlanger ED	40,993	13,591	Mid-Range	33	1,242	412
Erlanger East ED	34,799	23,535	Mid-Range	17	2,047	1,384

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Factor	Erlanger Med Ctr ED	Children's @ Erlanger ED	Erlanger East ED
ED Range Assignment Data			
% Emergency Department Patients Admitted as Inpatients	35.8%	8.0%	7.4%
Length of Stay (Hours) in ED	6 hrs 3 min	2 hrs 26 min	3 hrs 1 min
% of ED Patients seen in Private Rooms	N/A	N/A	100.0%
% of patients that will be moved from patient rooms to inner waiting or results waiting areas	0.0%	0.0%	0.0%
% of observation and extended stay patient remaining in ED	0.0%	0.0%	0.0%
# Average Minutes an ED patient admitted as an inpatient remains in ED	500 min	N/A	306 min
Average turnaround time (minutes) for results for lab studies	74 min	67 min	41 min
Average turnaround time (minutes) for results for imaging studies	86 min	76 min	53 min
% of behavioral health ED patients	2.0%	1.0%	0.9%
% of ED patients either ESI 4 or 5	31.0%	17.8%	42.4%
% of ED patients Age 65+	9.3%	0.0%	15.4%
% of imaging studies performed in ED	41.0%	34.0%	21.0%
Provisions in ED for family consult/grieving rooms	Yes	Yes	Yes
Availability of geriatric specialty area	No	No	No
Availability of pediatric specialty area	No	No	No
Availability of prisoner/detention patient specialty area	No	No	No
Availability of administrative/teaching specialty area	Yes	Yes	No
ED Range Assignment By Indicator			
% Emergency Department Patients Admitted as Inpatients	High	Low	Low
Length of Stay (Hours) in ED	High	Mid	Mid
% of ED Patients seen in Private Rooms	-	-	-
% of patients that will be moved from patient rooms to inner waiting or results waiting areas	-	-	-
% of observation and extended stay patient remaining in ED	-	-	-
# Average Minutes an ED patient admitted as an inpatient remains in ED	High	-	High
Average turnaround time (minutes) for results for lab studies	Mid	Mid	Mid
Average turnaround time (minutes) for results for imaging studies	Mid	Mid	Mid
% of behavioral health ED patients	Low	Low	Low
% of ED patients either ESI 4 or 5	Mid	High	Mid
% of ED patients Age 65+	Low	Low	Mid
% of imaging studies performed in ED	Mid	Mid	Low
Provisions in ED for family consult/grieving rooms	Mid	Mid	Mid
Availability of geriatric specialty area	-	-	-
Availability of pediatric specialty area	-	-	-
Availability of prisoner/detention patient specialty area	-	-	-
Availability of administrative/teaching specialty area	Mid	Mid	Mid
ED Range Assignment Summary			
Low >>	2	3	3
Mid >>	6	6	7
High >>	3	1	1
Total Indicators >>	11	10	11
ED Range Assignment >>	Mid-Range	Mid-Range	Mid-Range

It should be noted that when the original CON application was prepared in November, 2017, it showed seventy nine (79) ED beds for Erlanger's main campus, this was based on the 2016 Joint Annual Report. However, in FY 2017, twelve (12) ED beds were re-classified as a clinical decision unit which has inpatients that are waiting for inpatient room assignment. Therefore, for this reason on the 2017 Joint Annual Report, a total of sixty seven (67) ED beds were reported. Therefore, the total number of beds reported in this supplemental information is sixty seven (67) ED beds.

B. Additional Data

Check the Box that Applies:

[X] The applicant is providing additional data related to capacity, efficiencies, and demographics. If this box is checked the applicant must provide the information below.

[ ] The applicant is not providing additional data related to capacity, efficiencies, and demographics.

Data:

The applicant is encouraged to provide additional evidence of the capacity, efficiencies, and demographics of patients served within the existing host hospital ED facility in order to better demonstrate the need for expansion. The applicant may provide data relevant to patient acuity levels, age of patients, percentage of behavioral health patients, and existence of specialty modules. If the applicant is providing additional data, at a minimum, complete the following table for the host hospital ED. Other relevant categories may be added to the table by the applicant.

Additional Data to Demonstrate Need in the Proposed Service Area

Emergency Department	% of *Behavioral Health Patients	Statewide Average	% of Patients Level I or II	Statewide Average	% of Patients Ages 65+	Statewide Average

Data Source:

Hospital Discharge Data System (HDDS)

Note: 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 HDDS data.

Response

The absence of trauma facilities in Bradley County requires that EMS transport the patient to *Erlanger's* Level I trauma center in Hamilton County, Tennessee. Likewise, the closure of *Copper Basin Medical Center* in September, 2017, has isolated residents from ED services and trauma care. The movement of patients from Bradley and Polk Counties to facilities in Hamilton County has served to create overcrowded conditions at *Erlanger Medical Center's* Level I trauma service, Children's Hospital @ Erlanger and

Erlanger East Hospital. *Erlanger East Hospital* is the closet facility to Polk and Bradley County residents. The absence of appropriate facilities and questions related to the quality of care provided has caused the "system of care" for residents to fail, with no remedy currently available. As a result, the most appropriate solution is to add essential facilities and services, as proposed herein.

As requested, the chart *Additional Data To Demonstrate Need In The Proposed Service Area* has been completed.

Additional Data To Demonstrate Need In The Proposed Service Area

Emergency Department	% Behavioral Health Patients	Statewide Average	ED Patient Level Of Care 1 Or 2	Statewide Average	% Patients Age 65+	Statewide Average
Tennova Healthcare - Cleveland	3.6%	3.3%	7.7%	8.8%	19.0%	17.6%

3. Relationship to Existing Similar Services in the Area

A. All Applicants

Data:

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. Utilize the below tables to address this portion of the standards.

Hospital ED Utilization in the Proposed Service Area (PSA) and all Hamilton County Emergency Departments

Hospital ED	County	PSA Resident ED Visits at Hospital ED (A)	Total Service Area Resident ED Visits (B)	Market Share in Service Area ((A)/(B)) X 100 = Market Share %
Other TN	**All Other TN**			

Hospitals	Counties			
Total				
Satellite ED Visits YR 1				

Market Shares of ED Facilities in the Proposed Service Area + Hamilton County

ZIP Code/County	% Highest Market Share ED	% 2nd Highest Market Share ED	% 3rd Highest Market Share ED	% Applicant Host ED (if not top 3)

Data Source:
Hospital Discharge Data System (HDDS) – FSED Template

Response

Tennova Healthcare - Cleveland provides ED services, however, the hospital does not provide a trauma service. These services were closed subsequent to the acquisition of the hospital by CHS. The proposed ED/trauma center will offer a higher level of care than that provided via the ED at *Tennova*. As a result, patients in need of a lower level of care will continue to utilize the *Tennova ED* as they do currently. EMS services that now transport patients to Hamilton County will no longer have to do so if they can be stabilized and treated at the proposed ED/trauma center. These patients are not seen at *Tennova*. Thus, the vast majority of patients to be served are those not currently served by *Tennova*. The proposed ED/trauma facility is therefore expected to have limited to no adverse impact on the *Tennova ED*.

Similarly, Copper Basin Medical Center in Polk County has closed, as has the ED that served that community. While *Erlanger Health System* sought to assist the hospital in its effort to continue to provide ED services, we were unable to do so. These patients will now be served by *Tennova* or by the ED/trauma center proposed herein. Many

of these patients also migrated to *Erlanger* facilities in Hamilton County for one reason or another. Given that the goal of the proposed ED/trauma center is to serve those patients who now outmigrate by choice or necessity, the new ED/trauma center is expected to have little to no impact on the ED at *Tennova Healthcare - Cleveland.*

As requested, the chart *Hospital ED Utilization In The Proposed Service Area (PSA) And All Hamilton County Emergency Departments*, as well as the chart *Market Shares Of ED Facilities In The Proposed Service Area + Hamilton County*, have been completed.

Hospital ED Utilization In The Proposed Service Area (PSA) And All Hamilton County Emergency Departments

Hospital ED	County	PSA Resident ED Visits At Hospital Hospital ED (A)	Total Service Area Resident ED Visits (B)	Market Share In Service Area ((A) x (B)) x 100 = Market Share %
ED's In Proposed Service Area				
Tennova H-care-Cleveland	Bradley	41,486	61,911	67.0%
Tennova H-care-Cleveland Westside	Bradley	175	61,911	0.3%
Copper Basin Med Cntr	Polk	3,424	61,911	5.5%
ED's In Hamilton County, Tennessee				
Erlanger - Main Campus	Hamilton	5,770	61,911	9.3%
Erlanger East	Hamilton	1,721	61,911	2.8%
Erlanger North Hosp	Hamilton	94	61,911	0.2%
CHI Memorial Hosp-Chattanooga	Hamilton	2,687	61,911	4.3%
CHI Memorial Hosp-Hixson	Hamilton	257	61,911	0.4%
Parkridge Med Cntr	Hamilton	759	61,911	1.2%
Parkridge East Hosp	Hamilton	715	61,911	1.2%
Parkridge Valley Adult & Senior Campus	Hamilton	4	61,911	0.0%
Other TN Hospitals	All Other TN Counties	4,819	61,911	7.8%
Total		61,911		100.0%
Satellite ED Visits - Year 1		14,000		

Market Shares Of ED Facilities In The Proposed Service Area + Hamilton County

Zip Code / County	% Highest Market Share ED	% 2nd Highest Market Share ED	% 3rd Highest Market Share ED	% Applicant Host ED (If Not Top 3)
Bradley	Tennova-Cleveland	Erlanger-Main	Memorial Hospital	-
Polk	Tennova-Cleveland	Copper Basin	Starr Reg - Etowah	8.2%

(**) Notes >> 1.) Market share data is for CY 2016, the most recent year for which complete data is available.

2.) Copper Basin Medical Center closed in September, 2017. However, it's market share is still shown within the context of CY 2016.

4. Host Hospital Emergency Department Quality of Care

The quality of the host hospital should be in the top quartile of the state in order to be approved for the establishment of a FSED. It is the responsibility of the applicant to provide data on the host hospital ED and what quartile is applicable for each measure.

Data:

The Joint Commission's "Hospital Outpatient Core Measure Set" is utilized to demonstrate the quality of care provided by EDs.

Please complete the following table.

Quality of Care Provided at the Host Hospital ED

Measure	Year(s)	ED Time	Check (X) Applicable Quartile			
			Below 1st Quartile	Between 1st Quartile and Median	Between Median and 3rd Quartile	Above 3rd Quartile
OP-1: Median Time to Fibrinolysis						
OP-2: Fibrinolytic Therapy Received Within 30 Minutes						
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						

Data Source:

Centers for Medicare and Medicaid Services (CMS)

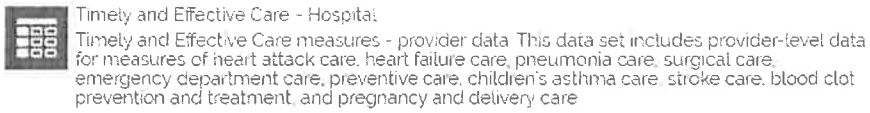
https://data.medicare.gov/data/hospital-compare

Directions for Accessing Data:

The above measures are found in the category "Timely and Effective Care – Hospital" within the Hospital Compare website, link above.

i. From the homepage select "Time & Effective Care" in the dropdown menu next to "in category".

ii. Select "Timely and Effective Care – Hospital".



iii. Use the top bar to filter the results by State, ZIP Code, County Name, and Measure ID, and/or Measure Name. Use the scroll bar at the bottom of the page to access Measure ID and Measure Name.

Note: Data provided on the CMS Hospital Compare website does have a three to six month lag. In order to account for this delay, applicants may supplement CMS data with other more timely data.

Response

Information on the quality of care provided at *Erlanger Medical Center* is shown in the table below. Not shown is the high volume of ED visits, Bradley County EMS transports, or *Erlanger's* role as a Level I trauma center and safety net provider for the entire region of southeast Tennessee. High volume, and specifically high acuity patients, can impact reported results.

As requested, the chart for "*Quality Of Care Provided At The Host Hospital ED*" has been completed.

Quality Of Care Provided At The Host Hospital ED

				========== Check (X) For Applicable Quartile ==========			
Measure	**Emergency Department**	**Year(s)**	**ED Time**	**Below 1st Quartile**	**Between 1st Quartile & Median**	**Between Median & 3rd Quartile**	**Above 3rd Quartile**
OP-1 Median Time To Fibrinolysis	Erlanger	2016	(*)				
OP-2 Fibrinolytic Therapy Received Within 30 Minutes	Medical	2016	(*)				
OP-4 Aspirin At Arrival	Center	2016	85 min.	XX			
OP-5 Median Time To ECG	&	2016	8 min.			XX	
OP-18 Median Time From ED Arrival To Departure For ED Discharges	Children's	2016	138 min.			XX	
OP-20 Door To Diagnostic Evaluation	Hospital	2016	29 min.				XX
OP-21 Median Time To Pain Mgmt. For Long Bone Fract	@ Erlanger	2016	44 min.		XX		
OP-23 ED-Head CT Or MRI Scan Results For Strokes		2016	(*)				

(*) This indicator is not available.

It should be noted that with these indicators, a lower time is desirable and a higher time value is less desirable. Therefore, the higher quartiles represent higher time values, which is less desirable. So that the quartile rankings may be fully understood, we have provided our quartile data for the State of Tennessee.

Tennessee Hospital CMS Measures
Emergency Department Score Rankings

	========= Percentile ==========				
Measure ID	25th	50th	75th	# Providers	Measure Description
OP_1	19	20	25	5	Median time to Fibrinolysis
OP_2	73	80	82	5	Fibrinolytic therapy received within 30 minutes of ED arrival
OP_4	93.25	97	99	82	Aspirin at arrival
OP_5	4	6	9	82	Median time to ECG
OP_18	111	129	157.5	99	Median time from ED arrival to ED departure for discharged ED patients
OP_20	15	21	27.5	99	Door to diagnostic eval for patients discharged from the ED
OP_21	39.75	52	61.25	96	Median time to pain medicine for Long Bone Fractures
OP_23	68	82.5	91	42	Head CT results for Stroke Patients

5. Appropriate Model for Delivery of Care

The applicant should discuss why a FSED is the appropriate model for the delivery of care in the proposed service area.

Response

Erlanger Health System serves as the backbone and safety net for healthcare delivery for the entire southeast region of Tennessee, and also for surrounding states including Georgia, Alabama and North Carolina. *Erlanger's* emphasis has been on the development of a "system of care" that helps to ensure that patients are treated at the right facility, whether such facility is owned or operated by *Erlanger Health System* or other providers. Providing the right care in the right setting allows the health system to function effectively. Current and prior efforts by *Erlanger Health System* to effectively promote such a plan, are evident in Sequatchie County, Bledsoe County, Hamilton County in Tennessee, Cherokee County in North Carolina.

Erlanger's six *LifeForce* air ambulance helicopters also are stationed in locations to provide ready transport to those in need throughout the region. Improved health

status is the best measure of performance for the model of care proposed herein. In this regard, Erlanger's track record and the efficiency and effectiveness of its "system of care" demonstrate that the model of care proposed herein is the most appropriate to meet the identified needs of those who reside in the service area.

It should also be noted that the Bradley County health status rank was 17 in 2013, and by 2018 the health status rank for Bradley County had dropped to 23, compared to all other Tennessee counties. This should be compared to Erlanger's experience with the provider based free-standing ED in Dunlap, Sequatchie County, Tennessee. In 2013 the health status rank of Sequatchie County was 91, and by 2018 the health status rank had improved to 53. This information was obtained from the *Robert Wood Johnson Foundation*.

6. Geographic Location

Data:

The FSED should be located within a 35 mile radius of the hospital that is the main provider. A map can also be provided as evidence. Please complete the following table.

Distance from Host Hospital

Distance (Miles)

Data Source:

Google Maps, MapQuest, etc.

Response

As requested, the table has been completed. The distance from *Erlanger Medical Center* to the proposed FSED is 27.2 miles, and will meet all CMS criteria as provider based ED.

Distance from Host Hospital

Distance (Miles)
27.2 miles

Data Source:
MapQuest

7. Access

The applicant must demonstrate an ability and willingness to serve equally all of the service area in which it seeks certification.

Response

Erlanger Health System is the safety net provider for southeast Tennessee and the surrounding states. *Erlanger Health System* is also the 7th largest public health system in the United States. Annually, *Erlanger Health System* provides approximately $110 million in uncompensated care. The proposed ED/trauma center, like all *Erlanger* facilities, will serve those in need on an equal basis, regardless of ability to pay.

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.

Data:
Use the following table to compare the payor mix of the host hospital to payor mix of the total service area. Applicants may also present evidence demonstrating limited access to emergency care in the proposed service area when applicable.

Services to High Need Populations by Payor

Payor	Bradley County	% Total	Polk County	% Total	Host Hospital Total	% Total
Medicare/Medicaid Advantage						
TennCare/Medicaid						
Commercial/Commercial Other						
Self-Pay						
Medically Indigent/Free						
Other						
Total						

Data Source:
Hospital Discharge Data System (HDDS)

Response

The proposed ED/trauma center will serve those in need regardless of ability to pay and will fulfill the needs and requirements of high need populations, including patients that are uninsured, low income or with limited access to emergency and trauma care.

As requested, the chart *Services To High Need Populations By Payor* has been completed.

Services To High Need Populations By Payor

	Bradley County	% Total	Polk County	% Total	Erlanger Main & East Total	% Total
Medicare / Medicare Advantage	14,521	28.5%	3,039	27.6%	1,369	18.3%
TennCare / Medicaid	16,073	31.6%	4,087	37.1%	2,714	36.2%
Commercial / Commercial Other	11,233	22.1%	2,057	18.7%	2,237	29.9%
Self-Pay	1,458	2.9%	939	8.5%	728	9.7%
Medically Indigent / Free	326	0.6%	43	0.4%		
Other	7,293	14.3%	842	7.7%	443	5.9%
Total	50,904	100.0%	11,007	100.0%	7,491	100.0%

(**) Notes >> 1.) Payor data is for CY 2016.

In addition, we have provided the payor mix for ED patients from the proposed service area. In CY 2016 for *Erlanger's* ED's as well as the *Tennova Healthcare - Cleveland ED*. It should be noted that *Tennova Healthcare - Cleveland* did not have any self-pay ED patients.

Comparison Of Erlanger ED Payor Mix To Tennova-Cleveland ED Payor Mix

	Erlanger East	% Total	Erlanger Main	% Total	Erlanger Total	% Total	Tennova - Cleveland	% Total
Medicare / Medicare Advantage	283	16.4%	1,086	18.8%	1,369	18.3%	12,412	29.8%
TennCare / Medicaid	433	25.2%	2,281	39.5%	2,714	36.2%	13,263	31.8%
Commercial / Commercial Other	644	37.4%	1,593	27.6%	2,237	29.9%	8,371	20.1%
Self-Pay	249	14.5%	479	8.3%	728	9.7%	0	0.0%
Medically Indigent / Free							0	0.0%
Other	112	6.5%	331	5.8%	443	5.9%	7,615	18.3%
Total	1,721	100.0%	5,770	100.0%	7,491	100.0%	41,661	100.0%

*** Notes >>* Medically Indigent / Free care for Erlanger is in the Self Pay category.

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9. Establishment of Service Area

A. Establishment of Non-Rural Service Area

[X] The proposed service area is non-rural. If this box is checked the applicant must provide the information below.

[ ] The proposed service area is rural.

The geographic service area shall be reasonable and based on an optimal balance between population density and service proximity of the applicant.

Data:

Socio- demographics of the service area

Projected populations to receive services

Complete the following tables to demonstrate:

a. Patient origin by ZIP Code for the hospital's existing ED in relation to the proposed service area for the FSED
b. Patient Origin by ZIP Code of the service area residents (i.e. market share).

The applicant may add or remove as many ZIP Code and Hospital ED lines as is necessary.

Patient Origin, Ranked Highest to Lowest, Host Hospital

(Highlight ZIP Codes in the Proposed Service Area)

County	Host Hospital ED Visits	% of Total	Cumulative % Total
Bradley			
Polk			
Total			

ED Patient Destination by Hospital ED

(Include all EDs with 50 or More Patients from a ZIP Code)

ZIP Code	Service Area ED Patients ED 1	Service Area ED Patients ED 2	Service Area ED Patients ED 3	Service Area ED Patients ED 4	*Other Hospital ED Patients	Total
Bradley						
Polk						
Total						

*Sub-total of ZIP Codes ED patients to hospitals with less than 50 patients

Data Source:

Hospital Discharge Data System (HDDS)
Demographic Tables in CON Application

Response

Erlanger Bradley County will be located proximate to a major intersection along U.S. Interstate 75, providing access for residents located in all directions (North, South, East & West) of the site. This location is best for ensuring access to trauma services for all residents, optimizing access to needed services.

As requested, the chart *Patient Origin - Ranked Highest To Lowest - Host Hospital* has been completed. Also, the chart *ED Patient Destination By Hospital ED* has been completed.

Patient Origin - Ranked Highest To Lowest - Host Hospital

		Host Hosp. ED Visits	% Of Total	Cumulative % Total
Erlanger - Main Campus	Bradley	4,950	66.1%	66.1%
	Polk	820	10.9%	77.0%
Erlanger East Hospital	Bradley	1,637	21.9%	98.9%
	Polk	84	1.1%	100.0%
	Total	7,491	100.0%	

ED Patient Origin By Hospital ED

Hospital ED	ED Visits	%
Bradley County		
Tennova Healthcare - Cleveland	37,899	74.5%
Erlanger - Main Campus	4,950	9.7%
CHI Memorial Hosp-Chattanooga	2,423	4.8%
Erlanger East	1,637	3.2%
Starr Reg Med Cntr-Athens	1,026	2.0%
Parkridge Med Cntr	693	1.4%
Parkridge East Hosp	664	1.3%
Starr Reg Med Cntr-Etowah	275	0.5%
CHI Memorial Hosp-Hixson	244	0.5%
Tennova H-care-Cleveland Westside	157	0.3%
Erlanger North Hosp	89	0.2%
Rhea Med Cntr	80	0.2%
Vanderbilt Univ Med Cntr	77	0.2%
Univ of TN Med Cntr	70	0.1%
Sweetwater Hosp Assn	58	0.1%
Other Hospital ED Patients *(Less Than 50 Visits)*	562	1.0%
Total	50,904	100.0%
Polk County		
Tennova Healthcare - Cleveland	3,587	32.6%
Copper Basin Med Cntr	3,381	30.7%
Starr Reg Med Cntr-Etowah	1,714	15.6%
Erlanger Med Cntr-Baroness Hosp	820	7.4%
Starr Reg Med Cntr-Athens	754	6.9%
CHI Memorial Hosp-Chattanooga	264	2.4%
Erlanger East	84	0.8%
Sweetwater Hosp Assn	71	0.6%
Parkridge Med Cntr	66	0.6%
Parkridge East Hosp	51	0.5%
Other Hospital ED Patients *(Less Than 50 Visits)*	215	1.9%
Total	11,007	100.0%

B. Establishment of Rural Service Area

☐ The proposed service area is rural. If this box is checked the applicant must provide the information below.

☒ The proposed service area is non-rural.

Applicants seeking to establish a FSED in a rural service area with limited access to emergency medical care shall establish a service area based upon need.

Data:
Applicants should provide the number of existing ED facilities in the proposed service area.

Data Source:
Licensure facility search, Joint Annual Reports (JAR), MapQuest, Other GPS searching

https://apps.health.tn.gov/facilityListings/

https://apps.health.tn.gov/PublicJARS/Default.aspx

Response

*** Not Applicable. ***

10. Relationship to Existing Applicable Plans; Underserved Area and Population

Data:
The proposal's relationship to underserved geographic areas and underserved population groups shall be a significant consideration. Complete the following table of federally designated areas in the proposed service area to address this portion of the standards.

Underserved Geographic Areas and Underserved Population Groups

Proposed Service Area ZIP Code and/or County	Medically Underserved Area Check (X) if Applicable	Medically Underserved Populations Check (X) if Applicable	Health Professional Shortage Area Check (X) if Applicable	Shortage Area for Mental Health Services Check (X) if Applicable

Data Source:
Tennessee Department of Health Office of Rural Health
https://www.tn.gov/health/article/federal-shortage-areas

U.S. Department of Health and Human Services, Health Resources and Services Administration
https://datawarehouse.hrsa.gov/tools/analyzers/muafind.aspx

Response

The Cleveland Division service area of Bradley County and all of Polk County are classified as being medically

underserved. The proposed project will help to ensure access for those in need.

As requested, the chart *Underserved Geographic Areas And Underserved Populations* has been completed.

Underserved Geographic Areas and Underserved Population Groups

Proposed Service Area ZIP Code and/or County	Medically Underserved Area Check (X) if Applicable	Medically Underserved Populations Check (X) if Applicable	Health Professional Shortage Area Check (X) if Applicable	Shortage Area for Mental Health Services Check (X) if Applicable
Bradley County - Cleveland Division Service Area	XX			
Bradley County			XX	XX
Polk County	XX		XX	XX

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 repository services during all hours of operation. Complete the following table to demonstrate the intent to provide the required services.

Composition of Services

Service	Hours Available	On-Site	Contracted or In-House
Laboratory			
X Ray			
CT Scanners			
Ultrasound			
Pharmacy			
Respiratory			
Other			

Response

The proposed Ed/trauma center will operate 24 hours per day, 7 days per week, 365 days per year. This will

ensure that services are always available to those in need. Erlanger Health System has experience in operating provider based ED's, providing essential services to all regardless of ability to pay.

As requested, the chart *Composition Of Services* has been completed.

Composition of Services

Service	Hours Available	On-Site	Contracted or In-House
Laboratory	24 / 7	Yes	In-House
X Ray	24 / 7	Yes	In-House
CT Scanner	24 / 7	Yes	In-House
Ultrasound	24 / 7	Yes	In-House
Pharmacy	24 / 7	Yes	In-House
Respiratory	24 / 7	Yes	In-House
Other			

13. Assurance of Resources

The funding letter from Erlanger's Health Systems CFO is noted. However, please provide a letter that includes all the required elements are outlined in the criteria.

Response

A revised letter from the CFO, which addresses all required elements as outlined in the criteria, is attached to this supplemental information.

14. Adequate Staffing

A. All Applicants

The 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. If the applicant plans to contract with an emergency physician group, the applicant should provide information on the physician group's ability to meet the staffing requirements. Utilize the following table to demonstrate planned staffing.

Staffing Patterns

Position Type	FTEs Needed for Proposed FSED	FTEs Currently Employed	FTEs that will be Recruited
Physicians			
Registered Nurses			
ER Tech			
EVS Tech			
Radiology Tech			
CT Tech			
Ultrasonographer			
Cardiac Specialist			
Medical Tech			
Pharmacist Staff			
Other			

Response

Erlanger Health System currently contracts with *ApolloMD* to staff all of it's ED's with emergency physicians. We anticipate that *ApolloMD* will staff the ED/trauma center at *Erlanger Bradley County* to provide required physician services. *ApolloMD* has the experience and expertise to provide requisite services for *Erlanger Bradley County*. Information on *ApolloMD* is attached to this supplemental information.

Erlanger Bradley County will be staffed with a minimum of one physician and one registered nurse (RN) at all times. Physicians staffing *Erlanger Bradley County* will be board certified, or board eligible, emergency physicians and will be part of Erlanger Medical Centers' single medical staff, governed by the same bylaws. All nurses staffing *Erlanger Bradley County* will be part of *Erlanger Medical Center's* single organized nursing staff.

As requested, the chart *Staffing Patterns* has been completed.

Staffing Patterns

Position Type	FTEs Needed for Proposed FSED	FTEs Currently Employed	FTEs that will be Recruited
Physicians	4.4		4.4
Advanced Practice Nurse	4.4		4.4
Registered Nurses	8.9		8.9
ER Tech	-		-

EVS Tech	.7		.7
Radiology Tech	1.3		1.3
CT Tech	3.0		3.0
Ultrasonographer	3.0		3.0
Cardiac Specialist	2.0		2.0
Medical Tech	5.6		5.6
Pharmacist Staff	1.0		1.0
Other	11.5		11.5

B. Non-Rural Staffing Requirements

[X] The proposed service area is non-rural. If this box is checked the applicant must provide the information below.

[ ] The proposed service area is rural.

The 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.

Response

Erlanger Health System currently contracts with *ApolloMD* to staff all of it's ED's with emergency physicians. We anticipate that *ApolloMD* will staff the ED/trauma center at *Erlanger Bradley County* to provide required physician services. *ApolloMD* has the experience and expertise to provide requisite services for *Erlanger Bradley County*. Information on *ApolloMD* is attached to this supplemental information.

Erlanger Bradley County will be staffed with a minimum of one physician and one registered nurse (RN) at all times. Physicians staffing *Erlanger Bradley County* will be board certified, or board eligible, emergency physicians and will be part of Erlanger Medical Centers' single medical staff, governed by the same bylaws. All nurses staffing *Erlanger Bradley County* will be part of *Erlanger Medical Center's* single organized nursing staff.

As requested, the chart *Staffing Patterns* has been completed.

Staffing Patterns

Position Type	FTEs Needed for Proposed FSED	FTEs Currently Employed	FTEs that will be Recruited
Physicians	4.4		4.4
Advanced Practice Nurse	4.4		4.4
Registered Nurses	8.9		8.9
ER Tech	-		-
EVS Tech	.7		.7
Radiology Tech	1.3		1.3
CT Tech	3.0		3.0
Ultrasonographer	2.0		2.0
Cardiac Specialist	2.0		2.0
Medical Tech	5.6		5.6
Pharmacist Staff	1.0		1.0
Other	11.5		11.5

C. Rural Staffing Requirements

☐ The proposed service area is rural. If this box is checked the applicant must provide the information below.

☒ The proposed service area is non-rural.

The 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

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(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.

Response

*** Not Applicable. ***

18. Community Linkage Plan

Please discuss the applicant community linkage plan that includes the following elements as described below.

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.

Response

Erlanger Health System has business development and physician liaison staff that have been collecting information about the need for trauma and emergency services within the service area. 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 provider, *Erlanger Bradley County* and it's provider based ED with trauma center assure access to all patients, regardless of their ability to pay. *Erlanger Bradley County* will work extensively with communities to educate them on the provision of services. *Erlanger* attributes its success in delivering services to the community, in part, to its efforts to engage and educate the community.

Erlanger will ensure that the proposed ED/trauma center is effectively linked to available community resources including inpatient and outpatient behavioral

health service, mental health and substance abuse services and providers. This will ensure continuity of care and to limit ED usage to the extent possible. *Erlanger* has experience in operating freestanding, provider based ED's and has demonstrated its ability to link services in the community. *Erlanger Sequatchie Valley* is a provider based ED that is effectively linked with the community. The ED has services to improve the health status of the community as independently measured using measures provided by the Robert Wood Johnson Foundation. Also, as a designated trauma service, *Erlanger Bradley County* will take an active role in the community and with EMS to educate the population on ways to minimize traumatic injury.

[End Of Responses To Guide For Freestanding Emergency Departments]

10.) Section B, Need, Item D.1 (Service Area Demographics).

Please complete the following chart.

Demographic Data	Bradley County	Polk County	State Of Tennessee Total
65 + Pop. - 2018			
65+ Pop. - 2022			
65+ Population % Change (2018-2022)			
65+ Population % of Total Population			

Response

As requested, the demographic chart has been completed.

Demographic Data	Bradley County	Polk County	State Of Tennessee Total
65 + Pop. - 2018	19,073	3,882	1,175,938
65+ Pop. - 2022	21,665	4,375	1,362,320
65+ Population % Change (2018-2022)	13.6%	12.7%	15.8%
65+ Population % of Total Population	19.4%	24.3%	18.8%

(**) Note - Data obtained from UTCBER Population Projection Series.

11.) Section B. 1. Need (Specific Criteria - Cardiac Catheterization) Item 3 - Emergency Transfer Plan.

The transfer agreement with Erlanger Medical Center and Erlanger East Hospital is noted. Please complete the following chart.

Hospital	Distance From Proposed ED	Emergency Travel Time from proposed ED to Hospital by ground
Erlanger Medical Center		
Erlanger East		

Response

As requested, the chart has been completed.

Hospital	Distance From Proposed ED	Emergency Travel Time from proposed ED to Hospital by ground
Erlanger Medical Center	27.2 miles	33 min.
Erlanger East	16.9 miles	17 min.

Researching the travel time on *Mapquest.com*, to *Erlanger Medical Center* it is estimated to be 39 minutes, and to *Erlanger East Hospital* it is estimated to be 20 minutes. The travel time for emergency vehicles has been estimated to be 15% less than these times.

12.) Section B. 1. Need (Specific Criteria - Cardiac Catheterization) Item 8 - Definition Of Need For New Services.

Please clarify the reason the applicant included Hamilton County in the Cardiac Catheterization service area and not in the FSED service area.

The applicant reported cardiac catheterization for the years 2013 to 2015. Please revise service area cardiac catheterization data to include the latest three years of data available and Tennova Cleveland utilization data.

It is noted the applicant references Tennova-Cleveland cardiac utilization. However, the data could not be located. Please clarify.

Please clarify how a cardiac catheterization lab at the proposed site would decompress the volume on the main campus. If so, please demonstrate the amount the proposed cardiac catheterization lab would reduce utilization at the main campus.

Please address what the cardiac need is for the 2 county service area.

Response

Applicant has not included Hamilton County in the service area for the proposed cardiac catheterization laboratory. The cardiac catheterization laboratories in Hamilton County were included in the report from the Tennessee Dept. of Health showing weighted average volumes for cardiac catheterization because we want to demonstrate the need to decompress volume on the Erlanger main campus. However, this does not mean that we have included Hamilton County in the service area for the proposed catheterization laboratory at *Erlanger Bradley County*.

As requested, a revised report from the Tennessee Dept. of Health is attached to this supplemental information, which reflects the most recent 3 year period available, 2014 to 2016.

On the cardiac catheterization report from the Tennssee Dept. of Health which was included with the original CON application, Tennova Healthcare - Cleveland was referenced as "Skyridge Medical Center", because this was the name of the hospital before it was changed to "Tennova Healthcare - Cleveland". The weighted average total for Skyridge/Tennova, was referenced on page 5 … the last page of the document.

Pertaining to the need for cardiac catheterization services in the proposed service area, the following table summarizes the number of catheterizations performed at Erlanger facilities in CY 2016, a total of 279.

Origin For Erlanger Cath Lab Patients For CY 2016

County Of Origin	No. Of Cases
Bradley County	223
Polk County	56
Total	279

Further, we anticipate that the need will be greater with the closing of *Copper Basin Medical Center* in September, 2017, which was in Polk County. The ED at *Copper Basin Medical Center* undoubtedly served as a point of referral to hospitals in Tennessee, Georgia and/or North Carolina. We expect that there will be a larger number of patients seeking service in Tennessee with the closure of *Copper Basin Medical Center*.

13.) Section C. 1. Need (Specific Criteria - Therapeutic Cardiac Catheterization) Item 14.

Please complete the following chart:

	Diagnostic Cases	Interventional Cases	Total Cases
Year One			
Year Two			
Year Three			
Year Four			
Year Five			

It is noted the applicant used patients rather than cases to calculate 2 year averages. Please recalculate the cardiac cath two year averages for years 1-2, 2-3, 3-4, and 4-5 using cases rather than patients.

Response

For purposes of the response to this question in the original CON application, the term "patients" is intended to be used interchangeably with the term "cases". As such, the data presented does represent "cases" and the two year averages do not need to be re-calculated.

As requested, the chart has been completed.

	Diagnostic Cases	Interventional Cases	Total Cases
Year One	65	185	260
Year Two	104	312	416
Year Three	107	321	428
Year Four	110	331	441
Year Five	113	341	454

14.) Section C. 1. Need (Specific Criteria - Therapeutic Cardiac Catheterization) Item 15.

Please clarify if a formal transfer agreement with an open heart tertiary center will be maintained. If so, please indicate the name of the open heart tertiary center.

Response

Erlanger Medical Center is a tertiary care provider and trauma center that provides open heart surgical services. The ED/trauma center will be integrated as part the "system of care" which has been built by *Erlanger Health System*. As such, a transfer agreement will be maintained.

15.) Section C. 1. Need (Specific Criteria - Therapeutic Cardiac Catheterization) Item 16.

Please provide the following information for the proposed Erlanger Bradley County cardiologists that will perform the proposed cardiac therapeutic catheterizations: 1) estimated number of diagnostic cardiac procedures conducted for each of the past five (5) years, and 2) the estimated number of therapeutic cardiac procedures conducted for each of the past five (5) years.

Please provide the names and credentials (i.e., curriculum vitae's and Board Certificates) for the physicians on the hospital's medical staff who will be performing these procedures. Please note those physicians who are board certified invasive and/or interventional cardiologists.

Response

The estimated number of diagnostic and therapeutic cardiac catheterization procedures for each of the past 5 years is below.

Erlanger Diagnostic and PCI Volumes Per MD Per Year

Dr Walter Few	2013	2014	2015	2016	2017
Diagnostic Caths	215	101	158	265	273
PCI	68	91	89	90	69
Total	283	192	247	355	342

Dr John Golding	2013	2014	2015	2016	2017
Diagnostic Caths	239	103	199	245	269
PCI	109	94	106	110	98
Total	348	197	305	355	367

Dr Robert Huang	2013	2014	2015	2016	2017
Diagnostic Caths	277	124	226	351	425
PCI	94	115	114	121	137
Total	371	239	340	472	562

Dr Poonam Puri	2013	2014	2015	2016	2017
Diagnostic Caths	192	101	198	356	410
PCI	69	94	87	144	123
Total	261	195	285	500	533

Dr Steven Stubblefield	2013	2014	2015	2016	2017
Diagnostic Caths		46	353	482	398
PCI		47	177	143	130
Total		93	530	625	528

Dr Matthew Wiisanen	2013	2014	2015	2016	2017
Diagnostic Caths				98	261
PCI				46	88
Total				144	349

The CV for each of these six (6) cardiologists is attached to this supplemental information.

16.) Section B, Need, Item 5.

Please list utilization and/or occupancy trends for each of the most recent three years of data available for each provider that provide cardiac catheterization and emergency department services in the proposed 2 county service area.

Please identify existing urgent care centers in Bradley and Polk Counties by completing the following table.

Urgent Care Centers in Bradley and Polk County

Urgent Care Center Name	Address	Distance from Proposed ED	Operating Hours	Medicare, TennCare, & Major Ins accepted?

Response

The only facility in the proposed service area that offers cardiac catheterization services is *Tennova Healthcare - Cleveland* (formerly *Skyridge Medical Center*). The only facilities in the proposed service area that offer emergency department services are *Tennova Healthcare - Cleveland*, and *Copper Basin Medical Center* which closed in September, 2017. However, it should be noted that neither of these hospitals offer trauma service. The trend information appears in the following chart.

Comparison Of Trends For Tennova Healthcare - Cleveland & Copper Basin Medical Center

	=== Tennova - Cleveland ======			=== Copper Basin Med Ctr ====		
	2014	2015	2016	2014	2015	2016
Utilization Data						
I/P Discharges	8,076	8,566	8,954	791	543	470
Patient Days	33,632	34,985	36,180	3,644	2,270	1,890
ALOS	4.2	4.1	4.0	4.6	4.2	4.0
Cardiac Catheterizations	436	488	773	-	-	-
ED Visits	49,971	50,533	48,501	7,542	7,243	6,750
Outpatient Visits	89,277	90,565	86,105	10,654	17,116	15,717
Utilization Trend						
I/P Discharges		6.1%	4.5%		-31.4%	-13.4%
Patient Days		4.0%	3.4%		-37.7%	-16.7%
ALOS		-1.9%	-1.1%		-9.3%	-3.8%
Cardiac Catheterizations		11.9%	58.4%			
ED Visits		1.1%	-4.0%		-4.0%	-6.8%
Outpatient Visits		1.4%	-4.9%		60.7%	-8.2%

As stated previously, please keep in mind that Copper Basin Medical Center closed in September, 2017. However, their data is presented above for the three (3) year period because that is what was requested.

The chart *Urgent Care Centers In Bradley & Polk County* has been completed.

Urgent Care Centers In Bradley & Polk County

Urgent Care Center Name	Address	Distance From Proposed ED	Operating Hours	Medicare, TennCare & Major Ins. Accepted ?
Bradley - Polk Walk-In	119 White Water Drive, Ocoee, TN	14 miles	M-F 8-8, S & S 8-3	All
AFC Urgent Care	170 Muse Creek Road, NW, Cleveland, TN	8 miles	M-F 8-8, S-S 8-5	No TennCare
Bradley Urgent Care	4021 Keith Street, NW, Cleveland, TN	7.8 miles	Not Listed	Insurance only
CHI Memorial	645 Paul Huff Parkway, Cleveland, TN	6.8 miles	M-F 8-8, S-S 8-5	All
Physicians Care	1494 Strait Road, NE, Cleveland, TN	9 miles	M-F- 8-6, S-s 8-2	All
Minute Clinic	2424 N. Ocoee Street, Cleveland, TN	6.5 miles	M-F 9-7, SS-9-8	No TennCare
Physician First	2725 Keith Street, NW, Cleveland, TN	6.0 miles	M-F 8-8, S S 10-6	Not Listed

17.) Section B, Need, Item 6.

Please complete the following charts for Erlanger Medical Center and the proposed satellite ED projected utilization.

	Actual			Projected		
Year	2015	2016	2017	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						

Erlanger Medical Center and Satellite ED Historical and Projected Utilization
Emergency Severity Index Level of Care

Level of Care	Main ED	Main ED	Main ED	Main ED	Satellite ED	Combined Year 1
	2014	2015	2016	Year 1	Year 1	
Level I						
Level II						
Level III						
Level IV						
Level V						
Total						

Please clarify the reason ED visits at the Erlanger East Hospital increased from 22,009 in 2014 to 34,799 in 2016.

Please indicate the projected cardiac catheterization utilization for each of the two years following completion of the proposed project to include details of the methodology data sources, assumptions, and rationale to project cardiac catheterization utilization.

The chart titled EHS forecast of ED utilization on page 86 of the application is noted. However, the applicant did not include the proposed Erlanger Bradley County ED project in the chart. Please include the proposed Erlanger Bradley County ED project in the chart and submit.

Response

As requested, the charts have been completed.

	======== Actual ========			====== Projected ========		
	2015	2016	2017	Year 1	Year 2	Year 5
Visits - Main Campus	97,099	92,685	90,808	91,716	92,633	95,439
Rooms - Main Campus	38	38	38	38	38	38
Visits Per Room - Main Campus	2,555	2,439	2,390	2,414	2,438	2,512
Visits - Satellite ED				14,000	15,500	17,000
Rooms - Satellite ED				16	16	16
Visits Per Room - Satellite ED				875	969	1,063
Visits - Total	97,099	92,685	90,808	105,716	108,133	112,439
Rooms - Total	38	38	38	54	54	54
Visits Per Room	2,555	2,439	2,390	1,958	2,002	2,082

Erlanger Medical Center & Satellite ED Historical And Projected Utilization
Emergency Severity Index Level Of Care

	==== Actual - Main ED ====			========== Year 1 ==========		
Level Of Care	2015	2016	2017	Main ED	Satellite ED	Combined ED
Level I	3,981	3,800	3,723	3,760	966	4,726
Level II	19,711	18,815	18,434	18,618	4,970	23,588
Level III	40,102	38,279	37,504	37,879	5,264	43,143
Level IV	29,809	28,454	27,878	28,157	2,632	30,789
Level V	3,496	3,337	3,269	3,302	168	3,470
Total	97,099	92,685	90,808	91,716	14,000	105,716

The large increase in ED visits at *Erlanger East Hospital* is due to many reasons. Among them are that East Hamilton County is the most rapidly growing area of Hamilton County. The Volkswagen assembly plant became operational in 2011, and since that time the area in Ooltewah and East Hamilton County has experienced very rapid growth. Another reason is that the new patient tower at *Erlanger East Hospital* was under construction, and actually opened, on December 1, 2016 … the entire area of East Hamilton County was anticipating the opening and the services at *Erlanger East Hospital* actually began growing rapidly in 2015 and 2016.

In CY 2016 Erlanger served a total of 279 cardiac catheterization patients from Bradley and Polk counties. This serves as the basis for our catheterization forecast. In addition to this, we believe that some patients are going to Georgia for catheterization service, however, we are unable to quantify this volume because we do have access to Georgia utilization data. As such, we believe the year 1 volume will most likely be approximately 260 catheterizations. In year 2 after the facility is open, we

believe that the patients currently seeking service in Georgia and elsewhere, will choose to have service performed at *Erlanger Bradley County*, with an expected volume of 416 catheterizations. In years 2, 3 and 4, we expect there will be an average growth rate of 3%.

Origin For Erlanger Cath Lab Patients For CY 2016

County Of Origin	No. Of Cases
Bradley County	223
Polk County	56
Total	279

As requested, *Erlanger Bradley County* has been added to the forecast of ED utilization.

EHS -- Forecast Of ED Utilization

Hospital	No. Of Rooms	===== Historical Utilization =======				===== Projected Utilization =======			
		2014	2015	2016	2017	2018	2019	2020	2021
al ED Visits									
Erlanger Medical Center		52,272	55,597	51,926	49,815	50,313	50,816	51,324	51,837
Children's Hospital @ Erlanger		37,895	41,502	40,759	40,993	41,403	41,817	42,235	42,657
Erlanger East Hospital		22,009	26,172	31,197	34,799	37,235	39,841	42,630	45,614
Erlanger Bradley County		-	-	-	-	-	-	14,000	15,500
Tennova - Cleveland		49,791	50,533	48,501	49,608	50,104	50,605	51,111	51,622
erage ED Visits Per Treatment Room									
Erlanger Medical Center	48	1,089	1,158	1,082	1,038	1,048	1,059	1,069	1,080
Children's Hospital @ Erlanger	31	1,222	1,339	1,315	1,322	1,336	1,349	1,362	1,376
Erlanger East Hospital	17	1,295	1,540	1,835	2,047	2,190	2,344	2,508	2,683
Tennova - Cleveland	42	1,186	1,203	1,155	1,181	1,193	1,205	1,217	1,229

Notes >>
1.) Data is from the Joint Annual Reports for 2014, 2015 and 2016.
2.) Data for 2017 for Erlanger ED's is from internal records.
3.) Tennova data for 2017 is estimated.
4.) Tennova growth rate is assumed at 1% in projected years.
5.) Erlanger Medical Center Children's Hospital @ Erlanger growth rates are assumed at 1% in projected years.
6.) Erlanger East Hospital growth rate is assumed at 7% in projected years. It should be noted that this is a conservative estimate, as there was an 18.9% growth rate in 2015, 19.2% in 2016, and 11.5% in 2017.

18.) Section B, Economic Feasibility, Item 1 (Project Cost Chart).

Moveable equipment in the amount of $1,797,084 is noted. Please list all equipment over $50,000.

Response

Moveable equipment associated with this project with a cost of more than $50,000 is listed, as requested.

- Portable, Digital x-ray System $163,893
- Chemistry Analyzer $75,000
- Hematology Analyzer $67,000
- Immunoassay Analyzer $55,000
- Coagulation Analyzer $50,000
- Urinalysis Analyzer $86,850

19.) Section B, Economic Feasibility, Items 3 And 4, Historcal Data Chart & Projected Data Chart.

There are calculation errors in the 2015 and 2016 columns in the Historical Data Chart. In addition, as prescribed please break-out salaries and wages into "a.direct patient care" and "b.non-patient care" in the Historical Data Chart. Please revise and submit a replacement Historical Data Chart.

As prescribed in the application, please break-out salaries and wages into "a.direct patient care" and "b.non-patient care" in the Total Facility Projected Data Chart and submit.

Response

As requested, the *Historical Data Chart* and the *Projected Data Chart* for the *Total Facility* have corrected and replacement pages are attached to this supplemental information.

20.) Section B, Economic Feasibility, Item 5.B.

Please discuss the reasons why Erlanger East's average ED charges are substantially less than Erlanger Medical Center and Tennova Cleveland.

Response

Erlanger East Hospital ED charges reflect the acuity of those patients served as do the charges at *Erlanger Medical Center*, a Level I trauma Center. As such, ED

charges at a major teaching hospital such as *Erlanger Medical Center*, with an ED residency and fellowship program, would normally be expected to be higher than *Erlanger East Hospital*. We expect, but are unable to confirm, that ED charges at *Tennova Healthcare - Cleveland*, reflect the for-profit status of that hospital's organizational structure.

21.) Section B, Economic Feasibility, Item 6.B.

The net operating margin is noted. However, please calculate the from the project's Projected Data Chart and submit a revised page 104 labeled as 101R.

Response

As requested, corrections have been made to the chart *Net Operating Margin Ratio* and a replacement page is attached to this supplemental information.

22.) Section B, Orderly Development, Item A.

What are the distances from the proposed ED site to each of the 5 Erlanger Health system hospitals listed on page 109 ?

Response

The distance to each of Erlanger Health Systems five (5) hospital locations is below.

Erlanger Medical Center	27.2 miles
Children's Hospital @ Erlanger	27.3 miles
Erlanger East Hospital	16.9 miles
Erlanger North Hospital	26.0 miles
Erlanger Bledsoe Hospital	48.5 miles

23.) Section B, Orderly Development, Item 3.C.

It appears that Erlanger Behavioral Health was referenced incorrectly in the response on page 113. Please clarify.

Response

Erlanger Behavioral Health is a subsidiary of *Erlanger Health System*, however, it is not the applicant. The chart *Outstanding Projects* has been revised and a replacement page 120 is attached to this supplemental information.

24.) Section B, Economic Feasibility, Item 8.

The staffing table is noted. However, please indicate how the proposed ED will be staffed. If by contracted emergency physicians, please provide an overview of the contracted organization and their experience.

Please complete the following chart showing the FTE staffing plan for the proposed satellite ED.

Applicant's Projected Staffing of Proposed Satellite ED by Shift

Position	7-3 # FTEs	3-11 # FTEs	11-7 # FTEs
Emergency Medicine Physician			
Director			
Manager			
Nurse Practitioner			
RN			
Respiratory Therapist			
Cardiac Specialist			
Pharmacist Staff			
Lab Tech			
Ultrasound Tech			
CT Tech			
Other			
Total			

Response

Erlanger Health System currently contracts with *ApolloMD* to staff all of it's ED's with emergency physicians. We anticipate that *ApolloMD* will staff the ED/trauma center at *Erlanger Bradley County* to provide required physician services. *ApolloMD* has the experience and expertise to provide requisite services for *Erlanger Bradley County*. Information on *ApolloMD* is attached to this supplemental information.

Erlanger Bradley County will be staffed with a minimum of one physician and one registered nurse (RN) at all times. Physicians staffing *Erlanger Bradley County* will be board certified, or board eligible, emergency physicians and will be part of Erlanger Medical Centers' single medical staff, governed by the same bylaws. All nurses staffing *Erlanger Bradley County* will be part of *Erlanger Medical Center's* single organized nursing staff.

As requested, the chart *Applicant's Projected Staffing Of Proposed Satellite ED BY Shift* has been completed.

Applicant's Projected Staffing of Proposed Satellite ED by Shift

Position	7-3 # FTEs	3-11 # FTEs	11-7 # FTEs
Emergency Medicine Physician	1	1	1
Director	1		
Manager	2	1	1
Nurse Practitioner	1	1	1
RN	2	2	2
Respiratory Therapist	1	1	
Cardiac Specialist	1	1	
Pharmacist Staff	1		
Lab Tech	1	1	1
Ultrasound Tech	1	1	
CT Tech	1	1	1
Other	6.7	2	1
Total	19.7	12	8

25.) Section B, Orderly Development, Item 4.

It is noted the applicant is Joint Commission accredited. Please provide documentation of the current accreditation and a copy of the latest survey.

Response

A copy of *The Joint Commission* accreditation is attached to this supplemental information.

26.) 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 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;

(b) 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:

i. The same accrediting standards as the licensed hospital of which it will be a department, for a Freestanding Emergency Department.

(h) For Cardiac Catheterization projects:

3. Whether the applicant will staff and maintain at least one cardiologist who has performed 75 cases annually averaged over the previous 5 years (for an adult program), and 50 cases annually averaged over the previous 5 years (for a pediatric program).

r) For Freestanding Emergency Department projects, whether the applicant has demonstrated that it will satisfy and maintain compliance with standards in the State Health Plan.

Response

Erlanger Medical Center has not been decertified in the last three (3) years.

Erlanger Medical Center will participate within two (2) years of implementation of the proposed project, in a self-assessment and external peer review assessment process to accurately assess our level of performance in relation to established standards and will implement ways to continuously improve.

Erlanger Medical Center will staff and maintain at last one cardiologist at the proposed center who has performed 75 cases annually average over the previous 5 years for adult services.

Erlanger Medical Center will, and has demonstrated, that it will satisfy and maintain compliance with standards in State Health Plan.

MAR 16 '18 AM 10:37

Supplemental #1
March 16, 2018
10:36 A.M.

A F F I D A V I T

STATE OF TENNESSEE |
|
COUNTY OF HAMILTON |

NAME OF FACILITY Erlanger Bradley County
- Satellite Emergency Department

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 13 of March (Month), 2018 (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
March 16, 2018
10:36 A.M.

Description	Section / Item
CON Replacement Pages	
Support Letter - Dr. David Darden	
Tennessee Certificate of Existence	
Limited Warranty Deed	
Site Plan	
Letter Agreement - Copper Basin Medical Center	
CFO Letter - Support Resources	
Emergency Medical Firm - ApolloMD	
CON Cardiac Cath Calculations - 2014-2016	
CV's For Cardiologists	
HRSA Designations For Medically Underserved, Health Professional Shortage Areas - For Bradley County & Polk County.	
Erlanger Medical Center - NEDOCS Overcrowding For 2017	
NEDOCS Article - ED Overcrowding	
Article - Jetport's Phenomenal Growth	
Article - Increase In Emergency Calls Prompts Need For More Staff And Equipment	
Report - Tennessee Trauma Care System (July, 2004)	
Letter Of Accreditation - *The Joint Commission*	
Erlanger - Notice Of Privileged Information	
Official Accreditation Report - *The Joint Commission*	

ATTACHMENTS

Supplemental #1
March 16, 2018
10:36 A.M.

David D. Darden, DO, MPH, ME
Office of the Polk County Medical Examiner
P.O. Box 335 • Ocoee, Tennessee 37361-0335
Phone: (423) 338-5467 • Cell: (423) 618-4151 • Fax: (423) 338-5102 • E-mail: dardendo@gmail.com

Letters to the Editor
Cleveland Daily Banner
P.O. Box 3600
Cleveland, TN 37320-3600

Dear Letter to the Editor

Please print the enclosed "letter to the Editor" in your earliest possible next edition.

Sincerely,

Dr. David D Darden

Letter to editor Cleveland Daily Banner

Tennova Healthcare serving the community for 65 years.

To The Editor:
"Tennova Healthcare serving the community for 65 years". In 1955 Bradley Memorial Hospital began as a non-profit 52 bed healthcare facility established under the Federal Hill-Burton Hospital Program. The Hill-Burton Hospital Program obligated Bradley Memorial Hospital to provide a specific amount of free or reduced healthcare each year to the people it served.

The Bradley County Commission voted 13-0 September 19, 2005 to sell Bradley Memorial Hospital to Community Health Systems (Tennova), a for-profit health care provider. At the time of this sale Community Health Systems (Tennova) was the owner of Cleveland Community Hospital thus giving Community Health Systems (Tennova) 100% control of local hospital health care. 100% control of any entity is commonly referred to as a monopoly.

