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TO: Chief Academic Officers and Nursing Educators

FROM: Betty Dandridge Johnson
Chief Academic Officer

SUBJECT: DNP Statewide Taskforce Report

DATE: March 6, 2018

In April 2017, THEC established a statewide Taskforce to examine the critical issues that were recommended by Tripp Umbach, the consulting firm that conducted the Doctor of Nursing Feasibility Study. The Taskforce was charged with examining three critical issues related to the DNP program: (1) DNP program capacity and student retention; (2) DNP clinical sites and faculty shortages; and (3) employment opportunities and matching DNP skills with the marketplace. This Taskforce was led jointly by the following three co-chairs along with the participation of 11 faculty members.

- Dr. Wendy M. Likes, Dean, College of Nursing (UTHSC)
- Dr. Cecelia A. McIntosh, Dean, School of Graduate Studies (ETSU)
- Dr. Patty Orr, Professor Lenora C. Reuther Chair of Excellence in Nursing (APSU)

In order to examine these challenges facing the DNP program, the Taskforce conducted interviews with DNP program directors (regarding program capacity and student retention). Additionally, two surveys were conducted and sent to employers and Chambers of Commerce.

The final report from the Taskforce is attached to this email. Provided below are some highlights from the report:

- The 10 established DNP programs have the capacity to grow enrollment with their current resources with variance in the specialty ranging from 20 in Women's Health Nurse Practitioner programs to 100 in Family Nurse Practitioners.
- Strategies were identified to increase student retention such as providing remediation programs for struggling students.

- Lack of preceptors, faculty and clinical sites