It is an insult to the many hundreds of the men, women, nurses and physicians who faithfully served the patients at Bradley Memorial Hospital for Tennova Healthcare to make the statement that Tennova Healthcare has been serving the community for 65 years. Community Health Systems (Tennova) was organized in 1985; you do the math.

I urge you to support the non-profit Erlanger Health System in their quest to build a local facility to serve the people of Bradley County and the surrounding area. This is called competition.

Dr. David D Darden
Ocoee, Tennessee
March 12, 2018

Supplemental #1
March 16, 2018
10:36 A.M.

ROBINSON TEAM kw GREATER DOWNTOWN REALTY KELLERWILLIAMS.REALTY CLICK FOR A FREE HOME ASSESSMENT

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Breaking news alerts trending videos, and more

Sale Of Bradley Memorial Hospital Approved

Monday, September 19, 2005 - by Robert T. Nash, FreeLanceMedia, Inc

A tentative deal to sell Bradley Memorial Hospital to Community Health Systems, a Brentwood, Tennessee-based health care group, has been announced.

"The (Bradley) County Commission voted 13-0 in favour of accepting the asset purchase agreement provided by Community Health Systems," hospital Chief Operating Officer Dewayne Belew told The Chattanoogan.com early Monday afternoon.

"The sale price is $76.5 million, with an additional $36.8 million allocated for capital improvements over the next five years, plus another $10 million set aside for the development of an Open Heart Surgery facility, contingent upon state approval and physician availability," Belew said.

Davis & Hoss
ATTORNEYS
(423) 266-0605

Mr. Belew said the proposed sale of the hospital, which began as a 52-bed facility in 1955, is subject to state and federal regulatory approval. If regulatory authorities approve the transaction, Community Health Systems will assume actual legal ownership at 12:01 a.m. on Sunday, Oct. 1, Mr. Belew said.

"Non-urban hospitals are vital to keeping quality health care close to home," reads a general statement on the Middle Tennessee company's official website. "We understand the specific needs of hometown hospitals – and we work with the community to create a partnership that maintains local involvement while providing the necessary resources to expand services, recruit physicians and enhance technology."

Public records indicate Community Health Systems was organized in 1985. As of July 1, the company owned 69 hospitals in 21 states, with an aggregate of 7,802 licensed beds, according to their website. For the fiscal year ending Dec. 31, 2004, the company reported $3.3 billion in revenues.

Efforts to reach Community Health Systems spokeswoman Rosemary Plorine for specific comment on the proposed purchase were unsuccessful.

The hospital's board of trustees had earlier approved the sale.

The amount includes $76.5 million for the county-owned hospital. The new owners are to spend $36.8 million for capital improvements.

Community Health Systems is the parent company of Cleveland Community Hospital.

The firm is also planning a $10 million open heart center, subject to the approval of a certificate of need from the state.

100% LOCAL
epb Fiber Optics
Because of SISKIN HOSPITAL I can...

Like 0 Tweet G+ Share

Marc Gravitt REGISTER of DEEDS

Supplemental #1
March 16, 2018
10:36 A.M.

September 21, 2017

Mr. Dan Johnson
Chairman of the Board
Copper Basin Medical Center
144 Medical Center Drive
Copper Hill, TN 37317

Re: Erlanger Health System/Copper Basin Medical Center

Dear Mr. Johnson:

For and on behalf of Erlanger Health System ("Erlanger"), it is my understanding that representatives of Copper Basin Medical Center ("Copper Basin") are scheduled to appear before the Tennessee Department of Health (the "Department") regarding Copper Basin's proposal to sustain the operations of its emergency department (the "Proposal"). It is further my understanding that the hearing is currently set for October 4 in Nashville.

In anticipation thereof, I appreciate that Copper Basin would welcome assistance from Erlanger before and/or at the scheduled hearing before the Department. While you understand and acknowledge that it is Erlanger's position that the Department is not likely to be receptive to Copper Basin's Proposal (with or without Erlanger's involvement), after thoughtful consideration, Erlanger would be willing to provide some measure of assistance, through Erlanger's Senior Vice-President for Planning and Business Development, Joe Winick, as able and as is convenient, but at all times within its sole and absolute discretion and otherwise contingent on Copper Basin's acknowledgement and agreement to the following:

(1) Nothing in this letter and no action pursuant hereto should or shall be construed or deemed in any way or for any purpose to indicate or otherwise establish Erlanger as an agent of Copper Basin for any purpose whatsoever or create any sort of partnership or joint venture between Erlanger and Copper Basin.

(2) Further, in no instance shall Erlanger, its successors, assigns, affiliates, owners, officers, trustees, directors, employees, attorneys and agents be liable to Copper Basin (and Copper Basin hereby expressly waives any claims it may have as to Erlanger) or to any third-party (to include, without limitation, any trustee in bankruptcy, receiver, third-party beneficiary or the like), whether a claim be in tort, contract or otherwise, for any assistance provided by Erlanger as to the Proposal.

(3) Further, the Facility shall indemnify Erlanger, its successors, assigns, affiliates, owners, officers, trustees, directors, employees, attorneys and agents from, and to

defend them against, any claim, cause of action, loss, liability, expense, damage, or cost, including paying all attorneys' fees, litigation expenses, and court costs that may be incurred as a result of or related to the Proposal.

(4) Further, any and all assistance provided as to the Proposal will be performed, if at all, by Erlanger strictly on a voluntary basis and without any expectation of remuneration whatsoever and solely in an effort by Erlanger to aid a fellow community hospital during a troublesome financial period.

(5) Finally, this letter sets forth the entire understanding and agreement between Erlanger and Copper Basin as to the Proposal, and shall be binding upon the parties and their successors, if any. All prior negotiations, agreements and understandings as to the matters herein concerned are expressly superseded hereby.

Dan, it is not expected that such assistance by Erlanger would extend beyond the October 4 hearing date; however, if and to the extent that it should, the terms of this letter shall control unless and until superseded by a subsequent agreement between Erlanger and Copper Basin relating to the Proposal. If Copper Basin is agreeable to the terms provided, please execute below and forward to my attention at robert.brooks@erlanger.org. Upon receipt, we can have further discussion regarding the hearing.

Sincerely,

Robert Brooks, EVP/Chief Operating Officer

Erlanger Health System

I HAVE CAREFULLY READ THE ABOVE AND FOREGOING, FULLY UNDERSTAND ITS CONTENTS AND UNDERSTAND, ACKNOWLEDGE AND AGREE TO EACH AND EVERY TERM FOR AND ON BEHALF OF THE BOARD OF DIRECTORS, COPPER BASIN MEDICAL CENTER:

By: _____
Dan Johnson, Chairman of the Board of Directors
Copper Basin Medical Center

Date: 9/22/17

Supplemental #1
March 16, 2018
10:36 A.M.

Winick, Joe

From: Dan Johnson <djohnson@copperbasin.org>
Sent: Friday, October 06, 2017 10:21 AM
To: Brooks, Robert
Cc: Hedges, Elizabeth; Winick, Joe; Engle, Brandi; 'Tim Henry (CBMC)'; 'Jeff O'Neill'
Subject: Department of Health meeting in Nashville

Rob,

Thank you and your staff for allowing Joe to his provide support and counsel before our appearance before the Dept of Health Board this past Wednesday. With Joe's help we delivered a practical approach to present to the Board. They unanimously voted to grant a one year waiver to place our license in an inactive status.

Most Sincerely,

Dan Johnson, CEO, MBA
Copper Basin Medical Center
144 Medical Center Drive
Copperhill, TN 37317
Phone: 423.496.5511
Email: djohnson@copperbasin.org

Electronic Mail Confidentiality Notice: The enclosed information is STRICTLY confidential and is intended for the use of the intended recipient only. Federal and State laws protect patient and peer information that may be disclosed in this e-mail. If you are not the intended recipient, you are hereby notified that you have received this communication in error and that any review, dissemination, distribution, disclosure, or copying of the contents is prohibited. If you have received this e-mail in error, please notify the sender immediately.

Supplemental #1
March 16, 2018
10:36 A.M.

erlanger

March 13, 2018

Ms. Melanie Hill, Executive Director
Tennessee Health Services Agency
State of Tennessee
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, TN 37243

RE: Erlanger Bradley County
Emergency Department/ Level IV Trauma Center
CON Application, CN 1802-011

Dear Ms. Hill:

This letter serves to confirm Erlanger's full support for development and operation of the provider based emergency department/trauma center associated with the above referenced Certificate of Need application. Much as we currently do with the Erlanger Bledsoe provider based emergency department, Erlanger is fully committed to provide all needed resources to operate the emergency department inclusive of equipment and staff. Erlanger will monitor, track and document the cost of maintaining needed resources and will maintain same to ensure the provision of high quality care within the emergency services continuum.

If you have any questions, please do not hesitate to contact me.

Sincerely,

J. Britton Tabor, CPA, FACHE
Executive Vice President, CFO & Treasurer

WHY APOLLOMD?

Multispecialty Solutions for Hospitals

The ApolloMD Vision

Delivering the highest quality patient care through a trusted partnership of integrated medical services

Emergency Medicine Services Partner

ApolloMD offers leading multispecialty solutions for hospitals through a unique structure focused on excellent clinical operations and enhanced patient care. Emphasizing quality, efficiency, communication, and patient experience, ApolloMD works collaboratively with partner facilities to implement best practices and process improvement across the board.

3.9

Million

As the healthcare marketplace grows increasingly complex, hospitals and health systems are turning to trusted partners to ensure the provision of top quality, cost-effective patient care. With a multispecialty focus and national resources, ApolloMD offers scalable solutions for hospitals. Whether a single clinical department, combined services agreement, or multi-facility health system partnership, ApolloMD is committed to delivering outstanding care and streamlined clinical operations in each and every partnership.

Multispecialty Solutions for Hospitals:

ApolloMD partners with hospitals and health systems to provide:

- **Anesthesia (https://apollomd.com/home/multispecialty-solutions/anesthesia-management/)**
- **Emergency Medicine (https://apollomd.com/home/multispecialty-solutions/emergency-medicine/)**
- **Hospital Medicine (https://apollomd.com/home/emergency-department-management/hospital-medicine/)**
- **Intensivist (https://apollomd.com/home/emergency-department-management/intensivist-services/)**
- **Palliative Care (https://apollomd.com/home/emergency-department-management/palliative-care/)**
- **Radiology (https://apollomd.com/home/emergency-department-management/radiology-staffing/)**

ApolloMD offers three key distinctions, resulting in top quality services for partner hospitals.

Physician Ownership

ApolloMD's status as a privately held, physician-owned practice offers several advantages to hospital partners. With no outside stakeholders, ApolloMD is accountable and responsible solely to hospital clients, partners, and physicians.

The number of patients treated each year by ApolloMD providers

Contact Us

Contact us today to discuss the ways in which a value-based physician services partnership with ApolloMD can optimize efficiency and improve patient satisfaction within your hospital.

Learn More (https://apollomd.com/home/multispecialty-solutions/contact-apollomd/)

Supplemental #1
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Every full-time physician is offered the opportunity to invest in the practice through the Preferred Partnership Program. With no ambiguity regarding eligibility, the program offers increased potential return on investment over time. This unique offering supports recruitment and retention efforts, attracting high quality physicians while promoting teamwork and collaboration across all specialties.

Highly Effective Transition Process

With a strong ability to retain physicians and a highly effective transition process, ApolloMD has successfully transitioned over fifty contracts in the past three years. In order to facilitate the startup process, we have developed a systemized approach to contract transitions, utilizing a 105-point interdepartmental checklist. When awarded a new contract, the transition process is kicked off immediately, with ApolloMD's dedicated transition team on-site at the hospital within 24-48 hours of an announcement to meet with existing providers.

In addition to a proven contract management process, ApolloMD's recruitment and retention expertise allows for smooth contract transitions. Our experienced physician recruitment team works closely with local clinical leadership and hospital administration to identify and hire physicians well-suited for each individual facility. We maintain a sizable pool of STRIKE Travel Team members who can provide interim coverage during start-ups and periods of unforeseen staffing shortages.

Physician Alignment

ApolloMD was founded on the idea of physician alignment, and this concept remains a cornerstone of the company today. With compensation based on clinical outcomes and efficiency, our providers are highly motivated to provide top quality patient care.

The ApolloMD Quality Partner Incentive (QPI) Program further incentivizes excellence, with compensation tied to:

- Core measure compliance
- Clinical and professional quality
- Patient, nursing, and medical staff satisfaction

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March 16, 2018
10:36 A.M.

- Positive citizenship and collaboration

CareHub: Connected Care from Home to Home

With a depth of experience in optimizing multispecialty clinical operations, ApolloMD developed the **CareHub (https://apollomd.com/home/multispecialty-solutions/carehub-solutions/)**, a suite of solutions for hospitals. The CareHub includes **Education (https://apollomd.com/home/multispecialty-solutions/carehub-solutions/carehub-education/)**, **Process Improvements (https://apollomd.com/home/multispecialty-solutions/carehub-solutions/carehub-process-improvement/)**, and **Technology (https://apollomd.com/home/multispecialty-solutions/carehub-solutions/carehub-technology/)** tools that can be customized for client hospitals in order to improve patient care.

15,069,675 patients served by our physicians

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(https://apollomd.com/)

EMERGENCY DEPARTMENT SERVICES

Our individual facility volumes range from 25,000 to more than 115,000 annual visits with an average contract volume of 40,000.

Emergency Medicine Physician Services Overview

Overview	Emergency Department Flow Assessment	RFP Request	Emergency Medicine Case Studies
(https://apollomd.com/emergency-medicine/)	(https://apollomd.com/emergency-medicine-department-flow/)	(https://apollomd.com/emergency-medicine-rfp/)	(https://apollomd.com/emergency-medicine-case-studies/)

Emergency Medicine Services Partner

With an average patient volume of 40,000 across our client hospitals and over 30 years of experience in emergency departments, ApolloMD offers true expertise in emergency medicine services. ApolloMD recognizes the unique emergency

department challenges specific to busier facilities. Our business model reflects that and strives to conquer those challenges by forming collaborative relationships with both the hospitals we serve and our physician partners. By aligning hospital incentives with physicians' incentives, we are able to increase patient satisfaction, improve flow and strengthen hospital financials.

Our unique approach to emergency department services incorporates the following:

Performance-Based Compensation Structure

ApolloMD's compensation structure works to create a culture of performance in every partner facility. Our physicians are compensated based on the patients they treat and the procedures they perform. In addition to the volume-based component of compensation, patient satisfaction and objective measures of quality can also be part of the compensation structure, allowing for a model that aligns physician incentives with efficient, quality and compassionate care.

Top Quality Physicians

ApolloMD seeks to provide the highest quality physicians for emergency department services. We work to establish a core group of physicians to live within the community and become truly vested to the hospital. Attracted by top compensation and a high quality of life, ApolloMD physicians are recruited from leading training programs and hospitals throughout the country.

Commitment to Quality and Patient Satisfaction

ApolloMD's primary commitment is to top quality and patient satisfaction, and our client hospitals reflect this. In 2010, one of our new clients received Press Ganey's Journey to Excellence Award, which recognizes the largest increase in ED patient satisfaction scores within one quarter. Immediately after partnering with ApolloMD, this facility's scores jumped from the single digits to the 95th percentile

Operational Resources and Efficiency

Contact Us

Contact us today to discuss the ways in which a value-based physician services partnership with ApolloMD can optimize efficiency and improve patient satisfaction within your hospital.

Learn More (https://apollomd.com/home/multispecialty-solutions/contact-apollomd/)

Supplemental #1
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ApolloMD believes that for a physician services group to operate most effectively, it is imperative to track and manage account receivables efficiently. This process includes effective documentation, coding and collections techniques. For these reasons, ApolloMD established an in-house billing company. We utilize electronic records to maximize control and efficiency in the billing process, and continually leverage our size and legal expertise to successfully negotiate with managed care providers in order to maximize reimbursement.

Emergency Department Services that Improve Financials

Through efficient business services and smart emergency room staffing, ApolloMD has decreased or eliminated subsidies at each of our partner facilities. When partnering with a facility, ApolloMD can help improve hospital financials in the ED by:

- Utilizing the proprietary ApolloMD Schedule Optimization System that matches demand and capacity, ensuring appropriate coverage for both periods of increased and decreased volumes.
- Capitalizing on ED expenditures by improving patient throughput and allowing for volume growth.
- Monitoring uncompensated care, including reimbursed CT scans, that the hospital would not be able to recover.
- Preventing ambulance diversions and lowering LWBS rates.
- Ensuring appropriate admission rates.

15,069,675 patients served by our physicians

About Us (https://apollomd.com/emergency-medicine-management/) For Physicians (https://apollomd.com/home/emergency-medicine-physicians/)

For Hospitals (https://apollomd.com/home/multispecialty-solutions/)

ApolloMD Sitemap (https://apollomd.com/apollomd-physician-services/apollomd-physician-servicessitemap/)

Privacy Policy (https://apollomd.com/apollomd-physician-services/apollomd-physician-servicessitemap/privacy-policy/)

Pay Account Online (https://www.paymentsmd.com/PayAccountOnline.aspx) Physician Login (https://www.apollomd.net/) Glossary (https://apollomd.com/glossary/)

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Supplemental #1
March 16, 2018
10:36 A.M.

Certificate of Need Cardiac Cath Calculations based on 2009 State Health Plan Standards

Data Sources: TDH Hospital Discharge Data System (HDDS)
Data Years: 2014-2016 (most recent years of finalized HDDS data)

Methodology: Determine the three year Cardiac Cath weighted volume (diagnostic and therapeutic) performed by each Tennessee hospital in the service area by 13 age groups. Include all patients seen, both Tennessee resident and non-resident. Include all occurrences of Cardiac Cath ICD-9 and ICD-10 Procedure Codes or CPT HCPCS codes with a Revenue Code 0481, Cardiology - Cardiac Cath Lab. Summarize cases based on the highest weighted code.

Cardiac Cath ICD-9, ICD-10 and CPT codes and categorizations determined by the Bureau of TennCare and the Tennessee Hospital Association. ICD-10 coding began the fourth quarter of 2015.

The service area for the current application includes Bradley, Hamilton and Polk counties. Acute care hospitals found in this area (during the years 2014-2016) are Tennova Healthcare Cleveland, Tennova Healthcare Cleveland – Westside Dr, Erlanger Medical Center, Erlanger North, Erlanger East, Memorial North Park, Memorial Healthcare System, Parkridge Medical Center, Parkridge East Hospital and Copper Basin Medical Center.

Tennova Healthcare Cleveland - Westside Dr. (State ID 06233) and Copper Basin Medical Center (State ID 70223) did not record any claims in the time period with Revenue Code 0481, Cardiology - Cardiac Cath Lab.

Tennova Healthcare Cleveland (State ID 06223)

Highest Weighted* Cardiac Cath Services Provided – Hospital Discharge Recorded Data – 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	486.5	475.0	7.5	4.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	2.0	2.0	0.0	0.0
30 - 39	19.0	19.0	0.0	0.0
40 - 44	35.5	34.0	1.5	0.0
45 - 49	51.5	50.0	1.5	0.0
50 - 54	61.5	60.0	1.5	0.0
55 - 59	77.0	77.0	0.0	0.0
60 - 64	74.0	74.0	0.0	0.0
65 - 69	64.0	64.0	0.0	0.0
70 - 74	47.0	44.0	3.0	0.0
75 - 79	31.0	29.0	0.0	2.0
80 - 84	17.0	17.0	0.0	0.0
85 +	7.0	5.0	0.0	2.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	197.0	28.0	117.0	52.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	7.0	0.0	3.0	4.0
40 - 44	16.0	4.0	12.0	0.0
45 - 49	21.0	2.0	15.0	4.0
50 - 54	15.0	2.0	9.0	4.0
55 - 59	37.0	10.0	27.0	0.0
60 - 64	31.0	2.0	21.0	8.0
65 - 69	24.0	4.0	12.0	8.0
70 - 74	8.0	2.0	6.0	0.0
75 - 79	24.0	2.0	6.0	16.0
80 - 84	10.0	0.0	6.0	4.0
85 +	4.0	0.0	0.0	4.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment

Erlanger Medical Center (State ID 33203)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	5,862.5	5,421.0	103.5	338.0
0 - 17	78.0	66.0	0.0	12.0
18 - 29	59.0	31.0	0.0	28.0
30 - 39	196.0	166.0	0.0	30.0
40 - 44	284.5	273.0	1.5	10.0
45 - 49	492.5	444.0	4.5	44.0
50 - 54	727.5	679.0	10.5	38.0
55 - 59	862.5	825.0	13.5	24.0
60 - 64	855.5	796.0	25.5	34.0
65 - 69	899.5	827.0	22.5	50.0
70 - 74	608.5	569.0	7.5	32.0
75 - 79	450.0	412.0	12.0	26.0
80 - 84	230.0	219.0	3.0	8.0
85 +	119.0	114.0	3.0	2.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	4,814.0	1,332.0	2,670.0	812.0
0 - 17	112.0	84.0	12.0	16.0
18 - 29	54.0	8.0	6.0	40.0
30 - 39	151.0	10.0	93.0	48.0
40 - 44	239.0	36.0	171.0	32.0
45 - 49	381.0	80.0	225.0	76.0
50 - 54	564.0	162.0	318.0	84.0
55 - 59	724.0	168.0	456.0	100.0
60 - 64	749.0	190.0	459.0	100.0
65 - 69	649.0	234.0	315.0	100.0
70 - 74	482.0	154.0	264.0	64.0
75 - 79	376.0	120.0	168.0	88.0
80 - 84	233.0	66.0	123.0	44.0
85 +	100.0	20.0	60.0	20.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Erlanger North (State ID 33213)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	8.0	8.0	0.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	0.0	0.0	0.0	0.0
40 - 44	2.0	2.0	0.0	0.0
45 - 49	2.0	2.0	0.0	0.0
50 - 54	1.0	1.0	0.0	0.0
55 - 59	1.0	1.0	0.0	0.0
60 - 64	0.0	0.0	0.0	0.0
65 - 69	0.0	0.0	0.0	0.0
70 - 74	2.0	2.0	0.0	0.0
75 - 79	0.0	0.0	0.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	16.0	10.0	6.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	0.0	0.0	0.0	0.0
40 - 44	5.0	2.0	3.0	0.0
45 - 49	4.0	4.0	0.0	0.0
50 - 54	2.0	2.0	0.0	0.0
55 - 59	5.0	2.0	3.0	0.0
60 - 64	0.0	0.0	0.0	0.0
65 - 69	0.0	0.0	0.0	0.0
70 - 74	0.0	0.0	0.0	0.0
75 - 79	0.0	0.0	0.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Erlanger East (State ID 33233)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	156.0	156.0	0.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	3.0	3.0	0.0	0.0
40 - 44	3.0	3.0	0.0	0.0
45 - 49	9.0	9.0	0.0	0.0
50 - 54	21.0	21.0	0.0	0.0
55 - 59	20.0	20.0	0.0	0.0
60 - 64	31.0	31.0	0.0	0.0
65 - 69	26.0	26.0	0.0	0.0
70 - 74	18.0	18.0	0.0	0.0
75 - 79	15.0	15.0	0.0	0.0
80 - 84	7.0	7.0	0.0	0.0
85 +	3.0	3.0	0.0	0.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	18.0	18.0	0.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	0.0	0.0	0.0	0.0
40 - 44	0.0	0.0	0.0	0.0
45 - 49	2.0	2.0	0.0	0.0
50 - 54	4.0	4.0	0.0	0.0
55 - 59	2.0	2.0	0.0	0.0
60 - 64	4.0	4.0	0.0	0.0
65 - 69	0.0	0.0	0.0	0.0
70 - 74	4.0	4.0	0.0	0.0
75 - 79	2.0	2.0	0.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Memorial North Park (State ID 33223)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	75.0	71.0	0.0	4.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	1.0	1.0	0.0	0.0
30 - 39	3.0	3.0	0.0	0.0
40 - 44	2.0	2.0	0.0	0.0
45 - 49	3.0	3.0	0.0	0.0
50 - 54	9.0	7.0	0.0	2.0
55 - 59	6.0	6.0	0.0	0.0
60 - 64	6.0	6.0	0.0	0.0
65 - 69	9.0	9.0	0.0	0.0
70 - 74	12.0	12.0	0.0	0.0
75 - 79	5.0	5.0	0.0	0.0
80 - 84	15.0	13.0	0.0	2.0
85 +	4.0	4.0	0.0	0.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	79.0	4.0	75.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	3.0	0.0	3.0	0.0
30 - 39	3.0	0.0	3.0	0.0
40 - 44	3.0	0.0	3.0	0.0
45 - 49	3.0	0.0	3.0	0.0
50 - 54	5.0	2.0	3.0	0.0
55 - 59	6.0	0.0	6.0	0.0
60 - 64	9.0	0.0	9.0	0.0
65 - 69	9.0	0.0	9.0	0.0
70 - 74	17.0	2.0	15.0	0.0
75 - 79	3.0	0.0	3.0	0.0
80 - 84	12.0	0.0	12.0	0.0
85 +	6.0	0.0	6.0	0.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Memorial Healthcare System (State ID 33323)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	11,006.5	9,632.0	220.5	1,154.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	39.0	27.0	0.0	12.0
30 - 39	208.0	181.0	3.0	24.0
40 - 44	356.0	316.0	6.0	34.0
45 - 49	585.5	541.0	4.5	40.0
50 - 54	966.5	873.0	19.5	74.0
55 - 59	1,253.0	1,142.0	21.0	90.0
60 - 64	1,537.5	1,337.0	34.5	166.0
65 - 69	1,855.0	1,611.0	36.0	208.0
70 - 74	1,676.0	1,446.0	36.0	194.0
75 - 79	1,281.5	1,094.0	37.5	150.0
80 - 84	825.5	726.0	19.5	80.0
85 +	423.0	338.0	3.0	82.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	9,723.0	1,686.0	5,205.0	2,832.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	26.0	4.0	6.0	16.0
30 - 39	156.0	20.0	96.0	40.0
40 - 44	292.0	32.0	192.0	68.0
45 - 49	484.0	78.0	294.0	112.0
50 - 54	826.0	160.0	498.0	168.0
55 - 59	1,116.0	202.0	654.0	260.0
60 - 64	1,274.0	212.0	714.0	348.0
65 - 69	1,557.0	294.0	759.0	504.0
70 - 74	1,497.0	288.0	741.0	468.0
75 - 79	1,227.0	208.0	627.0	392.0
80 - 84	754.0	116.0	378.0	260.0
85 +	514.0	72.0	246.0	196.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Parkridge Medical Center (State ID 33383)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	4,890.0	4,189.0	51.0	650.0
0 - 17	12.0	0.0	0.0	12.0
18 - 29	48.0	22.0	0.0	26.0
30 - 39	121.5	90.0	1.5	30.0
40 - 44	152.5	139.0	1.5	12.0
45 - 49	306.0	288.0	6.0	12.0
50 - 54	484.0	428.0	6.0	50.0
55 - 59	614.0	543.0	3.0	68.0
60 - 64	615.5	548.0	7.5	60.0
65 - 69	804.0	713.0	15.0	76.0
70 - 74	711.0	597.0	0.0	114.0
75 - 79	556.0	461.0	9.0	86.0
80 - 84	331.5	264.0	1.5	66.0
85 +	134.0	96.0	0.0	38.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	4,615.0	774.0	2,481.0	1,360.0
0 - 17	12.0	4.0	0.0	8.0
18 - 29	80.0	4.0	0.0	76.0
30 - 39	111.0	12.0	39.0	60.0
40 - 44	138.0	10.0	96.0	32.0
45 - 49	277.0	32.0	201.0	44.0
50 - 54	407.0	38.0	261.0	108.0
55 - 59	531.0	82.0	309.0	140.0
60 - 64	605.0	98.0	363.0	144.0
65 - 69	735.0	134.0	465.0	136.0
70 - 74	675.0	142.0	333.0	200.0
75 - 79	509.0	114.0	219.0	176.0
80 - 84	349.0	80.0	129.0	140.0
85 +	186.0	24.0	66.0	96.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

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Parkridge East Hospital (State ID 33393)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	9.0	9.0	0.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	1.0	1.0	0.0	0.0
30 - 39	1.0	1.0	0.0	0.0
40 - 44	0.0	0.0	0.0	0.0
45 - 49	0.0	0.0	0.0	0.0
50 - 54	1.0	1.0	0.0	0.0
55 - 59	2.0	2.0	0.0	0.0
60 - 64	0.0	0.0	0.0	0.0
65 - 69	1.0	1.0	0.0	0.0
70 - 74	1.0	1.0	0.0	0.0
75 - 79	2.0	2.0	0.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	3.0	0.0	3.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	0.0	0.0	0.0	0.0
40 - 44	0.0	0.0	0.0	0.0
45 - 49	0.0	0.0	0.0	0.0
50 - 54	0.0	0.0	0.0	0.0
55 - 59	0.0	0.0	0.0	0.0
60 - 64	0.0	0.0	0.0	0.0
65 - 69	0.0	0.0	0.0	0.0
70 - 74	0.0	0.0	0.0	0.0
75 - 79	3.0	0.0	3.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

From the 2016 Joint Annual Reports (JAR) of Hospitals there are 18 Cardiac Cath labs in operation in the service area:

Tennova Healthcare Cleveland (State ID 06223) – 1 lab
Erlanger Medical Center (State ID 33203) – 6 labs
Memorial Healthcare System (State ID 33323) – 7 labs
Parkridge Medical Center (State ID 33383) – 4 labs

Service Area Hospital	Diagnostic Cardiac Caths	Therapeutic Cardiac Caths	Total Cardiac Caths
Tennova Healthcare Cleveland (State ID 06223)	486.5	197.0	683.5
Erlanger Medical Center (State ID 33203)	5,862.5	4,814.0	10,676.5
Erlanger North (State ID 33213)	8.0	16.0	24.0
Erlanger East (State ID 33233)	156.0	18.0	174.0
Memorial North Park (State ID 33223)	75.0	79.0	154.0
Memorial Healthcare System (State ID 33323)	11,006.5	9,723.0	20,729.5
Parkridge Medical Center (State ID 33383)	4,890.0	4,615.0	9,505.0
Parkridge East Hospital (State ID 33393)	9.0	3.0	12.0
Totals	22,493.5	19,465.0	41,958.5

# of Caridac Cath Labs in Service Area (JAR)	18
Capacity per Lab (defined by standards)	2,000
Total Capacity in Service Area	36,000
Percent of Existing Services to Capacity	116.6%

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment

John V. Golding, III, M.D.

PERSONAL

U.S. Citizen

CURRENT POSITION

Interventional Cardiology, UT Erlanger Cardiology - East
1614 Gunbarrel Road, Suite 101 Chattanooga, TN 37421

Medical Director - Erlanger Cath lab March 2011- present

TRAINING & PRACTISE

2006 – 2010 Interventional Cardiologist, Cardiovascular Care Ctr.
Director of Nuclear Cardiology
1614 Gunbarrel Road, Suite 101 Chattanooga, TN 37421

2004 - 2006 Cardiologist, Galen Medical Group
Erlanger Medical Center - 979 East 3rd Street Suite C- 520

July 1997 – June 1998
Internal Medicine at Washington Hospital Center
Washington, DC
Internship

July 1998 – June 2000
Internal Medicine at Washington Hospital Center
Washington, DC
Residency

July 2000 – June 2003
Brown University, Miriam Hospital
Providence, RI
Fellowship: Cardiology

July 2003 – June 2004
Brown University, Miriam Hospital
Providence, RI
Fellowship: Interventional Cardiology

LEVEL 2 in TTE
LEVEL 3 in TEE
LEVEL 2 in Nuclear Cardiology
LEVEL 3 in Cardiac Cath

EDUCATION

May 1997 – Doctor of Medicine
Meharry Medical College – Nashville, TN

1993 - B.S. Chemistry
Howard University - Washington, DC

MEDICAL LICENSURE & CERTIFICATIONS

State of Tennessee (MD0000021693) 2004

State of Georgia, License No: 63590
Issued: November 5th 2009

The American Board of Internal Medicine
2000

The American Board of Internal Medicine
Cardiovascular Disease
2003 - 2013

The Certification Board of Nuclear Cardiology
2004 – 2014

The American Board of Internal Medicine
Interventional Cardiology
2004 - 2014

PROFESSIONAL MEMBERSHIPS

American College of Cardiology

American Heart Association

Association of Black Cardiologist

National Medical Association

HONORS AND AWARDS RECIEVED

ABC/Guidant/ 4th year Interventional Cardiology Scholarship

The Edmond F. Noel, Sr., MD award

The John H. Walls, MD Endowed Scholarship Fund

Meharry Medical College Academic Scholarship

Dean's list 1993-1994

AT&T Scholarship

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CURRICULUM VITAE

Walter Lee Few, III, M.D., F.A.C.C.

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Education

1. Emory University School of Medicine, Emory University Hospital, Suite F 606, 1364 Clifton Road, N.E., Atlanta, GA 30322. Interventional Cardiology Fellowship. Program Director: Ziyad Ghazzal, M.D. July 2004 – June 2005.

2. Emory University School of Medicine, 1639 Pierce Drive, 319 WMB, Atlanta, GA 30322. Cardiology Fellowship. Program Directors: W. Robert Taylor, M.D., Ph.D. and Maziar Zafari, M.D., Ph.D. July 2001 – June 2004.

3. Emory University School of Medicine, 69 Jesse Hill Jr. Drive, S.E., Atlanta, GA 30303. Internal Medicine Internship and Categorical Residency. Program Director: Joyce Doyle, M.D. July 1997 – June 2000.

4. Johns Hopkins University School of Medicine, 720 Rutland Avenue, Baltimore, MD 21205. Medical School, August 1993 – May 1997, M.D. degree conferred.

5. Morehouse College, 830 Westview Drive, S.W., Atlanta, GA 30314. Undergraduate School, August 1989 – May 1993, Major in Biology with a Minor in Psychology, Summa cum laude, B.S. degree conferred.

Professional Experience

Hospital Admissions Services, L.L.C., Internal Medicine Attending, Crawford Long Hospital of Emory University, 478 Peachtree Street, N.E., Suite 106-A, Atlanta, GA 30308-3124. Manager: Jacinto Del Mazo, M.D. July 2000 – June 2001.

Galen Medical Group, Interventional Cardiology and Peripheral Vascular Disease, 979 East Third Street, Erlanger Plaza, Suite C520, Chattanooga, TN 37403. Director: Walter Parkhurst, M.D. October 2005 – June 2006

Cardiovascular Care Center, PLLC, Interventional Cardiology and Peripheral Vascular Disease, 1614 Gunbarrel Road, Suite 101, Chattanooga, TN 37421. President: Michael Love, M.D. July 2006 – Current.

Professional Staff

Memorial Health Care System, Inc. 2525 de Sales Avenue, Chattanooga, TN 37404-1102. Phone (423) 495-2525. October 2005 – Current.
Parkridge Medical Center, 2333 McCallie Avenue, Chattanooga, TN 37404. Phone (423) 698-6061. October 2005 – Current.
Erlanger Medical Center, 975 East Third Street, Chattanooga, TN 37403. Phone (423) 778-7000. October 2005 – Current.

Licensure

State of Georgia Medical Board Physician, 1998 – Current, Number 046092.
State of Tennessee Medical License, 2005 – Current, Number 40120.
Diplomate of the American Board of Internal Medicine, exam taken August 22-23, 2000, certified for 2000-2010.
Diplomate of the American Board of Internal Medicine in Cardiovascular Disease, exam taken November 3-4, 2004, certified for 2004-2014.
Diplomate of the American Board of Internal Medicine in Interventional Cardiology, exam taken November 9, 2006, certified for 2006-2016.

Honors

Phi Beta Kappa, 1992
Beta Kappa Chi Scientific Honor Society, 1992
Golden Key National Honor Society, 1992
Louis W. Sullivan Pre-medical Scholar Award, Morehouse College, 1993
Valedictorian, Morehouse College, 1993
Frederick E. Mapp Prize in Biology, Morehouse College, 1993
Samuel Milton Nabrit Award, Morehouse College, 1993
Anafred N. Halpern New Investigator Award, American College of Nutrition, 1995
Research Grant, American Heart Association, July 2003 – June 2005
Chief Interventional Cardiology Fellow, Emory University School of Medicine, July 2004 – June 2005
Fellow of the American College of Cardiology, elected September 1, 2008

Research

1991 Oxygen consumption in turtle ventricular myocytes. Department of Comparative Physiology, Brown University, Providence, RI.
Preceptors: Donald C. Jackson, Ph.D., Cheryl L. Watson, Ph.D.

1992 Effects of anoxia on glucose uptake by turtle skeletal and cardiac muscle. Department of Comparative Physiology, Brown University, Providence, RI. Preceptors: Donald C. Jackson, Ph.D., Cheryl L. Watson, Ph.D.

1994 Weight loss in HIV infection and its relationship to serum hormones. Department of Endocrinology and Metabolism, Johns Hopkins University School of Medicine, Baltimore, MD.
Preceptor: Adrian S. Dobs, M.D. M.H.S.

July 2003-June 2005 The effect of progenitor cell mobilization using colony stimulating factors in myocardial infarction. Division of Cardiology, Emory University School of Medicine, Atlanta, GA.
Principle Investigator: Arshed Quyyumi, M.D.
Co-Investigator: Walter L. Few, III, M.D.
Supported by grant from the American Heart Association (July 2003-June 2005) and Berlex.

July 2003-June 2004 Physiologic and pathologic role of endothelium-derived hyperpolarizing factor in humans. Division of Cardiology, Emory University School of Medicine, Atlanta, GA.
Principle Investigator: Arshed Quyyumi, M.D.
Co-Investigators: W. Lance Lewis, Walter L. Few, III, M.D., Veerappan Subramaniyam.

Publications

1. Watson CL, Few III WL, Panol G, Jackson DC. Lactic acidosis transiently increases metabolic rate of turtle myocytes. American Journal of Physiology, 266(4 Pt 2):R1238-1243, 1994, April.94241302

2. Dobs AS, Few III WL, Blackman MR, Harman SM, Hoover DR, Graham NMH. Serum hormones in men with HIV-associated wasting. Journal of Clinical Endocrinology and Metabolism, 81(11) 4108-12, 1996, Nov.97082632

3. Few W, Block P, Ghazzal Z. Cath case of the month, December 2002. American College of Cardiology Website: www.acc.org.

Societies and Memberships

Morehouse Alumni Association
American College of Cardiology
Society of Cardiovascular Angiography and Interventions

References

1. W. Robert Taylor, M.D., Ph.D., Program Director of Emory Cardiology Fellowship. 1639 Pierce Drive, Suite 319 WMB, Atlanta, GA 30322. (404) 727-4724. E-mail: wtaylor@emory.edu.

2. Arshed Quyyumi, M.D. Emory University Hospital, 1364 Clifton Road, N.E., Suite F606, Atlanta, GA 30322. (404) 727-3655. E-mail: aquyyum@emory.edu.

3. John Douglas, M.D. Director of Interventional Cardiology Fellowship Training Program, Emory University Hospital, 1364 Clifton Road, N.E., Suite F606, Atlanta, GA 30322. (404) 712-7424.

4. Henry Liberman, M.D. The Emory Clinic Crawford Long, 550 Peachtree Street, N.E., Medical Office Tower 6th Floor, Atlanta, GA 30308. (404) 686-2503. E-mail: henry_liberman@emoryhealthcare.org

5. Michael Love, M.D. Cardiovascular Care Center, PLLC. 1614 Gunbarrel Road, Suite 101, Chattanooga, TN 37421. (423) 553-7600. E-mail: mlove@ccctn.net

6. D. Christopher Metzger, M.D. The Heart Center. 2050 MeadowView Parkway, Kingsport, TN 37660. (423) 230-5000.

Robert L. Huang, MD MPH

Date of Birth: 03/09/1976
Marital status: Married
Business Address: Erlanger Health System
975 E. Third Street
Chattanooga, TN 37403
Business Phone: (423) 778-5661
E-mail: robert.huang@erlanger.org; robhuang7@hotmail.com

EDUCATION:

8/1994-8/1998 Case Western Reserve University School of Engineering
Cleveland, OH
B.S. in Biomedical Engineering
Magna Cum Laude

8/1998-6/2002 Case Western Reserve University School of Medicine
Cleveland, OH
Doctor of Medicine

7/2005-5/2007 Vanderbilt University Medical Center
Nashville, TN
Masters of Public Health

TRAINING:

7/2002-6/2005 Vanderbilt University Medical Center
Nashville, TN
Internal Medicine Residency

7/2005-6/2007 VA Quality Scholars Fellowship
Nashville, TN

7/2007-6/2010 Vanderbilt University Medical Center
Nashville, TN
Cardiovascular Medicine Fellowship
Chief Fellow

7/2010-6/2011 Vanderbilt University Medical Center
Nashville, TN
Interventional Cardiology Fellowship

LICENSURE/CERTIFICATION:

USMLE Step 1	June 2000
USMLE Step 2	September 2001
USMLE Step 3	December 2003
Tennessee Medical License	Since March 2004
American Board of Internal Medicine (ABIM)	August 2005
ABIM – Cardiovascular Diseases	November 2010
ABIM – Interventional Cardiology	October 2011
ACLS/BLS	Since 2002
Georgia Medical License	September 2011

ACADEMIC APPOINTMENTS:

UT College of Medicine - Chattanooga, Clinical Assistant Professor
Vanderbilt University Medical Center Volunteer Faculty Appointment, Division of Cardiovascular Medicine

HOSPITAL APPOINTMENTS:

Erlanger Health System – General and Interventional Cardiology
Erlanger Health System – Planning Committee, Board of Trustees

PROFESSIONAL ORGANIZATIONS:

AHA – American Heart Association
ABIM – American Board of Internal Medicine
ACC – American College of Cardiology
SCAI – Society for Cardiac Angiography and Interventions

PROFESSIONAL ACTIVITIES:

Section Editor for the *Journal of Clinical Outcomes Management*
Reviewer for *Quality and Safety in Health Care*
Reviewer for *Journal of Invasive Cardiology*
Reviewer for *Nature Clinical Practice Cardiology*
Reviewer for *American Heart Journal*

INSTITUTIONAL SERVICE (Committees, Councils, Task Forces)

UT-Erlanger Cardiology Recruitment Committee Chair
Implemented QI Curriculum for Cardiology Fellowship
Vanderbilt Page-Campbell Moonlighting Coordinator
Vanderbilt CCU Moonlighting Coordinator
Vanderbilt Heart and Vascular Institute Operations Council
Vanderbilt Heart and Vascular Institute Quality Council

Vanderbilt Heart and Vascular Institute Curriculum Committee
Vanderbilt University Medical Center STEMI Network Committee
Vanderbilt University Medical Center Chest Pain Committee
VA Hypertension Quality Improvement Task-Force for VISN 9
Tennessee AHA Cardiac Systems of Care Task-Force
STEMI Council Erlanger Health System

TEACHING:

Chief Fellow in Cardiology
Physical Diagnosis Instructor, Evaluator
Inpatient Ward Attending
VA Triage Attending
Preceptor for Internal Medicine Journal Club
Research mentor/supervisor
- Eric Thomassee, MD – current cardiovascular medicine fellow at VUMC
- Jae Yoon Park, MD – current internal medicine resident at Mayo Clinic

Regularly supervises internal medicine residents on the cardiology consult service

INVITED LECTURES:

1. Huang RL. Therapies for GERD. Vanderbilt Morning Report, 6/2004.

2. Huang RL. The value of PSA and prostate CA therapy. Vanderbilt Morning Report, 10/2004.

3. Huang RL. Evidence behind CABG. Senior Talk, Vanderbilt University Medical Center, 1/2005.

4. Huang RL, Kurtz EG. Appropriateness Criteria of Coronary CT Angiography. Cardiology Journal Club, Vanderbilt University, 2/2008.

5. Huang RL, Kronenberg MW. Medical Therapy of Chronic Stable Angina. Clinical Management Conference, Vanderbilt University, 2/2008.

6. Huang RL, Clair W. Arrhythmogenic Right Ventricular Cardiomyopathy. Clinical Management Conference, Vanderbilt University, 9/29/09.

7. Huang RL. STEMI Outcomes 2009. Cardiology Grand Rounds, Vanderbilt University, 3/2010.

8. Huang RL, Salloum JG. Current STEMI Management. Clinical Management Conference, Vanderbilt University, 2/2011.

PUBLICATIONS

A. ORIGINAL INVESTIGATIONS

1. Huang R, Eisen G. Efficacy, safety, and limitations in current practice of sedation and analgesia. Gastrointest Endosc Clin N Am. 2004 Apr 14(2):269-88.

2. Huang RL, Listerman J, and Butler J. Risk Factors for Heart Failure Progression and Prognosis. Current Cardiology Reviews 2006 May; 2(2): 79-88.

3. Huang RL, Geisberg C, Howser R, Portner Peer, Pierson III RN, Butler J. Effect of age on outcomes after left ventricular assist device placement. Transplantation Proceedings 2006 Jun; 38(5): 1496-1498.

4. Geisberg C, Goring J, Listerman J, Nading MA, Huang RL, Butler J. Impact of optimal heart failure medical therapy on heart transplant listing. Transplant Proc. 2006 Jun; 38(5):1493-5.

5. Giesberg C, Goring J, Huang RL, Listerman J, Nading MA, and Butler, J. Anemia in heart failure may warrant more aggressive listing for cardiac transplantation. Transplant Proc. 2006 Jun; 38(5):1499-500.

6. Huang RL, Listerman J, Goring J, Giesberg C, Nading MA, and Butler, J. β-Blocker Therapy for Heart Failure: Should the Therapeutic Target be Dose or Heart Rate Reduction? Congestive Heart Failure 2006 Jul-Aug; 12(4): 206-210.

7. Listerman J, Huang RL, and Butler J. Risk Factors for Development of Heart Failure. Current Cardiology Reviews 2007. January; 3(1): 1-9.

8. Listerman J, Goring J, Geisberg C, Nading MA, Huang RL, and Butler J. Hemodynamic response and exercise capacity among anemic and non-anemic heart failure patients. Congestive Heart Failure 2007 Mar-Apr; 13(2):71-77.

9. Huang RL, Donelli A, Byrd J, Mickiewicz MA, Slovis C, Elasy TA, Speroff TS, Dittus RS, DiSalvo TG, Zhao D. Using Quality Improvement Methods to Improve Door-to-Balloon Time at an Academic Medical Center. Journal of Invasive Cardiology 2008 Feb; 20(2): 46-52.

10. Huang RL, Crenshaw M. The Impella Device and Other Percutaneous Support Available at Vanderbilt. Vanderbilt Heart and Vascular Institute Spring Newsletter 2009.

11. Choma NN, Huang RL, Dittus RS, Burnham KE, Roumie CL. Quality Improvement Initiatives Improve Hypertension Care Among Veterans. Circ Cardiovasc Qual Outcomes. 2009 July; 2:392-398.

12. Choma NN, Griffin MR, Huang RL, Roumie CL, et al. An Algorithm to Identify Incident Myocardial Infarction Using Medicaid Data. Pharmacoepidemol Drug Saf. 2009 Nov; 18(11):1064-71.

13. Huang RL. Use of Prasugrel in Acute Coronary Syndrome. Vanderbilt STEMI Newsletter, January 2010.

14. Schnipper JL, Roumie CL, Cawthon C, et al. Rationale and Design of the Pharmacist Intervention for Low Literacy in Cardiovascular Disease (PILL-CVD) Study. Circ Cardiovasc Qual Outcomes. 2010; 3:212-219. Adjudicator – medication errors.

15. Reagan BW, Huang RL, Clair WK. Palpitations: an annoyance that may require clairvoyance. Circulation. 2012 Feb 21; 125(7):958-65.

16. Kripalani S, Roumie CL, Dalal AK, Cawthon C, Businger A, Eden SK, Shintani A, Sponsler KC, Harris LJ, Theobald C, Huang RL, Scheurer D, Hunt S, Jacobson TA, Rask KJ, Vaccarino V, Gandhi TK, Bates DW, Williams MV, Schnipper JL; PILL-CVD (Pharmacist Intervention for Low Literacy in Cardiovascular Disease) Study Group. Effect of a pharmacist intervention on clinically important medication errors after hospital discharge: a randomized trial. Ann Intern Med. 2012 Jul 3; 157(1):1-10.

17. Huang RL, Thomassee EJ, Park JY, Scott CR, Maron DJ, Fredi JL. Scene STEMI Protocol to Facilitate Long-Distance Transfer for Primary PCI. Accepted Crtical Pathways in Cardiology to be published December 2012.

B. BOOK CHAPTERS

1. Huang RL, Maron DJ. Hurst's The Heart: Manual of Cardiology, 12th Edition. Chapter 21, Dyslipidemia & Other Cardiovascular Risk Factors, pp 237-260.

C. ABSTRACTS

1. Huang RL, Dillon GP, Bellamkonda R. Three-Dimensional Patterning in Gels for Three-Dimensional Nerve Guidance. Progress report prepared for Whitaker Summer Fellows Program.

2. Huang RL, McCormick TS, Cooper KD. Infiltrating Leukocytes Mediate Reactive Oxygen Species Following UV Radiation. Progress report prepared for American Cancer Society.

3. Huang RL, Goring J, Nading MA, Listerman J, Giesberg C, Khadim G, and Butler J. The Relationship between Renal Function and Left Ventricular Assist Device Use. Journal of Cardiac Failure, 2005; S136

4. Giesberg C, Nading MA, Listerman J, Huang RL, Goring J, Khadim G, and Butler J Varying prognostic implication of peak exercise oxygen consumption in anemic vs. non-anemic patients. Journal of Cardiac Failure, 2005;S168

5. Listerman J, Giesberg C, Nading MA, Huang RL, Goring J, Khadim G, and Butler J Exercise hemodynamics does not explain worse exercise capacity among anemic heart failure patients. Journal of Cardiac Failure, 2005;S104

6. Nading MA, Listerman J, Giesberg C, Huang RL, Goring J, Khadim G, and Butler J. Resting Cardiac Index Correlates Poorly with Renal Function in Heart Failure Patients. Journal of Cardiac Failure, 2005;S105

7. Goring J, Nading MA, Listerman J, Giesberg C, Huang RL, Khadim G, and Butler J. Metabolic Syndrome Predicts a Higher Risk for Heart Failure Hospitalizations in the Elderly. Journal of Cardiac Failure, 2005;S167

8. Huang RL, Byrd J, Speroff T, Dittus R, Elasy TA, DiSalvo T, Slovis C, Mickiewicz M, Zhao D. Door-to-Balloon Time: An Opportunity to Showcase Quality Improvement Methods. Journal of the American College of Cardiology 2007; 49(9): 273A.

9. Huang RL, Byrd, J, Dittus R, Elasy TA, DiSalvo, T, Zhao D, Speroff T. Improving Reliability of Door-to-Balloon Processes with System-Based Interventions. Critical Pathways in Cardiology 2007; 6(3): 135.

10. Huang RL, Byrd, J, Dittus R, Elasy TA, DiSalvo, T, Zhao D, Speroff T. Using Statistical Process Control to Drive Improvement in Door-to-Balloon Time. Journal of General Internal Medicine 2007; Vol 22, Supplement 1: 141.

11. Huang RL, Roumie CL, Elasy TA, Dittus RS, Gaffney FA, Greevy R, DiSalvo, T, Speroff, T. Medically-Treated Transfer Patients with Acute Myocardial Infarction Have Higher In-hospital Mortality than Non-Transferred Patients. Circulation 2007; 115 (21):e550, #97.

12. Choma NN, Huang RL, Dittus RS, Burnham KS, Roumie CL. Local Quality Improvement Initiative Improves Hypertension Care among Veterans. Circulation 2008; 117 (21): e445, #160.

13. Thomassee E, Huang RL, Steaban R, Scott C, Fredi JL. Using Emergency Medical Services on the Scene to Activate the Cardiac Catheterization Laboratory in STEMI Patients. Critical Pathways in Cardiology 2009; 8(3): 135.

14. Huang RL, Thomassee E, Scott CR, Steaban R, Zhao DX, Fredi JL. Transfer STEMI Patients Experience Most Delays in Outlying Hospitals. Circulation Cardiovascular Quality and Outcomes 2009; 2: e1-e66.

15. Kelley MB, Huang RL, Wells QS, Fredi JL, Scott CR, McPherson JA for the Vanderbilt Heart and Vascular Institute , Nashville, TN. Outcomes In Comatose Cardiac Arrest Patients With ST Elevation Myocardial Infarction Treated With Therapeutic Hypothermia And Percutaneous Coronary Intervention. Critical Care Medicine, December 2010, Volume 39, Issue 12, A462.

ORAL PRESENTATIONS:

1. Huang RL. Case Presentation -- Scimitar Syndrome. 10th Annual G.C. Fresinger Society Meeting, The Chattanoogan, 4/2009.

2. Huang RL. Case Presentation – Arrhythmogenic Ventricular Cardiomyopathy. 11th Annual G. C. Fresinger Society Meeting, 4/2010.

3. Huang RL, Hoff S, Salloum JG, Glazer MD, Lenihan D, Fredi JL. Coronary Mycotic Aneurysm Closure. i2 Summit 2011 Challenging Cases at ACC, 4/2011. Peer-reviewed.

4. Huang RL, Zhao DX. Challenging Pseudoaneurysm Case, TCT 2011, 11/2011. Peer-reviewed.

POSTER PRESENTATIONS:

1. Huang RL. β-Blocker Therapy for Heart Failure: Should the Therapeutic Target be Dose or Heart Rate Reduction? Vanderbilt University GME Poster Session, 5/2006.

2. Huang RL, Speroff T, Dittus RS, Elasy TA, Roumie CL. Improving Hypertension Quality of Care Using Systems-based Interventions. VA HSR&D, 2/2007.

3. Huang RL, Roumie CL, Elasy TA, Dittus RS, DiSalvo T, Speroff T. Medically-Treated Transfer Patients with Acute Myocardial Infarction Have Higher In-hospital Mortality than Non-Transferred Patients at Vanderbilt University Medical Center. Vanderbilt University GME Poster Session, 5/2007.

4. Huang RL, Donelli A, Byrd J, Mickiewicz MA, Slovis C, Elasy TA, Speroff TS, Dittus RS, DiSalvo TG, Zhao D. Using Quality Improvement Methods to Improve Door-to-Balloon Times at Vanderbilt University Medical Center. Vanderbilt University GME Poster Session, 5/2007.

5. Huang RL, Roumie CL, Elasy TA, Dittus RS, DiSalvo T, Speroff T. Medically-Treated Transfer Patients with Acute Myocardial Infarction Have Higher In-Hospital Mortality than Non-Transferred Patients. 8th AHA Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke 2007.

6. Huang RL, Roumie, CL, Speroff T, Elasy T, DiSalvo, T, Dittus R, Zhao, D, et al. Using Statistical Process Control to Drive Improvement in Door-to-Balloon Time. SGIM 2007 30th Annual Meeting.

7. Huang RL, Byrd J, Speroff T, Elasy T, DiSalvo, T, Dittus R, Zhao, D, et al. Improving Reliability of Door-to-Balloon Processes with System-Based Interventions. Tenth Congress of the Society of Chest Pain Centers 2007.

8. Huang RL, Thomassee E, Steaban R, Scott C, Vaughan D, Zhao DX, Fredi JL. Transfer STEMI Patients Experience Most Delay in Outlying Hospitals. 10th AHA Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke 2009.

9. Thomassee E, Huang RL, Steaban R, Scott C, Fredi JL. Using Emergency Medical Services on the Scene to Activate the Cardiac Catheterization Laboratory in STEMI Patients. Twelfth Congress of the Society of Chest Pain Centers 2009.

10. Huang RL, Cunningham B, Zhao DX, Steaban R, Disalvo TG. Creating and Sustaining a Reliable Door to Balloon Process: The VHVI Experience. 11th AHA Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke 2010.

11. Kelley MB, Huang RL, Wells QS, Fredi JL, Scott CR, McPherson JA for the Vanderbilt Heart and Vascular Institute , Nashville, TN. Outcomes In Comatose Cardiac Arrest Patients With ST Elevation Myocardial Infarction Treated With Therapeutic Hypothermia And Percutaneous Coronary Intervention. Society of Critical Care Medicine January 2011.

Poonam Puri, MD
Curriculum Vitae

GENERAL INFORMATION:

Name: Poonam Puri
Gender: Female

EDUCATION AND TRAINING:

Jan 2011 - Present — Working part time at Kaiser Permanente, Santa Clara, CA and Santa Clara Valley Medical Center, CA

July 2009 – June 2010 — Interventional Cardiology Fellowship at Emory University, Atlanta, GA
Program Director: John Douglas Jr. MD
Currently have performed as primary operator approximately 600 interventional procedures over last 12 months.

- Coronary Interventions: over 450 cases including complex multivessel angioplasty, primary PCI and Bypass Graft Angioplasty.
  Experience includes exposure to use of Rotablator, Angiojet, IVUS, FFR, CFR as well as use of Percutaneous Ventricular Assist Device (Impella/Tandem Heart)
- Structural Heart disease: 50 cases include BAV, Mitral Valvuloplasty PFO/ASD closure, Alcohol Septal Ablation, Balloon Pericardiotomy under guidance of Dr Peter Block.
- Peripheral Angiography/Interventions: 100 cases including management of CLI, Bowel ischemia, Acute Vascular Complications including pseudoaneurysm, Renal and Carotid Angiography/Stenting

July 2006 – June 2009 — Cardiovascular Medicine Fellowship at Keck School of Medicine University of Southern California, Los Angeles, CA.
Cardiology fellowship training program at Los Angeles County General Hospital provided unique experience in:

- Clinical management as well as Cardiac Catheterization in Rheumatic Multi valvular heart disease, Adult Congenital Heart Disease and High risk Pregnancy patients with valvular heart disease.
- Performance of more than 100 Transesophageal Echocardiograms and having read more than 700 Transthoracic Echocardiograms and more than 400 Nuclear Scans.
- Exposure to Cardiovascular MRI under expertise of Dr. Gerald Pohost.

July 2003 – June 2006 — Internal Medicine Residency at Keck School of Medicine, University of Southern California, Los Angeles, CA.

Sep 1995 – Nov 2002 — Medical School at M. P. Shah Medical College, Jamnagar, India with Internship at Sir Gangaram Hospital, Delhi, India

MEDICAL LICENSURE AND CERTIFICATION:

Board certified in Interventional Cardiology - November 2010
Board certified in Echocardiography - October 2010
Board certified in Cardiovascular Medicine - November 2009
Board certified in Nuclear Medicine - October 2008
Board certified in Internal Medicine - August 2006, 90th Percentile
USMLE Step1 and 2 - 2001/2002, 99th/88th Percentile

Level II certified in CT Coronary Angiography- Course Director: Matthew Budoff, MD
Board Eligible for CT Coronary Angiography

Medical Licensure:	Medical Board of California Licensure # A92644. Medical Council of India Licensure # 22339.
ECFMG certification:	Certified on February, 25 2003, ECFMG No: 0-623-272-2 Permanent validation: July 2003
USMLE ID No:	0-623-272-2
AAMC ID No:	11483703

RESEARCH/ABSTRACTS:

June 2009: *The effect of Intra Aortic Balloon Pump (IABP) on Renal Blood Flow (RBF) utilizing direct measurements of RBF by intravascular Doppler technique and renal artery diameter by quantitative angiography in patients undergoing high risk PCI with IABP.*
Poonam Puri MD, Uri Elkayam MD, Anilkumar O. Mehra MD (Principle Investigator)

June 2009: *Role of 3-D Magnetic Resonance Myocardial Perfusion Imaging to detect perfusion deficit across whole LV and compare it with conventional 2-D multi-slice Myocardial Perfusion Imaging.*
Poonam Puri MD, Gerald Pohost MD, Taehoon Shin MD (Principle Investigator).

Jan 2008: Poonam Puri MD, Anil O. Mehra,MD and Uri Elkayam MD
Cheyne-Stokes Respiration and Cardiac Hemodynamics in Heart failure.
Manuscript published in Catheterization and Cardiovascular Intervention Journal. 2008 Oct; 72:4, 581-585

Dec 2007: Vidya Narayan MD, Poonam Puri MD, Anilkumar O. Mehra, MD
A Case of late presentation of CardioSEAL PFO Closure Device Fracture and Thrombus formation 3 years after Device Implantation. Case Report published in The Journal of Invasive Cardiology. 2008;20:E247–E249

Sept 2004: Poonam Puri MD, Radha Sarma MD and Ramdas G. Pai MD
Massive posterior mitral annular calcification causing dynamic left ventricle outflow tract obstruction. Case report published in Journal of American Society of Echocardiography. 2005 Oct ;18:1106

April 2005: Poonam Puri MD, John L Go MD and Soma Sahai Srivastava MD
Intracranial Tuberculoma mimicking Stroke in an immunocompetent patient: Poster presented at Clinical Vignette competition in 2005 ACP-Annual Session at San Francisco.

PROFESSIONAL MEMBERSHIPS AND SOCIETIES:

July 2009-present	Society of Cardiac Angiography and Interventions
July 2006-present	American College of Cardiology
July 2003-present	American Medical Association.
July 2003-present	American College of Physicians/American Society of Internal Medicine.
Nov 2002-present	Indian Medical Association.

VOLUNTEER EXPERIENCE:

Dec 2000	National School Health Checking Program: A nation-wide program in India for the General well being and screening against common illnesses in primary school children, especially in inner city and rural areas.
Dec 1997	Pulse Polio Immunization: A nation-wide program in India for immunization of all children against polio with the aim of eradication of polio. Volunteered for the immunization in the inner-city areas and rural areas for three years.

HONORS AND AWARDS:

May 1993 Awarded National Merit Scholarship for obtaining First rank in All India Board Examination.

REFERENCES:

John Douglas, M.D.
Professor of Medicine
Director Interventional Cardiology & Cardiac Catheterization lab
Andreas Gruentzig Cardiovascular Center
Emory University School of Medicine, 1364 Clifton Rd NE, Atlanta GA 30322
jdoug01@emory.edu
404-727-7040

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Interventional Cardiology
Andreas Gruentzig Cardiovascular Center
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Interventional Cardiology
Andreas Gruentzig Cardiovascular Center
Emory University School of Medicine
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Supplemental #1
March 16, 2018
10:36 A.M.

Curriculum Vitae

Steven B. Stubblefield M.D. FACC
605 Glenwood Drive
Suite 412
Chattanooga, Tennessee 37404
423.495.0521 (Office)

Practice:

Private practice - Interventional Cardiology
Steven B. Stubblefield, MD
Interventional Cardiology, PLLC
Chattanooga, Tennessee
October 2002 to present

Diagnostic Center
Chattanooga, Tennessee
July 1992 to October 2002

Private Practice
Chattanooga, Tennessee
July 1985 – July 1992

Education:

ABIM Certification	Internal Medicine September 14, 1983
	Cardiovascular Disease November 8, 1989
	Interventional Cardiology November 2000 Recertified 2011 through 2021

Medical School	University of Tennessee Memphis, Tennessee Doctor of Medicine – June 1980
Internship	University of Tennessee Memphis, Tennessee June 23, 1980 – June 22, 1981
Residency	Internal Medicine University of Knoxville Memphis Tennessee July 1 1981 – June 30, 1983
Fellowship	Cardiology University of Tennessee Memphis, Tennessee July 1981 – June 30, 1985
Undergraduate	University of Tennessee at Knoxville Knoxville, Tennessee Bachelor of Arts, High Honors June 11, 1976
High School	Dobyns Bennett High School Kingsport, Tennessee Graduated May 1973

Personal:

Birth date: April 11, 1955
Birthplace: Fayetteville, Tennessee
Married to: Tami Stubblefield BS RN
Children: Chris and Shelby

Matthew E Wiisanen, MD

1. Personal Information

Home:
708 Hawks Nest Dr, Chattanooga, TN 37419
Mobile phone: 859-494-9469
E-mail: mewiisanen@yahoo.com
Place of Birth: Jackson, MN, USA
Date of Birth: January 7, 1977
Citizenship: United States

Work:
Erlanger Health
UT Erlanger Cardiology
979 East 3rd Street
Suite C-520
Chattanooga, TN 37403
Work phone: 423-778-5661

2. Present Position

Director of Structural Heart Disease
Interventional Cardiologist
Erlanger Health
UT Erlanger Cardiology

Assistant Professor of Medicine
Department of Medicine
University of Tennessee at Chattanooga College of Medicine

3. Education

A. College:
St John's University/College of St Benedict, Collegeville, MN
1995-1999
Degree: BA major in Natural Science and minor in German Studies

B. Graduate School:
University of Minnesota – School of Public Health
1999-2001
Field of Study: Epidemiology

C. Medical School :
University of Minnesota – Duluth 2001-2003
University of Minnesota – Twin Cities 2003-2005
Degree: MD

D. Internal Medicine Residency:
Mayo School of Graduate Medical Education – Internal Medicine Residency
Mayo Clinic, Rochester, MN
2005-2008

E. Cardiology Fellowship:
University of Kentucky – Division of Cardiovascular Diseases

Lexington, KY
July, 2008 – June, 2011

F. Interventional Cardiology Fellowship:
University of Kentucky – Division of Cardiovascular Disease
Lexington, KY
July, 2011 – June, 2013

4. Current Practice Skills

A. General Cardiology: Inpatient (including critical care) and outpatient care of the cardiac patient; read and interpret EKGs; read and interpret transthoracic echo (level II), stress echo and transesophageal echo; read and interpret nuclear cardiology (level II); perform and interpret diagnostic cardiac catheterization (level II); perform pericardiocentesis; perform temporary pacemaker placement, interpret pacemaker and ICD device interrogation; read and interpret peripheral vascular non-invasive studies

B. Interventional Cardiology: Perform diagnostic left and right heart catheterizations, coronary and peripheral angiography, and ventriculography and pulmonary angiography; perform percutaneous transluminal coronary angioplasty and percutaneous coronary interventions with coronary stents; perform rotational atherectomy; perform fractional flow reserve measurement, intravascular ultrasound and optical coherence tomography; place percutaneous ventricular assist devices (IABP and Impella); perform peripheral venous and pulmonary arterial thrombectomy using rheolysis with Angiojet and ultrasonic-directed thrombolysis with EKOS; place IVC filters; perform percutaneous transluminal angioplasty of peripheral arteries including carotids, subclavians, mesenterics, renals, iliacs, and distal lower extremities; perform percutaneous ASD and PFO closure, percutaneous VSD closure and percuatenous closure of perivalvular prosthetic leaks; perform alcohol septal ablation; perform percutaneous valvuloplasty and transcatheter aortic valve replacement; perform Mitracliping procedures; perform Angiovac procedures; perform renal denervation; place central venous access (central lines and tunneled devices) both by traditional routes and by the inside-out technique; perform left atrial appendage occlusion.

5. Board Certification(s)

USMLE:
Step 1: Passed June, 2003
Step 2 CK: Passed November, 2004
Step 2 CS: Passed February, 2005
Step 3: Passed April, 2006

American Board of Internal Medicine: Passed 8/15/08

National Board of Echocardiography: Passed 7/25/11

American Board of Internal Medicine: Cardiovascular Diseases: Passed 11/3/2011

American Board of Internal Medicine: Interventional Cardiology: Passed 11/5/2012

Registered Physician in Vascular Interpretation (RPVI): Passed 9/4/2013

American Board of Vascular Medicine – Endovascular Medicine: Passed 12/11/2013

6. Medical Licensure

Minnesota Board of Medical Practice

License number: 48797
Effective 7/8/06 – 1/31/2009, 7/13/2013 – 1/31/2017

Tennessee Department of Health – Health Related Boards
Lisence number: 54571
Effective: 7/25/2016 – 1/31/2019

Kentucky Board of Medical Licensure
License number: 42001
Effective: 7/1/09-3/1/14

North Dakota Board of Medical Examiners
License number: 12800
Effective 5/10/2013 – 1/7/2017

Arizona Medical Board
Resident/Fellow License: 84527
Effective 4/26/08 – 5/29/08

Tennessee Board of Medical Examiners
License number: 54571
Effective 7/25/2016 – 01/31/2019

7. Professional Memberships and Societies

American Academy of Family Physicians, 2001-2005
American Medical Association, 2001- 2013
Minnesota Medical Association, 2001-2008
American College of Physicians, 2006-2008
Mayo Clinic Alumni Association, 2008 – Present
American College of Cardiology, 2008 – Present
Heart Valve Society of America, 2009 – Present
Society for Cardiovascular Angiography and Interventions, 2009 – Present

8. Administrative Responsibilities

A. Chief Fellow – 2009-2011
University of Kentucky Division of Cardiovascular Disease Fellowship Program
B. Mayo Fellows Association – 2005-2006
Member At Large representing Internal Medicine

9. Other Work Experience

A. Contract Hospitalist for the Bureau of Prisons at the Federal Medical Center – Rochester, MN
Employer: NES Healthcare Group - 750 Veterans Memorial Hwy, Ste. 200,Hauppauge, NY 11788
Ph: 800-394-6376
September, 2007 – June, 2008
Reason for leaving: Moved to Kentucky
Privileged: 9/1/07 – 6/30/08
FMC Medical Director: Shelly Stanton, MD
B. Hospitalist for St Joseph Hospital & East Hospital – Lexington, KY
Employer: Eagle Hospital Physicians, 5901C Peachtree Dunwoody Rd Suite 350, Atlanta, Georgia 30328, Ph: (678) 397-0060
January, 2009 – November, 2009

Privileged: 1/12/09 – 10/1/10
St. Joseph Hospital Division Chief – Yuri Villaran, MD
St. Joseph East Division Chief – Eric Bradburn, MD
Reason for leaving: Left for other opportunity

C. Hospitalist for St. Joseph – Berea, Berea, KY
Employer: Eagle Hospital Physicians, 5901C Peachtree Dunwoody Rd Suite 350, Atlanta, Georgia 30328, Ph: (678) 397-0060
Privileged: 12/26/08 – 10/1/09
Medical Director: Patrick Kelleher, MD

D. Contract Physician for Southern Medical Group – Lexington, KY
Employer: Southern Medical Group, Inc, 2924 Knight Street, Suite 440
Shreveport, LA 71105-2413
Ph: 877-578-4443
May, 2009 – February, 2010
Medical Director: Scott Beach, MD
Reason for leaving: Left for other opportunity

E. Fee Basis Physician for VA Medical Center – Lexington, KY
Employer: VA Medical Center, 1101 Veterans Drive Lexington, KY 40502
Ph: 859-281-4900
January, 2010 – June, 2013
Medical Director: Dennis Dougherty, MD

F. Interventional Cardiologist
Employer: Sanford Health – 801 N Broadway, Fargo, ND 58122
Ph: 701-234-2371
August, 2013 – July, 2016
Division Chief: Craig Kouba, MD
Reason for leaving: Opportunity at Erlanger

10. Educational Activities

Mayo Clinic Conferences:
10/2/2006: Morbidity and Mortality Conference: Systems Audit Presentation for "AIDS patient with PCP and disseminated MAC."
2/5/2007: Morbidity and Mortality Conference: "Nutritional Neuromuscular Weakness"
8/8/2007: Internal Medicine Grand Rounds – Medical Images: "Left Ventricular Outflow Tract Obstruction: An Under-recognized Cause of Congestive Heart Failure."
8/31/2007: Journal Club – "Immunosuppressant therapy for myocarditis – where's the evidence?"

UK Conferences:
7/31/2008: Echo Conference "Echo findings in ASD"
8/21/2008: Nuclear Conference
9/9/2008: Cath Confernce
9/23/2008: Cath Conference
9/30/2008: Morbidity and Mortality Conference
10/7/2008: Hemodynamics Conference: "Normal thickness constrictive pericarditis"
12/7/2008: Echo Conference: "Acute mitral regurgitation"
1/6/2009: Morbidity and Mortality Conference
1/9/2009: Case Conference: Pseudoaneurysm after cardiac cath"
1/20/2009: Journal Club: ACCURACY
1/29/2009: EP Conference

3/5/2009: Hemodynamics Conference: "Aortic Insufficiency"
4/9/2009: Mayo Reading Series: Jeopardy
4/14/2009: Morbidity and Mortality Conference
4/20/2009: Case Conference: "Cardiac Biomarkers"
6/16/2009: Cath Conference
6/30/2009: Cath Conference
7/7/2009: Intro to UK Cardiology Fellowship: Part 1
7/8/2009: Intro to UK Cardiology Fellowship: Part 2
7/29/2009: The Great Debate: "Triple therapy with aspirin, clopidogrel and warfarin"
8/4/2009: Morbidity and Mortality Conference
9/14/2009: KY ACC Case Presentation: "24-year-old with shortness of breath"
9/21/2009: Case Conference
12/4/2009: Echo Confernce: "Rheumatic Heart Disease"
1/20/2010: Valvular Series: "Intro to Mitral stenosis"
1/26/2010: Cath Conference
2/2/2010: Cath Conference
3/14/2010: ACC Conference: Case Presentation: "A woman with thienopyridine resistance."
4/14/2010: Morbidity and Mortality Conference
4/20/2010: Cath Conference
4/27/2010: Cath Conference
5/11/2010: Morbidity and Mortality Conference
6/6/2010: Nuclear Conference
7/1/2010 – Present: 8 lectures a month to Internal Medicine Residents rotating on the Cardiology inpatient services
7/1//2010 – Present: 2 EKG lectures a month to Cardiology Fellows
10/11/10: Morbidity and Mortality – Case of a Pseudoaneurysm
1/27/2011: Cardiology Grand Rounds – Cardiovascular Manifestations of Pseudoxanthoma Elasticum
4/16/2012: Assessment of Aortic Stenosis in the Cath Lab
5/11/2013: Course director: "New Frontiers in Percutaneous Therapies"
5/11/2013: Inside-out Central Venous Access for the "New Frontiers in Percutaneous Therapies" Conferece
5/11/2013: Clinical Trial Participation for the "New Frontiers in Percutaneous Therapies" Conference

Post-fellowship activities:
4/2015: Update on the percutaneous treatment of structural heart disease – Sanford Heart Symposium
6/7/2015: Cardiology Update – Fargo Leadership Breakfast
9/10/2015: The Remarkable Story of Transcatheter Aortic Valve Replacement (TAVR) – Association of Clinical Research Professionals Conference
10/20/2015: Sanford Foundation Cardiology Update
5/2016: SUCK IT UP: A Novel Application of an Interventional Device – Midwest Cardiovascular Symposium
9/2016: Update in Interventional Cardiology – UT Internal Medicine Update
10/2016: Advances in Structural Heart Disease – Brasstown Symposium
10/2016: Advnaces in Structural Heart Disease – Manchester Symposium

11. Research Activities

A. Primary Investigator: HYBRID Trial – NHLBI sponsored multicenter trial comparing percuatneous coronary intervention revascularization versus the combination of minimally invasive coronary artery bypass grafting and percuatenous coronary intervention: 2017-present
B. Sub-investigator for Drug-Eluting Stents vs. Bare Metal Stents In Saphenous Vein Graft Angioplasty (DIVA) trial

C. Sub-investigator for **SYMPLICITY HTN-3** – An International, Multi-Center, Prospective, Single-Blind, Randomized, Controlled Study, Renal Denervation in Patients with Uncontrolled Hypertension
D. Sub-investigator for **SEATTLE II:** Submassive and Massive Pulmonary Embolism Treatment with Ultrasound AcceleraTed Thrombolysis ThErapy A Prospective, Single-Arm, Multi-center Trial of EkoSonic® Endovascular System and Activase for Acute Pulmonary Embolism
E. Principal investigator for "Defining the spectrum of PFO disease – a University of Kentucky Experience.
November, 2009 – 2011
Mentor: John Gurley, MD
F. Principal Investigator for the AQUIS study
November, 2009 – present
Mentor: John Gurley, MD
G. Sub-investigator for the dal-OUTCOMES study sponsored by Roche.
September, 2009 – 2012
Mentor: Khaled Ziada, MD
H. "Evaluation of the peripheral arterial tonometry experience in the Cardiovascular Health Clinic."
November, 2006 – June, 2008
Mentor: Randal J Thomas, MD
I. National Principal Investigator for the Angiovac Retrospective Registry for Right Heart Extraction
May, 2015-present
J. Fellow enrolling in SIMPLICITY HTN-3 under the direction of Khaled Ziada, MD at the University of Kentuck, 2012-2013
K. Fellow enrolling in the REDUCE and PREMIUM PFO trials under the direction of John Gurley, MD at the University of Kentucky, 2011-2013
L. Fellow enrolling in the ACP feasibility trial in 2010 under Dr. John Gurley, MD at the University of Kentucky
M. Sub-investigator for the GLobal Assessment of Plaque reGression With a PCSK9 antibOdy as Measured by intraVascular Ultrasound (GLAGOV)
September 2013 – 2015

12. Awards

A. 2008 – Internal Medicine Outstanding Achievement in Residency – Mayo Clinic, Rochester, MN May 21, 2008
B. 2007 Poster Presentation Finalist for "Wiisanen ME, Nkomo VT. Left Ventricular Outflow Tact Obstruction; An Under-recognized Cause of Heart Failure. Minnesota Chapter of the American College of Physicians Scientific Session. Nov, 2007."
C. American College of Cardiology Annual Legislative Conference – FIT Travel Award - September 2010
D. Mayo Clinic Cardiology Board Review Course – Special Scholar - September 2010
E. Teresa Hignite Award – 2012
F. First Place – Fellow's Poster Presentations, American College of Cardiology, Kentucky Chapter, Annual Meeting, 2012
G. Golden Stethoscope Award – May, 2014 - recognizes outstanding physicians who demonstrate excellence in patient care, customer service, communication and teamwork
H. Gardian Angel Award (3-time recipient)– November, 2013 – Award to Sanford staff by patients who wish to acknowledge a staff member or a volunteer who they felt gave them exceptional care.

I. New to Sanford Award – November, 2014 – Physician in their first 5 years at Sanford who has made significant contributions to Sanford
J. Fargo North High School class of 1995 Hall of Fame Inductee, 2016

13. Publications

A. **Original articles**

a) Michelson CM, Dyke CM, Wick DJ, Guenter R, Dangerfield D, **Wiisanen ME.** Use of a Modified Cardiopulmonary Bypass Circuit for Suction Embolectomy with the AngioVac Device. J Extra Corpor Technol. 2017 Dec;49(4):299-303
b) Drofa A, Kouznetsov E, Tomek S, **Wiisanen M**, Manchak M, Lindley T, Mitchell S, Hui F, Breker D. Successful Endovascular Management of Massive Pansinus Thrombosis: Case Report and Review of Literature. Pediatr Neurosurg 2016
c) **Wiisanen ME**, Moliterno DJ. Platelet protease-activated receptor antagonism in cardiovascular medicine. *Coron Artery Dis.* 2012 Sept 23;23(6):375-9.
d) Wallace EL, **Wiisanen ME,** Ziada KM. Drug-eluting stents in ACS. *Acute Coronary Syndromes. 2011;10(3):109-13.*
e) Lea B, Bailey AL, **Wiisanen ME**, Attili A, Rajagopalan N. Left ventricular noncompaction presenting as peripartum cardiomyopathy. *Int J Cariol.* 2011Jul6.
f) Elayi CS, Allen CL, Leung S, Lusher S, Morales GX, **Wiisanen M**, Aikat S, Kakavand B, Shah JS, Moliterno DJ, Gurley JC. Inside-out access: a new method of lead placement for patients with central venous occlusions. *Hearth Rhythm.* 2011; 8(6)851-7.
g) **Wiisanen ME**, Abdel-Latif A, Mukherjee D, Ziada KM. Drug Eluting Stents Versus Bare Metal Stents in Saphenous Vein Graft Interventions: A Systematic Review and Meta-Analysis. *JACC Interventions*. 2010; 12(3): 1262-1273.
h) **Wiisanen ME**, Moliterno DJ. The use of single versus dual antiplatelet therapy beyond 1 year following drug-eluting stent implantation. *Curr Cardiol Rep*. 2010 Sep;12(5):357-60.
i) Shaikh A, **Wiisanen ME**, Gunderson, HD, Leung N. Acquired Fanconi's Syndrome After Treatment with Capecitabine, Irinotecan, and Bevacizumab. *Annals of Pharmacotherapy.* 2009; 43(7):1370-3.

B. **Book Chapters, Review Articles**

a. **Wiisanen ME**, Moliterno DJ. Interrlationship of thrombin and platelets: the protease activated receptor-1. In: *Therapeutic Advances in Thrombosis*. 2012; Wiley-Blackwell 2nd ed: 71-86.
b. Thomas RJ, **Wiisanen ME**. Coronary Heart Disease Risk Factors. In: *American Heart Associations Clinical Cardiac Consult*. 2006; Lippencott Williams and Wilkins 2nd ed:146-148.

C. **Non Peer-Review Publications**

a. **Wiisanen ME.** Highlights from the American College of Cardiology Annual Scientific Sessions; in Acute Coronary Syndromes. *Acute Coronary Syndromes. 2011;10(2)*
b. Kassenborg H, Danila R, Snippes P, **Wiisanen M**, Sullivan M, Smith KE, Crouch N, Medus C, Weber R, Korlath J, Ristinen T, Lynfield R, Hull HF, Pahlen J, Boldingh T, Elfering K,Hoffman G, Lewis T, Friedlander A, Heine H, Culpepper R, Henchal E, Ludwig G, Rossi C, Teska J, Ezzell J, Eitzen E. Human Ingestion of Bacillus Anthracis-Contaminated Meat --- Minnesota, August 2000. *Morbidity and Mortality Weekly Report*. 2000; 49(36);813-6.

D. **Case and Poster Presentations**

a. **Wiisanen ME**, Foley III JD, Gurley JC. "Ultrasound-Accelerated Thrombolysis for the Treatment of Acute Pulmonary Embolism." Poster 759, Transcatheter Therapeutics, 2012

Annual Conference, *J Am Coll Cardiol*. 2012;60(17_S):. doi:10.1016/j.jacc.2012.08.801 (also presented at ACC Kentucky Chapter Annual Meeting – 2012).

b. Bradley B, Ruiz-Rodriguez E, White M, **Wiisanen ME**, Gurley JC, Smyth SS. "Percutaneous closure of a post-myocardial infarction ventricular septal defect: a case report." Poster at ACC – Kentucky Chapter Annual Meeting, 2012.

c. **Wiisanen ME**. "24-year old Female with Shortness of Breath After Delivery." Kentucky Chapter of the American College of Cardiology Annual Session. September 15, 2009.

d. **Wiisanen ME**, Nkomo VT. Left Ventricular Outflow Tact Obstruction; An Under-recognized Cause of Heart Failure. Minnesota Chapter of the American College of Physicians Scientific Session. Nov, 2007.

14. Hobbies

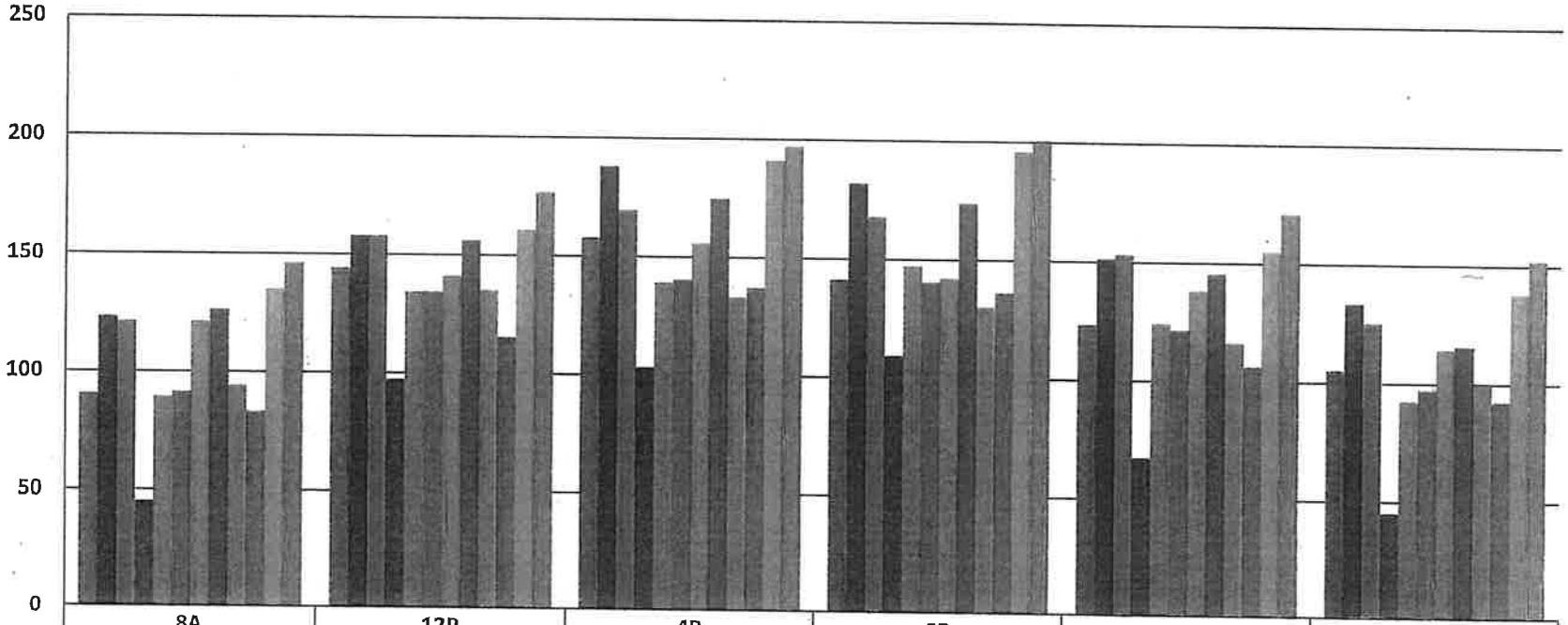
Running, water and snow skiing, playing guitar, singing, reading

15. Peer References

Available upon request

Erlanger Medical Center - Adult ED

MEDIAN NEDOCS JANUARY 2017 - DECEMBER 2017



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Supplemental #1
March 16, 2018
10:36 AM

Surge: An Organizational Response to Emergency Department Overcrowding

Mark G. Moseley, MD, MHA, Cheryl L. Dickerson, MS, MT, Jay Kasey, MHA, Craig B. Key, MD, Tammy Moore, MS, RN, Amit Vagarali, MS, and Douglas Rund, MD

Abstract

- *Objective:* Emergency department (ED) overcrowding is a national crisis that has many root causes both internal and external to the ED. ED overcrowding can harm patients, impair the patient care experience, and lead to negative operational and financial performance. This article describes an initiative undertaken to respond to ED overcrowding through the development of a comprehensive organizational surge plan that took place at our institution from 2008 to 2009.
- *Methods:* The NEDOCS model was selected as an objective measure of ED overcrowding. A multidisciplinary leadership team worked together to create a comprehensive surge plan linked to the NEDOCS. This plan was scalable in terms of increased resource allocation to the ED based on the NEDOCS in order to alleviate crowded conditions. The surge plan was widely disseminated and made an organizational priority with the help of senior leadership.
- *Results:* There was a demonstrable improvement in ED operational metrics. Despite significant volume growth during this period, the ED was able to improve throughput times, decrease the number of patients that leave without being seen, and improve patient perception of their ED experience.
- *Conclusion:* Through a collaborative, multidisciplinary effort, the Ohio State University Medical Center was able to implement a scalable institution-wide surge protocol linked to the NEDOCS to address ED overcrowding.

Acute care hospitals across the country are concerned with the trend of rapidly increased demand for emergency services. Significant annual increases in patients seeking emergency care have left emergency departments (EDs) across the country overburdened. This strain on the system has shaken an already fragile health care safety net, leaving hospitals vulnerable to unmet patient demand, perceptions of lack of timely care, and liability. Patients increasingly wait for longer periods of time, walk out of EDs without treatment in higher numbers, and even find their ambulances diverted to another hospital because of the need to employ ambulance diversion to ensure patient safety. These concerns have received national attention and have been publicized in 2 recent high-profile reports [1,2].

As a result, the front door to the acute care hospital has been more difficult to access. While this may cause hospitals to lose potential lifelong health system patients, it also can have significant economic impact as many acute care hospitals generate a majority of their inpatient admissions through the ED and through EMS patients brought to the ED. Further, when patients do enter the system, their experiences are increasingly frustrated ones, leading to a negative impact on patient satisfaction scores and institution reputation. Numerous operational strategies have been proposed to provide temporary remedies to address these changes; however, few have addressed the root causes of overcrowding in the ED or have proposed system-wide solutions to address the problem.

This article describes an initiative undertaken to respond to ED overcrowding through the development of a comprehensive organizational surge plan that took place at our institution from 2008 to 2009. The surge plan was one aspect of a multifaceted process improvement initiative that also included redesign of patient flow processes internal and external to the ED and changes to physical facilities, including the opening of a clinical decision unit and expanded triage bed capacity. While first undertaken as a necessary intervention during frequent periods of high census, the stated goal was to avoid reliance on the surge plan as a routine response to ED overcrowding, favoring instead the implementation of sustainable improvements designed to minimize surge conditions.

Setting

The Ohio State University Medical Center is a provider of

From the Department of Emergency Medicine, Ohio State University Medical Center, Columbus, OH.

comprehensive tertiary medical care in Columbus, Ohio. The medical center is the clinical teaching site of the Ohio State University College of Medicine and its faculty and is situated on the campus of the Ohio State University as part of one of the largest health sciences centers in the country. In fiscal year 2009, the medical center managed 55,316 patient admissions, 4515 births, 979,951 outpatient visits, 114,137 total ED visits, 15,562 inpatient surgeries, and 17,949 outpatient surgeries.

Intervention

It was evident as we began to look at the root causes of ED overcrowding that the ED felt isolated from the rest of the institution as it attempted to deal with the continuous demands of patients for care and support. Although multiple clinical and ancillary services of the organization were responsible for providing service to the ED, too often the ED felt that there was less than adequate response and back-up. In discussions, many departments outside of the ED did not know when ED overcrowding existed and many were unaware of it as an institutional issue. As part of the development of the surge plan, we realized that a key element would be to increase organizational awareness and the commitment of resources to better match ED demand. To do so, less than acceptable process times, service levels, and throughput were documented and multidisciplinary leadership teams were constituted to address deficiencies.

Closely correlated to institutional awareness was a common understanding of what constituted overcrowded ED conditions. While the ED had internal standards for what it considered overcrowded, it was evident that these did not easily correlate with the rest of the institution. As a result, coming up with a common language and method to quantify and articulate the degree of overcrowding became an important component of the surge plan development. To accomplish this, we adopted the measurement and continuous reporting of the National Emergency Department Overcrowding Scale (NEDOCS) using a model and surge plan outlined for the Los Angeles County+USC Medical Center (CJ Celentano, personal communication).

The NEDOCS is a quantitative, prospectively validated index utilized to approximate the degree of ED overcrowding in large academic EDs [3–5]. Although ED staff can subjectively provide an assessment of how busy or overcrowded the ED feels, the NEDOCS allows for an objective, numeric system that allows the institution as a whole to "speak in the same language." The NEDOCS formula utilizes a number of variables, including ED and hospital beds, wait times, and patient acuity, to yield a score between 0 and 200. The score falls along a color-coded scale ranging from "not busy" to "dangerously overcrowded," as follows:

0–20 (green) = Not busy

21–60 (yellow-green) = Busy

61–100 (yellow) = Extremely busy but not overcrowded

101–140 (orange) = Overcrowded

141–180 (red) = Severely overcrowded

181–200 (black) = Dangerously overcrowded

Specific ED and organizational responses can be triggered by a given score, allowing for a proportional response and scalability.

In discussions with key stakeholders from across the institution, we consistently heard that having a visible reporting mechanism so that persons outside of the ED can be aware of the ED's status would be critical for success. As such, in the early stages of development we involved the medical center's information technology department to gain approval and buy-in to place the NEDOCS score on the internal home page of the entire health system. Our ED uses an electronic medical record (EMR) called ED PulseCheck (PICIS Co., Wakefield, MA). One of our faculty members created a real-time website that interfaces with the ED PulseCheck system to download information to calculate the NEDOCS score once every minute (**Figure**). All the variables that make up the NEDOCS score are displayed, as well as the number of patients in the waiting room. Information is provided about the number of patients seen in the ED and the number of admissions to the hospital for yesterday, today, and the last hour. Finally, a graph is displayed at the bottom of the website that shows the NEDOCS scores over the last 24 hours. Each point on the graph represents a 15-minute average score. This page is available to everyone within the medical center and on the medical center's home page in the form of a color indicator that displays the NEDOCS score.

Implementation

With the NEDOCS as an objective basis for mobilizing the organization, surge plan development was undertaken in an offsite retreat setting. In addition to ED leadership, participants included leaders from the laboratory, radiology, patient placement, senior administration, nursing, environmental services, management engineering, information technology, and safety. The stated purpose was threefold: to promote awareness of ED overcrowding as an organizational issue, to provide education on the NEDOCS as an objective tool, and to develop specific departmental and service responses.

ED leadership conducted the educational component of the retreat, reviewing definitions and presenting actual ED scenarios which drive the NEDOCS scores. A cause-and-effect diagram showing "ED gridlock" as the effect to be

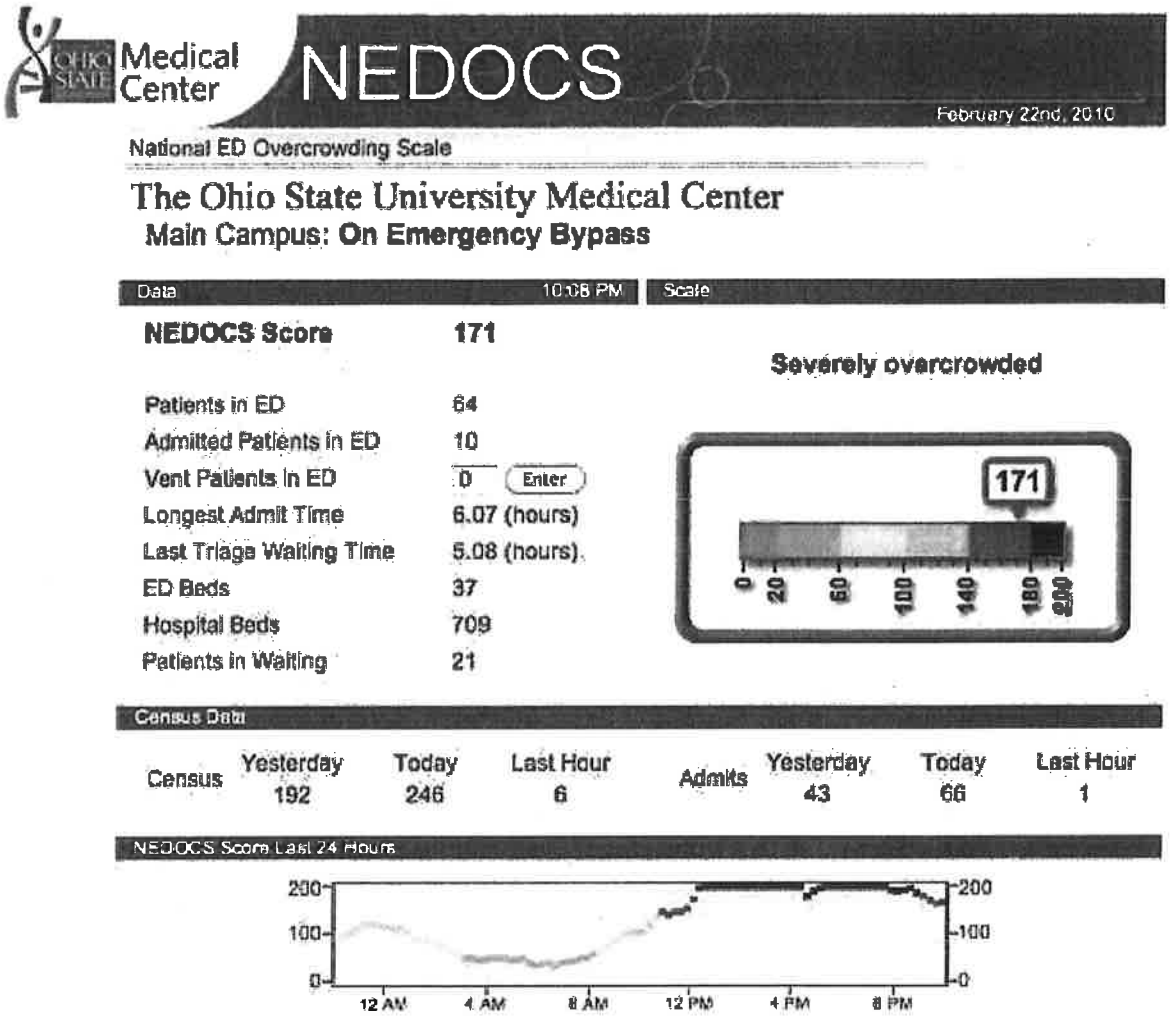

Figure. The NEDOCS website.

minimized was used to elicit group discussion of the causes from all perspectives. A list of potential specific actions by involved departments for each level of the NEDOCS was considered for inclusion or exclusion in the surge plan draft. This exercise led not only to specific surge plan actions but also illuminated the nursing, ancillary, and support department limitations in responding to the competing demands of the ED and the rest of the hospital.

The outcome of the retreat was a list of agreements to be included in the surge plan draft that was later crafted into a document, sent through administrative and medical staff approval processes, and recommended for implementation. The major elements of the plan included a description of the deployment actions within the ED, reprioritizing the pending workload in the radiology and laboratory, expediting bed cleaning and assignment processes, and creating a mechanism for on-call nurse staffing of additional inpatient beds. In addition to the administrative and medical staff venues for communication, IT representatives worked with internal marketing and communications staff to place the NEDOCS icon on the intranet home page. This created broad visibility and awareness of the ED's status in real-time, further supporting the message that ED overcrowding is an organizational issue.

Results/Outcomes

In daily practice, the NEDOCS is continuously calculated and frequently monitored by the ED charge nurse, the ED shift assistant nurse manager, and the ED attending physician. As the NEDOCS increases or ED metrics begin to

trend in a negative direction, the ED begins to internally "ramp up" activities targeted to patient flow. When the ED reaches the red level or "severely overcrowded," a number of specific interventions start to take place that include maximizing all treatment spaces, expediting patient transports to the floor or testing, expediting admissions, or calling in an on-call attending physician to work in our intake/triage area to see and evaluate patients from the waiting room. External to the department the bed placement/transfer center, environmental service, ancillary services, and transportation are alerted to the ED starting its "surge" via text page to key leadership in these areas; with the goal of optimizing patient flow. The nursing and medical directors of the department are also included in this page so that they can assist in mobilizing resources.

In most cases, the above interventions are sufficient to prevent further deterioration, improve conditions, and maintain unit safety. However, occasionally due to overwhelming demand or burden of critically ill patients, the NEDOCS will rise to the black or "dangerously overcrowded" level. With input from the directors, the black NEDOCS is a trigger to prompt consideration for ambulance diversion status and holding acceptance of ED-to-ED transfers if current ED resources are insufficient to adequately care for additional patients. In addition, inpatient units are asked to pick up patients in the ED, ancillary service staffing is increased and response provided to the ED (lab, respiratory therapy, and radiology), and additional "surge" inpatient unit beds can be opened up if necessary to add additional on-demand capacity to get ED patients out of the ED and into the inpatient setting more quickly.

To enhance awareness of the fully implemented ED surge, an overhead page is sent throughout the hospital as well as updated text pages to key leadership. This provides further assistance by inpatient units as well as informs members of the medical staff that they may be asked to provide assistance to seek alternative treatment sites for some ED patients within their area of expertise. If the ED remains in a critical state, and conditions further deteriorate, a full internal disaster response that activates the hospital's incident command center can be considered (but has not been necessary to date). As such, the ED surge protocol is scalable, allowing the ED to handle normal operational conditions but allowing for a mechanism to scale up interventions based on conditions on the ground. It also allows for an institution-wide response that is benchmarked to ED conditions and institutions capacity as defined by the NEDOCS. Since the implementation of the organizational surge plan application, the ED has called for a "red" surge approximately 10 times a month. A "black" surge notification occurs 1 to 2 times per month.

The surge protocol helped to dramatically improve operational performance metrics coupled with other ED operational improvements and expanded ED capacity over the same time period. The percentage of patients that left without being seen went from a 7% average (pre-improvement) to a 2.8% average (postimprovement). Hours of ambulance diversion went from 794 hours in 2008 to 12 hours in 2009, the lowest among all EDs in Columbus. Door to provider, provider to disposition, and disposition to out of the ED times have improved significantly, reducing patient processing times and smoothing movement of patients through the department. The above operational improvements occurred during a period from 2008 to present, where our ED volume has increased from approximately 64,000 to 72,000 visits annually. Further, Press Ganey ED patient satisfaction scores have increased substantially over the same period, from 71% to 85.6%. The ED patient satisfaction scores have earned the ED 3 consecutive quarterly awards for service excellence and exceeding goals from the medical center. Staff and leadership satisfaction with the ED has also dramatically improved. This improved perception has led ED staff to feel valued in that the medical center has invested and supported ED operations.

Innovation

Our institution is not the first to successfully implement an institution-wide ED surge protocol or even to link ED overcrowding and responses to same to the NEDOCS. With this said, we feel our approach is innovative in how we leveraged this process of creating the surge protocol into larger ED operational improvement success through collaborative, multidisciplinary teamwork across all levels of our organization. The teams that worked on many aspects of the surge protocol identified numerous opportunities for ED process improvement. The larger ED surge retreat with senior leadership and key stakeholders helped solidify support for the ED and its needs across the organization. It also served to break down institutional silos and highlighted the importance of working together as one team and one medical center for the care of our mutual patients.

We believe that information technology's involvement in the creation of the surge protocol is novel. We are unaware of other institutions that have the capability to continuously update the NEDOCS for the ED and link to a highly visible web-based home page. The creation of this program with interfaces to our ED EMR, the reporting and visual depiction of the NEDOCS and ED operational metrics, and the ability to see the real-time NEDOCS anywhere within the institution have not to our knowledge been previously reported.

Applicability

We feel that what we have described above is scalable, applicable, and feasible for others to duplicate. In essence, the

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ED surge protocol we have developed was an exercise in institutional teamwork and a collaborative effort to break down institutional barriers that negatively impact ED operations and contribute to ED overcrowding. ED overcrowding is widely recognized as a national crisis, and other strategies to identify, characterize, and combat overcrowding have been widely reported [6–9]. Web-based scoring tools for the NEDOCS are readily available (eg, www.nedocscalculator.com and http://hsc.unm.edu/emermed/nedocs_fin.shtml).

Practical Advice/Take Home Message

In an undertaking such as this, there are lessons to be learned about organizational culture, politics, and change management. There were several keys to our success that allowed us to tackle an institution-wide problem that has eluded many health system reform efforts across the country.

First and foremost was a commitment by senior leadership to provide the resources and the organizational inertia to break down cultural sticking points and roadblocks. Their resources, administrative support, and clout within the organization helped to make the problem of ED overcrowding visible to patient care areas and practitioners outside of the ED. Further, it helped to establish organizational ownership of ED overcrowding.

Second, we learned the value of making a problem visible. Many within our institution were unaware of the severe overcrowding conditions that existed in our ED. Bringing heightened awareness to the problem allowed for many creative volunteered solutions from leadership outside the ED. This helped to cement a sense of organizational ownership of the problem of ED overcrowding, shifting the emphasis from "an ED problem" to "a systems problem."

Finally, the importance of effective communication was vital to our success. Multiple strategies had to be utilized to "get out the message." This included email, mailings to members of the medical staff, a video blog by the health system's CEO, and numerous in-person presentations about the surge plan and the NEDOCS at departmental meetings, medical staff leadership meetings, and organizational operations committees.

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Cleveland Daily Banner

(/)

Jetport's Phenomenal Growth: Pages F25-F27

Hangar space sought regularly: Fidler

Posted Tuesday, February 27, 2018 10:35 am

By LARRY C. BOWERS

Cleveland's Regional Jetport, opened for service and replacing the community's old Hardwick Field in 2013, has enjoyed phenomenal success and growth during its first five years.

That growth is scheduled to continue with an expansion project in the near future.

Operations Director and Jetport Manager Mark Fidler says the airport is "hangar poor," and preliminary steps have been taken in planning for additional aircraft space.

Selected as Tennessee's Airport of the Year in 2014, the Jetport opened for service five years ago with around 20 hangars. It was assumed there would be construction for five to 10 additional structures.

The community's new, upscale airport has rapidly grown to 50 hangars. Fidler anticipates the need for as many as 25 more.

"I receive calls almost every day from individuals and corporations, inquiring about the availability of hangar space for aircraft," Fidler said in a recent interview.

In emphasizing the lure of the Cleveland/Bradley County community as a place to raise a family, or retire, Fidler added, "Many of the individuals are interested in moving to Cleveland, and several will be bringing their private airplanes."

The expansion will be to the north of the facility's terminal, beyond existing hangars.

Construction is also ready to begin on a new, high-capacity hangar on the south side of the terminal, near the Life Force hangar.

Two up-front tenants of the new hangar will be Cleveland businessmen Forrest Preston and Henry Lucken. Fidler said this will be the largest hangar at the aviation facility, and could house up to five tenants and five aircraft.

The 2016 move of Life Force Base 1 from Chattanooga's Erlanger Hospital to Cleveland is also a huge benefit to the community.

An agreement between Life Force and the City of Cleveland now provides free transportation for any city resident, in case of a medical emergency.

The Jetport recently completed the construction of a new entrance sign in front of the terminal along Dry Valley Road. The large stone sign will be accentuated with lighting.

See articles on the Jetport's expansion plans, and Life Force's move to Cleveland in Section F on

Cleveland Daily Banner

Increase in emergency calls prompts need for more staff and equipment

Posted Saturday, March 3, 2018 11:28 pm

By AUTUMN HUGHES

The number of calls to Bradley County Emergency Services continues to rise, highlighting a need for more EMS personnel and vehicles to serve the community.

Meeting with the Bradley County Commission's Emergency Services Committee on Friday, EMS Director Shawn Fairbanks discussed the call volume as well as staffing, equipment and infrastructure needs.

Fairbanks said in the past 20 years, the call volume has increased by 120 percent.

"Every year we have an increase," he said, adding increase has caught up "to the capacity of what we can run. I need more people on the road."

In January 2018, there were 149 fire calls and 1,970 EMS calls in Bradley County. Fairbanks said the department averages 2,300 calls per month.

"That's a lot for a month with seven trucks," he said.

Discussing staffing, Fairbanks said Bradley County EMS used to have a 24-hour schedule, but that was changed due to overtime rules, cutting shifts to eight hours.

As an alternative, Fairbanks suggested adopting a 24/48 schedule, with employee working a 24-hour shift then being off duty for 48 hours.

"It's no different than what the fire departments in Cleveland and Bradley County work every day," Fairbanks said.

He added "nobody likes change," but they have to do what's best for the people of Bradley County.

Emergency Service Committee Chairman Johnny Mull asked if there are other counties and communities on the 24/48 schedules.

Fairbanks said there are, and added the head of a neighboring EMS organization called him for information about switching from 24/48 shifts to eight-hour shifts. He couldn't recommend making that change.

Fairbanks told the committee he supports going to a 24/48 schedule with currently enough staff to run nine trucks.

He also discussed his EMS staffing proposal, which he said is "up in the air" until he hears from the County Technical Advisory Service which is reviewing the department's salary and wage information. He expects to get the information from CTAS on Tuesday for discussion at another committee meeting.

In regard to infrastructure, Fairbanks said roof repairs have been made to the EMS Center on Paul Huff Parkway, but he noticed a leak on Thursday that must be addressed.

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"We budgeted $7,000 to fix the roof." The repair cost so far is approximately $1,100, Fairbanks said. With the remaining money, and with Bradley County Mayor D. Gary Davis' approval, Fairbanks said he would like to begin working on some small improvement projects.

Bradley County Commissioner Charlotte Peak, who is supervising the work at the facility, said the center was built in 1990-1991 is "outdated." It needs carpet, a heat and air unit, and other repairs and updates. Peak has been getting individual quotes for the work at the center.

In other business:

• Fairbanks said the new International truck has arrived and will be stationed at the Paul Huff Parkway station. Also, the third new EMS truck should arrive soon and will be stationed at the Dooley Street station.

• Fairbanks said Bradley County EMS has become compliant with Medicare rules related to Advanced Beneficiary Notification forms. The ABN forms are required if a patient doesn't meet Medicare's definition of medical necessity to use an ambulance. EMS will still transport patients, but the patient must sign the ABN form to acknowledge they may be billed for the transport if Medicare refuses to pay. Being faced with signing the ABN form has caused some patients to decide to use private transportation rather than EMS, he added.

Fairbanks emphasized the ABN form is a Medicare requirement and there has been a learning process for all parties involved.

County Mayor Davis, who attended the committee meeting, agreed, noting Medicare — not Bradley County EMS — makes the decision as to whether to pay for Medicare patients' transports.

Committee member Thomas Crye said he has had to sign the ABN form in relation to his own medical treatment.

"It's nothing but a paper trail," he said.

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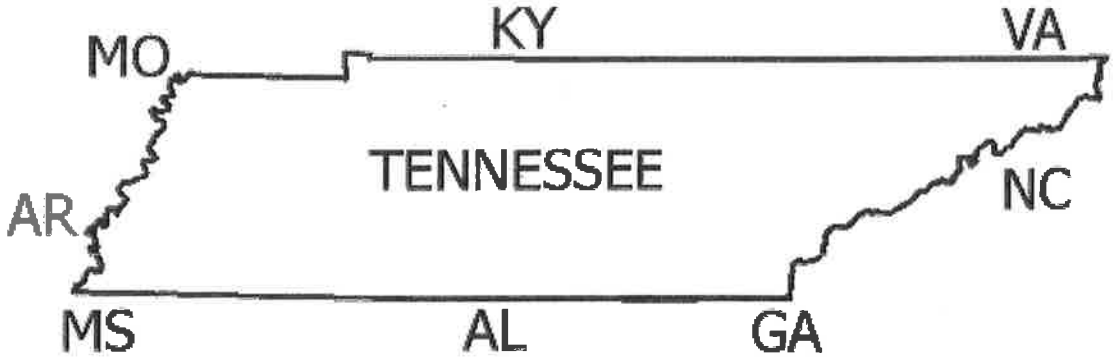
Tennessee
Trauma Care System Plan

Tennessee Department of Health
July, 2004



A System That Serves Tennessee and Supports Eight Neighboring States

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Deidre Popovich, Trauma Registrar

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MISSION STATEMENT

To establish and promote a continuum of care that provides timely and appropriate delivery of emergency medical treatment for people with acute traumatic injury, supported by the appropriate resources, to diminish or eliminate the risk of death or permanent disability and to use all of the state's trauma system resources to implement effective injury prevention programs.

PREFACE

Trauma has become an epidemic in the United States, claiming the lives of over 140,000 people annually. It can be said to be the last major plague of the young, killing more Americans between the ages of one and thirty-four than all other diseases combined. It remains the leading cause of disability of all people under the age of 65.

Medicine has made extraordinary advances during the last forty years, while the battle to abate the trauma epidemic has seen only limited success. Three major factors account for this.

First, the specialties of emergency medicine and trauma care are relatively new. The concept of early field intervention and immediate transport to an acute care center with highly skilled health care professionals prepared to provide early, definitive care was only recently developed, a by-product of our twentieth century wars, culminating in the Vietnam conflict. However, it is not possible to save or rehabilitate all trauma victims, due to the nature of their injuries or the time required for the victims to reach a trauma center.

Second, injury prevention, a powerful weapon in the fight against trauma, suffers from a lack of drama and immediacy. Too often, the blaring sirens and flashing lights of the emergent, acute care component of trauma overshadow the seemingly mundane arena of prevention. Too often fatalistic attitudes that "accidents" are "inevitable" justify inaction and create a cycle that feeds upon itself. Yet, from improvements in automotive safety to changes in personal behavior, prevention has the potential of being the most effective and least costly means for reducing the occurrence of trauma.

Lastly, the development of a trauma care system - a system which assures that the required resources are available and the necessary infrastructure is in place to deliver the "right" patient to the "right" facility in the "right" amount of time – entails broad consensus and cooperation among divergent groups around complex logistical, political, financial, legal, and medical issues.

Given the nature of the epidemic, a comprehensive trauma care system, which includes a strong injury prevention component, holds the most promise for curbing this brutal epidemic. Thirty to forty percent of all trauma deaths occur within hours of the injury, usually from shock and/or internal bleeding. Virtually all of these deaths are considered inappropriate and preventable, and should not occur if an organized trauma system were in place. Moreover, many trauma deaths, and particularly those that occur within minutes of injury and for which effective medical treatments are not available, could be avoided through an effective injury prevention infrastructure and programs.

HISTORY

Tennessee implemented a statewide trauma care system in 1988 with the designation of eleven hospital Trauma Centers. The Board for Licensing Health Care Facilities (BLHCF) created a Trauma Center Task Force to study the need for trauma centers in the state. The Task Force completed its work in 1985 with a recommendation that specific rules for Trauma Centers be promulgated based on the American College of Surgeons Committee on Trauma (ACS-COT) trauma center guidelines (Hospital Resources Document – Appendix 1). The BLHCF approved

these trauma center rules and required a specific inspection process managed by the state EMS Director. Each hospital seeking trauma center designation was required to submit a written application followed by an on-site inspection by a team as specified in the rules. The inspection team was comprised of an out-of-state trauma surgeon as the team leader, an in-state trauma surgeon, a critical care nurse, a hospital administrator and the state EMS Director, who assumed the functions of team administrator. The rules set standards for Level I and Level II trauma centers. The first inspections were conducted in 1987 and involved 14 hospitals in 6 cities. The 4 Level I applicants, all teaching hospitals, met designation requirements but none of the Level II applicants passed the initial inspections.

The trauma center designation process was highly debated after the initial inspection reports were presented in 1987 at the BLHCF meeting. Level II applicants made appeals, and it became apparent that trauma centers by themselves did not comprise a trauma care system. The BLHCF then decided not to designate any trauma centers until several actions were taken:

1. Approve trauma patient destination requirements by the state EMS board.
2. Develop standards for Level III and Pediatric Trauma Centers.
3. Implement a state trauma registry.
4. Resolve concerns about trauma center advertising.

The Department of Health convened an ad hoc committee to develop solutions to these problems. The resulting consensus on these issues and re-inspection of all Level II applicants led the BLHCF to designate 11 hospitals as trauma centers in August 1988: 4 as Level I, 7 as Level II.

The promulgation of Level III and Pediatric Trauma Center rules led to designation of several such trauma centers by 1990. Several other hospitals applied for either Level I or II designation and several Level II and III hospitals voluntarily relinquished their designations. As of March 2004, there were 12 designated trauma centers: 6 Level I, 2 Level II, and 4 Level III (Appendix 3). Of the approximately 19,000 trauma patients seen annually in Tennessee trauma centers, more than 15,000 received definitive care in the 6 Level I centers.

The ad hoc Trauma Center Task Force continued its work after 1988, focusing on trauma care quality assurance issues. It delivered its final report to the BLHCF in 1990, recommending that a permanent advisory group be established to advise the Board on trauma care policy and regulation. In response, the BLHCF created the Trauma Care Advisory Council (TCAC) in 1990 comprised of 12 members, a majority of whom are trauma surgeons (Appendix 2). Its mission was to:

1. Advise the BLHCF
2. Promote public education on trauma care and trauma system issues.
3. Conduct trauma systems planning.

Specific activities assigned at that time included preparation of an annual state trauma systems report, development of requirements for trauma center reporting, and monitoring the state trauma registry. However, to date, a functioning trauma registry has lacked funds and is not implemented. Work is currently in progress to secure funding and seek legislation to establish and protect a statewide database.

TRAUMA SYSTEM STRUCTURE

Tennessee's demographics and geography have contributed greatly to its trauma system structure and function. The state's population is 5.7 million and divided into 5 urban areas (focused in Memphis, Nashville, Knoxville, Chattanooga, and the Tri-Cities area in northeast Tennessee) and several sub-regions. The urban centers are separated by 100-200 miles, all are affiliated with medical schools that operate Level I trauma centers, and all have associated helicopter ambulance services. Almost all persons in the state are within 100 air miles from a Level I trauma center. This basic physical structure is almost ideal. The geography and the BLHCF and the state EMS Board having broad powers enabled Tennessee to develop a trauma care system without legislation. Only rule making was required to designate trauma centers and provide guidance to EMS personnel for the identification and transport of patients. Level I centers are the key focal points of the system. The geographic/demographic structure of the state and the ability to capitalize on it have created the existing system (Appendix 3).

TRAUMA SYSTEM PROBLEMS AND ISSUES

Trauma Registry. Although the trauma registry officially began operation in 1989, an unresolved legal issue has so far rendered it non-functional. In 1991 a legal opinion from the BLHCF counsel stated that without specific legal protection, the registry would be a publicly accessible database. The TCAC then blocked access to these data as the only means to protect hospitals and physicians from potential liability.

In 1995, the TCAC adopted the American College of Surgeons TRACS registry software for use in all trauma centers. The trauma centers enter all relevant data and transmit files to ACS. The legal problem has been greatly reduced by HIPPA and amendments to state law, but the legal creation of a State Trauma Registry still remains a necessity.

Public Information. A state chapter of the America Trauma Society was formed in 1989. It was active until 1995 and assisted the TCAC in publicizing the trauma care system and obtaining grants to meet objectives such as purchasing the TRACS software. Since 1995 there has been no statewide effort to inform the public and policy makers of trauma system issues.

Pediatric Trauma Care. Pediatric trauma centers were designated in 1990 in Knoxville and Chattanooga. Comprehensive pediatric emergency care legislation was enacted in 1998 that directed the BLHCF to set minimum pediatric emergency care standards for all hospitals. The highest level is the Comprehensive Regional Pediatric Center (CPRC; Appendix 4); there are a total of 4 in Children's Hospitals located in Memphis, Nashville, Knoxville, and Chattanooga.

The original concept was that CRPCs would provide definitive trauma care. However, as part of the process of adopting the comprehensive pediatric rules the BLCHF abolished the pediatric trauma center rules. CRPCs provide much of the care for critical pediatric trauma patients, but are supplemented in some areas by adult Level I trauma Centers.

Injury Prevention. Trauma care providers can be powerful and credible advocates for injury prevention programs. However, although individual trauma centers are required to support injury

prevention programs, there has been no statewide effort to use trauma care resources for injury prevention.

Reimbursement. In 1994 Tennessee implemented a Medicaid managed care program called TennCare. Managed Care Organizations (MCO's) are funded by the state to contract with health care providers. Trauma care is well organized and efficient, but not adequately reimbursed by many MCO's. The survival of the trauma care system depends on an adequate reimbursement structure.

System Structure. While the location and number of Level I trauma centers is almost ideal, other elements of the system structure may be improved. For example, all Level III trauma centers are located only within the 100 mile corridor from Knoxville to Chattanooga and only 2 Level II centers remain, with 2 in Memphis and 1 in Bristol, separated by a distance of more than 500 miles. Also, the existing system is exclusive; only trauma center hospitals are required to report patient data or are considered to be formally part of the system.

Summary. The underlying issue with most of the above problems is lack of accessible trauma patient and system information. The lack of specific knowledge concerning system characteristics, primarily defined by the causes and consequences of trauma, inhibits effective decisions and actions to improve the system.

PREVALENCE OF TRAUMA IN TENNESSEE

The Department of Health's Center of Health Statistics generated a traumatic injury report for the year 2000 from the UB 92 database. Using appropriate ICD-9 codes, there were 30,664 traumatic injuries admitted to hospitals that year and 596,501 injuries treated and released from hospital emergency departments that same year.

Of the inpatient total above, approximately 18,000 (59%) were seen in the then 13 designated trauma centers; there are a total of 137 acute care hospitals licensed in the state.

RURAL POPULATION AND TRAUMA CARE

Of 95 counties in the state, 89 are listed as rural by our state Office of Rural Health. This population is 3,280,000, or 57.5% of the state's total population of 5,700,000. The primary trauma care issue in rural areas is rapid access to definitive care at Level I trauma centers. This problem is ameliorated by the almost ideal location of Level I centers and the fact that five Level I centers operate, or are affiliated with, helicopter ambulance services. Almost every citizen is within 100 air miles of a Level I trauma center.

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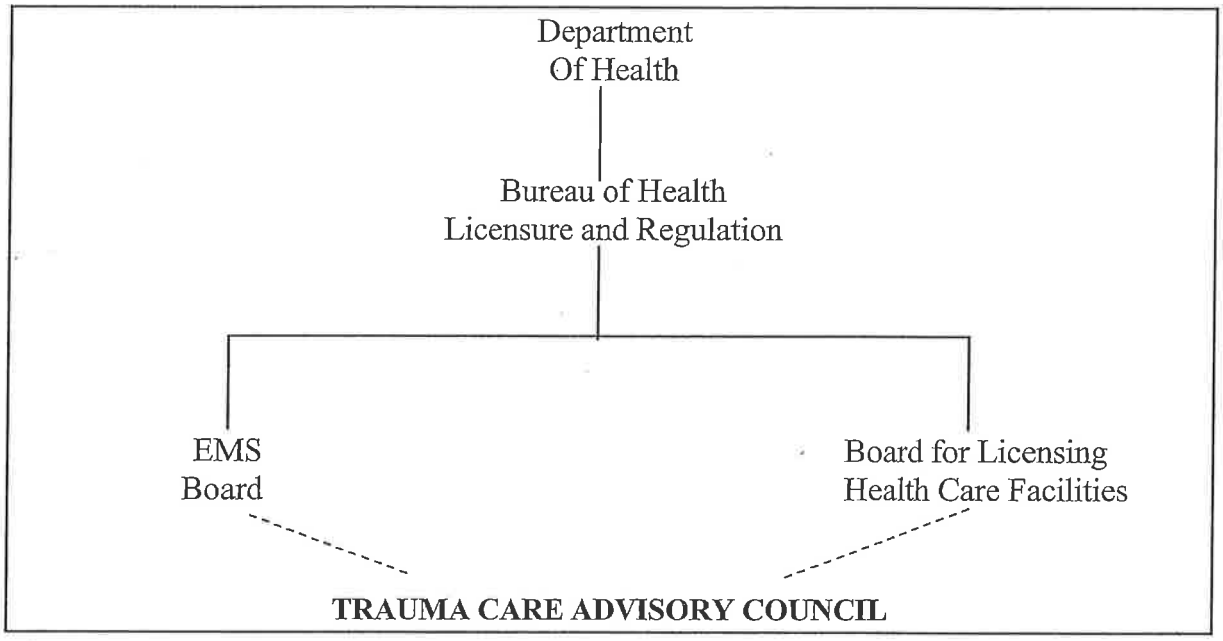
TRAUMA PLAN COMPONENTS

ADMINISTRATIVE COMPONENTS

I. LEADERSHIP

A. Lead Agency

The state lead agency for this project is the Bureau of Health Licensure & Regulation (BHL&R) of the state Health Department. The BHL&R manages the BLHCF and the EMS Board and Division along with other components, including twenty eight health manpower boards.



The state's Trauma System Manager is Joseph B. Phillips, Director of Emergency Medical Services, who works within the BHL&R as Director of the EMS Division. He is responsible to the BLHCF for managing the trauma center inspection process.

EMS and the BHLCF work jointly to develop and promulgate rules and regulations regarding designation of trauma centers and destination guidelines for EMS. Among lead agency responsibilities are:

- Ensure integration of system leadership activities
- Develop and enforce trauma center standards (Appendix 1)
- Manage the trauma center designation process
- Develop EMS trauma patient destination rules (Appendix 6)
- Develop and operate a system of data collection and analysis
- Develop EMS trauma patient care protocol guidelines (Appendix 7)
- Assist with the development of mass casualty/disaster plans
- Development and maintenance of a statewide EMS communication infrastructure (Appendix 8)

The Tennessee trauma care system plan goals are to:

1. Evaluate the system and plan improvements based on the results of this evaluation.
2. Identify other resources which can contribute to the improvement of the system.
3. Develop triage criteria for inter-hospital patient transfer.
4. Establish cooperative agreements with bordering states, which allow the system to fully meet public health needs in spite of geopolitical boundaries. Tennessee trauma centers are regional resources serving the citizens of Tennessee as well as Tennessee's eight border states.
5. Integrate the trauma care system into the state mass casualty/disaster planning and operations systems.
6. Completely integrate the trauma care system with regional EMS communication systems.
7. Develop statewide trauma prevention and education programs based on injury data.
8. Promote financial viability of our statewide trauma system

B. Trauma Care Advisory Council

The Trauma Care Advisory Council (TCAC) is a multidisciplinary standing committee of the EMS Board and the BHCLF. It was created by and is required to report to the BHCLF. The make up of the Council consists of surgeons, trauma coordinators, nurses, hospital administrators, rehabilitation services, consumer and EMS representatives (Appendix 2). The TCAC is responsible for system plan development and evaluation. It meets quarterly to review trauma system related information. The TCAC will develop reports, review data, and analyze reports from the trauma registry database and guide the development of the annual statistical and other reports. The TCAC reports its recommendations for trauma system changes to the EMS Board and to the BHCLF.

II. SYSTEM DEVELOPMENT

A. Trauma System Planning

Up to this point in time, developing the Trauma Care System has been the main focus of the administrative leadership. The designation of trauma centers was performed using guidelines developed by the American College of Surgeons Committee on Trauma and modified for Tennessee. The rules and regulations based on ACS-COT guidelines were promulgated by the Board for Licensing Health Care Facilities. The designation of hospitals as trauma centers has been voluntary on the part of hospitals. EMS destination guidelines were approved by the EMS Board. These guidelines describe a radius within which these destination guidelines apply to EMS (Appendix 5).

Current Objectives:

1. Establish a state trauma registry.
2. Identify the mechanisms and consequences of injury.
3. Develop plans based on available data to prevent injury and optimize care.

B. Trauma System Operations

Tennessee's trauma system consists of several regional trauma care systems operating under state guidelines. Since 1988, the care of seriously injured patients has been concentrated at the six Level I trauma centers. All prehospital care providers also follow these guidelines. Referring hospitals routinely transfer patients to Level I centers, but no state transfer guidelines or agreements are currently in effect, except for burn and pediatric care. Five Level I trauma centers operate helicopter ambulance services which provide both scene and interfacility transfers. EMS crews are required to consult with the pre-defined trauma medical control for any decision where there is not an obvious need for Level I destination. The state EMS Board has approved a telecommunications plan that allocates radio frequencies for ambulance dispatch, ambulance to hospital, and hospital to hospital radio communications.

Further needs may include:

1. Develop interhospital transfer guidelines.
2. Integrate the trauma care system into the statewide mass casualty/disaster planning process.
3. Evaluate the need for specialized medical control/consultation based on type of injury (e.g. burns, pediatric, poisoning).

III. LEGISLATION

Specific trauma system legislation has previously been unnecessary because of the broad authority granted to the EMS Board and the BLHCF. Rules and regulations regarding designation of trauma centers and destination guidelines for EMS were promulgated by these Boards. The Bureau of Health Licensure and Regulation is the lead agency for trauma system development, giving it authority to implement the system under the rules of both boards.

Specific legislation may be needed which provides:

1. Protection of access to trauma registry data and of confidential quality management program activities by the TCAC.
2. Adequate reimbursement from all payors to cover system costs.
3. Adequate funding to cover the cost of trauma system administration and operations.
4. Tort reform to ensure continued involvement of health providers in this serious epidemic.

IV. FINANCE

A. Trauma System Administrative Costs

Tennessee's trauma system administrative costs have been kept to a minimum. The cost associated with the designation of trauma centers has been assumed by the trauma centers. An important

challenge in the management of trauma systems is the documentation of the costs and benefits of trauma care. The initial costs associated with the trauma registry will be financed through a start-up grant. Ongoing funding will be required to sustain the registry and other administrative costs associated with the trauma system.

B. Trauma Care Provider Costs

The major costs of trauma care fall on the trauma care providers (EMS, physicians, and hospitals). Trauma care often represents a significant portion of the total unreimbursed care for all trauma care providers. Major hospital reimbursement methods do not provide adequate coverage for the costs of delivering care to patients with multiple injuries. Level I trauma centers receive a disproportionate number of trauma patients with lower socio-economic backgrounds, decreased insurance rates, and increased unemployment rates. Interpersonal violence contributes significantly to the financial problem for major trauma centers. There are limited resources available for development of the rural components of the trauma system. Documentation of costs among individual system components may have been performed, but these costs have not been aggregated. Also, no mechanism exists for accurate documentation of costs, in particular the unreimbursed costs associated with trauma system operation at the prehospital, hospital, and physician level.

C. Trauma System Funding

Funding for a comprehensive trauma system must be dedicated and sufficient to cover its development, implementation, delivery of care, and evaluation. Tennessee has relied upon existing fiscal policies to serve as sources of funding. TennCare has replaced the Medicaid system, applying a managed care approach to the health care needs of its recipients. However, most trauma care falls outside the scope of managed care. Funding allocation has not been appropriately addressed in either amount or distribution. There has been no legislation to authorize or appropriate dedicated revenue sources to support the EMS/trauma system. Tennessee is pursuing available grant funding for trauma system development.

Additional efforts should include:

1) Identification of potential sources of funding.
2) Commitment of a portion of any dedicated funds for:
   a) Sustaining a trauma care system, including designating facilities.
   b) Assisting the hospitals in revising their information systems to accommodate new trauma care reporting requirements.
   c) System-wide data collection and analysis, with special attention placed on documenting the cost effectiveness of the trauma system, measuring patient outcomes, and supporting quality improvement of each system component.
3) Design of a public information and education (PI & E) program that targets legislators and consumers, explaining that good trauma care is cost effect.
4) Aggressive pursuit of grant funding for trauma system development.

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OPERATIONAL AND CLINICAL COMPONENTS

I. PUBLIC INFORMATION AND EDUCATION

A. Public Information and Education

Tennessee relies heavily upon the individual components of the trauma care system to perform PI&E programs. The Department of Health maintains a small injury prevention section. Rules promulgated by the BLHCF require trauma centers to have prevention programs at their own expense. However, there is no lead agency designated to coordinate PI &E programs in Tennessee, and there is no unified trauma constituency to promote trauma system awareness and prevention activities. Therefore, neither the general public nor elected officials and their staffs have been properly educated about trauma system issues.

Potential aids to resolve these issues include:

1. Build a trauma constituency involving all trauma system components and consumer groups to promote trauma system awareness and prevention activities. This could include re-implementing an active Tennessee Division of the American Trauma Society (ATS).
2. Collaborate with other organizations, such as the state Committee on Pediatric Emergency Care (CoPEC), in developing and promoting injury prevention activities.
3. Educate public officials and their staff about trauma system issues.

B. Prevention

Injury is a preventable public health problem. The ultimate goal of an organized trauma system is to prevent injuries. Tennessee's Level I trauma centers and CRPC's are required to provide prevention programs in their respective regions. Other agencies are dedicated to specific causes of injuries, such as highway/motor vehicle safety, gun safety, helmet use, water safety, etc. There is no single reliable source of comprehensive injury surveillance data. There is no statewide comprehensive injury prevention program. Prevention goals were not established during the development of the trauma system.

Potential solutions include:

1. Use of new trauma registry, UB92 data, and the ambulance reporting system to assist in injury surveillance. The objective, however, should be to move toward an integrated EMS information system which would provide total injury surveillance.
2. Develop an injury prevention plan, which would:
   a) Communicate key trauma prevention strategies.
   b) Coordinate and evaluate existing prevention programs.
   c) Identify risk groups that are not currently addressed by existing prevention programs.

II. HUMAN RESOURCES

A. Workforce Resources

It appears that Tennessee has adequate numbers of prehospital personnel to support the trauma system. However, a crisis is developing in the trauma system due to critical shortages of providers willing to provide trauma care due to reimbursement, lifestyle and tort issues. Furthermore, hospital systems lack surge capacity to deal with mass casualty/disaster situations.

B. Trauma Educational Preparation

Trauma centers provide trauma education to residents, fellows, nurses and other healthcare providers through ATLS and TNCC. EMS providers have the BTLS and PHTLS programs as the primary trauma education curriculum. Non-trauma center hospitals and personnel provide varied levels of education regarding trauma care. Prehospital providers are not required to have continuing education regarding trauma education. Rural areas have limited resources necessary to implement trauma education programs. Some providers may be unaware of the benefits of a regionalized approach to trauma care and what their respective roles and responsibilities are as a component of the trauma system.

Recommendations regarding further support include:

1. Advocate participation of prehospital care providers in trauma educational programs, such as BTLS and PHTLS.
2. Support ACS-COT rural trauma course.
3. Advocate ATLS training for physicians participating in the trauma system.
4. Advocate additional specialized training courses for nurses such as TNCC and CATN.

III. PREHOSPITAL CARE

A. Communications

Public Access
Virtually all of Tennessee's population has access to the EMS system via 9-1-1 or E-9-1-1 systems. All county 9-1-1 systems have not yet implemented position location technology for cell phone users. The State Emergency Number Board is assisting local 9-1-1 centers with implementation of this capability.

Dispatch Priorities
Most counties utilize a consolidated 9-1-1 dispatch center to dispatch all emergency services, including emergency ground ambulance service. The hospital-based helicopter ambulance services are all dispatched from Level I trauma center communications centers using accepted industry standards. Most counties utilize commonly accepted industry standards for ALS and BLS calls. Most of the larger urban systems use some form of computer aided dispatching systems, which assist in deploying ambulances in regions based on past call history.

Communication System Integration
County 9-1-1 centers centrally dispatch all emergency service agencies and integrate such entities as police, fire, and EMS. This central dispatch capability helps ensure communications interoperability. EMS communications are regulated by the state EMS Telecommunications Plan which allocates VHF and UHF radiofrequencies for ambulance dispatch, ambulance to hospital, and hospital to hospital radio communications.

The EMS Telecommunications Act of 1977 (TCA 68-140-201—208) and EMS Board rules support the designation of regional communication centers (RCCs) that serve as communications hubs for regional EMS systems. A regional EMS system is a multi-county system comprised of all hospitals, ambulance services, dispatch centers and related entities that functions as an interactive emergency medical network coordinated through a RCC for the purposes of providing information and allocating/coordinating medical resources.

An RCC (Appendix 8) is an entity with a regional mission and focus that coordinates hospitals, ambulance services and other medical resources, in real time, to optimize emergency patient care in situations where local governments and health care providers request assistance. The RCC's will therefore coordinate all EMS and hospital resources that respond to any mass casualty events. Statewide implementation of the RCC system is essential for effective operation of the trauma care system in both routine and disaster operations.

This statewide communications system is not complete. It is essential that this system be fully implemented in order to ensure proper management of day-to-day operations and mass casualty incidents.

B. EMS Medical Direction

Paramedics and EMTs are not independent practitioners, but must operate under approved physician protocols. Medical Directors provide the operational framework for field personnel and seek to assure appropriateness of all medical aspects of the prehospital program with the same professional accountability as medical care in the more traditional settings. There is a state sponsored EMS medical director training course held annually.

There is virtually no on-line medical direction outside major urban areas. Regional Communications Centers will be equipped to provide on-line consultation for both rural paramedics and hospital emergency departments.

C. Triage

Trauma Patient Identification
Trauma care systems use the state EMS destination rules for identifying trauma patients, based on ACS-COT guidelines (Appendix 6). EMS destination rules provide guidance to EMS personnel for identifying those injured victims who should be transported to a trauma center.

Hospital Categorization
Trauma centers in Tennessee are designated by the BLHCF. Levels include I, II, and III adult centers. Currently there are 6 Level I, 2 Level II, and 4 Level III adult centers. Pediatric trauma care is provided by comprehensive regional pediatric care centers (CRPC) or Level I Trauma Centers. There are no triage guidelines or transfer protocols guiding interhospital transfer of trauma patients admitted to non-trauma hospitals. No mechanism is in place to measure system performance regarding overtriage and undertriage occurrences.

Efforts to address these issues may include:

1. Triage and transfer guidelines for non-trauma designated hospitals.
2. Ensure that all providers of trauma care contribute to the state registry. This data could be used to measure occurrences of overtriage and undertriage.

D. Transport

Current Demand and Nature of the System
The state of Tennessee is geographically diverse, from the mountains of East Tennessee to the plains and delta of the Mississippi in the west. Although mostly rural, there are 5 large population centers: Memphis, Nashville, Chattanooga, Knoxville and the Tri-Cities. Due to geography and demographics we have no extreme transport distances within Tennessee; all patients are within 100 air miles of a Level I trauma center. Due to the location of the designated trauma centers and state geographics, a significant number of out-of-state patients have access to treatment in the Tennessee trauma system.

No state is bordered by more states than Tennessee. The eight states that border Tennessee send patients to all of Tennessee's Level I trauma centers. The population served from these border states may be the equivalent of an additional state. Further study is necessary to determine the impact on our state trauma system of providing care to these out-of-state patients.

Ground and Air Ambulances
Trauma patients are transported by both ground and air ambulances with ground ambulances providing a majority of the transports. There are 5 hospital based ambulance services and 1 private provider operating 16 helicopter ambulances within the state as well as helicopter ambulances for contingent states. Most emergency ground ambulance services have a class A license and can provide ALS services. A web-based collection system is being developed in order to collect all ambulance run report data. Analysis of ambulance run report data will be required to determine how well EMS is integrated with the trauma care system. This task will be assigned to the state Trauma Registrar.

System Integration

Twelve of the 137 acute care hospitals in Tennessee participate in the trauma system as designated trauma centers. These twelve facilities have dedicated the necessary resources to provide optimal care for the injured. Although the non-trauma hospitals provide some trauma care, they are not required to submit data about injured patients to the state trauma registry, but do provide UB92

data. There is no state mechanism to review pre-hospital performance, although this performance is reviewed at the local ambulance service level (e.g. EMS response times, scene times, protocol adherence, destination guidelines).

Issues to address:

1. All facilities licensed to provide emergency care by the BLHCF should be required to submit trauma data about injured patients that they treat. All now submit UB92 data.
2. Perform analysis of state EMS data regarding:
   a) Access to the EMS system.
   b) Response time.
   c) Level of training and performance on scene.
   d) Distance to appropriate definitive care.
3. Ensure the state trauma registry has capability to evaluate EMS system performance as it pertains to the trauma care system.

IV. DEFINITIVE CARE FACILITIES

A. TRAUMA CARE FACILITIES

Trauma Centers
Tennessee has adopted designation standards for trauma centers based on the American College of Surgeons Committee on Trauma Optimal Resources Document.

Other Trauma Care Facilities
Some injured patients are treated in acute care hospitals and not designated as trauma centers. These facilities exist in the urban, suburban and rural areas of the state. Most specialty centers (i.e. burn, pediatrics, etc.) reside within Level I trauma centers. There is one burn unit (Chattanooga – 6 beds) and two burn centers (Nashville 10 beds and Memphis 6 beds). Issues regarding facilities include:

1. Non-designated trauma centers must be integrated into the trauma system through reporting of data, educational requirements, trauma protocols etc.
2. Trauma centers should provide support to non-designated trauma centers through assistance with quality management of trauma patients, trauma education and prevention programs.

Designation Process
Each hospital seeking trauma center designation is required to submit a written application followed by an on-site inspection by a team as specified in the rules. The inspection team is comprised of an out-of-state trauma surgeon as the team leader, an in-state trauma surgeon, a critical care nurse, a hospital administrator and the state EMS Director, who functions as the team administrator. Upon successful completion of a site visit the board the BLHCF designates a trauma center for 5 years. The rules further require that there be two site visits within the first 5 years of designation. Trauma center re-designation is approved by the BLHCF following successful completion of the second site visit in the 5 year designation cycle.

B. INTERFACILITY TRANSFERS

Transfer to Trauma Centers
Transfer of patients to trauma centers occurs after contact from the transferring hospital via phone. Some hospitals have transfer agreements within a hospital network, at times resulting in bypassing an appropriate Level I trauma center, resulting in prolonged transport times.

Tennessee has no formal guidelines for promoting the appropriate interfacility transfer of trauma patients. Solutions include:

1. Adopt and implement statewide EMTALA compatible transfer guidelines that ensure the transfer of trauma patients to designated trauma centers.
2. Educate the insurance industry and managed care organizations regarding the transfer of trauma patients and demonstrate the cost-benefit of a regionalized approach to trauma care.
3. Monitor out of state transfers.

Transfer from Trauma Centers to Other Facilities
Trauma centers rarely transfer patients back to "community" hospitals. Reimbursement issues impede this practice. Guidelines have not been developed and approved to facilitate transfer of patients from trauma centers back to "community" hospitals after acute care. This is especially a problem with out-of-state patients. Solutions include:

1. Develop guidelines facilitate the transfer of patients from trauma centers to "community" hospitals when appropriate.
2. Educate the insurance industry regarding the importance of repatriation of patients to their respective communities.

C. MEDICAL REHABILITATION

Rehabilitation Services
Rehabilitation services are utilized on a regional basis often expanding over several states. There are inadequate numbers of beds in rehabilitation facilities for patients without adequate financial reserves or third party payors willing to reimburse for rehabilitative services. Additionally, those patients covered by health insurance may not have access to appropriate rehabilitation services. There are no guidelines established regarding the adequacy of rehabilitation facilities providing trauma rehabilitation services. As a consequence patients are discharged home without rehabilitation or are kept in the trauma center until arrangements can be finalized. This results in increased length of stay and increased financial burdens on trauma centers. Also, acceptance by skilled care and nursing home facilities is often slow. Solution(s):

1. Due to magnitude of the problem, it is recommended that the TCAC form a task force to investigate and present solutions.

V. MASS CASUALTY MANAGEMENT

Tennessee's regional trauma care system is ideal for directing mass casualty incident (MCI) response of both hospitals and ambulance services. Level I trauma centers should coordinate the distribution of injured patients from any MCI, including terrorism, coordinate the development and application of regional disaster protocols, and coordinate these activities with other trauma regions and the state emergency management agency.

There are problems with implementing this system because the state medical communications system, which allocates regional communications centers in the eight public health regions, is not complete. Issues:

1. Complete the implementation of the RCC system. (See III A. Communications, page 16). This is the single most important improvement that can be made in improving Tennessee's medical readiness.
2. Develop regional disaster protocols covering all forms of injury (burns, chemical, blunt and penetrating trauma, and special populations such as pediatric, special needs, etc.)

VI. EVALUATION

A. System Data Requirements

Tennessee developed a state trauma registry in 1988 and identified the data elements all trauma centers were required to collect and report to the state. The Elvis Presley Memorial Trauma Center assumed responsibility for maintaining the database. The data reported by the trauma centers was received as reported. No quality data filters were present. The database was not designed to generate reports, only to receive data. A significant problem with the data in the state database was that it was considered to be public record, subject to review by the general public. This does not provide appropriate patient and provider confidentiality. That trauma registry is no longer functional and the accumulated data has been lost. All designated trauma centers now use TRACS the trauma registry software developed by the American College of Surgeons (ACS) and data is sent to the National Trauma Data Bank (NTDB). We plan to establish a state trauma registry with the assistance of federal grant monies. The BHLR is responsible for the state trauma registry operations. Issues to address:

1. All facilities licensed to provide emergency care by the BLHCF should be required to submit data about injured patients.
2. If required, implement measures to make the state trauma registry data confidential.

Data Collection Tools. We will purchase the state version of TRACS, collect patient data and link this with existing trauma related databases. Development of a web based registry will be considered.

B. Trauma System Performance

Evaluation of System Performance. Through site visits, the lead agency monitors trauma centers performance. Individual system components can evaluate their own performance but composite information to evaluate the overall system is not available. Implementation of the state trauma registry will link TRACS with other available databases and will assist with overall system evaluation. There is little current capability to assess the effectiveness of the system relative to meeting the needs of the injured, availability of resources, and costs, and assess the effectiveness of the system. Therefore, recommendations include:

1. Submit state TRACS data to the NTDB.
2. Develop trauma system performance indicators.

C. Trauma Center Evaluation

Trauma Center Quality Management. All currently designated trauma centers are required to perform acceptable quality management activities within their own institutions and are monitored by site visits. Quality management is evaluated through state re-inspections and focus on the trauma center's process of identifying system problems and implementing appropriate resolutions. Therefore, trauma center performance indicators should be developed and implemented.

D. Research

Trauma Care Research. Tennessee continues to struggle with how to organize and use the wealth of trauma data contained at the various trauma centers. One of the most significant research related documents published was the 1966 report by the National Research Council titled Accidental Death and Disability: The Neglected Disease of Modern Society. It was followed in 1973 by the Emergency Medical Services Systems Act. These documents made an appeal for increased federal and voluntary support of basic and applied research, long-term support of clinical research centers, expansion of research related to war wounds and the establishment of a National Institute of Trauma. These recommendations have not been adopted though they are still valid today. More recently the Major Trauma Outcome Study was done in an effort to provide comparison and baseline trauma data for research. This study was disbanded several years ago with the initiation of the NTDB database. Trauma research is conducted at Level I Trauma Centers and the results of existing trauma research in Tennessee is disseminated nationally in a variety of forums. The TCAC will oversee the production and coordination of reports from the new state trauma registry. Participation of AAST and EAST in multi-institutional study groups should be encouraged.

Research Funding. Since trauma is a multi-causative disease process, research must be multidisciplinary and funding must come from a broad support base. Federal injury research funding is disproportionately low compared to other diseases. Since trauma is not seen as a public health issue, substantial public monies have not been committed to injury research and prevention. It is recommended that the TCAC form a sub-committee to investigate alternative methods to funding trauma care and injury research in Tennessee. This same group should review prevention and education funding, as these are parallel with the need for research funding.

MEMORANDUM

TO: Board for Licensing Health Care Facilities

FROM: Judy Eads, Assistant Commissioner, Bureau Health Licensure and Regulation
Joe Phillips, State EMS Director
Katy Gammon, Director, Health Care Facilities
Cathy Green, Director, Board for Licensing Health Care Facilities

DATE: September 17, 2002

RE: Trauma Care Advisory Council

The Department of Health, Bureau of Health Licensure and Regulation, requests the Board adopt the following recommendations as policy for oversight and re-vamping of the existing Trauma Care Advisory Council:

1. **Officers –**

   The Chair is to be the current chairman of the State Committee on Trauma as appointed by the American College of Surgeons and will change when this appointment changes every 3 years. The Vice-Chair will be elected by the Council every 3 years at the time the Chair is appointed.

2. **Structure –**

   The Council will meet at least two (2) times per year.
   The Council will establish sub-committees as they see fit to accomplish their mission/goals.
   The Chair will submit a report to the Board for Licensing Health Care Facilities after each meeting.

3. **Mission –**

   The mission of the Council is to develop a Statewide Trauma Care System Plan for Tennessee to include a trauma care registry.

4. **Composition –**

   Core membership to include: Medical Directors from all six (6) Level I Trauma Care Centers, 1 Medical Director from a Level II Trauma Center and one Medical Director from a Level III Trauma Center (both appointed by Board for Licensing Health Care Facilities Chair), 1 EMS Board member, 1 BLHCF Board member, 1 Trauma Nurse Coordinator, Chair of Committee on Pediatric Emergency Care (CoPeC), 1 Trauma Center Hospital Administrator, 2 Consumers.

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DESIGNATED TRAUMA CENTERS
IN TENNESSEE

Memphis	Level
Regional Medical Center at Memphis/ Presley Trauma Center 877 Jefferson Avenue Memphis, TN 38103 Martin Croce, MD, Director	I
Methodist Hospital of Memphis 1265 Union Avenue Memphis, TN 38104 Raza Dilawari, MD, Director	II
Nashville	
Vanderbilt University Medical Center Division of Trauma 1161 22nd Avenue South Nashville, TN 37232 John Morris, MD, Director	I
Knoxville	
University Health Systems, Inc. Trauma Service 1924 Alcoa Highway Knoxville, TN 37920 Blaine Enderson, MD, Director	I
Chattanooga	
Erlanger Medical Center Trauma Service 975 East Third Street Chattanooga, TN 37405 Philip Burns, MD, Director	I

Kingsport

Wellmont Holston Valley Medical Center, Inc.
130 West Ravine Road
Kingsport, TN 37660
John Hall, MD, Director — I

Bristol

Wellmont Bristol Regional Medical Center
1 Medical Park Boulevard
Bristol, TN 37620
Eugene McClintic, MD, Director — II

Maryville

Blount Memorial Hospital
907 East Lamar Alexander Parkway
Maryville, TN 37801-5193
Melissa Trekell, MD, Director — III

Johnson City

Johnson City, Medical Center Hospital, Inc.
400 State of Franklin Road
Johnson City, TN 37601
Julie Dunn, MD, Director — I

Athens

Athens Regional Medical Center
1114 West Madison Avenue
P.O. Box 250
Athens, TN 37303-4150
Joseph Kalister, MD, Director — III

Etowah

Woods Memorial Hospital District
Highway 411 North
P.O. Box 410
Etowah, TN 37331-0410
Charles Cox, MD — III

Cleveland

Bradley Memorial Hospital
2305 Chambliss Avenue
Cleveland, TN 37311-3847
Janet Coombs, MD, Director — III

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COMPREHENSIVE REGIONAL PEDIATRIC CENTERS

East Tennessee Children's Hospital
P.O. Box 15010
2016 Clinch Avenue
Knoxville, TN 37901

T.C. Thompson Children's Hospital
910 Blackford Street
Chattanooga, TN 37403

LeBonheur Children's Medical Center
50 Dunlap
Memphis, TN 38103

Vanderbilt Children's Hospital
2200 Children's Way
Nashville, TN 37232

JP/G4024233/EMS

Supplemental #1
March 16, 2018
10:36 A.M.

December 11, 2017

Kevin M. Spiegel, FACHE
President and CEO
Chattanooga Hamilton County Hospital Authority
975 East Third Street
Chattanooga, TN 37403

Joint Commission ID #: 7809
Program: Hospital Accreditation
Accreditation Activity: 60-day Evidence of Standards Compliance
Accreditation Activity Completed: 12/11/2017

Dear Mr. Spiegel:

The Joint Commission is pleased to grant your organization an accreditation decision of Accredited for all services surveyed under the applicable manual(s) noted below:

- **Comprehensive Accreditation Manual for Hospitals**

This accreditation cycle is effective beginning April 01, 2017 and is customarily valid for up to 36 months. Please note, The Joint Commission reserves the right to shorten or lengthen the duration of the cycle.

Should you wish to promote your accreditation decision, please view the information listed under the 'Publicity Kit' link located on your secure extranet site, The Joint Commission Connect.

The Joint Commission will update your accreditation decision on Quality Check®.

Congratulations on your achievement.

Sincerely,

Mark Pelletier

Mark G.Pelletier, RN, MS
Chief Operating Officer
Division of Accreditation and Certification Operations

CONFIDENTIAL AND PRIVILEGED PURSUANT TO THE TENNESSEE PATIENT SAFETY AND QUALITY IMPROVEMENT ACT OF 2011 AT T.C.A. § 68-11-272. THIS DOCUMENT IS HEREBY SUBMITTED TO THE TENNESSEE HEALTH SERVICES AND DEVELOPMENT AGENCY PURSUANT TO T.C.A. §68-11-1601, ET SEQ., AND IT MAY NOT BE USED FOR ANY OTHER PURPOSE AT LAW, EQUITY OR OTHERWISE.

DO NOT DISSEMINATE

Official Accreditation Report

Chattanooga Hamilton County Hospital Authority
975 East Third Street
Chattanooga, TN 37403

Organization Identification Number: 7809

Unannounced Full Event: 3/27/2017 - 3/31/2017

Report Contents

Executive Summary

Survey Analysis for Evaluating Risk (SAFER™)

All Requirements for Improvement (RFIs) are plotted on the SAFER matrix according to the likelihood the issue could cause harm to patient(s), staff, and/or visitor(s), and the scope at which the RFI is observed. Combined, these characteristics identify a risk level for each RFI, which in turn will determine the level of required post-survey follow up. As the risk level of an RFI increases, the placement of the standard and Element of Performance moves from the bottom left corner to the upper right.

Requirements for Improvement

Observations noted within the Requirements for Improvement (RFI) section require follow up through the Evidence of Standards Compliance (ESC) process (*Please note, if your survey event resulted in a Preliminary Denial of Accreditation status, other follow-up events may apply*). The identified timeframes of submission for each observation are found within the Requirements for Improvement Summary portion of the final onsite survey report. If a follow-up survey is required, the unannounced visit will focus on the requirements for improvement although other areas, if observed, could still become findings. The time frame for performing the unannounced follow-up visit is dependent on the scope and severity of the issues identified within the Requirements for Improvement.

Executive Summary

Program(s)	Survey Date(s)
Hospital Accreditation Critical Access Hospital Accreditation	03/27/2017-03/31/2017

Hospital Accreditation :

As a result of the accreditation activity conducted on the above date(s), Requirements for Improvement have been identified in your report.

You will have follow-up in the area(s) indicated below:

- As a result of a Condition Level Deficiency, an Unannounced Medicare Deficiency Follow-up Survey will occur. Please address and correct any Condition Level Deficiencies immediately, as the follow-up event addressing these deficiencies will occur within 45 days of the last survey date identified above. The follow-up event is in addition to the written Evidence of Standards Compliance response.
- Evidence of Standards Compliance (ESC)

Critical Access Hospital Accreditation :

As a result of the accreditation activity conducted on the above date(s), Requirements for Improvement have been identified in your report.

You will have follow-up in the area(s) indicated below:

- Evidence of Standards Compliance (ESC)

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.

All Requirements for Improvement (RFIs) are plotted on the SAFER matrix according to the likelihood the issue could cause harm to patient(s), staff, and/or visitor(s), and the scope at which the RFI is observed. Combined, these characteristics identify a risk level for each RFI, which in turn will determine the level of required post-survey follow up. As the risk level of an RFI increases, the placement of the standard and Element of Performance moves from the bottom left corner to the upper right. The definitions for the Likelihood to Harm a Patient/Staff/Visitor and Scope are as follows:

Likelihood to Harm a Patient/Staff/Visitor:

- Low: harm could happen, but would be rare
- Moderate: harm could happen occasionally
- High: harm could happen any time

Scope:

- Limited: unique occurrence that is not representative of routine/regular practice, and has the potential to impact only one or a very limited number of patients, visitors, staff
- Pattern: multiple occurrences of the deficiency, or a single occurrence that has the potential to impact more than a limited number of patients, visitors, staff
- Widespread: deficiency is pervasive in the facility, or represents systemic failure, or has the potential to impact most/all patients, visitors, staff

SAFER Matrix Placement	Required Follow-Up Activity
HIGH/LIMITED, HIGH/PATTERN, HIGH/WIDESPREAD	• 60 day Evidence of Standards Compliance (ESC) -ESC will include Who, What, When, and How sections • ESC will also include two additional areas surrounding Leadership Involvement and Preventive Analysis • Finding will be highlighted for potential review by surveyors on subsequent onsite surveys up to and including the next full survey
MODERATE/PATTERN, MODERATE/WIDESPREAD	• 60 day Evidence of Standards Compliance (ESC) -ESC will include Who, What, When, and How sections • ESC will also include two additional areas surrounding Leadership Involvement and Preventive Analysis • Finding will be highlighted for potential review by surveyors on subsequent onsite surveys up to and including the next full survey
MODERATE/LIMITED, LOW/PATTERN, LOW/WIDESPREAD	• 60 day Evidence of Standards Compliance (ESC) -ESC will include Who, What, When, and How sections
LOW/LIMITED	• 60 day Evidence of Standards Compliance (ESC) -ESC will Include Who, What, When, and How sections

Note: If an Immediate Threat to Health and Safety, also known as Immediate Threat to Life (ITL), is discovered during a survey, the organization immediately receives a preliminary denial of accreditation (PDA) and, within 72 hours, must either entirely eliminate that ITL or implement emergency interventions to abate the risk to patients (with a maximum of 23 days to totally eliminate the ITL). Please see the Accreditation Process Chapter within the Comprehensive Accreditation Manual for more information.

Hospital Accreditation Program

Likelihood to Harm a Patient/Visitor/Staff

ITL			
High		IC.02.02.01 EP 2	
Moderate	EC.02.02.01 EP 5 EC.02.06.05 EP 2 MM.03.01.01 EP 8 PC.01.02.03 EP 4 RC.01.01.01 EP 8 RI.01.01.01 EP 8 UP.01.03.01 EP 4	EC.02.03.03 EP 1 EC.02.03.05 EP 3 EC.02.03.05 EP 16 EC.02.05.01 EP 8 EC.02.05.01 EP 15 EC.02.05.01 EP 16 EC.02.05.09 EP 5 IC.02.02.01 EP 4 LD.01.03.01 EP 12 LD.04.01.05 EP 4 LS.02.01.10 EP 7 LS.02.01.10 EP 10 LS.02.01.20 EP 11 LS.02.01.30 EP 18 LS.02.01.35 EP 4 LS.02.01.35 EP 5 MM.01.01.01 EP 2 MM.01.01.03 EP 3 MM.03.01.01 EP 3 MM.04.01.01 EP 13 MS.01.01.01 EP 5 MS.03.01.01 EP 7 PC.01.03.01 EP 1 PC.02.01.03 EP 7 PC.03.05.03 EP 2	EC.02.03.05 EP 15 EC.02.06.01 EP 1 MM.03.01.01 EP 2
Low	EC.02.02.01 EP 12 EC.02.05.05 EP 6	EC.02.04.03 EP 3 EC.02.05.07 EP 1	MS.01.01.01 EP 1 MS.01.01.01 EP 3

Likelihood to Harm a Patient/Visitor/Staff

	Limited	Pattern	Widespread
Low	EC.02.05.09 EP 6 EC.02.05.09 EP 7 EC.02.06.01 EP 26 IC.02.01.01 EP 1 IM.02.01.03 EP 5 LS.01.01.01 EP 3 LS.01.02.01 EP 13 LS.01.02.01 EP 14 LS.02.01.10 EP 1 LS.02.01.10 EP 5 LS.02.01.20 EP 10 LS.02.01.20 EP 36 LS.02.01.30 EP 11 LS.02.01.34 EP 4 LS.02.01.35 EP 6 LS.02.01.35 EP 10 LS.02.01.35 EP 11 LS.02.01.35 EP 14 MM.03.01.01 EP 6 NPSG.03.06.01 EP 1 NPSG.15.01.01 EP 2 PC.01.02.07 EP 3 PC.02.02.03 EP 11 PC.02.03.01 EP 1 WT.01.01.01 EP 2 WT.04.01.01 EP 2	EC.02.05.07 EP 2 LS.01.01.01 EP 6 LS.02.01.30 EP 3 LS.02.01.30 EP 19 LS.02.01.35 EP 7 MM.03.01.01 EP 5 MM.03.01.01 EP 7 MM.03.01.03 EP 2 MS.03.01.01 EP 8 MS.08.01.03 EP 1 PC.02.01.11 EP 2 RC.02.01.01 EP 2	MS.01.01.01 EP 16 RC.01.01.01 EP 19

Scope

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Critical Access Hospital Accreditation Program

Likelihood to Harm a Patient/Visitor/Staff			
ITL			
High			
Moderate	LD.04.03.09 EP 6 MM.05.01.11 EP 2 NPSG.03.06.01 EP 4 PC.01.02.01 EP 1	EC.02.04.03 EP 17 NPSG.03.06.01 EP 3	

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EC.02.04.03 EP 3
EC.02.05.05 EP 6
EC.02.05.09 EP 5
LS.02.01.10 EP 10
LS.02.01.35 EP 4
MM.03.01.01 EP 3
MM.05.01.01 EP 11
NPSG.03.05.01 EP 6
NPSG.03.05.01 EP 7
PC.04.01.05 EP 7
RC.01.01.01 EP 11

EC.02.02.01 EP 5
EC.02.03.03 EP 3
EC.02.03.05 EP 2
EC.02.05.01 EP 8
MM.03.01.03 EP 2
RI.01.01.03 EP 1

Likelihood to Harm a Patient/Visitor/Staff

Low

Limited | Pattern | Widespread

Scope

Requirements for Improvement – Summary

Observations noted within the Requirements for Improvement (RFI) section require follow up through the Evidence of Standards Compliance (ESC) process. The timeframe assigned for completion is due in 60 days. *(Please note: If your survey event resulted in a Preliminary Denial of Accreditation status, your organization may need to submit a Plan Of Correction in 10 days or an ESC in 45 days.)* The identified timeframes of submission for each observation are found within the Requirements for Improvement Summary portion of the final onsite survey report. If a follow-up survey is required, the unannounced visit will focus on the requirements for improvement although other areas, if observed, could still become findings. The time frame for performing the unannounced follow-up visit is dependent on the scope and severity of the issues identified within the Requirements for Improvement.

CoP: §485.618 **Tag:** C-0200 **Deficiency:** Standard

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	Standard

CoP: §485.623 **Tag:** C-0220 **Deficiency:** Standard

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	Standard
§485.623(b)(2)	C-0223	CAH - EC.02.02.01/EP5	Standard
§485.623(b)(1)	C-0222	CAH - EC.02.04.03/EP3, EC.02.05.05/EP6, EC.02.05.09/EP5	Standard

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CoP: §485.638 **Tag:** C-0300 **Deficiency:** Standard

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	Standard

CoP: §482.13 **Tag:** A-0115 **Deficiency:** Standard

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	Standard
§482.13(c)(2)	A-0144	HAP - NPSG.15.01.01/EP2	Standard

CoP: §482.23 **Tag:** A-0385 **Deficiency:** Condition

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	Standard
§482.23(c)(3)	A-0406	HAP - MM.04.01.01/EP13	Standard
§482.23(b)(4)	A-0396	HAP - PC.01.03.01/EP1	Standard

CoP: §482.24 **Tag:** A-0431 **Deficiency:** Standard

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	Standard
§482.24(b)	A-0438	HAP - RC.01.01.01/EP8	Standard

CoP: §482.25 **Tag:** A-0489 **Deficiency:** Standard

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	Standard
§482.25(b)(2)(i)	A-0502	HAP - MM.03.01.01/EP3	Standard
§482.25(b)(3)	A-0505	HAP - MM.03.01.01/EP8	Standard
§482.25(b)	A-0500	HAP - MM.03.01.01/EP5	Standard

CoP: §482.41 **Tag:** A-0700 **Deficiency:** Condition

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	Standard
§482.41(b)(1)(ii)	A-0710	HAP - LS.02.01.30/EP3, EP11	Standard
§482.41(c)		HAP - EC.02.05.09/EP7	Standard
§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	Standard
§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	Standard
§482.41(d)(4)	A-0726	HAP - EC.02.05.01/EP16	Standard

CoP: §482.42 **Tag:** A-0747 **Deficiency:** Condition

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:** Condition

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:** Standard

Corresponds to: CAH

Text: §485.635 Condition of Participation: Provision of Services

CoP Standard	Tag	Corresponds to	Deficiency
§485.635(c)(4)(ii)	C-0292	CAH - LD.04.03.09/EP6	Standard
§485.635(a)(3)(iv)	C-0276	CAH - MM.03.01.01/EP3, MM.05.01.11/EP2	Standard

CoP: §482.12 **Tag:** A-0043 **Deficiency:** Condition

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:** Standard

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	Standard
§482.22(c)(5)(i)	A-0358	HAP - PC.01.02.03/EP4, MS.01.01.01/EP16	Standard

Requirements for Improvement – Detail

Chapter: Environment of Care

Program: Hospital Accreditation

Standard: EC.02.02.01

Standard Text: The hospital manages risks related to hazardous materials and waste.

Element(s) of Performance:

5. The hospital minimizes risks associated with selecting, handling, storing, transporting, using, and disposing of hazardous chemicals.

Likelihood to Cause Harm: Moderate
Scope : Limited

12. The hospital labels hazardous materials and waste. Labels identify the contents and hazard warnings. * (See also IC.02.01.01, EP 6)
Footnote *: The Occupational Safety and Health Administration's (OSHA) Bloodborne Pathogens and Hazard Communications Standards and the National Fire Protection Association (NFPA) provide details on labeling requirements.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 5
§482.41(a) - (A-0701) - §482.41(a) Standard: Buildings

The condition of the physical plant and the overall hospital environment must be developed and maintained in such a manner that the safety and well-being of patients are assured.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (102 Central Avenue, Chattanooga, TN) site for the Hospital deemed service.

During tracer activities in the soiled utility room, the Medical Assistant stated that "gloves and occasionally a gown" were worn when spraying soiled instruments with EmPower Foam during the pre-cleaning process. The manufacturer's instructions for use stated "Protective eye gear, gloves and clothing MUST BE WORN".

Observed in Tracer Activities at (1651 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities at the Erlanger East Imaging Center, the eyewash station was plumbed for both hot and cold water, but did not have a mixing valve to create tepid water without multiple adjustments of both handles.

Observed in Tracer Activities at (1504 N. Thorton Avenue, Suite 104, Dalton, GA 30761, Dalton, GA) site for the Hospital deemed service.
The eyewash station at Dalton Pediatrics was observed to be plumbed with only cold water and unable to reach a tepid water temperature.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
During the building tour it was observed in the boiler room the eyewash station did not have a mixing valve and no documentation or risk assessment was available providing evidence that the temperature to the eyewash station is within the required limits of 60 -100 degrees.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
During the building tour of the chiller plant it was observed that the water treatment for the facility cooling loops were in the room and no eyewash was present. The drums of chemical were labeled with corrosive labeling identifying the dangers of the substance within the container.

EP 12

Observed in Tracer Activities at (1100 East Third Street, Chattanooga, TN) site.
Observed In the Soiled Utility Room, the plastic containers being utilized for transporting, pre-cleaning and cleaning used instruments were not labeled with biohazard labels.

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site.
During tracer activities at the Chattanooga Bone & Joint Center, the metal container utilized for pre-cleaning of used instruments was not labeled with a biohazard label.

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site.
The surveyor observed that the container storing used surgical instruments did not have a Biohazard sticker on the container.

Chapter: Environment of Care

Program: Hospital Accreditation

Standard: EC.02.03.03

Standard Text: The hospital conducts fire drills.

Element(s) of Performance:

1. The hospital conducts fire drills once per shift per quarter in each building defined as a health care occupancy by the Life Safety Code. The hospital conducts quarterly fire drills in each building defined as an ambulatory health care occupancy by the Life Safety Code. (See also LS.01.02.01, EP 11; LS.02.01.70, EP 6; LS.03.01.70, EP 6)
Note 1: Evacuation of patients during drills is not required.
Note 2: When drills are conducted between 9:00 P.M. and 6:00 A.M., the hospital may use alternative methods to notify staff instead of activating audible alarms.
Note 3: In leased or rented facilities, drills need be conducted only in areas of the building that the hospital occupies.

Likelihood to Cause Harm: Moderate
Scope : Pattern

Observation(s):

EP 1
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Document Review at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The documentation provided by the organization showed that they failed to perform the required fire drills at the required intervals during calendar year 2016 on the main hospital campus, at their ambulatory and community medicine sites.

Chapter: Environment of Care

Program: Hospital Accreditation

Standard: EC.02.03.05

Standard Text: The hospital maintains fire safety equipment and fire safety building features.
Note: This standard does not require hospitals to have the types of fire safety equipment and building features described below. However, if these types of equipment or features exist within the building, then the following maintenance, testing, and inspection requirements apply.

Element(s) of Performance:

3. Every 12 months, the hospital tests duct detectors, heat detectors, manual fire alarm boxes, and smoke detectors on the inventory. The results and completion dates are documented.
Note: For additional guidance on performing tests, see NFPA 72-2010: Table 14.4.5; 17.14.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

15. At least monthly, the hospital inspects portable fire extinguishers. The results and completion dates are documented.
Note 1: There are many ways to document the inspections, such as using bar-coding equipment, using check marks on a tag, or using an inventory.
Note 2: Inspections involve a visual check to determine correct type of and clear and unobstructed access to a fire extinguisher, in addition to a check for broken parts and full charge.
Note 3: For additional guidance on inspection of fire extinguishers, see NFPA 10-2010: 7.2.2; 7.2.4.

Likelihood to Cause Harm: **Moderate**
Scope : **WideSpread**

16. Every 12 months, the hospital performs maintenance on portable fire extinguishers, including recharging. Individuals performing annual maintenance on extinguishers are certified. The results and completion dates are documented.
Note 1: There are many ways to document the maintenance, such as using bar-coding equipment, using check marks on a tag, or using an inventory.
Note 2: For additional guidance on maintaining fire extinguishers, see NFPA 10-2010: 7.1.2; 7.2.2; 7.2.4; 7.3.1.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 3
§482.41(d)(2) - (A-0724) - (2) Facilities, supplies, and equipment must be maintained to ensure an acceptable level of safety and quality.
This Standard is NOT MET as evidenced by:

Observed in Document Review at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The documentation provided during survey showed that one duct detector in the East Building was not tested in 12/2016.

Observed in Document Review at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The documentation provided during survey showed that one smoke detector in the East Building was not tested in 12/2016.

EP 15
§482.41(d)(2) - (A-0724) - (2) Facilities, supplies, and equipment must be maintained to ensure an acceptable level of safety and quality.
This Standard is NOT MET as evidenced by:

Observed in Document Review at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The documentation provided during survey showed that the documentation of the quantity of fire extinguishers tested on the AW 6th floor in November, 2016 was 34; in December, 2016 was 33; in January, 2017 was 33 and in February, 2017 was 34. This is due to the technician not documenting the inspections on the master inventory sheet.

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 2 fire extinguishers observed at the Chattanooga Bone & Joint Center, there was no evidence of monthly checks documented since July 2016. The MRI fire extinguisher and the fire extinguisher outside of the Physical Therapy department both had new inspection tags placed on the fire extinguishers on July 26, 2016. There were no monthly checks documented on either tag after this date.

Observed in Tracer Activities at (1025 Executie Drive Suite 100, Hixson, TN) site for the Hospital deemed service.
In 1 of 2 fire extinguishers observed at Erlanger Hixon Primary Care, there was no evidence of monthly checks documented in January - March 2016.

Observed in Tracer Activities at (7380 Volkswagon Drive, Suite 110, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 2 fire extinguishers observed at Erlanger at Volkswagon Drive Wellness Center, there was no evidence of monthly checks documented in June - October 2016.

Observed in Tracer Activities at (1504 N. Thorton Avenue, Suite 104, Dalton, GA 30761, Dalton, GA) site for the Hospital deemed service.
The fire extinguisher observed at Dalton Pediatrics had no evidence of monthly checks documented from December 2016 - March 2017.

EP 16
§482.41(d)(2) - (A-0724) - (2) Facilities, supplies, and equipment must be maintained to ensure an acceptable level of safety and quality.
This Standard is NOT MET as evidenced by:

Observed in Document Review at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The documentation provided during survey showed that the quantity of fire extinguishers tested on the AW 6th floor in November, 2016 was 34; in December, 2016 was 33; in January, 2017 was 33, and in February, 2017 was 34. The annual quantity shown in September, 2016 is 33 showing a disparity of 1 extinguisher not being annually tested in the area.

Observed in Tracer Activities at (1720 Gunbarrel Rd Suite 110, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities in the E. Brainard Internal Medicine Practice, the fire extinguisher inspection/maintenance tag was noted to have been last placed in January 2016. There was no evidence that the 2017 annual maintenance or inspection had been completed as of March 28, 2017.

Observed in Tracer Activities at (101 McFarland Road, Lookout Mountain, GA) site for the Hospital deemed service.
During tracer activities at Lookout Mountain Family Practice, 1 of 2 fire extinguishers were observed to be missing an annual inspection/maintenance tag.

Observed in Tracer Activities at (1025 Executie Drive Suite 100, Hixson, TN) site for the Hospital deemed service.
During tracer activities at Erlanger Hixon Primary Care, the fire extinguisher inspection/maintenance tag was noted to have been last placed in December 2015. There was no evidence that the 2016 annual maintenance or inspection had been completed as of March 28, 2017.

Observed in Tracer Activities at (60 Erlanger South Dr. Suite A, Ringgold, GA) site for the Hospital deemed service.
During tracer activities at Erlanger South Family Practice, the fire extinguisher inspection/maintenance tag was noted to have been last placed in September 2015. There was no evidence that the 2016 annual maintenance or inspection had been completed.

Chapter: Environment of Care

Program: Hospital Accreditation

Standard: EC.02.04.03

Standard Text: The hospital inspects, tests, and maintains medical equipment.

Element(s) of Performance:

3. The hospital inspects, tests, and maintains non-high-risk equipment identified on the medical equipment inventory. These activities are documented.
Note: Scheduled maintenance activities for non-high-risk medical equipment in an alternative equipment maintenance (AEM) program inventory are to be completed at 100%. AEM frequency is determined by the hospital's AEM program.

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 3
§482.41(d)(2) - (A-0724) - (2) Facilities, supplies, and equipment must be maintained to ensure an acceptable level of safety and quality.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities in the Chattanooga Bone & Joint PT department, there was no evidence that the two hydrocollators had water changes and cleaning performed per manufacturer's recommendations which required every two week cleaning. There was no documentation of cleaning or water changes and staff verbally reported that they were cleaning the units "monthly".

Chapter: Environment of Care

Program: Hospital Accreditation

Standard: EC.02.05.01

Standard Text: The hospital manages risks associated with its utility systems.

Element(s) of Performance:

8. The hospital labels utility system controls to facilitate partial or complete emergency shutdowns.
Note 1: Examples of utility system controls that should be labeled are utility source valves, utility system main switches and valves, and individual circuits in an electrical distribution panel.
Note 2: For example, the fire alarm system's circuit is clearly labeled as Fire Alarm Circuit; the disconnect method (that is, the circuit breaker) is marked in red; and access is restricted to authorized personnel. Information regarding the dedicated branch circuit for the fire alarm panel is located in the control unit. For additional guidance, see NFPA 101-2012: 18/19.3.4.1; 9.6.1.3; NFPA 72-2010: 10.5.5.2.

Likelihood to Cause Harm: Moderate
Scope : Pattern

15. In critical care areas designed to control airborne contaminants (such as biological agents, gases, fumes, dust), the ventilation system provides appropriate pressure relationships, air-exchange rates, filtration efficiencies, temperature and humidity.
Note: Areas designed for control of airborne contaminants include spaces such as operating rooms (all classes), special procedure rooms that require a sterile field, Caesarean delivery rooms, rooms for patients diagnosed with or suspected of having airborne communicable diseases (for example, airborne infection isolation rooms, pulmonary or laryngeal tuberculosis, bronchoscopy), patients in 'protective environment' rooms (for example, those receiving bone marrow transplants), laboratories, pharmacies, sterile supply/processing rooms, and other sterile spaces. The basis for design compliance is the Guidelines for Design and Construction of Health Care Facilities, based on the edition used at the time of design (if available).

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

16. In non–critical care areas, the ventilation system provides required pressure relationships, temperature, and humidity.
Note: Examples of non–critical care areas are general care nursing units; clean and soiled utility rooms in acute care areas; laboratories, pharmacies, diagnostic and treatment areas, food preparation areas, and other support departments.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 8
§482.41(a) - (A-0701) - §482.41(a) Standard: Buildings

The condition of the physical plant and the overall hospital environment must be developed and maintained in such a manner that the safety and well-being of patients are assured.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There are 2 breakers identified as # 14 and #16 in the Line Isolation Monitor (LIM) #OR1L at Operating Room # 1 at the Ancillary West building that are engaged and not labeled; 12 breakers identified as # 5 through #8, inclusive, in the Line Isolation Monitor (LIM) #OR1R at Operating Room # 1 at the Ancillary West building that are engaged and not labeled and 4 breakers identified as # 14 and #16 in the Line Isolation Monitor (LIM) #OR2L at Operating Room # 2 at the Ancillary West building that are engaged and not labeled.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There was an electrical panel box #MEC B2F with breakers # 5 and #6 that were engaged and not labeled and an electrical panel box on the wall in the Energy building labeled "480 volt Emergency Power" with 4 circuit breakers that were engaged and not labeled.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. The circuit breaker for the main fire alarm panel at the main hospital is NOT marked in red in the electric panel box at the Main hospital.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
The circuit breaker located in panel RA for the main fire alarm panel at the North hospital location is NOT marked in red in the electric panel box.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. In 1 of 6 electrical panel checks, it was identified that the electrical panel breakers were not properly labeled to facilitate partial or complete emergency shutdowns. This was identified in the following locations:
Outside OR 1 panel SL1 breaker 24 was blank on the schedule and yet the breaker was in the "closed" position.

EP 15
§482.42 - (A-0747) - §482.42 Condition of Participation: Condition of Participation: Infection Control
This Condition is NOT MET as evidenced by:

Observed in Document Review at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
In 3 of 3 years of requested documents, the hospital was unable to verify temperature and humidity for the sterile supply storage area at Central Sterile Supply in calendar year 2016, calendar year 2015 and calendar year to date 2017.

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service.
In 6 of 80 critical pressure relationships, the Sterile Storage supply room at the Main campus operating room is negative air pressure to the adjoining hall; the sterile supply storage room at Orthopedic OR #1 at Ancillary West 6th floor is negative air pressure to the adjoining corridor; the Operating Room #1 at C-section area was negative air pressure to the adjoining hall on the 5th floor Ancillary West area; the Operating room #2 at Plaza Center was negative air pressure to the adjoining hall; the clean side of sterile processing area in the Plaza OR area is negative air pressure to the decontamination side of the department and the central sterile supply decontaminated section is positive air pressure to the clean side of the area on the ground floor Ancillary Building East.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 14 critical pressure relationships, it was identified that the pressure relation was not appropriate for the space. This was identified in the following locations: Cath Lab 1 was negative to the corridor during a procedure, this space is required to be positive. Sub-sterile to OR corridor was negative, this space was storing sterile supplies which then the usage of the room requires positive pressure to the OR corridor.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 16
§482.41(d)(4) - (A-0726) - (4) There must be proper ventilation, light, and temperature controls in pharmaceutical, food preparation, and other appropriate areas.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
In 4 of 40 soiled utility and environmental services closets tested, the soiled utility rooms at the L&D area on the 5th floor Children's Hospital, the 7th floor at room 7122; POD 6 on the 5th floor and the Environmental Services closet on the 6th floor nursing unit were positive air pressure to the adjoining corridors.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Chapter:	Environment of Care
Program:	Hospital Accreditation
Standard:	EC.02.05.05
Standard Text:	The hospital inspects, tests, and maintains utility systems. Note: At times, maintenance is performed by an external service. In these cases, hospitals are not required to possess maintenance documentation but must have access to such documentation during survey and as needed.

Element(s) of Performance:

6. The hospital inspects, tests, and maintains the following: Non-high-risk utility system components on the inventory. The completion date and the results of the activities are documented. Note: Scheduled maintenance activities for non-high-risk utility systems components in an alternative equipment maintenance (AEM) program inventory may be deferred as defined by organization policy, provided the completion rate is not less than 90%.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 6
§482.41(d)(2) - (A-0724) - (2) Facilities, supplies, and equipment must be maintained to ensure an acceptable level of safety and quality.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There was an electrical panel box Line Isolation Monitor at the C-Section room on the 5th floor Ancillary West that was blocked by a cart.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There was one junction box without a cover on it on the wall in the Plaza Center Procedure Room #2 and one junction box without a cover on it on the wall in the pump room on the first floor of the main hospital.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There was a junction box above the ceiling on the 6th floor North, one on the 4th floor ICU Ancillary East / Massoud area above the ceiling and one above the ceiling at the 4th floor Children's entry that did not have a cover on them.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
In 1 of 8 electrical panel checks, it was observed that the electrical panel was blocked. This was identified in the following locations: In the kitchen the electrical panel was blocked by a wheeled shelf unit with pots and pans on it.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
In 1 of 12 above ceiling checks, it was observed that electrical junction boxes were present without the covers. This was identified in the following location: EVS storage room the high voltage wires were exposed

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. In 1 of 10 above ceiling checks, it was observed that electrical junction boxes were present without the covers. This was identified in the following location: Shell space where construction had their offices over the door that entered into the waiting area.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. In 2 of 12 electrical panel checks, it was observed that the electrical panel was blocked. This was identified in the following locations: In OR 6 the electrical panel was blocked with carts/tables, In L&D by room 8813 the electrical panel was blocked by a cart with supplies.

Standard: EC.02.05.07

Standard Text: The hospital inspects, tests, and maintains emergency power systems.
Note: This standard does not require hospitals to have the types of emergency power equipment discussed below. However, if these types of equipment exist within the building, then the following maintenance, testing, and inspection requirements apply.

Element(s) of Performance:

1. At least monthly, the hospital performs a functional test of battery-powered lights required for egress for a minimum duration of 30 seconds and a visual inspection of EXIT signs. The test results and completion dates are documented.
Note: For additional guidance, see NFPA 101-2012: 7.9.3; 7.10.9.

Likelihood to Cause Harm: Low
Scope : Pattern

2. Every 12 months, the hospital either performs a functional test of battery-powered lights on the inventory required for egress for a duration of 1 1/2 hours, or the hospital replaces all batteries every 12 months and, during replacement, performs a random test of 10% of all batteries for 1 1/2 hours. The test results and completion dates are documented.

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 1

Observed in Tracer Activities at (1504 N. Thorton Avenue, Suite 104, Dalton, GA 30761, Dalton, GA) site. During tracer activities at Dalton Pediatrics, there was no evidence of the monthly functional tests of emergency lights having been completed in 2015 or 2016.

EP 2

Observed in Tracer Activities at (1504 N. Thorton Avenue, Suite 104, Dalton, GA 30761, Dalton, GA) site. During tracer activities at Dalton Pediatrics, there was no evidence of the annual functional test of battery-powered lights required for egress for a duration of 90 minutes; or replacement of all batteries every 12 months and, during replacement, performs a random test of 10% of all batteries for 90 minutes having been completed in 2015 or 2016.

Chapter: Environment of Care
Program: Hospital Accreditation
Standard: EC.02.05.09

Standard Text:

The hospital inspects, tests, and maintains medical gas and vacuum systems. Note: This standard does not require hospitals to have the medical gas and vacuum systems discussed below. However, if a hospital has these types of systems, then the following inspection, testing, and maintenance requirements apply.

Element(s) of Performance:

5. The hospital makes main supply valves and area shutoff valves for piped medical gas and vacuum systems accessible and clearly identifies what the valves control.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

6. The hospital implements a policy on all cylinders within the hospital that includes the following:
- Proper handling and transporting (for example, in carts, attached to equipment, on racks) to ensure safety
- Physically segregating full and empty cylinders from each other in order to assist staff in selecting the proper cylinder
- Labeling empty cylinders
- Prohibiting transfilling in any compartment with patient care rooms

Note: For additional guidance, see NFPA 99-2012: 11.5.2.3; 11.6.2; 11.6.2.3; 11.6.5; 11.6.5.2; 11.6.5.3; 11.7.3.2.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

7. The hospital meets all other HealthCare Facilities Code requirements, gas and vacuum systems, and gas equipment, as related to NFPA 99-2012: Chapters 5 & 11.
Note: For hospitals that use Joint Commission accreditation for deemed status purposes: the hosital meets the applicable provisions of the Life Safety Code Tentative Interim Amendments (TIAs) 12-4 and 12-6.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 5
§482.41(d)(2) - (A-0724) - (2) Facilities, supplies, and equipment must be maintained to ensure an acceptable level of safety and quality.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There was an oxygen shut off valve blocked at the PACU in the East Building OR on the second floor. This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There was an oxygen shut off valve blocked at the C-Section OR on the 5th floor Ancillary West Building. This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There was an oxygen shut off valve blocked at the Cardiac Cath Lab on the Ancillary West 4 floor. This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

**Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
In 3 of 3 Source Valve Label Checks, In 3 of 3 Source Valve Label Checks, it was observed that the sources valves were not labeled. This was identified at the following locations: Bulk oxygen tank, medical air compressor, medical vacuum compressor.**

Observed in Building Tour at (1651 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. In 4 of 7 Source Valve Label Checks, it was observed that the source valves were not properly labeled. This was identified in the following locations: Medical Air and Medical Vacuum for the ED, CO2 and Nitrogen for the Women's Surgery.

EP 6

**Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site.
During the building tour of the kitchen it was observed that a CO2 tank was unsecured in the dry storage area.**

EP 7
§482.41(c) - (c) Standard: Building safety.

Except as otherwise provided in this section, the hospital must meet the applicable provisions and must proceed in accordance with the Health Care Facilities Code (NFPA 99 and Tentative Interim Amendments TIA12–2, TIA 12–3, TIA 12–4, TIA 12–5 and TIA 12–6).
This Standard is NOT MET as evidenced by:

**Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There were 24 medical gas cylinders stored outside of the hospital in the bulk oxygen tank area that were not protected from the extremes of weather and from underneath to prevent rusting. All tanks were removed and placed inside the building or removed by the vendor while surveyor was on site.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.**

Chapter: Environment of Care

Program: Hospital Accreditation

Standard: EC.02.06.01

Standard Text: The hospital establishes and maintains a safe, functional environment.
Note: The environment is constructed, arranged, and maintained to foster patient safety, provide facilities for diagnosis and treatment, and provide for special services appropriate to the needs of the community.

Element(s) of Performance:

1. Interior spaces meet the needs of the patient population and are safe and suitable to the care, treatment, and services provided.

Likelihood to Cause Harm: Moderate
Scope : WideSpread

26. The hospital keeps furnishings and equipment safe and in good repair.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 1
§482.41(a) - (A-0701) - §482.41(a) Standard: Buildings

The condition of the physical plant and the overall hospital environment must be developed and maintained in such a manner that the safety and well-being of patients are assured.
This Standard is NOT MET as evidenced by:
§482.41 - (A-0700) - §482.41 Condition of Participation: Condition of Participation: Physical Environment
This Condition is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service.
There was a "black substance" stain on the ceiling tile at the Miller Eye center at the Consult Room. The tile was replaced immediately.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Tracer Activities at (1100 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities in the UT Family Practice patient waiting area, there was black dirt/debris observed on the air exchange vents and the surrounding ceiling tiles.

Observed in Tracer Activities at (1100 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 2 patient bathrooms at UT Family Practice, the vinyl flooring was observed to be cracked and had loose pieces present in the area behind the toilets. The exposed floor was observed to have dirt/debris present that was unable to be cleaned in the same manner as the vinyl flooring.

Observed in Tracer Activities at (60 Erlanger South Dr. Suite A, Ringgold, GA) site for the Hospital deemed service.
During tracer activities at Erlanger South Family Practice, the overhead lights in exam rooms #11, #12 and the hallway outside of the EVS room were observed to have dead bugs and debris in them.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 2 Geriatric Psych Unit Room Checks, it was observed that the rooms contained numerous ligature points. The following was identified in each room and confirmed by the staff to be the same through out all the rooms: The bathroom doors in the patient rooms did not have proper ligature free handles, The patient bathroom doors did not have proper angle cuts at the top to eliminate ligature points, The plumbing in the patient bathroom was all exposed to the water closet and the plumbing under the sink. The toiletry holders in the room were not the ligature free type, these were all surface mounted standard toiletry holders.
Mitigation: The organization had conducted a risk assessment and provided mitigating strategies to address the deficiencies. The unit has a geriatric population and many of their patient's are at a fall risk and have bed alarms in place. In addition to the every 15 minute observations, the organization has a policy that determines when escalation to a one on one sitter would occur as determined by the level of suicidal risk.

EP 26
§482.41(a) - (A-0701) - §482.41(a) Standard: Buildings

The condition of the physical plant and the overall hospital environment must be developed and maintained in such a manner that the safety and well-being of patients are assured.
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The surveyor observed that in the supply room on 6 North a cabinet used for clean supply storage needed repairs. The top of the cabinet was stained and there were several drawers that could not close.

Chapter: Environment of Care

Program: Hospital Accreditation

Standard: EC.02.06.05

Standard Text: The hospital manages its environment during demolition, renovation, or new construction to reduce risk to those in the organization.

Element(s) of Performance:

2. When planning for demolition, construction, renovation, or general maintenance, the hospital conducts a preconstruction risk assessment for air quality requirements, infection control, utility requirements, noise, vibration, and other hazards that affect care, treatment, and services.
Note: See LS.01.02.01 for information on fire safety procedures to implement during construction or renovation.

Likelihood to Cause Harm: Moderate
Scope : Limited

Observation(s):

EP 2
§482.42 - (A-0747) - §482.42 Condition of Participation: Condition of Participation: Infection Control
This Condition is NOT MET as evidenced by:

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There is a one room renovation in progress on the 9th floor Trauma Step down unit that has no pre-construction Infection Control Risk Assessment (ICRA) plan in place for the project.

Chapter: Infection Prevention and Control

Program: Hospital Accreditation

Standard: IC.02.01.01

Standard Text: The hospital implements its infection prevention and control plan.

Element(s) of Performance:

1. The hospital implements its infection prevention and control activities, including surveillance, to minimize, reduce, or eliminate the risk of infection.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 1
§482.42 - (A-0747) - §482.42 Condition of Participation: Condition of Participation: Infection Control
This Condition is NOT MET as evidenced by:

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The surveyor observed box of supplies stored directly on floor in supply room.

Observed in Individual Tracer at (1751 Gunbarrel Road, Chattanooga, TN) site.
Upon touring the Recovery Room area, a "Consignment" storage room for Smith & Nephew orthopedic products was found without a solid liner on the bottom shelf.

Chapter: Infection Prevention and Control

Program: Hospital Accreditation

Standard: IC.02.02.01

Standard Text: The hospital reduces the risk of infections associated with medical equipment, devices, and supplies.

Element(s) of Performance:

2. The hospital implements infection prevention and control activities when doing the following: Performing intermediate and high-level disinfection and sterilization of medical equipment, devices, and supplies. * (See also EC.02.04.03, EP 4)
Note: Sterilization is used for items such as implants and surgical instruments. High-level disinfection may also be used if sterilization is not possible, as is the case with flexible endoscopes.
Footnote *: For further information regarding performing intermediate and high-level disinfection of medical equipment, devices, and supplies, refer to the website of the Centers for Disease Control and Prevention (CDC) at http://www.cdc.gov/hicpac/Disinfection_Sterilization/acknowledg.html (Sterilization and Disinfection in Healthcare Settings).

Likelihood to Cause Harm: **High**
Scope : **Pattern**

4. The hospital implements infection prevention and control activities when doing the following: Storing medical equipment, devices, and supplies.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 2
§482.51 - (A-0940) - §482.51 Condition of Participation: Condition of Participation: Surgical Services
This Condition is NOT MET as evidenced by:

Observed in Tracer Activities at (102 Central Avenue, Chattanooga, TN) site for the Hospital deemed service.

During interview of the medical assistants who perform the pre-cleaning of soiled surgical instruments, it was stated that the EmPower Foam was "sometimes sprayed directly on the instruments, but usually it was sprayed into water and the instruments were soaked until the end of the day". According to the manufacturer's instructions for use, "Spray EmPower Foam onto instruments/equipment immediately after use. No diluting necessary".

Observed in Tracer Activities at (102 Central Avenue, Chattanooga, TN) site for the Hospital deemed service.

During interview of the medial assistants who perform the decontamination of soiled surgical instruments, it was stated that the instruments "were rinsed with water, scrubbed with an SOS pad, rinsed again then packaged in the appropriate size sterile packs to be sent to the hospital sterile processing department". There was no evidence of an enzymatic cleaning agent used during the decontamination process. The hospital utilized AAMI standards for the decontamination and cleaning of soiled instruments, however the current practice was not in accordance with those standards.

Observed in Tracer Activities at (1100 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities in the UT Family Practice soiled utility room, the Metrizyme Enzymatic detergent being used for pre-cleaning of instruments was not being diluted according to manufacturer's guidelines. Manufacturer's instructions for use required "1 oz. per 1 gallon of warm water (68-104 F)". Staff verified that the current practice did not include measuring the amount of water or monitoring the water temperature. The Medical Assistant stated that she used "enough water to cover the instruments or approximately two quarts".

Observed in Tracer Activities at (1100 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities in the UT Family Practice clean room where instruments were being packed and sterilized, there was no evidence that the M9 UltraClave Steam Sterilizer required daily, weekly, monthly or quarterly cleaning and/or maintenance were performed per the manufacturer's instructions for use (MIFU). The Medical Assistant and Practice Manager verified that there was no documentation of the maintenance or cleaning being completed. The Medical Assistant stated that she did do the daily cleaning per the MIFU but did not document it and that the weekly cleaning of the chamber and trays were completed but the water was not drained from the reservoir as required in the MIFU.

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities at Chattanooga Bone & Joint Center, the staff reported that the current process for transporting soiled instruments to the designated pre-cleaning area was to carry the instrument in a gloved hand and wrapped in a paper towel.

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed

service.
During tracer activities at Chattanooga Bone & Joint Center, the staff reported that during the pre-cleaning process for soiled instruments, after the instruments were sprayed with the Stryker Pretreatment Foam they rinsed the instruments and dried them prior to placing in the bin for transport to sterile processing. This did not follow the manufacturer's instructions for use which stated that the foam was to be sprayed directly on the instruments and re-sprayed as needed to keep them moist.

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities at Chattanooga Bone & Joint Center, it was observed that the pre-cleaning and storage of soiled instruments until transport to the hospital sterile processing department was being performed in the clean supply room.

Observed in Tracer Activities at (7490 Ziegler Road, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities at Erlanger Center for Women, it was observed that the two transvaginal ultrasound probes were not able to be traced to the patients that they were used on. Leadership and front line staff who processed the probes validated this observation.

Observed in Individual Tracer at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
Upon touring the Operating Room (O.R.) department, a O.R. staff member transported used surgical instruments in basins/caskets, with red biohazard bags laying atop, on a rolling cart. This practice is in opposition to national infection control guidelines. A discussion with the O.R. manager revealed this as standard practice.

Observed in Individual Tracer at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
Upon touring the Central Sterilization Department (CSD), it was discovered that the CSD staff were not in compliance with the Steris manufacturer's Control Test strip guidelines. The Steris Control Test strips product insert states that strips are to be inserted in disinfecting washer prior to instrument cleaning. The CSD staff Lead stated that her daily control test strip is inserted into the first disinfecting wash of instruments each day. Of note, a practice change occurred during survey, on 30-MAR-2017.

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activity and review of the process used to prepare used surgical instruments for transport to the sterile processing department (SPD), staff articulated that they place the instruments into a biohazard bag and place them on a shelf in the dirty utility room until taken to the SPD. There was no indication that the instruments are treated with an enzymatic spray or gel or that the instruments are kept moist pending full cleaning and decontamination in SPD. The organization indicated that they follow AAMI standards.

EP 4
§482.42 - (A-0747) - §482.42 Condition of Participation: Condition of Participation: Infection Control
This Condition is NOT MET as evidenced by:
§482.51 - (A-0940) - §482.51 Condition of Participation: Condition of Participation: Surgical Services
This Condition is NOT MET as evidenced by:

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 10 laryngoscope blades, in the anesthesia cart in the Interventional Radiology suite, these blades were not covered to prevent recontamination.

Observed in Tracer Activities at (1100 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities in UT Family Practice Procedure Room #4, there were two speculums and two packs of sterile gauze that had brown discoloration on the peel packs. Additionally, there was one speculum that was observed to be in a peel pack that was open at the sealed end and had a hole in the pack where it had appeared to have been punctured through.

Observed in Tracer Activities at (102 Central Avenue, Chattanooga, TN) site for the Hospital deemed service.

During tracer activities in exam room #7, there were two of eleven occult blood testing cards that were noted to have expired in 3/2016.

Observed in Tracer Activities at (1755 Gunbarrel Road, Suite 209, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities at Urology East, there was one pair of sterile gloves in the procedure room that were observed to be out of the original outer packaging and stored in a drawer.

Observed in Tracer Activities at (325 Market Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities in the Life Style Center Cardiac Rehab, there was a plastic bin full of Kendall Medtronic foam ECG electrodes and one package of Covidien Kendall electrodes that had no open date or revised expiration date documented per the manufacturer's instructions for use.

Observed in Tracer Activities at (101 McFarland Road, Lookout Mountain, GA) site for the Hospital deemed service.
During tracer activities at Lookout Mountain Primary Care, there was one package of Kendall ECG electrodes that had no open date or revised expiration date documented per the manufacturer's instructions for use.

Observed in Tracer Activities at (1025 Executie Drive Suite 100, Hixson, TN) site for the Hospital deemed service.
During tracer activities at Erlanger Hixon Primary Care, there was one package of McKesson ECG electrodes that had no open date or revised expiration date documented per the manufacturer's instructions for use.

Observed in Tracer Activities at (7380 Volkswagon Drive, Suite 110, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities at Erlanger at Volkswagon Drive Wellness Center, there was one package of Kendall ECG electrodes that had no open date or revised expiration date documented per the manufacturer's instructions for use.

Observed in Tracer Activities at (7380 Volkswagon Drive, Suite 110, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities at Erlanger at Volkswagon Drive Wellness Center, there was one package of 3M Defibrillator pads that had expired in January 2016 and two packages that had expired in June 2016 found in procedure room #8.

Observed in Tracer Activities at (2600 Taft Highway, Signal Mountain, TN) site for the Hospital deemed service.
During tracer activities at the UT Erlanger Health & Wellness at Signal Mountain, there were two boxes of Protexis sterile gloves that had expired in January of 2017.

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activity on the 7th floor it was observed that a Respiratory supply cart had an oxygen mask and hoses that had been removed from their protective wrappers and were stored in the drawer.

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The surveyor observed two McGrath #3 laryngoscopes that expired 1/6/2017 were found in the crash cart on the Geri Psych unit.

Chapter: Information Management

Program: Hospital Accreditation

Standard: IM.02.01.03

Standard Text: The hospital maintains the security and integrity of health information.

Element(s) of Performance:

5. The hospital protects against unauthorized access, use, and disclosure of health information.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 5

Observed in Tracer Activities at (1720 Gunbarrel Rd Suite 110, Chattanooga, TN) site.
During tracer activities at the E. Brainard Internal Medicine Practice, observed a laptop computer at the nurses' desk that had patient information visible, was unlocked and turned outward towards the common hallway. There was no staff member present at the laptop at the time of survey and was observed with the manager of the unit.

Chapter: Leadership

Program: Hospital Accreditation

Standard: LD.01.03.01

Standard Text: The governing body is ultimately accountable for the safety and quality of care, treatment, and services.

Element(s) of Performance:

12. For hospitals that use Joint Commission accreditation for deemed status purposes: The hospital has a governing body that assumes full legal responsibility for the operation of the hospital.

Likelihood to Cause Harm: Moderate
Scope : Pattern

Observation(s):

EP 12
§482.12 - (A-0043) - §482.12 Condition of Participation: Condition of Participation: Governing Body
This Condition is NOT MET as evidenced by:

Observed in Tracer Activities at Chattanooga Hamilton County Hospital Authority (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
Leadership did not ensure compliance with the following Conditions of Participation: §482.23 (A-0385), §482.41 (A-0700), §482.42 (A-0747), §482.51 (A-0940).

Chapter: Leadership

Program: Hospital Accreditation

Standard: LD.04.01.05

Standard Text: The hospital effectively manages its programs, services, sites, or departments.

Element(s) of Performance:

4. Staff are held accountable for their responsibilities.

Likelihood to Cause Harm: Moderate
Scope : Pattern

Observation(s):

EP 4

Observed in Tracer Activities at (102 Central Avenue, Chattanooga, TN) site.
During review of the pre-cleaning and decontamination processes and interviews with the Infection Prevention Director, it was stated that the UT Erlanger Gynecology Oncology staff had been provided "an hour and a half education on the hospital-wide process of high-level disinfection". There was no evidence of the implementation of the practices observed or the use of the recommended products provided in the educational materials.

Chapter: Life Safety

Program: Hospital Accreditation

Standard: LS.01.01.01

Standard Text: The hospital designs and manages the physical environment to comply with the Life Safety Code.

Element(s) of Performance:

3. The hospital maintains current and accurate drawings denoting features of fire safety and related square footage.
Fire safety features include the following:
- Areas of the building that are fully sprinklered (if the building is partially sprinklered)
- Locations of all hazardous storage areas
- Locations of all fire-rated barriers
- Locations of all smoke-rated barriers
- Sleeping and non-sleeping suite boundaries, including the size of the identified suites
- Locations of designated smoke compartments
- Locations of chutes and shafts
- Any approved equivalencies or waivers

Likelihood to Cause Harm: Low
Scope : Limited

6. The hospital does not remove or minimize an existing life safety feature when such feature is a requirement for new construction. Existing life safety features, if not required by the Life Safety Code, can be either maintained or removed. (For full text, refer to NFPA 101-2012: 4.6.12.2; 4.6.12.3)

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 3

Observed in Document Review at (975 East Third Street, Chattanooga, TN) site.
The life safety drawings did not include identification of the 1 hour wall surrounding the linen chutes located on the 6th and 7th floor of the main campus. The drawings were updated appropriately during survey process.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site.
During the building tour it was identified that the life safety prints provided at the time of survey did not include all the required features. The building was partially sprinklered, the prints did not reflect the areas fully sprinkled as required. The prints also indicated some walls in areas were 1 hour construction and they did not go to deck as required for proper 1 hour construction. The prints also did not identify all hazardous areas as required.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Supplemental #1
March 16, 2018
10:36 A.M.

EP 6

Observed in Building Tour at (1651 Gunbarrel Road, Chattanooga, TN) site.
In 4 of 15 smoke barrier door checks, it was identified that the smoke barrier doors did not properly operate when tested. This was identified in the following locations: Smoke barrier door by OR 8 did not latch when tested, 3rd floor smoke barrier door by room A323 did not properly latch when tested, 2nd floor smoke barrier door by room A224 did not properly latch when tested,1st floor by mechanical room down from the cafeteria the smoke barrier doors did not properly latch when tested.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Chapter: Life Safety

Program: Hospital Accreditation

Standard: LS.01.02.01

Standard Text: The hospital protects occupants during periods when the Life Safety Code is not met or during periods of construction.

Element(s) of Performance:

13. The hospital conducts education to promote awareness of building deficiencies, construction hazards, and temporary measures implemented to maintain fire safety. The need for education is based on criteria in the hospital's interim life safety measure (ILSM) policy.

Likelihood to Cause Harm: Low
Scope : Limited

14. The hospital trains those who work in the hospital to compensate for impaired structural or compartmental fire safety features. The need for training is based on criteria in the hospital's interim life safety measure (ILSM) policy.
Note: Compartmentalization is the concept of using various building components (for example, fire-rated walls and doors, smoke barriers, fire-rated floor slabs) to prevent the spread of fire and the products of combustion so as to provide a safe means of egress to an approved exit. The presence of these features varies, depending on the building occupancy classification.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 13

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site.
There is a one room renovation in progress on the 9th floor Trauma Step down unit that an Interim Life Safety Measure was implemented, however no deficiency notification to the staff was documented to support the policy was followed as indicated by the ILSM in place.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 14

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site.
There is a one room renovation in progress on the 9th floor Trauma Step down unit that an Interim Life Safety Measure was implemented, however no training was documented to support the policy was followed as indicated by the ILSM in place.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Chapter: Life Safety

Program: Hospital Accreditation

Standard: LS.02.01.10

Standard Text: Building and fire protection features are designed and maintained to minimize the effects of fire, smoke, and heat.

Element(s) of Performance:

1. Buildings meet requirements for construction type in accordance with NFPA 101-2012: 18/19.1.6.2.

Likelihood to Cause Harm: Low
Scope : Limited

5. The fire protection ratings for opening protectives in fire barriers, fire-rated smoke barriers, and fire-rated smoke partitions are as follows:
- Three hours in three-hour barriers and partitions
- Ninety minutes in two-hour barriers and partitions
- Forty-five minutes in one-hour barriers and partitions
- Twenty minutes in thirty-minute barriers and partitions
(For full text, refer to NFPA 101-2012: 8.3.4; 8.3.3.2; Table 8.3.4.2)
Note: Labels on fire door assemblies must be maintained in legible condition.

Likelihood to Cause Harm: Low
Scope : Limited

7. Fire-rated doors within walls and floors have functioning hardware, including positive latching devices and self-closing or automatic-closing devices. Gaps between meeting edges of door pairs are no more than 1/8 of an inch wide, and undercuts are no larger than 3/4 of an inch. Fire-rated doors within walls do not have unapproved protective plates greater than 16 inches from the bottom of the door. Blocking or wedging open fire-rated doors is prohibited. (For full text, refer to NFPA 101-2012: 8.3.3.1; NFPA 80-2010: 4.8.4.1; 5.2.13.3; 6.3.1.7; 6.4.5)

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

10. The space around pipes, conduits, bus ducts, cables, wires, air ducts, or pneumatic tubes penetrating the walls or floors are protected with an approved fire-rated material.
Note: Polyurethane expanding foam is not an accepted fire-rated material for this purpose. (For full text, refer to NFPA 101-2012: 8.3.5)

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 1
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. In 1 of 10 above ceiling checks, it was observed that the spray on fire proofing was missing in the 3rd floor stairwell north end.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 5
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
During the building tour it was identified that the building separation from the healthcare side to the business occupancy in the annex building did have the proper rating for the assembly. The door/wall in the separation was a solid glass assembly with no rating or proper sprinkler system for the application to achieve the required rating.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 7
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. The Perfusion supply storage room door at the Orthopedic Operating Rooms does not close and latch properly.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. The fire door at the Basement of Massoud elevator lobby was missing the floor latching piece of the required hardware.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. The bottom door gap on the Environmental Services closet on the 9th floor North Building and on the 6 floor North Building was greater than 3/4" from the floor.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There is a fire door at the 7th floor fire barrier wall and one on the 6th floor barrier wall of the main hospital that did not close and latch properly.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There is a compromised and broken fire door at the 5th floor Central wing that did not close and latch properly.
The surveyor discussed the Life Safety deficiency with the organization, and it was determined that the following ILSMs will be implemented until the deficiency has been resolved and according to the organization's ILSM policy: increase surveillance (EP-8), conduct education promoting awareness of deficiencies (EP-13). A new assembly was ordered while surveyor was on site and this ILSM activity will continue until the door and frame are replaced.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 6 fire barrier door checks, it was identified that the fire barrier doors did not have the proper hardware for a rated door. This was identified in the following locations: The storage doors in the Geriatric psych unit just across from the nurses station, listed as 1 hour rated assemblies did not have self closing devices on the doors.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Supplemental #1
March 16, 2018
10:36 A.M.

EP 10
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There are pipe penetrations to the fire walls above the ceilings at the connector corridor at the "F" elevator, one at the 5th floor North lobby area and a wire penetration to the fire wall above the ceiling at the door to the 6th floor North unit.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There was an unsealed pipe penetration to the fire barrier wall above the ceiling at the door area of the 4th floor at the Central to North connection.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. In 2 of 8 fire barrier wall checks, it was observed that the fire barriers had penetrations. This was identified in the following locations: 3rd floor stairwell north end by room A301 a penetration in the 2 hour fire rated wall within the stairwell over the door a flex conduit was not properly sealed around, 2nd floor stairwell north end a penetration in the 2 hour fire rated wall within the stairwell a 1" conduit was not properly sealed around.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Chapter: Life Safety

Program: Hospital Accreditation

Standard: LS.02.01.20

Standard Text: The hospital maintains the integrity of the means of egress.

Element(s) of Performance:

10. An exit enclosure is not used for any purpose that has the potential to interfere with its use as an exit and, if so designated, as an area of refuge. Open space within the exit enclosure is not used for any purpose that has the potential to interfere with egress. (For full text, refer to NFPA 101-2012: 18/19.2.2.3; 7.1.3.2.3; 7.2.2.5.3.1)

Likelihood to Cause Harm: Low
Scope : Limited

11. Exits, exit accesses, and exit discharges (means of egress) are clear of obstructions or impediments to the public way, such as clutter (for example, equipment, carts, furniture), construction material, and snow and ice. (For full text, refer to NFPA 101-2012: 18/19.2.5.1; 7.1.10.1; 7.5.1.1)
Note 1: Wheeled equipment (such as equipment and carts currently in use, equipment used for patient lift and transport, and medical emergency equipment not in use) that maintains at least five feet of clear and unobstructed corridor width is allowed, provided there is a fire plan and training program addressing its relocation in a fire or similar emergency. (For full text, refer to NFPA 101-2012: 18/19.2.3.4 (4))
Note 2: Where the corridor width is at least eight feet and the smoke compartment is fully protected by an electrically supervised smoke detection system or is in direct supervision of facility staff, furniture that is securely attached is allowed provided it does not reduce the corridor width to less than six feet, is only on one side of the corridor, does not exceed 50 square feet, is in groupings spaced at least 10 feet apart, and does not restrict access to building service and fire protection equipment. (For full text, refer to NFPA 101-2012: 18/19.2.3.4 (5))

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

36. The hospital meets all other Life Safety Code means of egress requirements related to NFPA 101-2012: 18/19.2.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 10

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site.
During the building tour it was observed that stairwell 1 had tables stored in the extra space within the stairwell on the 1st floor.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 11
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. In 3 of 80 fire exit corridors evaluated, there were several carts in the Operating Room hallways blocking fire egress; several carts in the Adult Emergency Department hallway blocking fire egress and the fire Exit halls through the Plaza Center operating rooms was obstructed by several patient carts.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. The fire egress path was blocked by an Isolet at POD 6 on the 5th floor of the Children's Hospital.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. During the building tour it was observed in the emergency department that 2 soiled linen hampers on 2 hallways were stored in the fire egress paths.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 36
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There is an Environmental Services storage area in a stairwell with the only access is from the stairwell area that is not the same rating as the stairwell, has no closer on the door and does not have a "NO EXIT" sign on the door.
While surveyor was on site, the area was cleared out, the door and assembly was removed and a two hour wall was constructed in it's place and the area is now compliant.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Chapter:	Life Safety
Program:	Hospital Accreditation
Standard:	LS.02.01.30

Standard Text: The hospital provides and maintains building features to protect individuals from the hazards of fire and smoke.

Element(s) of Performance:

3. All existing hazardous areas have doors that are self-closing or automatic-closing. These areas are protected by either a fire barrier with one-hour fire-resistive rating or an approved electrically supervised automatic sprinkler system. Hazardous areas include, but are not limited to, boiler and fuel-fired heater rooms, central/bulk laundries larger than 100 square feet, paint shops, repair shops, soiled linen rooms, trash collection rooms with containers exceeding 64 gallons, laboratories employing flammable or combustible materials deemed less than a severe hazard, and storage rooms greater than 50 square feet used for storage of equipment and combustible supplies. (For full text, refer to NFPA 101-2012: 19.3.2.1; 19.3.2.2; 19.3.2.3; 19.3.2.4)

Likelihood to Cause Harm: Low
Scope : Pattern

11. Corridor doors are constructed to resist the passage of smoke, fitted with positive latching hardware, hinged so that they swing, and the doors do not have ventilating louvers or transfer grills (with the exception of bathrooms, toilets, and sink closets that do not contain flammable or combustible materials). Undercuts are no larger than one inch. Roller latches are prohibited. (For full text, refer to NFPA 101-2012: 18/19.3.6.3.1; 19.3.6.3.4; 18.3.6.3.5; 18/19.3.6.4; 18/19.3.6.5; 19.3.6.3.10; 18/19.3.6.3.11)

Likelihood to Cause Harm: Low
Scope : Limited

18. Smoke barriers extend from the floor slab to the floor or roof slab above, through any concealed spaces (such as those above suspended ceilings and interstitial spaces), and extend continuously from exterior wall to exterior wall. All penetrations are properly sealed. (For full text, refer to NFPA 101-2012: 18/19.3.7.3; 8.2.3; 8.5.2; 8.5.6; 8.7)
Note: Polyurethane expanding foam is not an accepted fire-rated material for this purpose.

Likelihood to Cause Harm: Moderate
Scope : Pattern

19. Doors in smoke barriers are self-closing or automatic-closing, constructed of 1 3/4-inch or thicker solid bonded wood core or constructed to resist fire for not less than 20 minutes, and fitted to resist the passage of smoke. The gap between meeting edges of door pairs is no wider than 1/8 of an inch. In new buildings, undercuts are no larger than 3/4 of an inch. (For full text, refer to NFPA 101-2012: 18.3.7.6; 18/19.3.7.8; 8.5.4.1; NFPA 80-2010: 4.8.4.1; 6.3.1.7.1)

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 3
§482.41(b)(1)(ii) - (A-0710) - (ii) Notwithstanding paragraph (b)(1)(i) of this section, corridor doors and doors to rooms containing flammable or combustible materials must be provided with positive latching hardware. Roller latches are prohibited on such doors.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
In 3 of 6 Hazardous Room Checks, it was identified that penetrations were present in the 1 hour fire rated hazardous area . This was identified in the following locations: Med Surg storage there was an unsealed conduit, Med surge office supply there was a penetration with data cable passing through the penetrations. EVS storage with 1 hour fire rated construction had multiple penetrations with unsealed conduits, holes in the fire barrier and unsealed around the structural steel.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. During the building tour it was observed on the 2nd floor in a soiled utility room with 1 hour rated construction as listed on the life safety prints, a conduit was present that was not properly sealed around.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 11
§482.41(b)(1)(ii) - (A-0710) - (ii) Notwithstanding paragraph (b)(1)(i) of this section, corridor doors and doors to rooms containing flammable or combustible materials must be provided with positive latching hardware. Roller latches are prohibited on such doors.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. The corridor door with latching hardware attached at the CT Scan #2 did not close and latch correctly. This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

EP 18
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There was a 1-1/4" penetration to the smoke barrier on the 6th floor cross over, the 7th floor at the crossover of the Central / North corridor and the 5th floor of the Children's Hospital at POD 6.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
In 1 of 4 smoke barrier wall checks, it was observed that penetrations were present. This was identified in the following location: In the smoke barrier at x-ray mammography there were improperly sealed conduits and wires passing through the barrier without being properly sealed.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. In 2 of 3 smoke barrier wall checks, it was observed that penetrations were present in the smoke barrier. This was identified in the following locations: 3rd floor by room A306 over the double doors in the smoke barrier was a 4"conduit sleeve was not properly sealed, 3rd floor by room A323 over the double doors in the smoke barrier a 4" conduit sleeve was not properly sealed.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 19
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 2 smoke barrier door checks, there is a dutch type door in the smoke barrier wall at the Pharmacy and the Anesthesia Work / Storage room both located in the Operating Room at the main campus without a coordinator being held open by a rope tied to a storage cart.
The doors were both replaced with compliant full length doors, staff has been in-serviced on the rope hold open and magnetic hold-open devices have been ordered and will be installed on the doors when they arrive.
The surveyor discussed the Life Safety deficiency with the organization, and it was determined that the following ILSMs will be implemented until the deficiency has been resolved and according to the organization's ILSM policy: increase surveillance (EP-8), conduct education promoting awareness of deficiencies (EP-13).
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service.
There is a smoke barrier door located in the Operating Room #2 at Children OR with an undercut in excess of 3/4".
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
In 1 of 6 smoke barrier door checks, it was observed that the smoke barrier door did not properly operate when tested. This was identified in the following location: Med Surg smoke barrier door did not properly latch when tested.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Chapter: Life Safety

Program: Hospital Accreditation

Standard: LS.02.01.34

Standard Text: The hospital provides and maintains fire alarm systems.

Element(s) of Performance:

4. The hospital meets all other Life Safety Code fire alarm requirements related to NFPA 101-2012: 18/19.3.4.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 4
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA 12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. The physician call room located in the C-Section area did not have a smoke alarm in the room. A smoke detector was placed in the room while surveyor was on site.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Chapter: Life Safety

Program: Hospital Accreditation

Standard: LS.02.01.35

Standard Text: The hospital provides and maintains systems for extinguishing fires.

Element(s) of Performance:

4. Piping for approved automatic sprinkler systems is not used to support any other item. (For full text, refer to NFPA 25-2011: 5.2.2.2)

Likelihood to Cause Harm: Moderate
Scope : Pattern

5. Sprinkler heads are not damaged. They are also free from corrosion, foreign materials, and paint and have necessary escutcheon plates installed. (For full text, refer to NFPA 101-2012: 18.3.5.1; 19.3.5.3; 9.7.5; NFPA 25-2011: 5.2.1.1.1; 5.2.1.1.2; NFPA 13-2010: 6.2.6.2.2; 6.2.7.1)

Likelihood to Cause Harm: Moderate
Scope : Pattern

6. There are 18 inches or more of open space maintained below the sprinkler deflector to the top of storage.
Note: Perimeter wall and stack shelving may extend up to the ceiling when not located directly below a sprinkler head. (For full text, refer to NFPA 101-2012: 18.3.5.1; 19.3.5.3; 9.7.1.1; NFPA 13 -2010: 8.5.5.2; 8.5.5.2.1; 8.5.5.3)

Likelihood to Cause Harm: Low
Scope : Limited

7. At least six spare sprinkler heads for each type of system, with associated wrenches, are kept in a cabinet that will not exceed 100°F. (For full text, refer to NFPA 101-2012: 18.3.5.1; 19.3.5.3; 9.7.1.1; NFPA 25-2011: 5.4.1.4; 5.4.1.4.1; 5.4.1.4.2; 5.4.1.6; 5.4.1.6.1; NFPA 13-2010: 6.2.9; 6.2.9.1; 6.2.9.3; 6.2.9.6)

Likelihood to Cause Harm: **Low**
Scope : **Pattern**

10. The travel distance from any point to the nearest portable fire extinguisher is 75 feet or less. Portable fire extinguishers have appropriate signage, are installed either in a cabinet or secured on a hanger made for the extinguisher, and are at least four inches off the floor. Those fire extinguishers that are 40 pounds or less are installed so the top is not more than 5 feet above the floor. (For full text, refer to NFPA 101-2012: 18/19.3.5.12; 9.7.4.1; NFPA 10-2010: 6.2.1.1; 6.1.3.3.1; 6.1.3.4; 6.1.3.8)

Likelihood to Cause Harm: **Low**
Scope : **Limited**

11. Class K–type portable fire extinguishers are located within 30 feet of grease-producing ranges, griddles, broilers, or cooking appliances that use vegetable or animal oils or fats, such as deep fat fryers. A placard is conspicuously placed near the extinguisher stating that the fire protection system should be activated prior to using the fire extinguisher. (For full text, refer to NFPA 101-2012: 18/19.3.2.5.1; NFPA 96-2011: 10.10.2; NFPA 10-2010: 5.5.5; 5.5.5.3; 6.6.2)

Likelihood to Cause Harm: **Low**
Scope : **Limited**

14. The hospital meets all other Life Safety Code automatic extinguishing requirements related to NFPA 101-2012: 18/19.3.5.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 4
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There were two sprinkler heads / Sprinkler line supporting two sections of HVAC duct in the Massoud Basement HVAC area.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There was a low voltage cable attached to the sprinkler line above the ceiling on the 9th floor at room 9145; an HVAC duct above the ceiling on the 9th floor at room 9129; a bundle of cable at the 8th floor elevator lobby and a bundle of cable above the ceiling at the 7th floor elevator lobby all being supported by the sprinkler line.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

EP 5
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There were two dust covered sprinkler heads in the ceiling at the security dispatch area of the main campus. This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. There are 3 sprinkler heads that are rusted in the ceiling of the Central Supply Washer / Sterilizer area; 9 corroded sprinkler heads in the canopy ceiling at the Adult Emergency Room entry and 3 sprinkler heads in the main lobby ceiling that are rusted all on main hospital campus.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There was a sprinkler head coated with heavy dust and dirt located on the ceiling of the 5th floor Children's Hospital entry and a piece of plastic garbage bag attached to the sprinkler head in the Soiled Utility room on the 7th floor.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There was one missing escutcheon plate on a sprinkler head in the ceiling at the Adult Emergency Room entry and a mis-aligned escutcheon plate in the ceiling of the Surgical consult room of the Miller Eye Center on the 2nd floor.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 8 Sprinkler Head Checks, it was observed that the sprinkler heads had a foreign material on the them. This was identified in the following locations: Dry storage in the kitchen, In the pharmacy over the work table.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 6
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service. In 2 of 15 active storage areas surveyed, there were several boxes of supplies stored in the Materials Management storeroom and the dietary dry storage room storeroom that were closer than 18" from the sprinkler heads on the ceiling.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service. There were several boxes of supplies that were stored in Room 401 storage room that were closer than 18" to the sprinkler head.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service. During the building tour it was observed in the kitchen that the storage was within the 18" clearance required below the sprinkler head.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 7

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site.
During the building tour it was observed that the facility did not have six spare heads of each kind of sprinkler system with in the facility. It was identified that the organization did not have upright spare sprinkler heads onsite.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site.
During the building tour it was observed in the shell space which housed the raiser to a fire suppression system (one of three in the building) did not have six spare heads for the system. No wrenches were present for head removal, if needed.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 10
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (2600 Taft Highway, Signal Mountain, TN) site for the Hospital deemed service.
During tracer activities at the UT Erlanger Health & Wellness at Signal Mountain, the fire extinguisher outside of the lab room was noted to be mounted at a height of greater than five feet.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 11
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (632 Morrison Springs Road, Chattanooga, TN) site for the Hospital deemed service.
During the building tour it was identified that the K-extinguisher in the kitchen was greater than 30ft from grease producing cooking equipment.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Observed in Building Tour at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
In 1 of 3 K extinguisher checks, it was identified that the k extinguisher in the kitchen was missing the required placard that gives guidance for suppression activation and proper extinguisher usage.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

EP 14
§482.41(b)(1)(i) - (A-0710) - (i) The hospital must meet the applicable provisions and must proceed in accordance with the Life Safety Code (NFPA 101 and Tentative Interim Amendments TIA12–1, TIA 12–2, TIA 12–3, and TIA 12–4.) Outpatient surgical departments must meet the provisions applicable to Ambulatory Health Care Occupancies, regardless of the number of patients served.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (100 East 37th Street, Chattanooga, TN) site for the Hospital deemed service.
There was a fire extinguisher that was blocked by a recycle bin in the storeroom area of Materials Management.
This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure. The corrective action taken needs to be included in the organization's Evidence of Standards Compliance submission.

Chapter: Medical Staff

Program: Hospital Accreditation

Standard: MS.01.01.01

Standard Text: Medical staff bylaws address self-governance and accountability to the governing body.

Element(s) of Performance:

1. The organized medical staff develops medical staff bylaws, rules and regulations, and policies.

Likelihood to Cause Harm: Low
Scope : WideSpread

3. Every requirement set forth in MS.01.01.01, Elements of Performance (EPs) 12–37, is in the medical staff bylaws. These requirements may have associated details, some of which may be extensive; such details may reside in the medical staff bylaws, rules and regulations, or policies. The organized medical staff adopts what constitutes the associated details, where they reside, and whether their adoption can be delegated. Adoption of associated details that reside in medical staff bylaws cannot be delegated. For those EPs 12–37 that require a process, the medical staff bylaws include, at a minimum, the basic steps required for implementation of the requirement, as determined by the organized medical staff and approved by the governing body. The organized medical staff submits its proposals to the governing body for action. Proposals become effective only upon governing body approval. (See the 'Leadership' [LD] chapter for requirements regarding the governing body's authority and conflict management processes.)
Note: If an organization is found to be out of compliance with this EP, the citation will occur at the appropriate element(s) of performance in MS.01.01.01, EPs 12–37.

Likelihood to Cause Harm: **Low**
Scope : **WideSpread**

5. The medical staff complies with the medical staff bylaws, rules and regulations, and policies.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

16. For hospitals that use Joint Commission accreditation for deemed status purposes: The medical staff bylaws include the following requirements, in accordance with Element of Performance 3: The requirements for completing and documenting medical histories and physical examinations. The medical history and physical examination are completed and documented by a physician, an oralmaxillofacial surgeon, or other qualified licensed individual in accordance with state law and hospital policy. (For more information on performing the medical history and physical examination, refer to MS.03.01.01, EPs 6–11.)
Note 1: The definition of 'physician' is the same as that used by the Centers for Medicare & Medicaid Services (CMS) (refer to the Glossary).
Note 2: The requirements referred to in this element of performance are, at a minimum, those described in the element of performance and Standard PC.01.02.03, EPs 4 and 5.

Likelihood to Cause Harm: **Low**
Scope : **WideSpread**

Observation(s):

EP 1
§482.22(c) - (A-0353) - §482.22(c) Standard: Medical Staff Bylaws

The medical staff must adopt and enforce bylaws to carry out its responsibilities.
The bylaws must:
This Standard is NOT MET as evidenced by:

Observed in Credentialing and Privileging at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
Per the Medical Staff leadership, the Bylaws and Rules and Regulations are to be reviewed and, if necessary, revised every two years. The current Bylaws are dated 2010, while the Rules and Regulations were last updated in 2008. These Rules and Regulations cite medical references from the early 1980's, indicating a clear need to be updated.

EP 3

Observed in Credentialing and Privileging at (975 East Third Street, Chattanooga, TN) site.
The Medical Staff Bylaws do not address histories and physicals, as required in Element of Performance 16.

EP 5
§482.22(c) - (A-0353) - §482.22(c) Standard: Medical Staff Bylaws

The medical staff must adopt and enforce bylaws to carry out its responsibilities.
The bylaws must:
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The pre-operative history and physical of a patient who had surgery for a rectal cancer did not include a rectal examination. This is in conflict with the medical staff's rules and regulations, which describe the necessary content for a history and physical

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The pre-procedure physical exam of a patient undergoing an ERCP procedure in the GI Lab included only a general and neurological exam. No abdominal exam was recorded as being performed. This physical examination does not comply with the content of histories and physicals as outlined in the medical staff rules and regulations.

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The pre-procedure history and physical of a patient undergoing surgery for a bladder neck tumor did not meet the requirements for a history and physical as established in the medical staff rules and regulations. Specifically, the patient's chief complaint was noted to be "can't pee". But there was no corresponding history of present illness to provide any more details regarding the patient's history. In addition, no physical exam was documented as having been performed.

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site.
A pre-operative physical examination of a patient undergoing an ENT procedure only consisted of an ENT exam. This is out of the compliance with the Medical Staff Rules and Regulations.

EP 16
§482.22(c)(5)(i) - (A-0358) - (i) A medical history and physical examination be completed and documented for each patient no more than 30 days before or 24 hours after admission or registration, but prior to surgery or a procedure requiring anesthesia services. The medical history and physical examination must be completed and documented by a physician (as defined in section 1861(r) of the Act), an oromaxillofacial surgeon, or other qualified licensed individual in accordance with State law and hospital policy.
This Standard is NOT MET as evidenced by:

Observed in Credentialing and Privileging at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
The current Medical Staff Bylaws do not include the requirements for completing and documenting medical histories and physical examinations.

Chapter: Medical Staff

Program: Hospital Accreditation

Standard: MS.03.01.01

Standard Text: The organized medical staff oversees the quality of patient care, treatment, and services provided by practitioners privileged through the medical staff process.

Element(s) of Performance:

7. The organized medical staff monitors the quality of medical histories and physical examinations.

Likelihood to Cause Harm: Moderate
Scope : Pattern

8. The medical staff requires that a practitioner who has been granted privileges by the hospital to do so performs a patient's medical history and physical examination and required updates. (See also PC.01.02.03, EP 5)

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 7

Observed in Credentialing and Privileging at (975 East Third Street, Chattanooga, TN) site.
The medical staff is not monitoring the quality of histories and physicals.

EP 8

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site.
The update of the history and physical (originally performed by a pediatrician) performed on a pediatric dental patient was done by an anesthesiologist, who does not have privileges to perform pre-operative histories and physicals. The organization's general practice is to have anesthesiologists perform histories and physical updates on dental and podiatric patients. But none of the anesthesiologists have privileges to do so

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Chapter: Medical Staff

Program: Hospital Accreditation

Standard: MS.08.01.03

Standard Text: Ongoing professional practice evaluation information is factored into the decision to maintain existing privilege(s), to revise existing privilege(s), or to revoke an existing privilege prior to or at the time of renewal.

Element(s) of Performance:

1. The process for the ongoing professional practice evaluation includes the following: There is a clearly defined process in place that facilitates the evaluation of each practitioner's professional practice.

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 1

Observed in Credentialing and Privileging at (975 East Third Street, Chattanooga, TN) site.
The Medical Staff privileges "First Assist Practitioners", but does not perform ongoing professional practice evaluations on these individuals.

Chapter: Medication Management

Program: Hospital Accreditation

Standard: MM.01.01.01

Standard Text: The hospital plans its medication management processes.

Element(s) of Performance:

2. The hospital implements its policy to make information about the patient accessible to licensed independent practitioners and staff who participate in the management of the patient's medications.
Note 1: This element of performance does not apply in emergency situations.
Note 2: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 2

Observed in Medication Management Tracer at (975 East Third Street, Chattanooga, TN) site.
When reviewing medication orders, pharmacists do not have access to all the information necessary to insure patient safety. Specifically, they are unable to determine is a female patient (not in Labor and Delivery) is pregnant.

Chapter: Medication Management

Program: Hospital Accreditation

Standard: MM.01.01.03

Standard Text: The hospital safely manages high-alert and hazardous medications.

Element(s) of Performance:

3. The hospital implements its process for managing high-alert and hazardous medications. (See also EC.02.02.01, EPs 1 and 8)
Note: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 3

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site.
During tracer activity on the 7th floor and review of the process used to store high-alert medications, it was noted that insulin was being stored in the refrigerator in bins that did not contain a high-alert sticker. In addition, an open multi-dose vial of insulin did not contain a high alert sticker per hospital policy PC-104 Medications: High Risk.

Observed in Medication Management Tracer at (975 East Third Street, Chattanooga, TN) site.
High alert medications stored in the Omnicell medication dispensing unit in Pre-Op were not labeled as being high alert, as required by hospital policy.

Observed in Medication Management Tracer at (975 East Third Street, Chattanooga, TN) site.
Insulin, stored in the refrigerator attached to the Malignant Hyperthermia cart in the OR, was not labeled as a high-alert medication, as required by hospital policy.

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site.
During tracer activity and review of the process used to store high-alert medications, it was noted that insulin was being stored in the refrigerator in bins that did not contain a high-alert sticker. In addition, a multi-dose vial of Homolog insulin and a multi-dose vial of Lantus had been opened and were placed into the door of the refrigerator. This is contrary to the hospitals policy number PC-104 Medications: High Risk.

Chapter: Medication Management

Program: Hospital Accreditation

Standard: MM.03.01.01

Standard Text: The hospital safely stores medications.

Element(s) of Performance:

2. The hospital stores medications according to the manufacturers' recommendations or, in the absence of such recommendations, according to a pharmacist's instructions. Note: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: Moderate
Scope : WideSpread

3. The hospital stores all medications and biologicals, including controlled (scheduled) medications, in a secured area to prevent diversion, and locked when necessary, in accordance with law and regulation.
Note 1: Scheduled medications include those listed in Schedules II–V of the Comprehensive Drug Abuse Prevention and Control Act of 1970.
Note 2: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

5. The hospital implements its policy addressing the control of medication between receipt by an individual health care provider and its administration.
Note: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: **Low**
Scope : **Pattern**

6. The hospital prevents unauthorized individuals from obtaining medications in accordance with its policy and law and regulation.
Note: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

7. All stored medications and the components used in their preparation are labeled with the contents, expiration date, and any applicable warnings.
Note: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: **Low**
Scope : **Pattern**

8. The hospital removes all expired, damaged, and/or contaminated medications and stores them separately from medications available for administration.
Note: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: **Moderate**
Scope : **Limited**

Observation(s):

EP 2
§482.23(c)(6)(ii)(D) - (A-0413) - (D) Address the security of the medication(s) for each patient.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (1025 Executie Drive Suite 100, Hixson, TN) site.
In 2 of 2 monthly vaccine refrigerator temperature logs reviewed at Erlanger Hixon Primary Care, it was noted that there was no monitoring of the temperatures during the weekends documented for the months of February- March 2017.

Observed in Tracer Activities at (7380 Volkswagon Drive, Suite 110, Chattanooga, TN) site.
During tracer activities at t Erlanger at Volkswagon Drive Wellness Center, the freezer that was used for storing vaccines was noted to have a large ice build-up at the top and bottom of the freezer that extended out to where the door seal was located.

Observed in Tracer Activities at (7380 Volkswagon Drive, Suite 110, Chattanooga, TN) site.
In 2 of 2 monthly vaccine refrigerator temperature logs reviewed at Erlanger at Volkswagon Drive Wellness Center, it was noted that there was no monitoring of the temperatures during the weekends documented for the months of February- March 2017. Additionally, on February 22, March 3 and March 17, the afternoon temperatures were not documented as required by organization policy.

Observed in Tracer Activities at (60 Erlanger South Dr. Suite A, Ringgold, GA) site.
During review of the March 2017 vaccine refrigerator temperature log at Erlanger South Family Practice, it was noted that the weekend min/max temperature ranges for March 4-5 and March 18-19 were out of the acceptable range of 36-46 with no corrective action noted. Additionally, on March 16 and March 22, March 24, and March 28, the morning temperatures were not documented as required by organization policy.

Observed in Tracer Activities at (2600 Taft Highway, Signal Mountain, TN) site.
In 2 of 2 monthly vaccine refrigerator temperature logs reviewed at UT Erlanger Health & Wellness at Signal Mountain, it was noted that the weekend min/max temperature ranges for Feb. 11-12, March 11-12, March 18-19 and March 25-26 were out of the acceptable range of 36-46 with no corrective action noted.

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activity on the 7th floor, a dormatory style refrigerator used to store patients' medication was not monitored, contained a large layer of ice in the freezer section. A sign on the refrigerator stated that it was for patients' home medications including insulin. The temperature was not being monitored. It did not contain any medications at the time it was observed.

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site.
The temperature in the Cardiac Cath Lab #3 was noted to be 65 degrees F, while the requirements for the non-refrigerated cardiac and other medications stored in this room are that they be stored at 68 - 77 degrees F.

Observed in Medication Management Tracer at (975 East Third Street, Chattanooga, TN) site.
The temperature of the refrigerator attached to the Malignant Hyperthermia cart in the OR was noted to be out of range on 3-9-17 and 3-10-17 (49 and 60 degrees, respectively; expected range: 36-46 degrees). The individual who checked and documented these temperatures failed to contact the organization's Maintenance Department, as required by hospital policy, on both days.

EP 3
§482.25(b)(2)(i) - (A-0502) - (2)(i) All drugs and biologicals must be kept in a secure area, and locked when appropriate.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site.
A vial of Fentanyl was found in the nurse supply cart in the IR suite. The "Medication Storage and Security Including Narcotics" policy requires "Narcotics not in Pyxis shall be secured and locked (i.e. Radiology)".

Observed in Tracer Activities at (102 Central Avenue, Chattanooga, TN) site for the Hospital deemed service.

During tracer activities, observed two bottles of Lidocaine that were stored in an unlocked supply room in a common hallway. The door was unlocked and was observed to have cardboard placed in the door latching mechanism to keep the door open at all times.

EP 5
§482.25(b) - (A-0500) - §482.25(b) Standard: Delivery of Services

In order to provide patient safety, drugs and biologicals must be controlled and distributed in accordance with applicable standards of practice, consistent with Federal and State law.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (60 Erlanger South Dr. Suite A, Ringgold, GA) site for the Hospital deemed service.
During tracer activities at Erlanger South Family Practice, it was noted that there were multiple inconsistencies in the sample medication logs. There were three logs for Xarelto 20mg samples with a documented inventory total of 13 bottles, however the actual number of bottles in the sample closet were six. There were four logs for Xarelto 15mg samples with a documented inventory of two bottles, however the actual number of bottles in the sample closet was six. This was not in accordance with organization policy titled Medication: Drug Samples, Complimentary (rev. 3/17).

Observed in Tracer Activities at (2600 Taft Highway, Signal Mountain, TN) site for the Hospital deemed service.
During tracer activities at UT Erlanger Health & Wellness at Signal Mountain, it was noted that there were multiple inconsistencies in the sample medication logs. There was a log for Farxiga 5mg samples with a documented inventory total of three bottles, however the actual number of bottles in the sample closet were five. There was a log for Farxiga 10mg samples with a documented inventory of two bottles, however the actual number of bottles in the sample closet was four. This was not in accordance with organization policy titled Medication: Drug Samples, Complimentary (rev. 3/17).

EP 6
§482.25(b)(2)(iii) - (A-0504) - (iii) Only authorized personnel may have access to locked areas.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities in the Chattanooga Bone & Joint Center supply room, it was observed that the supply room had secure badge access, however the medications that were located inside the room were stored in an unlocked refrigerator and a locked cabinet with the key placed in a binder directly on top of the cabinet. The manager and staff in the department confirmed that the Cast Techs, MRI Techs, Physical Therapists and PSRs (receptionists) all had access to this room and the medications.

EP 7

Observed in Tracer Activities at (1100 East Third Street, Chattanooga, TN) site.
In 3 of 3 open multi-use medication vials, the revised expiration date was outside of 28 days per organization policy. There was one vial of Xylocaine opened on 3/9/17 with an expiration date of 4/8/17 (30 days) and one opened on 3/22/17 with an expiration date of 4/20/17 (29 days). There was also one vial of Lidocaine opened on 3/22/17 with an expiration date of 4/20/17 (29 days).

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site.
During tracer activities at the Chattanooga Bone & Joint Center, there was one multidose vial of Marcaine that was observed to have an open date of 3/10/17 and an expiration date of 4/8/17 (29 days) which was outside of the organization's' required 28 day expiration.

Observed in Tracer Activities at (60 Erlanger South Dr. Suite A, Ringgold, GA) site.
During tracer activities at the Erlanger South Family Practice, there was one multidose vial of Lidocaine that was observed to have an open date of 3/29/17 and an expiration date of 4/28/17 (30 days) which was outside of the organization's' required 28 day expiration.

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site.
During tracer activity and review of insulin storage, it was noted that a vial of Humalog and a vial of Lantus insulin had been opened however, the vials had not been labeled with the expiration or do not use beyond date. This is contrary to the hospital's policy # PC-079 Medication Storage Area, Inspection.

EP 8
§482.25(b)(3) - (A-0505) - (3) Outdated, mislabeled, or otherwise unusable drugs and biologicals must not be available for patient use.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (101 McFarland Road, Lookout Mountain, GA) site for the Hospital deemed service.
In 11 of 11 MMR vaccines observed in the Lookout Mountain Primary Care Clinic, had expired and were stored with non-expired vaccines. One vial had expired on 3/5/2017 and ten vials had expired on 3/17/17.

Observed in Tracer Activities at (7490 Ziegler Road, Chattanooga, TN) site for the Hospital deemed service.
During tracer activities at Erlanger Center for Women, there were eight bags of 0.9% NS 1000ml that had expired on March 1, 2017 in the supply/medication room.

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activity in the pediatric unit, it was noted in a patient specific medication bin that a vial of antibiotic that had been prepared by the pharmacy had expired but remained in the bin available for use. This was observed with the department leaders.

Chapter: Medication Management

Program: Hospital Accreditation

Standard: MM.03.01.03

Standard Text: The hospital safely manages emergency medications.

Element(s) of Performance:

2. Emergency medications and their associated supplies are readily accessible in patient care areas.

Likelihood to Cause Harm: **Low**
Scope : **Pattern**

Observation(s):

EP 2

Observed in Building Tour at (975 East Third Street, Chattanooga, TN) site.
During tracer activity on WICU and MICU Succinylcholine was being stored in the medication refrigerators. Staff was unable to identify where the Malignant Hyperthermia (MH) cart containing Dantrolene was stored and were not aware that anesthesia would respond to an MH emergency with an MH cart. The organization was unable to provide a policy detailing this information and acknowledged that staff needed to be educated regarding signs and symptoms of MH and the response process.

Chapter: Medication Management

Program: Hospital Accreditation

Standard: MM.04.01.01

Standard Text: Medication orders are clear and accurate.

Element(s) of Performance:

13. The hospital implements its policies for medication orders.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 13
§482.23(c)(3) - (A-0406) - (3) With the exception of influenza and pneumococcal polysaccharide vaccines, which may be administered per physician-approved hospital policy after an assessment of contraindications, orders for drugs and biologicals must be documented and signed by a practitioner who is authorized to write orders in accordance with State law and hospital policy, and who is responsible for the care of the patient as specified under §482.12(c).
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site.
In 2 of 15 patient records reviewed, two medications were ordered for the same indication (pain) without pain scales and differentiating instructions, thereby giving the nurse a choice of meds for a specific condition or indication. No attempts at clarifying these orders were undertaken. Per the Pharmacy Director, the expectation would be for these orders to be clarified. This issue is addressed in the organization's policy on Interpretation of Range Orders (last revised 01/17).

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site.
In 3 of 5 patient records reviewed, there was evidence of unclear orders for post-operative pain medications. A post-op urology patient had orders for both Lortab and Tylenol "prn pain", while a post-op cardiology patient had orders for both Morphine IV and Toradol IV "prn pain" . A post-op Orthopedic patient had orders for both Morphine and Dilaudid "prn pain". In none of these cases did the physician's orders provide any guidance as to when each drug was to be given, e.g. for mild, moderate or severe pain. No attempts at clarifying these orders were undertaken. Per the Pharmacy Director, the expectation would be for these orders to be clarified. This issue is addressed in the organization's policy on Interpretation of Range Orders (last revised 01/17).

Observed in Individual Tracer at (1751 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
The surveyor observed a order for Fentanyl 50mcg. every 1 hr. prn pain. The order did not include a pain scale.

Chapter: National Patient Safety Goals

Program: Hospital Accreditation

Standard: NPSG.03.06.01

Standard Text: Maintain and communicate accurate patient medication information.

Element(s) of Performance:

1. Obtain information on the medications the patient is currently taking when he or she is admitted to the hospital or is seen in an outpatient setting. This information is documented in a list or other format that is useful to those who manage medications.
Note 1: Current medications include those taken at scheduled times and those taken on an as-needed basis. See the Glossary for a definition of medications.
Note 2: It is often difficult to obtain complete information on current medications from a patient. A good faith effort to obtain this information from the patient and/or other sources will be considered as meeting the intent of the EP.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 1

Observed in Tracer Activities at (7490 Ziegler Road, Chattanooga, TN) site.
In 2 of 2 patient records reviewed, there was no evidence that the patient's current medications were obtained/reviewed or that medication reconciliation was completed.

Observed in Tracer Activities at (1504 N. Thorton Avenue, Suite 104, Dalton, GA 30761, Dalton, GA) site.
During review of a patient record at Dalton Pediatrics, there was no evidence that the patient's medications were reviewed or that medication reconciliation was completed.

Chapter: National Patient Safety Goals

Program: Hospital Accreditation

Standard: NPSG.15.01.01

Standard Text: Identify patients at risk for suicide.
Note: This requirement applies only to psychiatric hospitals and patients being treated for emotional or behavioral disorders in general hospitals.

Element(s) of Performance:

2. Address the patient's immediate safety needs and most appropriate setting for treatment.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 2
§482.13(c)(2) - (A-0144) - (2) The patient has the right to receive care in a safe setting.
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activity on the WICU, a patient admitted for overdose was assessed to be a suicide and elopement risk. The patient was placed on an emergency detention and certificate of need precautions used for high risk of suicide. The organization's policy PC.242 and PC.063 require a sitter to be assigned for any suicidal patients. This was not done in this case. It was verified by the clinical leadership that a sitter should have been assigned.

Chapter: National Patient Safety Goals

Program: Hospital Accreditation

Standard: UP.01.03.01

Standard Text: A time-out is performed before the procedure.

Element(s) of Performance:

4. During the time-out, the team members agree, at a minimum, on the following:
- Correct patient identity
- The correct site
- The procedure to be done

Likelihood to Cause Harm: Moderate
Scope : Limited

Observation(s):

EP 4

Observed in Tracer Activities at (1010 East Third Street, Chattanooga, TN) site.
During the observation of a timeout prior to a procedure, the patient identification included only the patient name. The organization required that patient identification be completed through the use of two patient identifiers, name and date of birth.

Chapter: Provision of Care, Treatment, and Services

Program: Hospital Accreditation

Standard: PC.01.02.03

Standard Text: The hospital assesses and reassesses the patient and his or her condition according to defined time frames.

Element(s) of Performance:

4. The patient receives a medical history and physical examination no more than 30 days prior to, or within 24 hours after, registration or inpatient admission, but prior to surgery or a procedure requiring anesthesia services. (See also MS.03.01.01, EP 6; RC.02.01.03, EP 3)

Likelihood to Cause Harm: Moderate
Scope : Limited

Observation(s):

EP 4
§482.22(c)(5)(i) - (A-0358) - (i) A medical history and physical examination be completed and documented for each patient no more than 30 days before or 24 hours after admission or registration, but prior to surgery or a procedure requiring anesthesia services. The medical history and physical examination must be completed and documented by a physician (as defined in section 1861(r) of the Act), an oromaxillofacial surgeon, or other qualified licensed individual in accordance with State law and hospital policy.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
In 1 of 3 patient records reviewed, in Interventional Radiology, the history and physical examination was not completed prior to the procedure. A printed history and physical examination was stamped with a H&P update stamp, but the stamp had not been signed. The procedure was already in progress. The medical staff bylaws require the H&P be completed prior to a procedure.

Chapter: Provision of Care, Treatment, and Services

Program: Hospital Accreditation

Standard: PC.01.02.07

Standard Text: The hospital assesses and manages the patient's pain.

Element(s) of Performance:

3. The hospital reassesses and responds to the patient's pain, based on its reassessment criteria.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 3

Observed in Individual Tracer at (1751 Gunbarrel Road, Chattanooga, TN) site.
Upon medical record review, two PRN pain medication administrations (Oxycodone IR), on 28-MAR-2017, pain reassessments (within one hour, per hospital Pain Management policy) could not be retrieved via the electronic health record.

Chapter: Provision of Care, Treatment, and Services

Program: Hospital Accreditation

Standard: PC.01.03.01

Standard Text: The hospital plans the patient's care.

Element(s) of Performance:

1. The hospital plans the patient's care, treatment, and services based on needs identified by the patient's assessment, reassessment, and results of diagnostic testing. (See also RC.02.01.01, EP 2; PC.01.02.13, EP 2)

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 1
§482.23(b)(4) - (A-0396) - (4) The hospital must ensure that the nursing staff develops, and keeps current, a nursing care plan for each patient. The nursing care plan may be part of an interdisciplinary care plan.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activity on the 3rd floor Renal unit it was observed that a dialysis patient's Plan of Care made no mention of his dialysis treatment.

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During an individual tracer on the 5th floor, it was noted that a sepsis/UTI patient's plan of care was not completed and did not reflect the patient's treatment, services and individualized interventions which were based on the patient's assessed needs after 3 days post admission. The unit manager and Director verified that the care plan was expected to be completed in 24 hours of admission.

Chapter: Provision of Care, Treatment, and Services

Program: Hospital Accreditation

Standard: PC.02.01.03

Standard Text: The hospital provides care, treatment, and services as ordered or prescribed, and in accordance with law and regulation.

Element(s) of Performance:

7. For hospitals that use Joint Commission accreditation for deemed status purposes: The hospital provides care, treatment, and services using the most recent patient order(s).

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 7

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site.
A Nurse administered 0.5 mg Dilaudid to a post-op hip replacement patient, while the physician's order was for 1 mg of Dilaudid.

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site.
During tracer activity and review of the record of care, it was noted that the patient had received Lortab for a pain level of 4/10. The order was to administer Lortab for a pain level of 5/10 - 7/10. There was no documentation to support that the order had been clarified or that a new order had been obtained.

Chapter: Provision of Care, Treatment, and Services

Program: Hospital Accreditation

Standard: PC.02.01.11

Standard Text: Resuscitation services are available throughout the hospital.

Element(s) of Performance:

2. Resuscitation equipment is available for use based on the needs of the population served.
Note: For example, if the hospital has a pediatric population, pediatric resuscitation equipment should be available. (See also EC.02.04.03, EP 2)

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 2

Observed in Tracer Activities at (1010 East Third Street, Chattanooga, TN) site.
During review of the crash cart log for March 2017, it was noted that the defibrillator had not been checked on March 10, 13, 15, 16, 17. The staff and practice manager verified that this was to be checked and recorded on the log daily when the practice was open.

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site.
During tracer activity on the 7th floor it was noted the emergency cart checks were completed approximately 50% of the time during the month of March according to the log.

Chapter: Provision of Care, Treatment, and Services

Program: Hospital Accreditation

Standard: PC.02.02.03

Standard Text: The hospital makes food and nutrition products available to its patients.

Element(s) of Performance:

11. The hospital stores food and nutrition products, including those brought in by patients or their families, using proper sanitation, temperature, light, moisture, ventilation, and security.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 11

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site.
During tracer activity on the 7th floor, a refrigerator used to store patient nourishments interior was visibly soiled.

Chapter: Provision of Care, Treatment, and Services

Program: Hospital Accreditation

Standard: PC.02.03.01

Standard Text: The hospital provides patient education and training based on each patient's needs and abilities.

Element(s) of Performance:

1. The hospital performs a learning needs assessment for each patient, which includes the patient's cultural and religious beliefs, emotional barriers, desire and motivation to learn, physical or cognitive limitations, and barriers to communication.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 1

Observed in Tracer Activities at (7490 Ziegler Road, Chattanooga, TN) site.
In 2 of 2 patient records reviewed, there was no evidence of a learning needs assessment having been performed or documented in the medical record.

Chapter: Provision of Care, Treatment, and Services

Program: Hospital Accreditation

Standard: PC.03.05.03

Standard Text: The hospital uses restraint or seclusion safely.

Element(s) of Performance:

2. The use of restraint and seclusion is in accordance with a written modification to the patient's plan of care.

Likelihood to Cause Harm: Moderate
Scope : Pattern

Observation(s):

EP 2
§482.13(e)(4)(i) - (A-0166) - (i) in accordance with a written modification to the patient's plan of care.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activity on the 5th Floor medical unit, it was observed that a 45 year old patient with both psychiatric and medical conditions was placed in 4 point restraints daily from 3/24 through 3/28. The plan of care was not modified at any time to reflect the use or discontinuation of restraints. The organization's policy (PC. 050 Restraints/Protective Devices) requires the care plan to be revised for the use of restraints.

Chapter: Record of Care, Treatment, and Services

Program: Hospital Accreditation

Standard: RC.01.01.01

Standard Text: The hospital maintains complete and accurate medical records for each individual patient.

Element(s) of Performance:

8. The medical record contains information about the patient's care, treatment, or services that promotes continuity of care among providers.
Note: For hospitals that elect The Joint Commission Primary Care Medical Home option: This requirement refers to care provided by both internal and external providers.

Likelihood to Cause Harm: **Moderate**
Scope : **Limited**

19. For hospitals that use Joint Commission accreditation for deemed status purposes: All entries in the medical record, including all orders, are timed.

Likelihood to Cause Harm: **Low**
Scope : **WideSpread**

Observation(s):

EP 8
§482.24(b) - (A-0438) - §482.24(b) Standard: Form and Retention of Record

The hospital must maintain a medical record for each inpatient and outpatient. Medical records must be accurately written, promptly completed, properly filed and retained, and accessible. The hospital must use a system of author identification and record maintenance that ensures the integrity of the authentication and protects the security of all record entries.
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
During tracer activity on the 5th floor, it was noted that a patient's record contained inconsistent and discrepant documentation of patient Allergies.

EP 19
§482.24(c)(1) - (A-0450) - (1) All patient medical record entries must be legible, complete, dated, timed, and authenticated in written or electronic form by the person responsible for providing or evaluating the service provided, consistent with hospital policies and procedures.
This Standard is NOT MET as evidenced by:

Observed in Tracer Activities at (1010 East Third Street, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 2 patient records reviewed, the physician attestation on the Procedure Sedation Record and the time-out section of the consent form had no times documented.

Observed in Tracer Activities at (1651 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
During review of a patient record at the East Imaging Center, the Contrast Questionnaire and the Patient Statement of Pregnancy forms completed on 3/28/17 were observed to be lacking the time of day.

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site for the Hospital deemed service.
In 2 of 2 patient records reviewed in the Chattanooga Bone & Joint MRI department, the MRI Center Spine Questions and MRI Patient Interview forms were observed to be lacking the time of day.

Observed in Tracer Activities at (325 Market Street, Chattanooga, TN) site for the Hospital deemed service.
During review of a patient record at the Life Style Center Cardiac Rehab, the Conditions of Admission and Authorization of Medical Treatment and the Cardiac ITP Initial Assessment forms were observed to be lacking the time of day.

Observed in Tracer Activities at (7490 Ziegler Road, Chattanooga, TN) site for the Hospital deemed service.
During review of a patient record at the Erlanger Center for Women, the Review of Systems form was observed to be lacking the time of day.

Observed in Tracer Activities at (1504 N. Thorton Avenue, Suite 104, Dalton, GA 30761, Dalton, GA) site for the Hospital deemed service.
During review of a patient record at Dalton Pediatrics, it was observed that the Consent to Treat form for a minor had been signed by the patient's mother, however there was no date, time, witness signature or designation of who signed the form for the minor as required by organization policy.

Chapter:	Record of Care, Treatment, and Services
Program:	Hospital Accreditation
Standard:	RC.02.01.01
Standard Text:	The medical record contains information that reflects the patient's care, treatment, and services.
Element(s) of Performance:	

2. The medical record contains the following clinical information:
- The reason(s) for admission for care, treatment, and services
- The patient's initial diagnosis, diagnostic impression(s), or condition(s)
- Any findings of assessments and reassessments (See also PC.01.02.01, EP 1; PC.03.01.03, EPs 1 and 8)
- Any allergies to food
- Any allergies to medications
- Any conclusions or impressions drawn from the patient's medical history and physical examination
- Any diagnoses or conditions established during the patient's course of care, treatment, and services (including complications and hospital-acquired infections). For psychiatric hospitals using Joint Commission accreditation for deemed status purposes: The diagnosis includes intercurrent diseases (diseases that occur during the course of another disease; for example, a patient with AIDS may develop an intercurrent bout of pneumonia) and the psychiatric diagnoses.
- Any consultation reports
- Any observations relevant to care, treatment, and services
- The patient's response to care, treatment, and services
- Any emergency care, treatment, and services provided to the patient before his or her arrival
- Any progress notes
- All orders
- Any medications ordered or prescribed
- Any medications administered, including the strength, dose, and route
- Any access site for medication, administration devices used, and rate of administration
- Any adverse drug reactions
- Treatment goals, plan of care, and revisions to the plan of care (See also PC.01.03.01, EPs 1 and 23)
- Results of diagnostic and therapeutic tests and procedures
- Any medications dispensed or prescribed on discharge
- Discharge diagnosis
- Discharge plan and discharge planning evaluation (See also PC.01.02.03, EP 6)

Likelihood to Cause Harm: **Low**
Scope : **Pattern**

Observation(s):

EP 2

Observed in Tracer Activities at (1755 Gunbarrel Road, Suite 209, Chattanooga, TN) site.
In 2 of 2 patient records reviewed at Urology East, there were sample medications provided to the patient that were not documented in the medical record in accordance with organization policy titled Medication: Drug Samples, Complimentary (rev. 3/17).

Observed in Tracer Activities at (1809 Gunbarrel Road, Chattanooga, TN) site.
In 2 of 2 patient records reviewed at Chattanooga Bone & Joint Center, there were sample medications provided to the patient that were not documented in the medical record in accordance with organization policy titled Medication: Drug Samples, Complimentary (rev. 3/17).

Chapter: Rights and Responsibilities of the Individual

Program: Hospital Accreditation

Standard: RI.01.01.01

Standard Text: The hospital respects, protects, and promotes patient rights.

Element(s) of Performance:

8. The hospital respects the patient's right to pain management. (See also HR.01.04.01, EP 4; PC.01.02.07, EP 1; MS.03.01.03, EP 2)

Likelihood to Cause Harm: Moderate
Scope : Limited

Observation(s):

EP 8

Observed in Individual Tracer at (975 East Third Street, Chattanooga, TN) site.
The surveyor observed persistently ineffective staff response to high pain scores after medication interventions.

Chapter: Waived Testing

Program: Hospital Accreditation

Standard: WT.01.01.01

Standard Text: Policies and procedures for waived tests are established, current, approved, and readily available.

Element(s) of Performance:

2. The person from the hospital whose name appears on the Clinical Laboratory Improvement Amendments of 1988 (CLIA '88) certificate, or a qualified designee, establishes written policies and procedures for waived testing that address the following:
- Clinical usage and limitations of the test methodology
- Need for confirmatory testing (for example, recommendations made by the manufacturer for rapid tests) and result follow-up recommendations (for example, a recommendation to repeat the test when results are higher or lower than the reportable range of the test)
- Specimen type, collection, and identification, and required labeling
- Specimen preservation, if applicable
- Instrument maintenance and function checks, such as calibration
- Storage conditions for test components
- Reagent use, including not using a reagent after its expiration date
- Quality control (including frequency and type) and corrective action when quality control is unacceptable
- Test performance
- Result reporting, including not reporting individual patient results unless quality control is acceptable
- Equipment performance evaluation

Note 1: Policies and procedures for waived testing are made available to testing personnel.
Note 2: The designee should be knowledgeable by virtue of training, experience, and competence about the waived testing performed.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 2

Observed in Individual Tracer at (1751 Gunbarrel Road, Chattanooga, TN) site.
Upon Recovery Room (PACU) tour, two bottles of expired Human Chorionic Gonadotropin control reagents (2016) were found in a refrigerator.

Chapter: Waived Testing

Program: Hospital Accreditation

Standard: WT.04.01.01

Standard Text: The hospital performs quality control checks for waived testing on each procedure. Note: Internal quality controls may include electronic, liquid, or control zone. External quality controls may include electronic or liquid.

Element(s) of Performance:

2. The documented quality control rationale for waived testing is based on the following:
- How the test is used
- Reagent stability
- Manufacturers' recommendations
- The hospital's experience with the test
- Currently accepted guidelines

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 2

Observed in Tracer Activities at (325 Market Street, Chattanooga, TN) site.
During tracer activities in the Life Style Center Cardiac Rehab, there were two glucometer control solution bottles that were observed to be lacking an opened date or revised expiration date according to manufacturer's recommendations.

Chapter: Environment of Care

Program: Critical Access Hospital Accreditation

Standard: EC.02.02.01

Standard Text: The critical access hospital manages risks related to hazardous materials and waste.

Element(s) of Performance:

5. The critical access hospital minimizes risks associated with selecting, handling, storing, transporting, using, and disposing of hazardous chemicals.

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 5
§485.623(b)(2) - (C-0223) - (2) There is proper routine storage and prompt disposal of trash;
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
The 3M chemical decontamination filters used in emergency management had expired in 2014.

Chapter: Environment of Care

Program: Critical Access Hospital Accreditation

Standard: EC.02.03.03

Standard Text: The critical access hospital conducts fire drills.

Element(s) of Performance:

3. When quarterly fire drills are required, at least 50% are unannounced. Fire drills are held at unexpected times and under varying conditions. Fire drills include transmission of fire alarm signal and simulation of emergency fire conditions.
Note 1: When drills are conducted between 9:00 P.M. and 6:00 A.M., the critical access hospital may use alternative methods to notify staff instead of activating audible alarms.
Note 2: For additional guidance, see NFPA 101-2012: 18/19: 7.1.7; 7.1; 7.2; 7.3.

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 3
§485.623(d)(1) - (C-0231) - (1) Except as otherwise provided in this section, the CAH must meet the applicable provisions of the 2000 edition of the Life Safety Code of the National Fire Protection Association. The Director of the Office of the Federal Register has approved the NFPA 101 2000 edition of the Life Safety Code, issued January 14, 2000, for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. A copy of the Code is available for inspection at the CMS Information Resource Center, 7500 Security Boulevard, Baltimore, MD and at the Office of the Federal Register, 800 North Capital Street NW, Suite 700, Washington, DC. Copies may be obtained from the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269. If any changes in this edition of the Code are incorporated by reference, CMS will publish notice in the Federal Register to announce the changes. Chapter 19.3.6.3.2, exception number 2 of the adopted edition of the Life Safety Code does not apply to a CAH.
This Standard is NOT MET as evidenced by:

Observed in Document Review at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
In 4 of 12 Fire Drill Checks, it was identified that the fire drills performed on the 3rd shift for 2016 were not conducted at varying times. This is supported by the following drill dates and times: 1stQ - 2-25-16 - 06:00, 2ndQ - 4-21-16 - 06:00, 3rdQ - 7-29-16 - 06:15, 4thQ - 12-31-16 - 05:30.

Chapter: Environment of Care

Program: Critical Access Hospital Accreditation

Standard: EC.02.03.05

Standard Text: The critical access hospital maintains fire safety equipment and fire safety building features.
Note: This standard does not require critical access hospitals to have the types of fire safety equipment and building features described below. However, if these types of equipment or features exist within the building, then the following maintenance, testing, and inspection requirements apply.

Element(s) of Performance:

2. Every 6 months, the critical access hospital tests vane-type and pressure-type water flow devices and valve tamper switches on the inventory. The results and completion dates are documented.
Note 1: For additional guidance on performing tests, see NFPA 72 -2010: Table 14.4.5.
Note 2: Mechanical water-flow devices (including, but not limited to, water motor gongs) should be tested quarterly. The results and completion dates are documented. (For full text, refer to NFPA 25-2011: Table 5.1.1.2)

Likelihood to Cause Harm: **Low**
Scope : **Pattern**

Observation(s):

EP 2
§485.623(d)(1) - (C-0231) - (1) Except as otherwise provided in this section, the CAH must meet the applicable provisions of the 2000 edition of the Life Safety Code of the National Fire Protection Association. The Director of the Office of the Federal Register has approved the NFPA 101 2000 edition of the Life Safety Code, issued January 14, 2000, for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. A copy of the Code is available for inspection at the CMS Information Resource Center, 7500 Security Boulevard, Baltimore, MD and at the Office of the Federal Register, 800 North Capital Street NW, Suite 700, Washington, DC. Copies may be obtained from the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269. If any changes in this edition of the Code are incorporated by reference, CMS will publish notice in the Federal Register to announce the changes. Chapter 19.3.6.3.2, exception number 2 of the adopted edition of the Life Safety Code does not apply to a CAH.
This Standard is NOT MET as evidenced by:

Observed in Document Review at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
During the document review it was observed that the annual testing performed in September 2016 indicated that 8 water flow devices were tested. The quarterly testing though out 2016 occurring in March, June, September and December only had testing results for 4 devices. The organization was not sure as to the total device count and as to which devices were possibly missed during the quarterly testing.

Chapter: Environment of Care
Program: Critical Access Hospital Accreditation
Standard: EC.02.04.03
Standard Text: The critical access hospital inspects, tests, and maintains medical equipment.

Element(s) of Performance:

3. The critical access hospital inspects, tests, and maintains non-high-risk equipment identified on the medical equipment inventory. These activities are documented.
Note: Scheduled maintenance activities for non-high-risk medical equipment in an alternative equipment maintenance (AEM) program inventory are to be completed at 100%. AEM frequency is determined by the hospital's AEM program.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

17. The critical access hospital maintains the quality of the diagnostic computed tomography (CT), positron emission tomography (PET), magnetic resonance imaging (MRI), and nuclear medicine (NM) images produced.

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

Observation(s):

EP 3
§485.623(b)(1) - (C-0222) - (1) All essential mechanical, electrical, and patient-care equipment is maintained in safe operating condition;
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
The hydrocollator used in the physical therapy department was not being cleaned every two weeks according to the manufactures instructions for use. It was being cleaned once a month.

EP 17

Observed in Individual Tracer at (16931 Rankin Avenue, Dunlap, TN) site.
In 11 of 35 daily quality control checks of the CAT SCAN, were out of compliance. The daily water phantom check should be +/- 5 and has an upper limit of +/- 7. According to the manufacturers guidelines if the upper limit exceeds 7 for three days in a row or 3 days out of 7, maintenance should be contacted. The upper limits was recorded about 7 on the following dates: 12/28 7.15, 12/29 7.16, 1/6 7.07, 1/9 7.33, 1/13 7.37, 1/15 7.03, 1/21 7.17, 1/23 7.02, 1/25 7.05, 1/27 7.24, 1/29 7.08.

Chapter:	Environment of Care
Program:	Critical Access Hospital Accreditation
Standard:	EC.02.05.01
Standard Text:	The critical access hospital manages risks associated with its utility systems.

Element(s) of Performance:

8. The critical access hospital labels utility system controls to facilitate partial or complete emergency shutdowns.
Note 1: Examples of utility system controls that should be labeled are utility source valves, utility system main switches and valves, and individual circuits in an electrical distribution panel.
Note 2: For example, the fire alarm system's circuit is clearly labeled as Fire Alarm Circuit; the disconnect method (that is, the circuit breaker) is marked in red; and access is restricted to authorized personnel. Information regarding the dedicated branch circuit for the fire alarm panel is located in the control unit. For additional guidance, see NFPA 101-2012: 18/19.3.4.1; 9.6.1.3; NFPA 72-2010: 10.5.5.2.

Likelihood to Cause Harm: **Low**
Scope : **Pattern**

Observation(s):

EP 8

Observed in Building Tour at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
In 3 of 5 electrical panel checks, it was observed that the electrical panels did not have a properly labeled schedules to facilitate partial or complete emergency shutdowns. This was identified in the following locations: Electrical panel C breaker 10 was in the "closed" position and no description on the panel schedule, Electrical panel C-1A breaker 5 was in the "closed" position without description in the panel schedule, and Electrical panel Z breakers 6 & 8 were in the "closed" position with no description in the panel schedule. The staff at the time of survey, did not know what, if anything the "closed" breakers were providing power to.

Observed in Building Tour at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
During the building tour it was identified that the electrical breaker for the main fire panel was not identified in red as required by NFPA 72.

Chapter: Environment of Care

Program: Critical Access Hospital Accreditation

Standard: EC.02.05.05

Standard Text: The critical access hospital inspects, tests, and maintains utility systems.
Note: At times, maintenance is performed by an external service. In these cases, critical access hospitals are not required to possess maintenance documentation but must have access to such documentation during survey and as needed.

Element(s) of Performance:

6. The critical access hospital inspects, tests, and maintains the following: Non-high-risk utility system components on the inventory. The completion date and the results of the activities are documented.
Note: Scheduled maintenance activities for non-high-risk utility systems components in an alternative equipment maintenance (AEM) program inventory may be deferred as defined by organization policy, provided the completion rate is not less than 90%.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 6
§485.623(b)(1) - (C-0222) - (1) All essential mechanical, electrical, and patient-care equipment is maintained in safe operating condition;
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
During the building tour it was identified in the penthouse mechanical room #1 there was a junction box that was missing the cover so high voltage wires were exposed.

Chapter: Environment of Care

Program: Critical Access Hospital Accreditation

Standard: EC.02.05.09

Standard Text: The critical access hospital inspects, tests, and maintains medical gas and vacuum systems.
Note: This standard does not require critical access hospitals to have the medical gas and vacuum systems discussed below. However, if a critical access hospital has these types of systems, then the following inspection, testing, and maintenance requirements apply.

Element(s) of Performance:

5. The critical access hospital makes main supply valves and area shutoff valves for piped medical gas and vacuum systems accessible and clearly identifies what the valves control.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 5
§485.623(b)(1) - (C-0222) - (1) All essential mechanical, electrical, and patient-care equipment is maintained in safe operating condition;
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
During the building tour it was observed that the source valve at the bulk oxygen storage tank was not properly labeled as required by NFPA 99. The type of utility, where it supplies the utility and to not close unless an emergency is required to be listed on the label.

Chapter: Leadership

Program: Critical Access Hospital Accreditation

Standard: LD.04.03.09

Standard Text: Care, treatment, and services provided through contractual agreement are provided safely and effectively.

Element(s) of Performance:

6. Leaders monitor contracted services by evaluating these services in relation to the critical access hospital's expectations.

Likelihood to Cause Harm: Moderate
Scope : Limited

Observation(s):

EP 6
§485.635(c)(4)(ii) - (C-0292) - (ii) Ensuring that a contractor of services (including one for shared services and joint ventures) furnishes services that enable the CAH to comply with all applicable conditions of participation and standards for the contracted services.
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
In 1 of 3 contracts reviewed, there was no documentation to support that the clinical expectations that were established in the state mobile crisis contract were being monitored by the hospital.

Chapter: Life Safety

Program: Critical Access Hospital Accreditation

Standard: LS.02.01.10

Standard Text: Building and fire protection features are designed and maintained to minimize the effects of fire, smoke, and heat.

Element(s) of Performance:

10. The space around pipes, conduits, bus ducts, cables, wires, air ducts, or pneumatic tubes penetrating the walls or floors are protected with an approved fire-rated material.
Note: Polyurethane expanding foam is not an accepted fire-rated material for this purpose. (For full text, refer to NFPA 101-2012: 8.3.5)

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 10
§485.623(d)(1) - (C-0231) - (1) Except as otherwise provided in this section, the CAH must meet the applicable provisions of the 2000 edition of the Life Safety Code of the National Fire Protection Association. The Director of the Office of the Federal Register has approved the NFPA 101 2000 edition of the Life Safety Code, issued January 14, 2000, for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. A copy of the Code is available for inspection at the CMS Information Resource Center, 7500 Security Boulevard, Baltimore, MD and at the Office of the Federal Register, 800 North Capital Street NW, Suite 700, Washington, DC. Copies may be obtained from the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269. If any changes in this edition of the Code are incorporated by reference, CMS will publish notice in the Federal Register to announce the changes. Chapter 19.3.6.3.2, exception number 2 of the adopted edition of the Life Safety Code does not apply to a CAH.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
In 1 of 6 fire barrier wall checks, it was observed that the fire barrier wall had penetration present. This was identified in the following locations: Communication Room in the penthouse had improperly sealed conduit penetrations.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Chapter: Life Safety

Program: Critical Access Hospital Accreditation

Standard: LS.02.01.35

Standard Text: The critical access hospital provides and maintains systems for extinguishing fires.

Element(s) of Performance:

4. Piping for approved automatic sprinkler systems is not used to support any other item. (For full text, refer to NFPA 25-2011: 5.2.2.2)

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 4
§485.623(d)(1) - (C-0231) - (1) Except as otherwise provided in this section, the CAH must meet the applicable provisions of the 2000 edition of the Life Safety Code of the National Fire Protection Association. The Director of the Office of the Federal Register has approved the NFPA 101 2000 edition of the Life Safety Code, issued January 14, 2000, for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. A copy of the Code is available for inspection at the CMS Information Resource Center, 7500 Security Boulevard, Baltimore, MD and at the Office of the Federal Register, 800 North Capital Street NW, Suite 700, Washington, DC. Copies may be obtained from the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269. If any changes in this edition of the Code are incorporated by reference, CMS will publish notice in the Federal Register to announce the changes. Chapter 19.3.6.3.2, exception number 2 of the adopted edition of the Life Safety Code does not apply to a CAH.
This Standard is NOT MET as evidenced by:

Observed in Building Tour at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
In 1 of 7 above ceiling checks, it was observed that the sprinkler piping was supporting other items. This was identified in the following locations: In the hallway outside the case managers office.

This finding was observed during survey activity, but corrected onsite prior to the surveyor's departure.

Chapter: Medication Management

Program: Critical Access Hospital Accreditation

Standard: MM.03.01.01

Standard Text: The critical access hospital safely stores medications.

Element(s) of Performance:

3. The critical access hospital stores all medications and biologicals, including controlled (scheduled) medications, in a secured area to prevent diversion, and locked when necessary, in accordance with law and regulation.
Note 1: Scheduled medications include those listed in Schedules II–V of the Comprehensive Drug Abuse Prevention and Control Act of 1970.
Note 2: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 3
§485.635(a)(3)(iv) - (C-0276) - (iv) Rules for the storage, handling, dispensation, and administration of drugs and biologicals. These rules must provide that there is a drug storage area that is administered in accordance with accepted professional principles, that current and accurate records are kept of the receipt and disposition of all scheduled drugs, and that outdated, mislabeled, or otherwise unusable drugs are not available for patient use.
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (121 Wheelertown, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
The medication cabinet storing Lidocaine and Lidocaine with epinephrine was found unlocked.

Chapter: Medication Management

Program: Critical Access Hospital Accreditation

Standard: MM.03.01.03

Standard Text: The critical access hospital safely manages emergency medications.

Element(s) of Performance:

2. Emergency medications and their associated supplies are readily accessible in patient care areas. (See also PC.03.01.01, EP 8)

Likelihood to Cause Harm: Low
Scope : Pattern

Observation(s):

EP 2
§485.618(b) - (C-0202) - §485.618(b) Standard: Equipment, Supplies, and Medication

Equipment, supplies, and medication used in treating emergency cases are kept at the CAH and are readily available for treating emergency cases. The items available must include the following:
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
There is no malignant hyperthermia kit available for use in the emergency department where rapid sequence intubation may take place.

Observed in Individual Tracer at (16931 Rankin Avenue, Dunlap, TN) site for the Critical Access Hospital – Acute deemed service.
There is no malignant hyperthermia kit available for use in the emergency department where rapid sequence intubation may take place.

Chapter: Medication Management

Program: Critical Access Hospital Accreditation

Standard: MM.05.01.01

Standard Text: A pharmacist reviews the appropriateness of all medication orders for medications to be dispensed in the critical access hospital.

Element(s) of Performance:

11. After the medication order has been reviewed, all concerns, issues, or questions are clarified with the individual prescriber before dispensing.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 11

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site.
The patient had orders for both Flexeril & Levsin PRN muscle spasms without any direction to nursing on how or in which order to administer these medications. This would constitute a therapeutic duplication. Upon staff interview it was determined that a transcription error left off the indications for bladder spasms for the Levsin however this was not clarified until during survey.

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site.
The patient had orders for a loading dose of Vancomycin then every 24 hour dosing. The first dose after the loading dose was administered 12 hours after and not 24 hours as the order indicated. Vancomycin is dosed per pharmacy protocol and in a interview with the pharmacist it was determined that the patient received the appropriate dose of Vancomycin however the order was not updated to the new administration time of 1100 (12 hours after the loading dose).

Chapter: Medication Management

Program: Critical Access Hospital Accreditation

Standard: MM.05.01.11

Standard Text: The critical access hospital safely dispenses medications.

Element(s) of Performance:

2. The critical access hospital dispenses medications and maintains records in accordance with law and regulation, licensure, and professional standards of practice.
Note 1: Dispensing practices and recordkeeping include antidiversion strategies.
Note 2: This element of performance is also applicable to sample medications.

Likelihood to Cause Harm: **Moderate**
Scope : **Limited**

Observation(s):

EP 2
§485.635(a)(3)(iv) - (C-0276) - (iv) Rules for the storage, handling, dispensation, and administration of drugs and biologicals. These rules must provide that there is a drug storage area that is administered in accordance with accepted professional principles, that current and accurate records are kept of the receipt and disposition of all scheduled drugs, and that outdated, mislabeled, or otherwise unusable drugs are not available for patient use.
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (16931 Rankin Avenue, Dunlap, TN) site for the Critical Access Hospital – Acute deemed service.
The waste of 25 mg of Ketamine on 2/13/17 was not recorded in the Omni Cell as required by hospital policy.

Chapter: National Patient Safety Goals

Program: Critical Access Hospital Accreditation

Standard: NPSG.03.05.01

Standard Text: Reduce the likelihood of patient harm associated with the use of anticoagulant therapy.
Note: This requirement applies only to critical access hospitals that provide anticoagulant therapy and/or long-term anticoagulation prophylaxis (for example, atrial fibrillation) where the clinical expectation is that the patient's laboratory values for coagulation will remain outside normal values. This requirement does not apply to routine situations in which short-term prophylactic anticoagulation is used for venous thrombo-embolism prevention (for example, related to procedures or hospitalization) and the clinical expectation is that the patient's laboratory values for coagulation will remain within (or close to) normal values.

Element(s) of Performance:

6. A written policy addresses baseline and ongoing laboratory tests that are required for anticoagulants.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

7. Provide education regarding anticoagulant therapy to prescribers, staff, patients, and families. Patient/family education includes the following:
- The importance of follow-up monitoring
- Compliance
- Drug-food interactions
- The potential for adverse drug reactions and interactions

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 6

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site.
The organization did not have a written policy that addresses baseline and ongoing laboratory tests that are required for anticoagulants.

EP 7

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site.
There was no documentation to support that a patient who was placed on long term warfarin therapy had been educated about the medication.

Chapter: National Patient Safety Goals

Program: Critical Access Hospital Accreditation

Standard: NPSG.03.06.01

Standard Text: Maintain and communicate accurate patient medication information.

Element(s) of Performance:

3. Compare the medication information the patient brought to the critical access hospital with the medications ordered for the patient by the critical access hospital in order to identify and resolve discrepancies.
Note: Discrepancies include omissions, duplications, contraindications, unclear information, and changes. A qualified individual, identified by the critical access hospital, does the comparison. (See also HR.01.06.01, EP 1)

Likelihood to Cause Harm: **Moderate**
Scope : **Pattern**

4. Provide the patient (or family as needed) with written information on the medications the patient should be taking when he or she is discharged from the critical access hospital or at the end of an outpatient encounter (for example, name, dose, route, frequency, purpose).
Note: When the only additional medications prescribed are for a short duration, the medication information the critical access hospital provides may include only those medications. For more information about communications to other providers of care when the patient is discharged or transferred, refer to Standard PC.04.02.01.

Likelihood to Cause Harm: **Moderate**
Scope : **Limited**

Observation(s):

EP 3

Observed in Tracer Visit at (16931 Rankin Avenue, Dunlap, TN) site.
In 4 of 5 patient records reviewed, there was no documentation to support that the ED physician reviewed the patients home medications before discharge. The patients medication reconciliation form was not complete per the Medication Reconciliation policy to include checking the box for continue of discontinue and signing the form to attest that they were reviewed.

EP 4

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site.
The patient was not provided with a complete list of discharge medication upon discharge from the hospital. The physician only reviewed two of three pages of home medications so the patient was not provided with the third page of medication.

Chapter: Provision of Care, Treatment, and Services

Program: Critical Access Hospital Accreditation

Standard: PC.01.02.01

Standard Text: The critical access hospital assesses and reassesses its patients.

Element(s) of Performance:

1. The critical access hospital defines, in writing, the scope and content of screening, assessment, and reassessment information it collects. (See also RC.02.01.01, EP 2)
Note: In defining the scope and content of the information it collects, the organization may want to consider information that it can obtain, with the patient's consent, from the patient's family and the patient's other care providers, as well as information conveyed on any medical jewelry.

Likelihood to Cause Harm: **Moderate**
Scope : **Limited**

Observation(s):

EP 1

Observed in Individual Tracer at (16931 Rankin Avenue, Dunlap, TN) site for the Critical Access Hospital – Acute deemed service.
Capnography was not used to monitor a patient who received moderate sedation in the ED, as required by the policy "Procedural Sedation/Analgesia by Non-Anesthesiologist Physicians".

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
In 1 of 5 patient records reviewed, the history and physical did not contain all of the required components required by the bylaws, specifically mental status and psychosocial review.

Chapter: Provision of Care, Treatment, and Services

Program: Critical Access Hospital Accreditation

Standard: PC.04.01.05

Standard Text: Before the critical access hospital discharges or transfers a patient, it informs and educates the patient about his or her follow-up care, treatment, and services.

Element(s) of Performance:

7. The critical access hospital educates the patient, and also the patient's family when it is involved in decision making or ongoing care, about how to obtain any continuing care, treatment, and services that the patient will need.

Likelihood to Cause Harm: **Low**
Scope : **Limited**

Observation(s):

EP 7

Observed in Individual Tracer at (16931 Rankin Avenue, Dunlap, TN) site.
There was no documentation to support that the patient had been educated about the moderate sedation they received before they were discharged.

Chapter: Record of Care, Treatment, and Services

Program: Critical Access Hospital Accreditation

Standard: RC.01.01.01

Standard Text: The critical access hospital maintains complete and accurate medical records for each individual patient.

Element(s) of Performance:

11. All entries in the medical record are dated.

Likelihood to Cause Harm: Low
Scope : Limited

Observation(s):

EP 11
§485.638(a)(4)(iv) - (C-0307) - (iv) Dated signatures of the doctor of medicine or osteopathy or other health care professional.
This Standard is NOT MET as evidenced by:

Observed in Individual Tracer at (71 Wheelertown Avenue, Pikeville, TN) site for the Critical Access Hospital – Acute deemed service.
In 1 of 30 progress notes reviewed, was not dated.

Chapter: Rights and Responsibilities of the Individual

Program: Critical Access Hospital Accreditation

Standard: RI.01.01.03

Standard Text: The critical access hospital respects the patient's right to receive information in a manner he or she understands.

Element(s) of Performance:

Supplemental #1
March 16, 2018
10:36 A.M.

1. The critical access hospital provides information in a manner tailored to the patient's age, language, and ability to understand. (See also RI.01.01.01, EPs 2 and 5; PC.04.01.05, EP 8)

Likelihood to Cause Harm: **Low**
Scope : **Pattern**

Observation(s):

EP 1

Observed in Record Review at (71 Wheelertown Avenue, Pikeville, TN) site.
In 3 of 3 patient records reviewed, the discharge medication list provided to the patient used medical abbreviations such as PO, BID, qHS which the patient would not understand.

Supplemental #2 (Copy)

Chattanooga-Hamilton Co Hospital Authority d/b/a Erlanger Medical Center

CN1802-011

MAR 27 '18 10:19

Supplemental #2
March 27, 2018
10:19 am

SUPPLEMENTAL INFORMATION *(No. 2)*

Chattanooga-Hamilton County Hospital Authority

D / B / A

Erlanger Medical Center - Provider Based ED / Trauma Center & Cardiac Catheterization Laboratory

Application To Initiate A

Provider Based (Free Standing) Emergency Department,

Cardiac Catheterization Laboratory

As

Erlanger Medical Center - Provider Based ED / Trauma Center & Cardiac Catheterization Laboratory

(Cleveland, Bradley County, TN)

Application Number CN1802-011

ERLANGER HEALTH SYSTEM
Chattanooga, Tennessee

Supplemental Responses To Questions Of The Tennessee Health Services & Development Agency

1.) Section B, Need, Item 1 (Project Specific Criteria - Freestanding ED.

A. Capacity Challenges: Wait Times and Visits Per Treatment Room

Data:

1. Wait Times

The following table that demonstrates wait times in the proposed service area and need for each existing ED facility in the proposed service area is noted. However, please use the median measures rather than the high measures for the Tennessee Average and National Average and submit.

Wait Times at Existing ED Facilities in the Proposed Service Area

Measure	Emergency Department	Year(s)	ED Time	Tennessee Average	National Average
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					

Data Source:

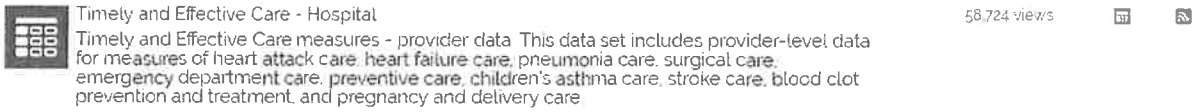
Centers for Medicare and Medicaid Services (CMS)

https://data.medicare.gov/data/hospital-compare

Directions for Accessing Data:
The above measures are found in the category "Timely and Effective Care – Hospital" within the Hospital Compare website, link above.

i. From the homepage select "Time & Effective Care" in the dropdown menu next to "in category".

ii. Select "Timely and Effective Care – Hospital".



iii. Use the top bar to filter the results by State, ZIP Code, County Name, and Measure ID, and/or Measure Name. Use the scroll bar at the bottom of the page to access Measure ID and Measure Name.

Note: Data provided on the CMS Hospital Compare website does have a three to six month lag. In order to account for this delay, applicants may supplement CMS data with other more timely data.

Response

As requested, the table has been revised using median times for the Tennessee and U.S. averages.

Indicator	Description	Year	Erlanger Med. Ctr.	Tennova - Cleveland	State Of Tennessee	U. S.
ED-1	Median Time From ED Arrival To ED Departure For Admitted Patients	2016	327 min.	401 min.	251 min.	282 min.
ED-2	Median Time From Admit Decision To ED Departure For Admitted Patients	2016	190 min.	206 min.	81 min.	102 min.
OP-18	Median Time From ED Arrival To ED Departure For Discharged ED Patients	2016	138 min.	207 min.	132 min.	138 min.
OP-20	Door To Diagnostic Evaluation By A Qualified Medical Professional	2016	29 min.	19 min.	17 min.	20 min.
OP-22	ED Patient Left Without Being Seen	2016	2%	5%	2%	2%

It would normally be expected that *Erlanger Medical Center* should have longer wait times due to being a Level I

trauma center, and also with *Children's Hospital @ Erlanger* being the state designated *Regional Pediatric Center.*

Data:

2. **Visits Per Treatment Room**

The following table that provides data on the number of visits per treatment room per year for each of the existing ED facilities in the service area is noted. However, for the last column (ACEP-Low to High Range) please also include both the low and high range # of rooms.

Visits Per Treatment Room in Existing ED Facilities in the Proposed Service Area

Emergency Department	Year(s)	Total Visits	# of Rooms	# of Visits/Room	ACEP-Low to High Range

Data Source:
Hospital Joint Annual Report, Search site

https://apps.health.tn.gov/PublicJARS/Default.aspx

American College of Emergency Physicians (ACEP), Emergency Department Design – A Practical Guide to Planning for the Future, Second Edition, pages 116-117.

Response

As requested, the table has been revised to show the low to high range number of visits and rooms.

Visits Per Treatment Room In Existing ED Facilities In The Proposed Service Area

Emergency Department	Year(s)	Total Visits	No. Of Rooms	No. Of Visits Per Room	ACEP - Low To High Range No. Of Visits	ACEP - Low To High Range No. Of Rooms
Tennova	2014	49,791	42	1,186	1,613 - 1,250	31 - 40
Healthcare -	2015	50,533	42	1,203	1,613 - 1,250	31 - 40
Cleveland	2016	48,501	42	1,155	1,613 - 1,250	31 - 40

2.) Section B, Need, Item 1 (Project Specific Criteria - Freestanding ED) - 2. Expansion Of Existing Emergency Department Facility.

It appears that in Table 12 on page 29, the applicant has provided the bed quantity standards from the ACEP Guidelines. Please provide the host hospitals' actual number of ED beds, Visits/Bed, and Estimated Area/Bed and compare that to the ACEP Guidelines.

Response

To clarify, the number of ED beds which applicant listed in this table were the actual number of ED beds at each of the locations listed. This was not the bed quantity standards from the ACEP guidelines.

However, in reviewing this supplemental question, applicant noted an error on the table in supplemental number one (1). The number of ED beds shown for Erlanger Medical Center was listed as 34, the correct number is 38. For this reason, a revised table appears below.

Host Hospital ED Visits Per Treatment Room

Emergency Department Design: A Practical Guide To Planning, American College Of Emergency Physician - Estimates For Emergency Department Areas & Beds

			========== Bed Quantities ==========		
Most Recent Year Annual Visits (2017)	Dept. Gross Area (Sq. Feet)	Low, Medium Or High Range Factor	Low, Medium Or High Range Bed Quantity	Low, Medium Or High Range Visits / Bed	Estimated Area / Bed
49,815	22,632	Medium (Mid-Range)	38	1,311	596
40,993	13,591	Medium (Mid-Range)	33	1,242	412
34,799	23,535	Medium (Mid-Range)	17	2,047	1,384

As requested in this supplemental question, a comparison of the actual beds for each location to the ACEP guidelines reveals the following results.

Host Hospital ED Visits Per Treatment Room
Compared To ACEP Guidelines

	Most Recent Year Annual Visits (2017)	Dept. Gross Area (Sq. Feet)	ED Bed Quantity	ED Visits / Bed	Est. Area / Bed	======== ACEP Recommended ======= Bed Quantity	Visits / Bed	Area / Bed
Erlanger Medical Center ED	49,815	22,632	38	1,311	596	31	1,607	800
Children's @ Erlanger ED	40,993	13,591	33	1,242	412	25	1,600	800
Erlanger East ED	34,799	23,535	17	2,047	1,384	23	1,522	800

This table evidences the fact that *Erlanger Medical Center* has 204 SF per ED bed less than the ACEP recommendation and *Children's Hospital @ Erlanger* has 338 SF per bed less than the ACEP recommendation. Although *Erlanger East Hospital* has 584 SF per ED bed more than the

ACEP recommendation, it is also over utilized by 525 visits per ED bed more than the ACEP recommendation. Further, it would normally be expected that *Erlanger Medical Center* should have longer wait times due to being a Level I trauma center, and also with *Children's Hospital @ Erlanger* being the state designated *Regional Pediatric Center*.

3.) Section B, Need, Item 1 (Project Specific Criteria - Freestanding ED) - 4. Host Hospital Emergency Department Quality Of Care.

The table on the bottom of page 37 is noted. However, please clarify if the double XXs in the table represent both Erlanger's Main Emergency and Children's ED.

Response

The table referenced in this supplemental question includes *Erlanger Medical Center*, *Children's Hospital @ Erlanger*, and *Erlanger East Hospital*. Since all of these hospitals operate under a single Medicare provider number, this is how the data is required to be reported to CMS.

4.) Section B, Need, Item 1 (Project Specific Criteria - Freestanding ED) - 8. Services To High Need Populations.

The table in the middle of page 41 is noted. However, please clarify why there is no designation in the medically Indigent/free category. In addition, please clarify what represents the "other" category in the table.

Response

For clarity, a patient is typically determined to be "medically indigent/free care" after applications have been submitted and denied from various payor organizations, such as TennCare, CoverTN, and other governmental and/or private payors. This process could take between 90-120 days or more, to make such a determination, and then the hospital business office will classify the account as "medically indigent/free care". Therefore, depending on the program

to which an application has been made, the financial class for a patient would usually be designated as "TennCare Pending" or "Self Pay". As such, the timing of the determination of true indigent status is, generally speaking, beyond the window of time that the hospital has in order to submit it's quarterly data to HDDS. This is the reason that the note was added to this table indicating that "Medically Indigent/Free care for Erlanger is in the Self Pay category".

The "other" category in the table is miscellaneous governmental payor programs which would include Champus (for military families), prisoners, etc.

5.) Section C, 1 - Need (Specific Criteria - Therapeutic Cardiac Catheterization) Item 14.

The following chart is noted. However, Year One total cases total 250 cases rather than 260. Please correct and revise the following chart.

	Diagnostic Cases	Interventional Cases	Total Cases
Year One			
Year Two			
Year Three			
Year Four			
Year Five			

Response

As requested, the chart has been revised and appears below.

	Diagnostic Cases	Interventional Cases	Total Cases
Year One	65	185	250
Year Two	104	312	416
Year Three	107	321	428
Year Four	110	331	441
Year Five	113	341	454

6.) Section B, Economic Feasibilty, Items 3 and 4. Historical Data Chart and Projected Data Chart.

There appear to be a calculation error in 2015 line E. (Earnings before Interest Taxes and Depreciation) that totals $74,589,035 in the 2015 Historical Data Chart.

Response

The *Historical Data Chart* has been corrected and replacement pages 92-R and 93-R are attached to this supplemental information.

7.) Section B, Economic Feasibility, Item 6.B.

The Net Operating Margin is noted. However, please re-verify the Net Operating Margin Ratio calculation from the Project's Projected Data Chart and submit a revised page 104 labeled as 104R if necessary.

Response

The error pertaining to net operating margin has been corrected, and a replacement page 104-R is attached to this supplemental information.

8.) Section B, Orderly Development, Item 3.C.

It appears Erlanger Behavioral Health was referenced incorrectly in the last sentence of the first paragraph on page 113. Please clarify and submit a replacement page 113 if necessary.

Response

Erlanger Behavioral Health mentioned on page 113 of the CON application, as noted in this supplemental question, was not referenced incorrectly. *Erlanger Health System* is a co-owner of *Erlanger Behavioral Health* and as such, we expect that this joint venture will also undertake the teaching mission of *Erlanger Health System* with the establishment of behavioral health training programs with our affiliated colleges and schools.

Erlanger Health System views *Erlanger Behavioral Health* as part of our integrated "system of care" for the regional service area. For this reason, we mentioned *Erlanger Behavioral Health* as being part of our teaching mission and system of care.

Supplemental #2
March 27, 2018
10:19 am

AFFIDAVIT

STATE OF TENNESSEE

COUNTY OF HAMILTON

CN 1802-011

NAME OF FACILITY: Erlanger Medical Center - Satellite Emergency Dept in Cleveland, Bradley Co, TN

I, Joseph 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/Title Lead Executive

Sworn to and subscribed before me, a Notary Public, this the 26 day of March, 2018, witness my hand at office in the County of Hamilton, State of Tennessee.

Shelia Hall
NOTARY PUBLIC

My commission expires June 9, 2018.

SHELIA HALL
STATE OF TENNESSEE NOTARY PUBLIC
HAMILTON COUNTY

HF-0043

Revised 7/02

Supplemental #2
March 27, 2018
10:19 am

TABLE OF ATTACHMENTS

Supplemental #2
March 27, 2018
10:19 am

Description	Section / Item
Tennessee Emergency Department Averages	
U. S. Emergency Department Averages	
CON Replacement Pages	

Supplemental #2
March 27, 2018
10:19 am

ATTACHMENTS

State of Tennessee → Averages

Data.Medicare.gov

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Based on Timely and Effective Care - State

Timely and Effective Care measures - state data. This data set includes state-level data for measures of heart attack care, heart failure care, pneumonia

Find in this Dataset

Manage More Views Filter Visualize Export Embed About

	State	Condition	Measure Name	Measure ID	Score	Footnote	Measure Start Date
1	TN	Emergency Department	* Average (median) time patients spent in the emergency department,	ED_1b	251	20 - State and national averages do not include VHA ho	04/01/2016
2	TN	Emergency Department	Average time patients spent in the emergency department, before the	ED_1b_HIGH_MIN	272	20 - State and national averages do not include VHA ho	04/01/2016
3	TN	Emergency Department	Average time patients spent in the emergency department, before the	ED_1b_LOW_MIN	200	20 - State and national averages do not include VHA ho	04/01/2016
4	TN	Emergency Department	Average time patients spent in the emergency department, before the	ED_1b_MEDIUM_MIN	229	20 - State and national averages do not include VHA ho	04/01/2016
5	TN	Emergency Department	Average time patients spent in the emergency department, before the	ED_1b_OVERALL_MIN	258	20 - State and national averages do not include VHA ho	04/01/2016
6	TN	Emergency Department	Average time patients spent in the emergency department, before the	ED_1b_VERY_HIGH_M	330	20 - State and national averages do not include VHA ho	04/01/2016
7	TN	Emergency Department	* Average (median) time patients spent in the emergency department,	ED_2b	81	20 - State and national averages do not include VHA ho	04/01/2016
8	TN	Emergency Department	Average time patients spent in the emergency department, after the c	ED_2b_HIGH_MIN	95	20 - State and national averages do not include VHA ho	04/01/2016
9	TN	Emergency Department	Average time patients spent in the emergency department, after the c	ED_2b_LOW_MIN	54	20 - State and national averages do not include VHA ho	04/01/2016
10	TN	Emergency Department	Average time patients spent in the emergency department, after the c	ED_2b_MEDIUM_MIN	67	20 - State and national averages do not include VHA ho	04/01/2016
11	TN	Emergency Department	Average time patients spent in the emergency department, after the c	ED_2b_OVERALL_MIN	88	20 - State and national averages do not include VHA ho	04/01/2016
12	TN	Emergency Department	Average time patients spent in the emergency department, after the c	ED_2b_VERY_HIGH_M	136	20 - State and national averages do not include VHA ho	04/01/2016
13	TN	Emergency Department	* Average (median) time patients spent in the emergency department b	OP_18b	132	20 - State and national averages do not include VHA ho	04/01/2016
14	TN	Emergency Department	Average time patients spent in the emergency department before bei	OP_18b_HIGH_MIN	170	20 - State and national averages do not include VHA ho	04/01/2016
15	TN	Emergency Department	Average time patients spent in the emergency department before bei	OP_18b_LOW_MIN	113	20 - State and national averages do not include VHA ho	04/01/2016
16	TN	Emergency Department	Average time patients spent in the emergency department before bei	OP_18b_MEDIUM_MIN	130	20 - State and national averages do not include VHA ho	04/01/2016
17	TN	Emergency Department	Average time patients spent in the emergency department before bei	OP_18b_OVERALL_M	145	20 - State and national averages do not include VHA ho	04/01/2016
18	TN	Emergency Department	Average time patients spent in the emergency department before bei	OP_18b_VERY_HIGH_	166	20 - State and national averages do not include VHA ho	04/01/2016
19	TN	Emergency Department	* Average (median) time patients spent in the emergency department b	OP_20	17	20 - State and national averages do not include VHA ho	04/01/2016
20	TN	Emergency Department	Average time patients spent in the emergency department before the	OP_20_HIGH_MIN	19	20 - State and national averages do not include VHA ho	04/01/2016
21	TN	Emergency Department	Average time patients spent in the emergency department before the	OP_20_LOW_MIN	21	20 - State and national averages do not include VHA ho	04/01/2016
22	TN	Emergency Department	Average time patients spent in the emergency department before the	OP_20_MEDIUM_MIN	22	20 - State and national averages do not include VHA ho	04/01/2016
23	TN	Emergency Department	Average time patients spent in the emergency department before the	OP_20_OVERALL_MIN	22	20 - State and national averages do not include VHA ho	04/01/2016
24	TN	Emergency Department	Average time patients spent in the emergency department before the	OP_20_VERY_HIGH_M	26	20 - State and national averages do not include VHA ho	04/01/2016
25	TN	Emergency Department	Average (median) time patients who came to the emergency departm	OP_21	47	20 - State and national averages do not include VHA ho	04/01/2016
26	TN	Emergency Department	* Percentage of patients who left the emergency department before be	OP_22	2	20 - State and national averages do not include VHA ho	01/01/2016
27	TN	Emergency Department	Percentage of patients who came to the emergency department with	OP_23	74	20 - State and national averages do not include VHA ho	04/01/2016

Supplemental #2
March 27, 2018
10:19 am

United States → Averages

Data.Medicare.gov

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Based on Timely and Effective Care - National

Timely and Effective Care measures - national data. This data set includes national-level data for measures of heart attack care, heart failure care, ▸

Find in this Dataset

Manage More Views Filter Visualize Export Embed About

	Measure Name	Measure ID	Condition	Score	Footnote	Measure Start Date
* 1	Average (median) time patients spent in the emergency department	ED_1b	Emergency Department	282	20 - State and national averages do not include VHA hospital data.	04/01/2016
2	Average time patients spent in the emergency department, before th	ED_1b_HIGH_MIN	Emergency Department	297	20 - State and national averages do not include VHA hospital data.	04/01/2016
3	Average time patients spent in the emergency department, before th	ED_1b_LOW_MIN	Emergency Department	214	20 - State and national averages do not include VHA hospital data.	04/01/2016
4	Average time patients spent in the emergency department, before th	ED_1b_MEDIUM_MIN	Emergency Department	262	20 - State and national averages do not include VHA hospital data.	04/01/2016
5	Average time patients spent in the emergency department, before th	ED_1b_OVERALL_MIN	Emergency Department	277	20 - State and national averages do not include VHA hospital data.	04/01/2016
6	Average time patients spent in the emergency department, before th	ED_1b_VERY_HIGH_MIN	Emergency Department	336	20 - State and national averages do not include VHA hospital data.	04/01/2016
* 7	Average (median) time patients spent in the emergency department	ED_2b	Emergency Department	102	20 - State and national averages do not include VHA hospital data.	04/01/2016
8	Average time patients spent in the emergency department, after the	ED_2b_HIGH_MIN	Emergency Department	121	20 - State and national averages do not include VHA hospital data.	04/01/2016
9	Average time patients spent in the emergency department, after the	ED_2b_LOW_MIN	Emergency Department	58	20 - State and national averages do not include VHA hospital data.	04/01/2016
10	Average time patients spent in the emergency department, after the	ED_2b_MEDIUM_MIN	Emergency Department	91	20 - State and national averages do not include VHA hospital data.	04/01/2016
11	Average time patients spent in the emergency department, after the	ED_2b_OVERALL_MIN	Emergency Department	102	20 - State and national averages do not include VHA hospital data.	04/01/2016
12	Average time patients spent in the emergency department, after the	ED_2b_VERY_HIGH_MIN	Emergency Department	137	20 - State and national averages do not include VHA hospital data.	04/01/2016
* 13	Average (median) time patients spent in the emergency department	OP_18b	Emergency Department	138	20 - State and national averages do not include VHA hospital data.	04/01/2016
14	Average time patients spent in the emergency department before be	OP_18b_HIGH_MIN	Emergency Department	163	20 - State and national averages do not include VHA hospital data.	04/01/2016
15	Average time patients spent in the emergency department before be	OP_18b_LOW_MIN	Emergency Department	112	20 - State and national averages do not include VHA hospital data.	04/01/2016
16	Average time patients spent in the emergency department before be	OP_18b_MEDIUM_MIN	Emergency Department	143	20 - State and national averages do not include VHA hospital data.	04/01/2016
17	Average time patients spent in the emergency department before be	OP_18b_OVERALL_MIN	Emergency Department	148	20 - State and national averages do not include VHA hospital data.	04/01/2016
18	Average time patients spent in the emergency department before be	OP_18b_VERY_HIGH_MIN	Emergency Department	172	20 - State and national averages do not include VHA hospital data.	04/01/2016
* 19	Average (median) time patients spent in the emergency department	OP_20	Emergency Department	20	20 - State and national averages do not include VHA hospital data.	04/01/2016
20	Average time patients spent in the emergency department before th	OP_20_HIGH_MIN	Emergency Department	25	20 - State and national averages do not include VHA hospital data.	04/01/2016
21	Average time patients spent in the emergency department before th	OP_20_LOW_MIN	Emergency Department	18	20 - State and national averages do not include VHA hospital data.	04/01/2016
22	Average time patients spent in the emergency department before th	OP_20_MEDIUM_MIN	Emergency Department	22	20 - State and national averages do not include VHA hospital data.	04/01/2016
23	Average time patients spent in the emergency department before th	OP_20_OVERALL_MIN	Emergency Department	23	20 - State and national averages do not include VHA hospital data.	04/01/2016
24	Average time patients spent in the emergency department before th	OP_20_VERY_HIGH_MIN	Emergency Department	27	20 - State and national averages do not include VHA hospital data.	04/01/2016
25	Average (median) time patients who came to the emergency depart	OP_21	Emergency Department	49	20 - State and national averages do not include VHA hospital data.	04/01/2016
* 26	Percentage of patients who left the emergency department before b	OP_22	Emergency Department	2	20 - State and national averages do not include VHA hospital data.	01/01/2016
27	Percentage of patients who came to the emergency department wit	OP_23	Emergency Department	72	20 - State and national averages do not include VHA hospital data.	04/01/2016

Supplemental #2
March 27, 2018
10:19 am

Supplemental #3 (Copy)

Chattanooga-Hamilton Co Hospital Authority d/b/a Erlanger

CN1802-011

548

MAR 28 '18 AM 10:38

Supplemental #~~2~~ 3
March 28, 2018
10:12 am

SUPPLEMENTAL INFORMATION *(No. 3)*

Chattanooga-Hamilton County Hospital Authority

D / B / A

Erlanger Medical Center - Provider Based ED / Trauma Center & Cardiac Catheterization Laboratory

Application To Initiate A

Provider Based (Free Standing) Emergency Department,

Cardiac Catheterization Laboratory

As

Erlanger Medical Center - Provider Based ED / Trauma Center & Cardiac Catheterization Laboratory

(Cleveland, Bradley County, TN)

Application Number CN1802-011

ERLANGER HEALTH SYSTEM
Chattanooga, Tennessee

Supplemental #~~2~~3
March 28, 2018
10:12 am

Supplemental Responses To Questions Of The Tennessee Health Services & Development Agency

1.) **Section B, Need, Item 1 (Project Specific Criteria - Freestanding ED) - 2. Expansion Of Existing Emergency Department Facility.**

It appears that in the Host Hospital ED Visits per Treatment Room Compared to ACEP Guidelines table on page 5 of the Supplemental #2 response, the applicant has compared the statistics at the Erlanger facilities to the ACEP Recommended low range. Since the applicant has previously declared the Erlanger facilities in the mid-range it would be appropriate to adjust your response to the ACEP Recommended Guideline to a point mid-way between the low and high standard. For example, the low standard for beds is 31 while the high standard for beds is 40. It would be appropriate to adjust your response to a mid-range value of 35.5 rooms.

Response

In preparing the responses to the questions contained in supplemental number 2, applicant was unsure which bed quantity to use for comparison to ACEP guidelines because there is not a "Medium (Mid-Range)" bed quantity stipulated by the ACEP standard. As such, the low bed quantity was selected for each *Erlanger* facility because applicant did not want to make an assumption in this regard. However, as pointed out, it would seem appropriate to adjust the value to 35.5 rooms.

As requested, the table for *Host Hospital ED Visits Per Treatment Room Compared To ACEP Guidelines* has been revised and appears below.

Host Hospital ED Visits Per Treatment Room
Compared To ACEP Guidelines

	Most Recent Year Annual Visits (2017)	Dept. Gross Area (Sq. Feet)	ED Bed Quantity	ED Visits / Bed	Est. Area / Bed	======== ACEP Recommended ======= Bed Quantity	Visits / Bed	Area / Bed
Erlanger Medical Center ED	49,815	22,632	38	1,311	596	35.5	1,607	800
Children's @ Erlanger ED	40,993	13,591	33	1,242	412	35.5	1,600	800
Erlanger East ED	34,799	23,535	17	2,047	1,384	35.5	1,522	800

Erlanger Medical Center has 204 SF per ED bed less than the ACEP recommendation and *Children's Hospital @*

Erlanger has 338 SF per bed less than the ACEP recommendation. Although *Erlanger East Hospital* has 584 SF per ED bed more than the ACEP recommendation, it is also over utilized by 525 visits per ED bed more than the ACEP recommendation. Further, it would normally be expected that *Erlanger Medical Center* should have longer wait times due to being a Level I trauma center, and also with *Children's Hospital @ Erlanger* being the state designated *Regional Pediatric Center*.

Supplemental ~~#2~~ 3
March 28, 2018
10:12 am

A F F I D A V I T

STATE OF TENNESSEE |
|
COUNTY OF HAMILTON |

NAME OF FACILITY Erlanger Bradley County - Satellite Emergency Department

I, Martin S. McKay, 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.

Martin S. McKay
SIGNATURE

SWORN to and subscribed before me this 27 of March (Month), 2018 (Year), a Notary Public in and for the State of Tennessee, County of Hamilton.

Shelia Hall
NOTARY PUBLIC

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

SHELIA HALL
STATE OF TENNESSEE NOTARY PUBLIC
HAMILTON COUNTY

Supplemental #4 (Copy)

Chattanooga-Hamilton Co. Hospital Authority d/b/a Erlanger Medical Center

CN1802-011

MAR 29 '18 AM10:40

Supplemental #4
March 29, 2018
10:39 A.M.

SUPPLEMENTAL INFORMATION *(No. 4)*

Chattanooga-Hamilton County Hospital Authority

D / B / A

Erlanger Medical Center - Provider Based ED / Trauma Center & Cardiac Catheterization Laboratory

Application To Initiate A

Provider Based (Free Standing) Emergency Department,

Cardiac Catheterization Laboratory

As

Erlanger Medical Center - Provider Based ED / Trauma Center & Cardiac Catheterization Laboratory

(Cleveland, Bradley County, TN)

Application Number CN1802-011

ERLANGER HEALTH SYSTEM
Chattanooga, Tennessee

Supplemental #4
March 29, 2018
10:39 A.M.

Supplemental Responses To Questions Of The Tennessee Health Services & Development Agency

1.) **Section B, Need, Item 1 (Project Specific Criteria - Freestanding ED) - 2. Expansion Of Existing Emergency Department Facility.**

It appears that the interpolation of the ACEP recommended guidelines for mid-range estimates have been miscalculated.

For Erlanger Medical Center ED I calculate 35.5 bed quantity, 1,435 visits/bed, and 825 area/bed.

For Children's @ Erlanger ED I calculate 29 bed quantity, 1,406 visits/bed, and 838 area/bed.

For Erlanger East ED I calculate 26 bed quantity, 1,386 visits/bed, and 838 area/bed.

Please submit a revised "Host Hospital ED Visits Per Treatment Room Compared to ACEP Guidelines" table with the correct information.

Response

As requested in the question above, the ACEP recommendations have been revised by interpolating the mid-range values as being the mid-way point between the low and high range estimates for bed quantity, visits per bed and area per bed (square feet).

Host Hospital ED Visits Per Treatment Room Compared To ACEP Guidelines

	Most Recent Year Annual Visits (2017)	Dept. Gross Area (Sq. Feet)	ED Bed Quantity	ED Visits / Bed	Est. Area / Bed	======== ACEP Recommended ======= Bed Quantity	Visits / Bed	Area / Bed
Erlanger Medical Center ED	49,815	22,632	38	1,311	596	35.5	1,435	825
Children's @ Erlanger ED	40,993	13,591	33	1,242	412	29	1,406	838
Erlanger East ED	34,799	23,535	17	2,047	1,384	26	1,386	838

While *Erlanger Medical Center* ED utilization shows 124 visits per ED bed under itilized, it is noted that it has 229 SF per ED bed less than the ACEP recommendation. While *Children's Hospital @ Erlanger* utilization shows 164 visits per ED bed under utilized, it is noted that it has 426 SF per bed less than the ACEP recommendation. Although *Erlanger East Hospital* has 546 SF per ED bed more than the

ACEP recommendation, it is also over utilized by 661 visits per ED bed more than the ACEP recommendation. All of these conditions in each location have resulted in overcrowding *Erlanger's* ED's.

Further, it should be noted that *Erlanger Medical Center* is a Level I trauma center and also that *Children's Hospital @ Erlanger* is a designated *Regional Pediatric Center*. This specialization is not reflected in the ACEP recommended guidelines.

MAR 29 '18 AM 10:40

Supplemental #4
March 29, 2018
10:39 A.M.

A F F I D A V I T

STATE OF TENNESSEE |
|
COUNTY OF HAMILTON |

NAME OF FACILITY Erlanger Bradley County - Satellite Emergency Department

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 28 of March (Month), 2018 (Year), a Notary Public in and for the State of Tennessee, County of Hamilton.

Shelia Hall
NOTARY PUBLIC

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

SHELIA HALL
STATE OF TENNESSEE NOTARY PUBLIC
HAMILTON COUNTY

FEB 9 '18 AM 11:01

LETTER OF INTENT
TENNESSEE HEALTH SERVICES & DEVELOPMENT AGENCY

The Publication of Intent is to be published in the Cleveland Daily Banner, which is a newspaper of general circulation in Bradley County, Tennessee, on or before February 9, 2018, 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 Medical Center, owned by the Chattanooga-Hamilton County Hospital Authority D/B/A Erlanger Health System, 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 new provider based (satellite) emergency department, to include a cardiac catheterization laboratory for outpatient services. The ED will be designated as a Level IV trauma center, which will be part of the Erlanger Trauma Network. No other health care services will be initiated or discontinued.

The facility and equipment will be located at Erlanger Bradley County – Provider Based Emergency Department, located at an unaddressed site, otherwise described as 2.9 acres, at the southeast quadrant of Exit 20 northbound on U.S. Interstate 75, accessed via Cherokee Gateway Blvd., Cleveland, Bradley County, Tennessee, 37353. The total project cost is estimated to be $ 11,297,935.00.

The anticipated date of filing the application is February 14, 2018.

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

Joseph M. Winick	February 7, 2018 Date:	Joseph.Winick@erlanger.org E-Mail:

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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

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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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RULES
OF
HEALTH SERVICES AND DEVELOPMENT AGENCY

CHAPTER 0720-11
CERTIFICATE OF NEED PROGRAM – GENERAL CRITERIA

TABLE OF CONTENTS

0720-11-.01 General Criteria for Certificate of Need

0720-11-.01 GENERAL CRITERIA FOR CERTIFICATE OF NEED. The Agency will consider the following general criteria in determining whether an application for a certificate of need should be granted:

(1) Need. The health care needed in the area to be served may be evaluated upon the following factors:

(a) The relationship of the proposal to any existing applicable plans;

(b) The population served by the proposal;

(c) The existing or certified services or institutions in the area;

(d) The reasonableness of the service area;

(e) The special needs of the service area population, including the accessibility to consumers, particularly women, racial and ethnic minorities, TennCare participants, and low-income groups;

(f) Comparison of utilization/occupancy trends and services offered by other area providers;

(g) The extent to which Medicare, Medicaid, TennCare, medically indigent, charity care patients and low income patients will be served by the project. In determining whether this criteria is met, the Agency shall consider how the applicant has assessed that providers of services which will operate in conjunction with the project will also meet these needs.

(2) Economic Factors. The probability that the proposal can be economically accomplished and maintained may be evaluated upon the following factors:

(a) Whether adequate funds are available to the applicant to complete the project;

(b) The reasonableness of the proposed project costs;

(c) Anticipated revenue from the proposed project and the impact on existing patient charges;

(d) Participation in state/federal revenue programs;

(e) Alternatives considered; and

(f) The availability of less costly or more effective alternative methods of providing the benefits intended by the proposal.

(Rule 0720-11-.01, continued)

(3) Quality. Whether the proposal will provide health care that meets appropriate quality standards may be evaluated upon 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 regulation 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.

1. This may include accreditation by any organization approved by Centers for Medicare and Medicaid Services (CMS) and other nationally recognized programs. The Joint Commission or its successor, for example, would be acceptable if applicable. Other acceptable accrediting organizations may include, but are not limited to, the following:

(i) Those having the same accrediting standards as the licensed hospital of which it will be a department, for a Freestanding Emergency Department;

(ii) Accreditation Association for Ambulatory Health Care, and where applicable, American Association for Accreditation of Ambulatory Surgical Facilities, for Ambulatory Surgical Treatment Center projects;

(iii) Commission on Accreditation of Rehabilitation Facilities (CARF), for Comprehensive Inpatient Rehabilitation Services and Inpatient Psychiatric projects;

(iv) American Society of Therapeutic Radiation and Oncology (ASTRO), the American College of Radiology (ACR), the American College of Radiation Oncology (ACRO), National Cancer Institute (NCI), or a similar accrediting authority, for Megavoltage Radiation Therapy projects;

(v) American College of Radiology, for Positron Emission Tomography, Magnetic Resonance Imaging and Outpatient Diagnostic Center projects;

(Rule 0720-11-.01, continued)

(vi) Community Health Accreditation Program, Inc., Accreditation Commission for Health Care, or another accrediting body with deeming authority for hospice services from CMS or state licensing survey, and/or other third party quality oversight organization, for Hospice projects;

(vii) Behavioral Health Care accreditation by the Joint Commission for Nonresidential Substitution Based Treatment Center, for Opiate Addiction projects;

(viii) American Society of Transplantation or Scientific Registry of Transplant Recipients, for Organ Transplant projects;

(ix) Joint Commission or another appropriate accrediting authority recognized by CMS, or other nationally recognized accrediting organization, for a Cardiac Catheterization project that is not required by law to be licensed by the Department of Health;

(x) Participation in the National Cardiovascular Data Registry, for any Cardiac Catheterization project;

(xi) Participation in the National Burn Repository, for Burn Unit projects;

(xii) Community Health Accreditation Program, Inc., Accreditation Commission for Health Care, and/or other accrediting body with deeming authority for home health services from CMS and participation in the Medicare Quality Initiatives, Outcome and Assessment Information Set, and Home Health Compare, or other nationally recognized accrediting organization, for Home Health projects; and

(xiii) Participation in the National Palliative Care Registry, for Hospice projects.

(h) For Ambulatory Surgical Treatment Center projects, whether the applicant has estimated the number of physicians by specialty expected to utilize the facility, developed criteria to be used by the facility in extending surgical and anesthesia privileges to medical personnel, and documented the availability of appropriate and qualified staff that will provide ancillary support services, whether on- or off-site.

(i) For Cardiac Catheterization projects:

1. Whether the applicant has documented a plan to monitor the quality of its cardiac catheterization program, including but not limited to, program outcomes and efficiencies;

2. Whether the applicant has agreed to cooperate with quality enhancement efforts sponsored or endorsed by the State of Tennessee, which may be developed per Policy Recommendation; and

3. Whether the applicant will staff and maintain at least one cardiologist who has performed 75 cases annually averaged over the previous 5 years (for an adult program), and 50 cases annually averaged over the previous 5 years (for a pediatric program).

(j) For Open Heart projects:

(Rule 0720-11-.01, continued)

1. Whether the applicant will staff with the number of cardiac surgeons who will perform the volume of cases consistent with the State Health Plan (annual average of the previous 2 years), and whether the applicant will maintain this volume in the future;

2. Whether the applicant will staff and maintain at least one surgeon with 5 years of experience;

3. Whether the applicant will participate in a data reporting, quality improvement, outcome monitoring, and peer review system that benchmarks outcomes based on national norms, with such a system providing for peer review among professionals practicing in facilities and programs other than the applicant hospital (demonstrated active participation in the STS National Database is expected and shall be considered evidence of meeting this standard);

(k) For Comprehensive Inpatient Rehabilitation Services projects, whether the applicant will have a board-certified physiatrist on staff (preferred);

(l) For Home Health projects, whether the applicant has documented its existing or proposed plan for quality data reporting, quality improvement, and an outcome and process monitoring system;

(m) For Hospice projects, whether the applicant has documented its existing or proposed plan for quality data reporting, quality improvement, and an outcome and process monitoring system;

(n) For Megavoltage Radiation Therapy projects, whether the applicant has demonstrated that it will meet the staffing and quality assurance requirements of the American Society of Therapeutic Radiation and Oncology (ASTRO), the American College of Radiology (ACR), the American College of Radiation Oncology (ACRO), National Cancer Institute (NCI), or a similar accrediting authority;

(o) For Neonatal Intensive Care Unit projects, whether the applicant has documented its existing or proposed plan for data reporting, quality improvement, and outcome and process monitoring system; whether the applicant has documented the intention and ability to comply with the staffing guidelines and qualifications set forth by the Tennessee Perinatal Care System Guidelines for Regionalization, Hospital Care Levels, Staffing and Facilities; and whether the applicant will participate in the Tennessee Initiative for Perinatal Quality Care (TIPQC);

(p) For Nursing Home projects, whether the applicant has documented its existing or proposed plan for data reporting, quality improvement, and outcome and process monitoring systems, including in particular details on its Quality Assurance and Performance Improvement program. As an alternative to the provision of third party accreditation information, applicants may provide information on any other state, federal, or national quality improvement initiatives;

(q) For Inpatient Psychiatric projects:

1. Whether the applicant has demonstrated appropriate accommodations for patients (e.g., for seclusion/restraint of patients who present management problems and children who need quiet space; proper sleeping and bathing arrangements for all patients), adequate staffing (i.e., that each unit will be staffed with at least two direct patient care staff, one of which shall be a nurse, at all

times), and how the proposed staffing plan will lead to quality care of the patient population served by the project;

2. Whether the applicant has documented its existing or proposed plan for data reporting, quality improvement, and outcome and process monitoring system; and

3. Whether an applicant that owns or administers other psychiatric facilities has provided information on satisfactory surveys and quality improvement programs at those facilities.

(r) For Freestanding Emergency Department projects, whether the applicant has demonstrated that it will satisfy and maintain compliance with standards in the State Health Plan;

(s) For Organ Transplant projects, whether the applicant has demonstrated that it will satisfy and maintain compliance with standards in the State Health Plan; and

(t) For Relocation and/or Replacement of Health Care Institution projects:

1. For hospital projects, Acute Care Bed Need Services measures are applicable; and

2. For all other healthcare institutions, applicable facility and/or service specific measures are applicable.

(u) For every CON issued on or after the effective date of this rule, reporting shall be made to the Health Services and Development Agency each year on the anniversary date of implementation of the CON, on forms prescribed by the Agency. Such reporting shall include an assessment of each applicable volume and quality standard and shall include results of any surveys or disciplinary actions by state licensing agencies, payors, CMS, and any self-assessment and external peer assessment processes in which the applicant participates or participated within the year, which are relevant to the health care institution or service authorized by the certificate of need. The existence and results of any remedial action, including any plan of correction, shall also be provided.

(v) HSDA will notify the applicant and any applicable licensing agency if any volume or quality measure has not been met.

(w) Within one month of notification the applicant must submit a corrective action plan and must report on the progress of the plan within one year of that submission.

(4) Contribution to the Orderly Development of Adequate and Effective Healthcare Facilities and/or Services. The contribution which the proposed project will make to the orderly development of an adequate and effective health care system may be evaluated upon the following factors:

(a) The relationship of the proposal to the existing health care system (for example: transfer agreements, contractual agreements for health services, the applicant's proposed TennCare participation, affiliation of the project with health professional schools);

(b) The positive or negative effects attributed to duplication or competition; and

(Rule 0720-11-.01, continued)

(c) The availability and accessibility of human resources required by the proposal, including consumers and related providers.

(5) Applications for Change of Site. When considering a certificate of need application which is limited to a request for a change of site for a proposed new health care institution, The Agency may consider, in addition to the foregoing factors, the following factors:

(a) Need. The applicant should show the proposed new site will serve the health care needs in the area to be served at least as well as the original site. The applicant should show that there is some significant legal, financial, or practical need to change to the proposed new site.

(b) Economic factors. The applicant should show that the proposed new site would be at least as economically beneficial to the population to be served as the original site.

(c) Quality of Health Care to be provided. The applicant should show the quality of health care to be provided will be served at least as well as the original site.

(d) Contribution to the orderly development of health care facilities and/or services. The applicant should address any potential delays that would be caused by the proposed change of site, and show that any such delays are outweighed by the benefit that will be gained from the change of site by the population to be served.

(6) Certificate of need conditions. In accordance with T.C.A. § 68-11-1609, The Agency, in its discretion, may place such conditions upon a certificate of need it deems appropriate and enforceable to meet the applicable criteria as defined in statute and in these rules.

Authority: *T.C.A. §§ 4-5-202, 4-5-208, 68-11-1605, 68-11-1609, and 2016 Tenn. Pub. Acts Ch. 1043.* ***Administrative History:*** *Original rule filed August 31, 2005; effective November 14, 2005. Emergency rule filed May 31, 2017; effective through November 27, 2017.*

CERTIFICATE OF NEED
REVIEWED BY THE DEPARTMENT OF HEALTH
DIVISION OF POLICY, PLANNING AND ASSESSMENT
615-741-1954

DATE: April 30, 2018

APPLICANT: Chattanooga-Hamilton County Hospital Authority
d/b/a Erlanger Medical Center
Unaddressed site in Bradley County, TN 37353

CONTACT PERSON: Joseph Winick
Erlanger Health System
975 East 3rd St.
Chattanooga, TN 37403

CON#: CN1802-011

COST: $11,297,935

In accordance with Section 68-11-1608(a) of the Tennessee Health Services and Planning Act of 2002, the Tennessee Department of Health, Division of Policy, Planning, and Assessment, reviewed this certificate of need application for financial impact, TennCare participation, compliance with *Tennessee's State Health Plan*, and verified certain data. Additional clarification or comment relative to the application is provided, as applicable, under the heading "Note to Agency Members."

SUMMARY:
The applicant, Chattanooga-Hamilton County Hospital Authority d/b/a Erlanger Medical Center (EMC), seeks approval to initiate a Free Standing Emergency Department (FSED) and initiate a full service cardiac catheterization laboratory in Bradley County, Cleveland, TN. This new FSED, Erlanger Bradley County, will be part of the Erlanger Trauma Network which includes a Level I trauma center at Erlanger Medical Center and a Level I pediatric trauma center at Children's Hospital at Erlanger both located in Hamilton County, TN.

GENERAL CRITERIA FOR CERTIFICATE OF NEED

NEED:
The applicant's primary service area includes Bradley and Polk Counties, TN. Bradley and Polk Counties are both listed as medically underserved according to the U.S Department of Health and Human Services data warehouse.

2018-2022 Service Area Total Population Projections

County	2018	2022	% Increase or Decrease
Bradley	107,651	111,750	3.8%
Polk	17,627	17,977	2.0%

Tennessee Population Projections 2017 Revised UTCBER, Tennessee Department of Health

Erlanger Medical Center is a government owned 788 bed acute care hospital.
Erlanger Medical Center seeks approval to establish a Free Standing Emergency Department and initiate a full service Cardiac Catheterization lab in Bradley County, TN. The FSED facility will be located just off exit 20 on Interstate 75 with convenient access to Highway 64 providing easy access for patients in the service area. The applicant details the need for this project in several reasons:

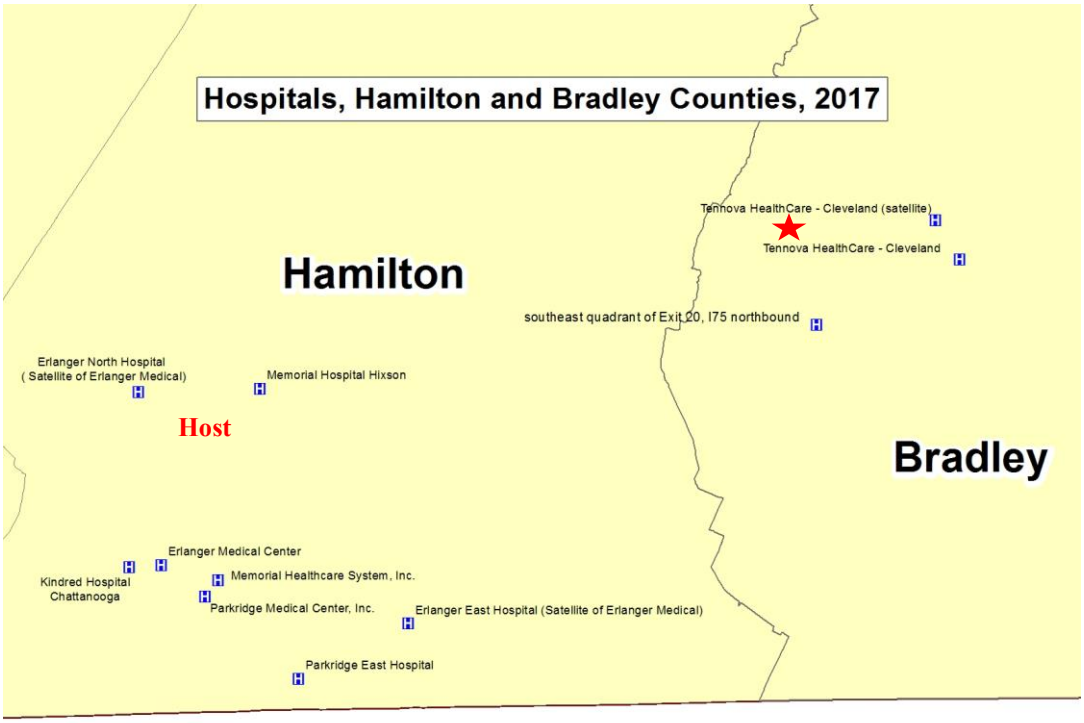
- Erlanger East-Hamilton hospital was opened in 2013 under the ACEP standard of 30,000 ER visits per year. In 2017, Erlanger East ED visits were 34,799 or 23% over the ACEP capacity. This project is needed to decompress the volumes to the Erlanger East campus

ED.

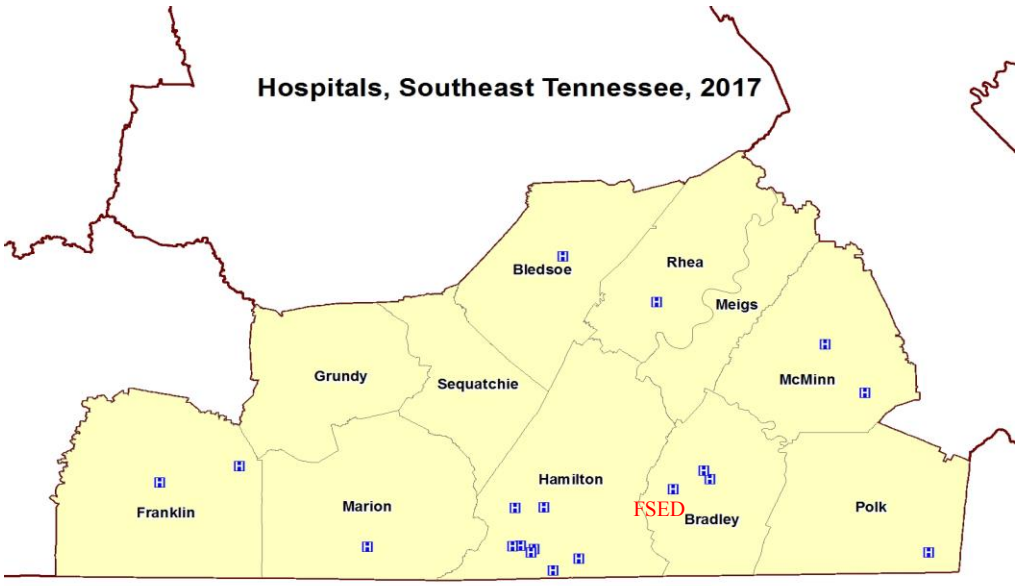
- Erlanger Medical Center's main campus EDs are experiencing high volumes and are expected reach near 90,000 visits for FY2018.
- Copper Basin Medical Center in Polk County recently closed, including the emergency department.
- The Erlanger Bradley County project will be part of the Erlanger Trauma Network, which includes a base for LifeForce air ambulance already located at the Cleveland regional airport. The FSED will contain a helipad for LifeForce transports. The applicant states that Bradley County EMS transports an average of 600 patients per year to Erlanger Medical Center. With the establishment of the FSED in Bradley County, the need for EMS transports will be significantly reduced.

Note to agency members:
Please see the email from the DOH, Division of Health Licensure and Regulation concerning trauma center designation of FSED facilities. FSEDs will not be granted designation as trauma centers.

The distance from the proposed FSED to host hospital Erlanger Medical Center is approximately 27.2 miles, and approximately 6.5 miles from Tennova Healthcare-Tennova hospital.



Map produced by Division of Population Health Assessment; Tennessee Department of Health



Map produced by Division of Population Health Assessment; Tennessee Department of Health

Patient Destination for County Service Area by Hospital, Highest to Lowest, 2016

Hospital	Resident County			Total	Hospital Total All COs
	Bradley	Hamilton	Polk		
Copper Basin Medical Center	0	0	3,224	3,224	6,096
Erlanger East Hospital	1,505	22,692	75	24,272	30,255
Erlanger Medical Center	3,774	41,913	460	46,147	74,749
Erlanger North Hospital	73	11,612	0	11,685	13,720
Fort Sanders Regional Medical Center	0	58	0	58	40,890
Johnson City Medical Center	0	65	0	65	46,646
LeConte Medical Center	0	75	0	75	50,258
Memorial Healthcare System, Inc.	2,286	23,911	226	26,423	43,651
Memorial North Park	239	26,255	0	26,494	30,050
Parkridge East Hospital	562	20,311	0	20,873	45,068
Parkridge Medical Center, Inc.	597	24,500	0	25,097	33,020
Parkridge West Hospital	0	257	0	257	15,689
Rhea Medical Center	101	1,207	0	1,308	21,460
Saint Thomas Rutherford Hospital	0	142	0	142	74,707
Starr Regional Medical Center	1,045	103	705	1,853	35,595
Starr Regional Medical Center Etowah	265	0	1,637	1,902	10,822
Sweetwater Hospital Association	59	0	53	112	23,440
Tennova HealthCare - Cleveland	38,441	1,069	3,311	42,821	47,836
Tennova HealthCare - Cleveland (Westside)	158	0	0	158	216
University of Tennessee Medical Center	0	66	0	66	28,843

Vanderbilt University Medical Center	77	214	0	291	120,616
Other Hospitals*	518	1,052	250	1,820	-
Total	49,700	175,502	9,941	235,143	793,627

Source: Tennessee Department of Health, Division of Health Planning.
Hospital Discharge Data System, 2016. Nashville, TN.

NOTE: Hospital Discharge statistics should not be compared to Joint Annual Report statistics. Both systems are independent of each other with different reporting requirements.

In 2016, 77% of all Bradley County resident ED visits were seen at Tennova Healthcare-Cleveland. Erlanger Medical Center performed 7.6% of the ED visits for patients residing in Bradley County.

In 2016, 33% of all Polk County resident ED visits were seen at Tennova Healthcare-Cleveland. Erlanger Medical Center performed 4.6% of the ED visits for patients residing in Polk County.

The applicant reported that 179 patients were transferred from Tennova Healthcare- Cleveland to Erlanger Medical Center and Children's Hospital in 2016. These patients would account for less than .3% of the EMC patient total of 74,749 for 2016.

2016 Emergency Room Utilization

County	Facility	#ER Rooms	2016 Total	Average Per Room
Hamilton	Erlanger East-Hamilton	17	31197	1835
Hamilton	Erlanger Medical Center*	79	92685	1173
Hamilton	Erlanger North Hospital	8	14857	1857
Hamilton	Parkridge Medical Center	23	38394	1669
Hamilton	Parkridge East	19	50430	2654
Hamilton	Memorial Healthcare	31	49445	1595
Hamilton	Memorial North Park	21	32674	1550
Bradley	Tennova HealthCare-Cleveland	42	48501	1145
Polk	*Copper Basin Medical Center***	*3*	*6750*	*2250*

Joint Annual Reports of Hospitals, 2016 Tennessee Department of Health, Division of Policy
*Erlanger Medical Center data includes Children's Hospital @Erlanger.
** Copper Basin Medical Center is now closed for operations.

TENNCARE/MEDICARE ACCESS:
The applicant participates in the TennCare/Medicaid and Medicare programs, provider # 044-1306. The applicant states that Erlanger Medical Center provided approximately $116 million and $110 million in uncompensated care to patients in 2016 and 2017. The applicant provides their Financial Assistance Policy in the application attachments.

Project Payor Mix Year One

Payor Source	Projected Gross Operating Revenue	% of Total
Medicare/Medicare Managed Care	$8,850,457	24.2%
TennCare/Medicaid	$5,566,660	15.7%
Commercial/Other Managed Care	$16,193,611	45.7%
Self-Pay	$4,432,054	12.5%
Other	$248,195	.7%
Charity Care	$435,456	1.2%
Total	$35,456,433	100%

A list of all the applicant's managed care payor contracts is found in Attachment A-9 of the application.

ECONOMIC FACTORS/FINANCIAL FEASIBILITY:
The Department of Health, Division of Policy, Planning, and Assessment have reviewed the Project Costs Chart, the Historical Data Chart, and the Projected Data Chart to determine if they are mathematically accurate and if the projections are based on the applicant's anticipated level of utilization. The location of these charts may be found in the following specific locations in the Certificate of Need Application or the Supplemental material:

The project is funded by operating funds of Erlanger Health System as detailed in a letter from the Erlanger CFO is included in the application.

The Cost per Square Footage Chart is located on page 23 of the application. A total square footage of 12,383 SF, with 9,883 SF for the emergency department and 2,500 SF for the catheterization lab, is detailed at a cost of $330 SF. This amount is above the median SF of $289 SF, but below the 3rd quartile SF cost of $395.

Project Costs Chart: The Project Costs Chart is located on page 89 of the application. The total project cost is $11,297,935, with a construction of cost of $4,086,390.

Historical Data Chart: The Historical Data Chart for the entire facility is located in Supplemental 2 of the application. The applicant reported admissions of 33,340, 35,414, and 38,626 in 2015, 2016, and 2017 with net operating income of each year of $47,915,710, $29,543,136, and $9,871,131, respectively.

Projected Data Chart: The Projected Data Chart for the Satellite Emergency Department is located on page 99 of the application. The applicant projects 14,000 and 15,500 ED visits, or 875 and 969 visits per room for years one and two of the project, with positive net operating revenues of $1,138,667 and $1,567,912 each year respectively.

Proposed Charge Schedule

	Previous Year	Current Year	Year One	Year Two	% Change
Gross Charge	n/a	n/a	$2,533	$2,842	12.2%
Average Deduction	n/a	n/a	$2,059	$2,329	13.%
Average Net Charge	n/a	n/a	$473	$514	8.7%

CONTRIBUTION TO THE ORDERLY DEVELOPMENT OF HEALTHCARE:
The FSED will be owned by Erlanger Medical Center. The applicant will operate the emergency department 7 days per week, 24 hours per day. There will be a total of 16 treatment rooms. Laboratory, pharmacy, respiratory, and radiology services, including x-ray and CT will be available onsite during all hours of operation, 24/7. The catheterization lab will operate Monday-Friday 8:00am-5pm, and on call as needed. The catheterization lab will provide both diagnostic and therapeutic (interventional) procedures as needed.

This project is part of a long range plan to provide a system of care over a four state area, with the goal of providing a comprehensive system of care comprised of unduplicated services while serving those who are currently under served and do not have the ability to pay for their services.

The applicant states that other options for the project are not possible. The campuses of Erlanger East Hospital and Erlanger Medical Center are not sufficient in size to accommodate the expansion of their current emergency departments, so the proposed project is the only viable option.

The applicant states that positive effects of the project will include improved delivery of care for those in need of emergency care regardless of ability to pay, in the areas where patients are underserved.

The applicant will have transfer agreements with the following Erlanger Hospitals:
Erlanger Medical Center, Erlanger East Hospital, Erlanger North Hospital, Erlanger Bledsoe Hospital, and T.C. Thompson Children's Hospital.

The applicant provides a Project Completion Forecast Chart on page 132 of the application detailing a Final Project Report date of August, 2020.

QUALITY MEASURES:
Erlanger Medical Center is licensed by the State Health Department with license number 0000000140.
A survey by the TN. State Office of Emergency Medical Services was conducted on May 26, 2015, resulting in the recommendation to continue the applicant's designation as a Level I trauma center.
The Erlanger Medical Center, the FSED host hospital, is currently accredited by the Joint Commission.
Erlanger Health System is a leader in academic partnership with many university and clinical programs, including the U.T College of Medicine. Erlanger Health System is also a member of the Vanderbilt University Medical Center health network which further enhances opportunities for state of the art research, education and training. A complete partnership listing is included in the application.

SPECIFIC CRITERIA FOR CERTIFICATE OF NEED

The applicant responded to all relevant specific criteria for Certificate of Need as set forth in the document *Tennessee's State Health Plan.*

CERTIFICATE OF NEED STANDARDS AND CRITERIA

FOR

Freestanding Emergency Departments

The Health Services Development Agency (HSDA) may consider the following standards and criteria for applicants seeking to establish or expand Freestanding Emergency Departments (FSEDs). Rationale statements are provided for standards to explain the Division of Health Planning's underlying reasoning. Additionally, these rationale statements may assist stakeholders in responding to these Standards and may assist the HSDA in its assessment of applications. Existing FSEDs are not affected by these standards and criteria unless they take action that requires a new certificate

of need (CON) for such services. These proposed standards and criteria will become effective immediately upon approval and adoption by the governor.

The Certificate of Need Standards and Criteria serve to uphold the Five Principles for Achieving Better Health set forth by the State Health Plan. These Principles were first developed for the 2010 edition and have been utilized as the overarching framework of the Plan in each annual update that has followed. Utilizing the Five Principles for Achieving Better Health during the development of the CON Standards and Criteria ensures the protection and promotion of the health of the people of Tennessee. The State Health Plan's Five Principles for Achieving Better Health are as follows:

1. **Healthy Lives:** The purpose of the State Health Plan is to improve the health of people in Tennessee.
2. **Access:** People in Tennessee should have access to health care and the conditions to achieve optimal health.
3. **Economic Efficiencies:** Health resources in Tennessee, including health care, should be developed to address the health of people in Tennessee while encouraging value and economic efficiencies.
4. **Quality of Care:** People in Tennessee should have confidence that the quality of care is continually monitored and standards are adhered to by providers.
5. **Workforce:** The state should support the development, recruitment, and retention of a sufficient and quality health workforce.

Definitions

Rural Area: A proposed service area shall be designated as rural in accordance with the U.S. Department of Health and Human Services (HRSA) Federal Office of Rural Health Policy's *List of Rural Counties and Designated Eligible Census Tracts in Metropolitan Counties*. This document, along with the two methods used to determine eligibility, can be found at the following link:
http://www.hrsa.gov/ruralhealth/resources/forhpeligibleareas.pdf

For more information on the Federal Office of Rural Health Policy visit:
http://www.hrsa.gov/ruralhealth/

Freestanding Emergency Department: A facility that receives individuals for emergency care and is structurally separate and distinct from a hospital. A freestanding emergency department (FSED) is owned and operated by a licensed hospital. These facilities provide emergency care 24 hours a day, 7 days a week, and 365 days a year.

Service Area: Refers to the county or contiguous counties or Zip Code or contiguous Zip Codes represented by an applicant as the reasonable area in which the applicant intends to provide freestanding emergency department services and/or in which the majority of its service recipients reside.

Standards and Criteria

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.

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

Capacity Challenges- Wait Times

Item	***Category***	***Erlanger Medical Ctr***	***Tennessee Average***	***National Average***
ED-1	*Median time from ED arrival to ED departure for ED admitted patients*	*312*	*321 mins*	*335 mins*
ED-2	*Median time from admit decision to departure for ED admitted patients*	*168*	*130 mins*	*121 mins*
OP-18	*Median time from ED arrival to ED departure for discharged ED patients*	*142*	*170 mins*	*163 mins*
OP-20	*Door to diagnostic evaluation by a qualified medical professional*	*26*	*19 mins*	*25 mins*
OP-22	*ED-patient left without being seen*	*2%*	*2%*	*2%*

Data gathered by DOH staff 5-24-18

Capacity Challenges- Wait Times

Item	***Category***	***Erlanger Medical Ctr***	***Tennessee Average***	***National Average***
ED-1	*Median time from ED arrival to ED departure for ED admitted patients*	*327*	*251 mins*	*282 mins*
ED-2	*Median time from admit decision to departure for ED admitted patients*	*190 mins*	*81 mins*	*120 mins*
OP-18	*Median time from ED arrival to ED departure for discharged ED patients*	*138 mins*	*132 mins*	*138 mins*
OP-20	*Door to diagnostic evaluation by a qualified medical professional*	*29 mins*	*17 mins*	*20 mins*
OP-22	*ED-patient left without being seen*	*2%*	*2%*	*2%*

Data provided by applicant, Supplemental 2.

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.

EHS -- Analysis Of Average ED Visits Per Treatment Room
For The Service Area Of Erlanger Bradley County

Hospital	No. Of Rooms	2014	2015	2016	2017	2018(est)
Total ED Visits						
Erlanger Medical Center		52,272	55,597	51,926	49,815	51,028
Children's Hospital @ Erlanger		37,895	41,502	40,759	40,993	37,636
Erlanger East Hospital		22,009	26,172	31,197	34,799	36,776
Tennova - Cleveland		49,791	50,533	48,501		
Average ED Visits Per Treatment Room						
Erlanger Medical Center	48	1,089	1,158	1,082	1,038	1,063
Children's Hospital @ Erlanger	31	1,222	1,339	1,315	1,322	1,214
Erlanger East Hospital	17	1,295	1,540	1,835	2,047	2,163
Tennova - Cleveland	42	1,186	1,203	1,155		

Notes >> 1.) Data is from the Joint Annual Reports for 2014, 2015 and 2016. For 2017 and 2018, data is from Erlanger internal records.

The standard utilization capacity for Tennova-Cleveland according to the ACEP guidelines is 1,596 visits per room.

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

Low quality comparison of existing ED facilities in the service area.

Tennova Healthcare-Cleveland

		ED time	Below 1st Qtr	1st to Median	Median to 3rd	Above 3rd
OP-1	Median Time to Fibrinolysis	N/A				
OP-2	Fibrinolytic Therapy Received Within 30 Minutes	N/a				
OP-4	Aspirin at Arrival	100 mins				X
OP-5	Median Time to ECG	5 mins		X		
OP-18	Median Time from ED Arrival to Departure for Discharged ED Patients	195 mins				X
OP-20	Door to Diagnostic Evaluation by a Qualified Medical Personnel	16 mins		X		
OP-21	ED-Median Time to Pain Management for Long Bone Fracture	92 mins				X
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	87 mins			X	

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.

Rationale: Applicants seeking to establish a FSED should demonstrate need based on barriers to access in the proposed service area. While limited access to emergency services due to geographic isolation, low-quality of care, or excessive wait times are pertinent to the discussion, the applicant is also encouraged to provide additional data from the proposed service area that may provide the HSDA with a more comprehensive picture of the unique needs of the population that would be served by the FSED. Host hospitals applying to establish a FSED displaying efficiencies in care delivery via high volumes and low wait time should not be penalized in the review of this standard. Host hospitals are expected to demonstrate high quality care in order to receive approval. See Standard 4 for more information.

Applicants seeking to establish an FSED in a geographically isolated, rural area should be awarded special consideration by the HSDA.

The applicant states that after Tennova Healthcare acquired Bradley Memorial Hospital, the level III trauma center was closed. This left patients in Bradley County geographically isolated with no trauma center and necessitated the transport of those patients to Hamilton County, Erlanger Medical Center. Additionally, Copper

Basin Medical Center has recently closed, leaving Polk County residents with no local trauma center.

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.

ED Utilization 2016-2017

	2016 Ed visits	***2017 ED visits***	***2017 ED Rooms***	***2017 Visits/Room***
Erlanger Medical Center	*51,926*	*49,815*	*38*	*1311*
Children's Hospital @Erlanger	*40,759*	*40,993*	*31*	*1242*

Host Hospital ED Visits Per Treatment Room

Emergency Department Design: A Practical Guide To Planning, American College Of Emergency Physician - Estimates For Emergency Department Areas & Beds

	Most Recent Year Annual Visits (2017)	Dept. Gross Area (Sq. Feet)	Low, Medium Or High Range Factor	Bed Quantities: Low, Medium Or High Range Bed Quantity	Bed Quantities: Low, Medium Or High Range Visits / Bed	Bed Quantities: Estimated Area / Bed
Erlanger Medical Center ED	49,815	22,632	Mid-Range	34	1,465	666
Children's @ Erlanger ED	40,993	13,501	Mid-Range	33	1,242	412
Erlanger East ED	34,799	23,535	Mid-Range	17	1,047	1,384

Supplemental #1
March 16, 2018
10:36 A.M.

Factor	Erlanger Med Ctr ED	Children's @ Erlanger ED	Erlanger East ED
ED Range Assignment Data			
% Emergency Department Patients Admitted as Inpatients	35.8%	8.0%	7.4%
Length of Stay (Hours) in ED	6 hrs 5 min	2 hrs 26 min	3 hrs 1 min
% of ED Patients seen in Private Rooms	N/A	N/A	100.0%
% of patients that will be moved from patient rooms to inner waiting or results waiting areas	0.0%	0.0%	0.0%
% of observation and extended stay patient remaining in ED	0.0%	0.0%	0.0%
# Average Minutes an ED patient admitted as an inpatient remains in ED	500 min	N/A	306 min
Average turnaround time (minutes) for results for lab studies	74 min	67 min	41 min
Average turnaround time (minutes) for results for imaging studies	86 min	76 min	55 min
% of behavioral health ED patients	2.0%	1.0%	0.9%
% of ED patients either ESI 4 or 5	31.0%	17.8%	42.4%
% of ED patients Age 65+	9.3%	0.0%	15.4%
% of imaging studies performed in ED	41.0%	34.0%	21.0%
Provisions in ED for family consult/grieving rooms	Yes	Yes	Yes
Availability of geriatric specialty area	No	No	No
Availability of pediatric specialty area	No	No	No
Availability of prisoner/detention patient specialty area	No	No	No
Availability of administrative/teaching specialty area	Yes	Yes	No
ED Range Assignment By Indicator			
% Emergency Department Patients Admitted as Inpatients	High	Low	Low
Length of Stay (Hours) in ED	High	Mid	Mid
% of ED Patients seen in Private Rooms	-	-	-
% of patients that will be moved from patient rooms to inner waiting or results waiting areas	-	-	-
% of observation and extended stay patient remaining in ED	-	-	-
# Average Minutes an ED patient admitted as an inpatient remains in ED	High	-	High
Average turnaround time (minutes) for results for lab studies	Mid	Mid	Mid
Average turnaround time (minutes) for results for imaging studies	Mid	Mid	Mid
% of behavioral health ED patients	Low	Low	Low
% of ED patients either ESI 4 or 5	Mid	High	Mid
% of ED patients Age 65+	Low	Low	Mid
% of imaging studies performed in ED	Mid	Mid	Low
Provisions in ED for family consult/grieving rooms	Mid	Mid	Mid
Availability of geriatric specialty area	-	-	-
Availability of pediatric specialty area	-	-	-
Availability of prisoner/detention patient specialty area	-	-	-
Availability of administrative/teaching specialty area	Mid	Mid	Mid
ED Range Assignment Summary			
Low =>	1	3	3
Mid =>	6	6	7
High =>	3	1	1
Total Indicators =>	11	10	11
ED Range Assignment =>	Mid-Range	Mid-Range	Mid-Range

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.

Resident County	Total	Number Behavioral Health Patients	Percentage Behavioral Health Patients	Number Patients Level I or II	Percentage Patients Level I or II	Number Patients Age 65 and Older	Percentage Patients Age 65 and Older
TENNESSEE	3,055,244	54,581	1.8	1,456,976	47.7	441,123	14.4
Bradley	49,697	1,074	2.2	29,702	59.8	8,952	18.0
Tennova-Cleveland	46,597	1,059	2.3	20,609	64.0	8,861	19.0

Source: Tennessee Department of Health, Division of Health Planning.
Hospital Discharge Data System, 2016. Nashville, TN.

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.

Patient Destination for County Service Area by Hospital, Highest to Lowest, 2016

Hospital	Resident County			Total	Hospital Total All COs
	Bradley	Hamilton	Polk		
Copper Basin Medical Center	0	0	3,224	3,224	6,096
Erlanger East Hospital	1,505	22,692	75	24,272	30,255
Erlanger Medical Center	3,774	41,913	460	46,147	74,749
Erlanger North Hospital	73	11,612	0	11,685	13,720
Fort Sanders Regional Medical Center	0	58	0	58	40,890
Johnson City Medical Center	0	65	0	65	46,646

LeConte Medical Center	0	75	0	75	50,258
Memorial Healthcare System, Inc.	2,286	23,911	226	26,423	43,651
Memorial North Park	239	26,255	0	26,494	30,050
Parkridge East Hospital	562	20,311	0	20,873	45,068
Parkridge Medical Center, Inc.	597	24,500	0	25,097	33,020
Parkridge West Hospital	0	257	0	257	15,689
Rhea Medical Center	101	1,207	0	1,308	21,460
Saint Thomas Rutherford Hospital	0	142	0	142	74,707
Starr Regional Medical Center	1,045	103	705	1,853	35,595
Starr Regional Medical Center Etowah	265	0	1,637	1,902	10,822
Sweetwater Hospital Association	59	0	53	112	23,440
Tennova HealthCare - Cleveland	38,441	1,069	3,311	42,821	47,836
Tennova HealthCare - Cleveland (Westside)	158	0	0	158	216
University of Tennessee Medical Center	0	66	0	66	28,843
Vanderbilt University Medical Center	77	214	0	291	120,616
Other Hospitals*	518	1,052	250	1,820	-
Total	49,700	175,502	9,941	235,143	793,627

Source: Tennessee Department of Health, Division of Health Planning.
Hospital Discharge Data System, 2016. Nashville, TN.

NOTE: Hospital Discharge statistics should not be compared to Joint Annual Report statistics. Both systems are independent of each other with different reporting requirements.

In 2016, 77% of all Bradley County resident ED visits were seen at Tennova Healthcare-Cleveland. Erlanger Medical Center performed 7.6% of the ED visits for patients residing in Bradley County.

In 2016, 33% of all Polk County resident ED visits were seen at Tennova Healthcare-Cleveland. Erlanger Medical Center performed 4.6% of the ED visits for patients residing in Polk County.

The applicant reported that 179 patients were transferred from Tennova Healthcare- Cleveland to Erlanger Medical Center and Children's Hospital in 2016. These patients would account for less than .3% of the EMC patient total of 74,749 for 2016.

Hospital ED Utilization In The Proposed Service Area (PSA) And All Hamilton County Emergency Departments				
Hospital ED	County	PSA Resident ED Visits At Hospital Hospital ED (A)	Total Service Area Resident ED Visits (B)	Market Share In Service Area ((A) x (B)) x 100 = Market Share %
ED's In Proposed Service Area				
Tennova H-care-Cleveland	Bradley	41,486	61,911	67.0%
Tennova H-care-Cleveland Westside	Bradley	175	61,911	0.3%
Copper Basin Med Cntr	Polk	3,424	61,911	5.5%
ED's In Hamilton County, Tennessee				
Erlanger - Main Campus	Hamilton	5,770	61,911	9.3%
Erlanger East	Hamilton	1,721	61,911	2.8%
Erlanger North Hosp	Hamilton	94	61,911	0.2%
CHI Memorial Hosp-Chattanooga	Hamilton	2,687	61,911	4.3%
CHI Memorial Hosp-Hixson	Hamilton	257	61,911	0.4%
Parkridge Med Cntr	Hamilton	759	61,911	1.2%
Parkridge East Hosp	Hamilton	715	61,911	1.2%
Parkridge Valley Adult & Senior Campus	Hamilton	4	61,911	0.0%
Other TN Hospitals	All Other TN Counties	4,819	61,911	7.8%
Total		61,911		100.0%
Satellite ED Visits - Year 1		14,000		

Market Shares Of ED Facilities In The Proposed Service Area + Hamilton County				
Zip Code / County	% Highest Market Share ED	% 2nd Highest Market Share ED	% 3rd Highest Market Share ED	% Applicant Host ED (If Not Top 3)
Bradley	Tennova-Cleveland	Erlanger-Main	Memorial Hospital	-
Polk	Tennova-Cleveland	Copper Basin	Starr Reg - Etowah	8.2%

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*.

Erlanger Medical Center

		ED time	Below 1st Qtr	1st to Median	Median to 3rd	Above 3rd
OP-1	Median Time to Fibrinolysis	N/A				
OP-2	Fibrinolytic Therapy Received Within 30 Minutes	N/A				
OP-4	Aspirin at Arrival	85 mins	X			
OP-5	Median Time to ECG	8 mins			X	
OP-18	Median Time from ED Arrival to Departure for Discharged ED Patients	138 mins			X	
OP-20	Door to Diagnostic Evaluation by a Qualified Medical Personnel	29 mins				X
OP-21	ED-Median Time to Pain Management for Long Bone Fracture	44 mins		X		
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	N/A				

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.

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.

The applicant states that the Erlanger Health System is the backbone and safety net for healthcare delivery for the southeast region of Tennessee and the surrounding areas. Erlanger is committed to provide the right level of care in the right locations for those in need to healthcare. Erlanger has six LifeForce air ambulance helicopters ready to transport those in need throughout the region.

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

   The FSED will be located 27.5 miles from the host 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.

   Erlanger is the 7th largest public health system in the United States and provides approximately $110 million in uncompensated care annually.

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.

Comparison Of Erlanger ED Payor Mix To Tennova-Cleveland ED Payor Mix

	Erlanger East	% Total	Erlanger Main	% Total	Erlanger Total	% Total	Tennova - Cleveland	% Total
Medicare / Medicare Advantage	283	16.4%	1,086	18.8%	1,369	18.3%	12,412	29.8%
TennCare / Medicaid	433	25.2%	2,281	39.5%	2,714	36.2%	13,263	31.8%
Commercial / Commercial Other	644	37.4%	1,593	27.6%	2,237	29.9%	8,371	20.1%
Self-Pay	249	14.5%	479	8.3%	728	9.7%	0	0.0%
Medically Indigent / Free							0	0.0%
Other	112	6.5%	331	5.8%	443	5.9%	7,615	18.3%
Total	1,721	100.0%	5,770	100.0%	7,491	100.0%	41,661	100.0%

** *Notes* >> Medically Indigent / Free care for Erlanger is in the Self Pay category.

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.
Bradly County is a non-rural county. Tennova-Cleveland is the only hospital provider in the service area. The FSED will be located at a major intersection along I-75.

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.

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.

    Bradley County-Cleveland service area and all of Polk County are classified as medically underserved area.

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.

    Laboratory, pharmacy, respiratory, and radiology services, including x-ray and CT will be available onsite during all hours of operation, 24/7.

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.

The FSED will provide emergency and trauma services to adults and children. Transport to Children's Hospital @ Erlanger, a designated regional trauma center, is available in minutes via LifeForce air ambulance.

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.

A letter from the CFO of Erlanger Health System assuring the necessary resources to operate the FSED sufficiently with high quality patient care is located as an attachment to the application.

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/text-idx?rgn=div6&node=42:5.0.1.1.4.4#se42.5.485_1631

Rationale: FSEDs should be staffed with a physician who is board-certified or board-eligible in emergency medicine and a registered nurse in order to ensure the facility is capable of providing the care necessary to treat and/or stabilize patients seeking emergency care. The HSDA should consider evidence provided by the applicant that demonstrates significant barriers to the recruitment a physician who is board-certified or board-eligible in emergency medicine exist.

Rural FSEDs should be awarded flexibility in terms of staffing in accordance with federal regulations. Additionally, flexibility in staffing requirements takes into account the limited availability of medical staff in certain rural regions of the state.

The FSED will be staffed with at least one physician and one RN at all times.

Title	FTE
Physician	4.4
RN	8.9
Advanced Practice RN	4.4
ER tech/ EVS tech	.7
Rad tech	1.3
CT tech	3.0
Ultrasound tech	2.0
Cardiac specialist	2.0
Medical tech	5.6
Pharmacy tech	1.0
Other	11.5

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

    Erlanger Health System implemented a new EMR system in 2017 which is fully integrated to serve all Erlanger facilities including the FSED.

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.

    Erlanger Health System operates six air ambulance helicopters for rapid transfer of patients in need of higher levels of care. The FSED will have a helipad to accommodate the LifeForce helicopters.

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 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.
The memorandum is available at the following link:
https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/downloads/SCletter08-08.pdf
All signage and naming conventions will meet CMS standards and guidelines. In addition, the public communication will include advertisements in the local newspapers which clearly provide accurate explanation as to the nature and services available.

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.

Erlanger will ensure that the proposed FSED is effectively linked to available community resources including inpatient and outpatient behavioral health services, mental health and substance abuse services and providers.

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.

EMC agrees to provide all reasonably requested information and statistical data to the HSDA.

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.

    As with EMC, the FSED will be part of The Joint Commission accreditation and the American College of Surgeons.

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.

    EMC participates in both the Medicaid and Medicare programs and as will the proposed FSED. Many of the current commercial payors which have contractual agreements with Erlanger Health Systems will be able to access services at the FSED.

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.

    As with EMC, the FSED will be part of The Joint Commission accreditation and the American College of Surgeons.

    Note: Federal legislation, the Rural Emergency Acute Care Hospital (REACH Act), is under consideration. Under this legislation rural hospitals would be permitted to convert into a FSED and retain CMS recognition. If passage takes place, these standards should be considered revised in order to grant allowance to Tennessee hospitals seeking this conversion in accordance with the federal guidelines.

CERTIFICATE OF NEED STANDARDS AND CRITERIA
FOR

CARDIAC CATHETERIZATION SERVICES

All Cardiac Catheterization Services

Applicants proposing to provide any type of cardiac catheterization services must meet the following minimum standards:

1. **Compliance with Standards:** The Division of Health Planning is working with stakeholders to develop a framework for greater accountability to these Standards and Criteria. Applicants should indicate whether they intend to collaborate with the Division and other stakeholders on this matter.

The applicant states, as a satellite facility of Erlanger Medical Center, Erlanger Bradley County intends to fully cooperate with these criteria.

2. **Facility Accreditation:** If the applicant is not required by law to be licensed by the Department of Health, the applicant should provide documentation that the facility is fully accredited or will pursue accreditation by the Joint Commission or another appropriate accrediting authority recognized by the Centers for Medicare and Medicaid Services (CMS).

The applicant states, as a satellite facility of Erlanger Medical Center, Erlanger Bradley County intends to fully cooperate with these criteria by seeking accreditation by the Joint Commission and by Accreditation for Cardiac Excellence.

3. **Emergency Transfer Plan:** Applicants for cardiac catheterization services located in a facility without open heart surgery capability should provide a formalized written protocol for immediate and efficient transfer of patients to a nearby open heart surgical facility (within 60 minutes) that is reviewed/tested on a regular (quarterly) basis.

The applicant has included in the application written protocols for immediate and efficient transfer of patient to Erlanger Medical Center.

4. **Quality Control and Monitoring:** Applicants should document a plan to monitor the quality of its cardiac catheterization program, including, but not limited to, program outcomes and efficiency. In addition, the applicant should agree to cooperate with quality enhancement efforts sponsored or endorsed by the State of Tennessee, which may be developed per Policy Recommendation 2.

The applicant has included in the application written protocols to monitor the quality of its cardiac catheterization program, including outcomes and efficiency. The applicant will also seek accreditation by the Joint Commission and by Accreditation for Cardiac Excellence.

5. **Data Requirements:** Applicants should agree to provide the Department of Health and/or the Health Services and Development Agency 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 of practice, existing data reporting streams will be relied upon and adapted over time to collect all needed information.

The applicant agrees to provide all reasonably requested information and statistical data to the HSDA.

6. **Clinical and Physical Environment Guidelines:** Applicants should agree to document ongoing compliance with the latest clinical guidelines of the American College of Cardiology/Society for Cardiac Angiography and Interventions Clinical Expert Consensus Document on Cardiac Catheterization Laboratory Standards (ACC Guidelines). As of the adoption of these Standards and Criteria, the latest version (2001) may be found online at: http://www.acc.org/qualityandscience/clinical/consensus/angiography/dirIndex.htm.

   Where providers are not in compliance, they should maintain appropriate documentation stating the reasons for noncompliance and the steps the provider is taking to ensure quality. These guidelines include, but are not limited to, physical facility requirements, staffing, training, quality assurance, patient safety, screening patients for appropriate settings, and linkages with supporting emergency services.

The applicant states, as a satellite facility of Erlanger Medical Center, Erlanger Bradley County will document ongoing compliance with the latest clinical guidelines of the American College of Cardiology, Society for Cardiac Angiography and Interventions Clinical Expert Consensus Document on Catheterization Laboratory Standards. (ACC Standards)

7. **Staffing Recruitment and Retention:** The applicant should generally describe how it intends to maintain an adequate staff to operate the proposed service, including, but not limited to, any plans to partner with an existing provider for training and staff sharing.

The applicant state as a satellite facility of Erlanger Medical Center, Erlanger Bradley County will be staffed by appropriate trained and experienced staff from EMC. These staff will possess the same skills required for both laboratory locations and may rotate between facilities as needed providing seamless integration of the FSED catheterization services.

8. **Definition of Need for New Services:** A need likely exists for new or additional cardiac catheterization services in a proposed service area if the average current utilization for all existing and approved providers is equal to or greater than 70% of capacity (i.e., 70% of 2000 cases) for the proposed service area.

Data Sources: TDH Hospital Discharge Data System (HDDS)
Data Years: 2014-2016 (most recent years of finalized HDDS data)

Methodology: Determine the three year Cardiac Cath weighted volume (diagnostic and therapeutic) performed by each Tennessee hospital in the service area by 13 age groups. Include all patients seen, both Tennessee resident and non-resident. Include all occurrences of Cardiac Cath ICD-9 and ICD-10 Procedure Codes or CPT HCPCS codes with a Revenue Code 0481, Cardiology - Cardiac Cath Lab. Summarize cases based on the highest weighted code.

Cardiac Cath ICD-9, ICD-10 and CPT codes and categorizations determined by the Bureau of TennCare and the Tennessee Hospital Association. ICD-10 coding began the fourth quarter of 2015.

**Note: The original Data Request to TDOH from Erlanger Medical Center requested catheterization data to include Bradley, Hamilton and Polk counties.*

The service area for the current application includes Bradley, Hamilton and Polk counties. Acute care hospitals found in this area (during the years 2014-2016) are Tennova Healthcare Cleveland, Tennova Healthcare Cleveland – Westside Dr, Erlanger Medical Center, Erlanger North, Erlanger East, Memorial North Park, Memorial Healthcare System, Parkridge Medical Center, Parkridge East Hospital and Copper Basin Medical Center.

Tennova Healthcare Cleveland - Westside Dr. (State ID 06233) and Copper Basin Medical Center (State ID 70223) did not record any claims in the time period with Revenue Code 0481, Cardiology - Cardiac Cath Lab.

Tennova Healthcare Cleveland (State ID 06223)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	486.5	475.0	7.5	4.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	2.0	2.0	0.0	0.0
30 - 39	19.0	19.0	0.0	0.0
40 - 44	35.5	34.0	1.5	0.0
45 - 49	51.5	50.0	1.5	0.0
50 - 54	61.5	60.0	1.5	0.0
55 - 59	77.0	77.0	0.0	0.0
60 - 64	74.0	74.0	0.0	0.0
65 - 69	64.0	64.0	0.0	0.0
70 - 74	47.0	44.0	3.0	0.0
75 - 79	31.0	29.0	0.0	2.0
80 - 84	17.0	17.0	0.0	0.0
85 +	7.0	5.0	0.0	2.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	197.0	28.0	117.0	52.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	7.0	0.0	3.0	4.0
40 - 44	16.0	4.0	12.0	0.0
45 - 49	21.0	2.0	15.0	4.0
50 - 54	15.0	2.0	9.0	4.0
55 - 59	37.0	10.0	27.0	0.0
60 - 64	31.0	2.0	21.0	8.0
65 - 69	24.0	4.0	12.0	8.0
70 - 74	8.0	2.0	6.0	0.0
75 - 79	24.0	2.0	6.0	16.0
80 - 84	10.0	0.0	6.0	4.0
85 +	4.0	0.0	0.0	4.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Erlanger Medical Center (State ID 33203)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	5,862.5	5,421.0	103.5	338.0
0 - 17	78.0	66.0	0.0	12.0
18 - 29	59.0	31.0	0.0	28.0
30 - 39	196.0	166.0	0.0	30.0
40 - 44	284.5	273.0	1.5	10.0
45 - 49	492.5	444.0	4.5	44.0
50 - 54	727.5	679.0	10.5	38.0
55 - 59	862.5	825.0	13.5	24.0
60 - 64	855.5	796.0	25.5	34.0
65 - 69	899.5	827.0	22.5	50.0
70 - 74	608.5	569.0	7.5	32.0
75 - 79	450.0	412.0	12.0	26.0
80 - 84	230.0	219.0	3.0	8.0
85 +	119.0	114.0	3.0	2.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	4,814.0	1,332.0	2,670.0	812.0
0 - 17	112.0	84.0	12.0	16.0
18 - 29	54.0	8.0	6.0	40.0
30 - 39	151.0	10.0	93.0	48.0
40 - 44	239.0	36.0	171.0	32.0
45 - 49	381.0	80.0	225.0	76.0
50 - 54	564.0	162.0	318.0	84.0
55 - 59	724.0	168.0	456.0	100.0
60 - 64	749.0	190.0	459.0	100.0
65 - 69	649.0	234.0	315.0	100.0
70 - 74	482.0	154.0	264.0	64.0
75 - 79	376.0	120.0	168.0	88.0
80 - 84	233.0	66.0	123.0	44.0
85 +	100.0	20.0	60.0	20.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Erlanger North (State ID 33213)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	8.0	8.0	0.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	0.0	0.0	0.0	0.0
40 - 44	2.0	2.0	0.0	0.0
45 - 49	2.0	2.0	0.0	0.0
50 - 54	1.0	1.0	0.0	0.0
55 - 59	1.0	1.0	0.0	0.0
60 - 64	0.0	0.0	0.0	0.0
65 - 69	0.0	0.0	0.0	0.0
70 - 74	2.0	2.0	0.0	0.0
75 - 79	0.0	0.0	0.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	16.0	10.0	6.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	0.0	0.0	0.0	0.0
40 - 44	5.0	2.0	3.0	0.0
45 - 49	4.0	4.0	0.0	0.0
50 - 54	2.0	2.0	0.0	0.0
55 - 59	5.0	2.0	3.0	0.0
60 - 64	0.0	0.0	0.0	0.0
65 - 69	0.0	0.0	0.0	0.0
70 - 74	0.0	0.0	0.0	0.0
75 - 79	0.0	0.0	0.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Erlanger East (State ID 33233)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	156.0	156.0	0.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	3.0	3.0	0.0	0.0
40 - 44	3.0	3.0	0.0	0.0
45 - 49	9.0	9.0	0.0	0.0
50 - 54	21.0	21.0	0.0	0.0
55 - 59	20.0	20.0	0.0	0.0
60 - 64	31.0	31.0	0.0	0.0
65 - 69	26.0	26.0	0.0	0.0
70 - 74	18.0	18.0	0.0	0.0
75 - 79	15.0	15.0	0.0	0.0
80 - 84	7.0	7.0	0.0	0.0
85 +	3.0	3.0	0.0	0.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	18.0	18.0	0.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	0.0	0.0	0.0	0.0
40 - 44	0.0	0.0	0.0	0.0
45 - 49	2.0	2.0	0.0	0.0
50 - 54	4.0	4.0	0.0	0.0
55 - 59	2.0	2.0	0.0	0.0
60 - 64	4.0	4.0	0.0	0.0
65 - 69	0.0	0.0	0.0	0.0
70 - 74	4.0	4.0	0.0	0.0
75 - 79	2.0	2.0	0.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Memorial North Park (State ID 33223)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	75.0	71.0	0.0	4.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	1.0	1.0	0.0	0.0
30 - 39	3.0	3.0	0.0	0.0
40 - 44	2.0	2.0	0.0	0.0
45 - 49	3.0	3.0	0.0	0.0
50 - 54	9.0	7.0	0.0	2.0
55 - 59	6.0	6.0	0.0	0.0
60 - 64	6.0	6.0	0.0	0.0
65 - 69	9.0	9.0	0.0	0.0
70 - 74	12.0	12.0	0.0	0.0
75 - 79	5.0	5.0	0.0	0.0
80 - 84	15.0	13.0	0.0	2.0
85 +	4.0	4.0	0.0	0.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	79.0	4.0	75.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	3.0	0.0	3.0	0.0
30 - 39	3.0	0.0	3.0	0.0
40 - 44	3.0	0.0	3.0	0.0
45 - 49	3.0	0.0	3.0	0.0
50 - 54	5.0	2.0	3.0	0.0
55 - 59	6.0	0.0	6.0	0.0
60 - 64	9.0	0.0	9.0	0.0
65 - 69	9.0	0.0	9.0	0.0
70 - 74	17.0	2.0	15.0	0.0
75 - 79	3.0	0.0	3.0	0.0
80 - 84	12.0	0.0	12.0	0.0
85 +	6.0	0.0	6.0	0.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Memorial Healthcare System (State ID 33323)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	11,006.5	9,632.0	220.5	1,154.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	39.0	27.0	0.0	12.0
30 - 39	208.0	181.0	3.0	24.0
40 - 44	356.0	316.0	6.0	34.0
45 - 49	585.5	541.0	4.5	40.0
50 - 54	966.5	873.0	19.5	74.0
55 - 59	1,253.0	1,142.0	21.0	90.0
60 - 64	1,537.5	1,337.0	34.5	166.0
65 - 69	1,855.0	1,611.0	36.0	208.0
70 - 74	1,676.0	1,446.0	36.0	194.0
75 - 79	1,281.5	1,094.0	37.5	150.0
80 - 84	825.5	726.0	19.5	80.0
85 +	423.0	338.0	3.0	82.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	9,723.0	1,686.0	5,205.0	2,832.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	26.0	4.0	6.0	16.0
30 - 39	156.0	20.0	96.0	40.0
40 - 44	292.0	32.0	192.0	68.0
45 - 49	484.0	78.0	294.0	112.0
50 - 54	826.0	160.0	498.0	168.0
55 - 59	1,116.0	202.0	654.0	260.0
60 - 64	1,274.0	212.0	714.0	348.0
65 - 69	1,557.0	294.0	759.0	504.0
70 - 74	1,497.0	288.0	741.0	468.0
75 - 79	1,227.0	208.0	627.0	392.0
80 - 84	754.0	116.0	378.0	260.0
85 +	514.0	72.0	246.0	196.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Parkridge Medical Center (State ID 33383)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	4,890.0	4,189.0	51.0	650.0
0 - 17	12.0	0.0	0.0	12.0
18 - 29	48.0	22.0	0.0	26.0
30 - 39	121.5	90.0	1.5	30.0
40 - 44	152.5	139.0	1.5	12.0
45 - 49	306.0	288.0	6.0	12.0
50 - 54	484.0	428.0	6.0	50.0
55 - 59	614.0	543.0	3.0	68.0
60 - 64	615.5	548.0	7.5	60.0
65 - 69	804.0	713.0	15.0	76.0
70 - 74	711.0	597.0	0.0	114.0
75 - 79	556.0	461.0	9.0	86.0
80 - 84	331.5	264.0	1.5	66.0
85 +	134.0	96.0	0.0	38.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	4,615.0	774.0	2,481.0	1,360.0
0 - 17	12.0	4.0	0.0	8.0
18 - 29	80.0	4.0	0.0	76.0
30 - 39	111.0	12.0	39.0	60.0
40 - 44	138.0	10.0	96.0	32.0
45 - 49	277.0	32.0	201.0	44.0
50 - 54	407.0	38.0	261.0	108.0
55 - 59	531.0	82.0	309.0	140.0
60 - 64	605.0	98.0	363.0	144.0
65 - 69	735.0	134.0	465.0	136.0
70 - 74	675.0	142.0	333.0	200.0
75 - 79	509.0	114.0	219.0	176.0
80 - 84	349.0	80.0	129.0	140.0
85 +	186.0	24.0	66.0	96.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

Parkridge East Hospital (State ID 33393)

Highest Weighted* Cardiac Cath Services Provided - Hospital Discharge Recorded Data - 2014-2016

Diagnostic Cardiac Caths				
	Diagnostic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	9.0	9.0	0.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	1.0	1.0	0.0	0.0
30 - 39	1.0	1.0	0.0	0.0
40 - 44	0.0	0.0	0.0	0.0
45 - 49	0.0	0.0	0.0	0.0
50 - 54	1.0	1.0	0.0	0.0
55 - 59	2.0	2.0	0.0	0.0
60 - 64	0.0	0.0	0.0	0.0
65 - 69	1.0	1.0	0.0	0.0
70 - 74	1.0	1.0	0.0	0.0
75 - 79	2.0	2.0	0.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

Therapeutic Cardiac Caths				
	Therapeutic	Service Categories		
Age Grp	Total	CC	PV	EP
Total	3.0	0.0	3.0	0.0
0 - 17	0.0	0.0	0.0	0.0
18 - 29	0.0	0.0	0.0	0.0
30 - 39	0.0	0.0	0.0	0.0
40 - 44	0.0	0.0	0.0	0.0
45 - 49	0.0	0.0	0.0	0.0
50 - 54	0.0	0.0	0.0	0.0
55 - 59	0.0	0.0	0.0	0.0
60 - 64	0.0	0.0	0.0	0.0
65 - 69	0.0	0.0	0.0	0.0
70 - 74	0.0	0.0	0.0	0.0
75 - 79	3.0	0.0	3.0	0.0
80 - 84	0.0	0.0	0.0	0.0
85 +	0.0	0.0	0.0	0.0

CC - Cardiac Catheterization PV - Peripheral Vascular Catheterization EP - Electrophysiological Studies

* Cardiac Cath ICD-9, ICD-10, CPT codes and service categories provided by the Bureau of TennCare and the Tennessee Hospital Association.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Healthcare Facility Statistics. Hospital Discharge Data System, 2014-2016. Nashville, TN.

From the 2016 Joint Annual Reports (JAR) of Hospitals there are 18 Cardiac Cath labs in operation in the service area:

Tennova Healthcare Cleveland (State ID 06223) – 1 lab
Erlanger Medical Center (State ID 33203) – 6 labs
Memorial Healthcare System (State ID 33323) – 7 labs
Parkridge Medical Center (State ID 33383) – 4 labs

Service Area Hospital	Diagnostic Cardiac Caths	Therapeutic Cardiac Caths	Total Cardiac Caths
Tennova Healthcare Cleveland (State ID 06223)	486.5	197.0	683.5
Erlanger Medical Center (State ID 33203)	5,862.5	4,814.0	10,676.5
Erlanger North (State ID 33213)	8.0	16.0	24.0
Erlanger East (State ID 33233)	156.0	18.0	174.0
Memorial North Park (State ID 33223)	75.0	79.0	154.0
Memorial Healthcare System (State ID 33323)	11,006.5	9,723.0	20,729.5
Parkridge Medical Center (State ID 33383)	4,890.0	4,615.0	9,505.0
Parkridge East Hospital (State ID 33393)	9.0	3.0	12.0
Totals	22,493.5	19,465.0	41,958.5

# of Caridac Cath Labs in Service Area (JAR)	18
Capacity per Lab (defined by standards)	2,000
Total Capacity in Service Area	36,000
Percent of Existing Services to Capacity	116.6%

The applicant states that the catheterization labs on the EMC main campus are operating at 131.5% of capacity, with a weighted total of 10,520 procedures performed in 4 Cath laboratories or (10,520 / 8,000 capacity = 131.5%).

According to the 2016 Joint Annual Report, the applicant reported 6 catheterization labs with a total of 10,676 weighted procedures or (10,676 / 12,000 capacity = 90%)

9. **Proposed Service Areas with No Existing Service:** In proposed service areas where no existing cardiac catheterization service exists, the applicant must show the data and methodology used to estimate the need and demand for the service. Projected need and demand will be measured for applicants proposing to provide services to residents of those areas as follows:

   Need. The projected need for a service will be demonstrated through need-based epidemiological evidence of the incidence and prevalence of conditions for which diagnostic and/or therapeutic catheterization is appropriate within the proposed service area.

   Demand. The projected demand for the service shall be determined by the following formula:

   A. Multiply the age group-specific historical state utilization rate by the number of residents in each age category for each county included in the proposed service area to produce the projected demand for each age category;
   B. Add each age group's projected demand to determine the total projected demand for cardiac catheterization procedures for the entire proposed service area.

   Not applicable.

10. **Access:** In light of Rule 0720-4-.01 (1), which lists the factors concerning need on which an application may be evaluated, 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;

    Both Polk and Bradley Counties are designated as medically underserved by the United Sates Health Resources and Service administration.

    b. Who documents that the service area population experiences a prevalence, incidence and/or mortality from heart and cardiovascular diseases or other clinical conditions applicable to cardiac catheterization services that is substantially higher than the State of Tennessee average;

    The mortality rate for heart disease in Tennessee is 207.3 per 100,000. The rates for Polk and Bradley counties are 225.6 and 219.3, respectively.

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

    EMC is a component facility of the designated safety net hospital by the Bureau of Tenncare Essential Access Hospital payment program.

d. 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.

EMC participates in both the Medicaid/TennCare and Medicare programs and as will the proposed FSED.

Specific Standards and Criteria for the Provision of Diagnostic Cardiac Catheterization Services Only

If an applicant does not intend to provide therapeutic cardiac catheterization services, the HSDA should place a condition on the resulting CON limiting the applicant to providing diagnostic cardiac catheterization services only. Applicants proposing to provide only diagnostic cardiac catheterization services should meet the following minimum standards:

11. **Minimum Volume Standard:** Such applicants should demonstrate that the proposed service utilization will be a minimum of 300 diagnostic cardiac catheterization cases per year by its third year of operation. Annual volume shall be measured based upon a two-year average which shall begin at the conclusion of the applicant's first year of operation. If the applicant is proposing services in a rural area where the HSDA determines that access to diagnostic cardiac catheterization services has been limited, and if the applicant is pursuing a partnership with a tertiary facility to share and train staff, the Agency may determine that a minimum volume of 200 cases per year is acceptable. Only cases including diagnostic cardiac catheterization procedures as defined by these Standards and Criteria may count towards meeting this minimum volume standard.
    Not applicable. The applicant currently provides diagnostic services.

12. **High Risk/Unstable Patients:** Such applicants should (a) delineate the steps, based on the ACC Guidelines, that will be taken to ensure that high-risk or unstable patients are not catheterized in the facility, and (b) certify that therapeutic cardiac catheterization services will not be performed in the facility unless and until the applicant has received Certificate of Need approval to provide therapeutic cardiac catheterization services.
    Not applicable. The applicant currently provides diagnostic services.

13. **Minimum Physician Requirements to Initiate a New Service:** The initiation of a new diagnostic cardiac catheterization program should require at least one cardiologist who performed an average of 75 diagnostic cardiac catheterization procedures over the most recent five year period. All participating cardiologists in the proposed program should be board certified or board eligible in cardiology and any relevant cardiac subspecialties.
    Not applicable. The applicant currently provides diagnostic services.

Specific Standards and Criteria for the Provision of Therapeutic Cardiac Catheterization Services

Applicants proposing to provide therapeutic cardiac catheterization services must meet the following minimum standards:

14. **Minimum Volume Standard:** Such applicants should demonstrate that the proposed service utilization will be a minimum of 400 diagnostic and/or therapeutic cardiac catheterization cases per year by its third year of operation. At least 75 of these cases per year should include a therapeutic cardiac catheterization procedure. Annual volume shall be measured based upon a two-year average which shall begin at the conclusion of the applicant's first year of operation. Only cases including diagnostic and therapeutic cardiac catheterization procedures as defined by these Standards and Criteria shall count towards meeting this minimum volume standard.

Projected Cardiac Cath Volume			
	Year 1	***Year 2***	***Year 3***
Projected Diagnostic Exams	*65*	*104*	*107*
Projected Therapeutic Exams	*185*	*312*	*321*
Total Projected Exams	***250***	***416***	***428***

15. **Open Heart Surgery Availability:** Acute care facilities proposing to offer adult therapeutic cardiac catheterization services shall not be required to maintain an on-site open heart surgery program. Applicants without on-site open heart surgery should follow the most recent American College of Cardiology/American Heart Association/Society for Cardiac Angiography and Interventions Practice Guideline Update for Percutaneous Coronary Intervention (ACC/AHA/SCAI Guidelines). As of the adoption of these Standards and Criteria, the latest version of this document (2007) may be found online at:
http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.107.185159

    Therapeutic procedures should not be performed in freestanding cardiac catheterization laboratories, whether fixed or mobile. Mobile units may, however, perform therapeutic procedures provided the mobile unit is located on a hospital campus and the hospital has on-site open heart surgery. In addition, hospitals approved to perform therapeutic cardiac catheterizations without on-site open heart surgery backup may temporarily perform these procedures in a mobile laboratory on the hospital's campus during construction impacting the fixed laboratories.

The applicant states, as a satellite facility of Erlanger Medical Center, Erlanger Bradley County will document ongoing compliance with the latest clinical guidelines of the American College of Cardiology, American Heart Association, Society for Cardiac Angiography and Interventions Clinical Expert Consensus Document on Catheterization Laboratory Standards. (ACC Standards)

Erlanger Medical center is a tertiary care provider and trauma center that provides open heart surgical services.

16. **Minimum Physician Requirements to Initiate a New Service:** The initiation of a new therapeutic cardiac catheterization program should require at least two cardiologists with at least one cardiologist having performed an average of 75 therapeutic procedures over the most recent five year period. All participating cardiologists in the proposed program should be board certified or board eligible in cardiology and any relevant cardiac subspecialties.

The applicant states they will have at least a minimum of 2 cardiologists with at least 1 cardiologist who performed an average of 75 therapeutic procedures over the past five year period.

The applicant provides estimated catheterization cases for six cardiologists for the past five years in Supplemental 1 of the application, ***four of these cardiologists have averaged over 75 therapeutic cases during the five year time period, with the other two reporting less than five years.***

17. **Staff and Service Availability:** Ideally, therapeutic services should be available on an emergency basis 24 hours per day, 7 days per week through a staff call schedule (24/7 emergency coverage). In addition, all laboratory staff should be available within 30 minutes of the activation of the laboratory. If the applicant will not be able to immediately provide 24/7 emergency coverage, the applicant should present a plan for reaching 24/7 emergency coverage within three years of initiating the service or present a signed transfer agreement with another facility capable of treating transferred patients in a cardiac catheterization laboratory on a 24/7 basis within 90 minutes of the patient's arrival at the originating emergency department.

The applicant does not anticipate that the cardiac patients who are served at Erlanger Bradley County generally will not be high risk patients. The applicant state as a satellite facility of Erlanger Medical Center, Erlanger Bradley County will be staffed by appropriate trained and experienced cardiologists from EMC. These cardiologists will possess the same skills required for both laboratory locations and may rotate between facilities as needed providing seamless integration of the FSED catheterization services, and have the ability to treat higher acuity patients.

18. **Expansion of Services to Include Therapeutic Cardiac Catheterization:** An applicant proposing the establishment of therapeutic cardiac catheterization services, who is already an existing provider of diagnostic catheterization services, should demonstrate that its diagnostic cardiac catheterization unit has been utilized for an average minimum of 300 cases per year for the two most recent years as reflected in the data supplied to and/or verified by the Department of Health.

The applicant states this criterion is not applicable as EMC is currently providing this service, but rather to initiate cardiac catheterization services at the proposed FSED.

Specific Standards and Criteria for the Provision of Pediatric Cardiac Catheterization Services

Applicants proposing to provide pediatric cardiac catheterization services should meet the following minimum standards:

19. **Minimum Volume Standard:** Such applicants should demonstrate that the proposed service utilization will be a minimum of 100 cases per year by its third year of operation. Annual volume shall be measured based upon a two-year average which

shall begin at the conclusion of the applicant's first year of operation. Only cases that include diagnostic and therapeutic cardiac catheterization procedures as defined by these Standards and Criteria shall count towards meeting this minimum volume standard.

Not applicable.

20. **Minimum Physician Requirements to Initiate a New Service:** The initiation of a new pediatric cardiac catheterization program should require at least two cardiologists with at least one cardiologist having performed an average of 50 pediatric cardiac catheterization procedures over the most recent five year period. Pediatric cardiac catheterization procedures should be performed only by board certified or board eligible physicians specializing in pediatric cardiac care.

Not applicable.

21. **Open Heart Surgery Availability:** Such applicants should offer full pediatric cardiac medical and cardiac surgical capabilities, including pediatric open heart surgery.

Not applicable.

Specific Standards and Criteria for the Offering of Mobile Cardiac Catheterization Services

The need for mobile cardiac catheterization services should be based upon the following minimum standards:

22. **Minimum Volume Standard:** Such applicants should demonstrate that the proposed service utilization will be a minimum of 60 cardiac catheterization cases per day of operation per year by its third year of operation. Annual volume shall be measured based upon a two-year average which shall begin at the conclusion of the applicant's first year of operation. If the applicant is proposing services in a rural area where the HSDA determines that access to diagnostic cardiac catheterization services has been limited, and if the applicant is pursuing a partnership with a tertiary facility to share and train staff, the Agency may determine that a minimum volume of 40 cases per day of operation per year is acceptable. Only cases that included diagnostic cardiac catheterization procedures may count towards meeting this minimum volume standard.

Not applicable.

23. **Limitations on Procedure Types in Mobile Facilities:** No therapeutic or pediatric cardiac catheterization procedures should be performed using a mobile laboratory unless the mobile unit is located on a hospital campus with on-site open heart surgery capability and, in the case of a pediatric procedure, offers full pediatric cardiac medical and cardiac surgical capabilities. On a temporary basis, however, the same scope of services offered in a fixed laboratory may be offered in a mobile laboratory only for the duration of construction impacting the fixed laboratory.

Not applicable.

24. **Non-Cardiologist Physician and Staff Competence:** In cases where attending cardiologists live more than 30 minutes from the mobile laboratory and/or typically leave after performing a procedure, the applicant should document that a sufficient number of physicians and support staff at the facility have an understanding of the potential complications of cardiac catheterization and are an integral part of the program's management process.

Not applicable.

From: Ann R. Reed
To: Melanie Hill; Trent Sansing
Cc: Jeff Ockerman; Donna G. Tidwell; Robert Seesholtz
Subject: RE: Erlanger and Tennova Bradley County satellite ED projects
Date: Friday, June 8, 2018 7:41:20 AM
Attachments: image001.png

Melanie

The Board for Licensing Health Care Facilities (BLHCF) at its June 6, 2018 meeting was presented with the issue of trauma designation being allowable for off campus EDs. The BLHCF was provided guidance from the Trauma Care Advisory Council (TCAC) which was to **not allow** trauma designation by an off campus ED. The BLHCF voted to stand with the guidance of the TCAC.

If you need anything further, please let me know.

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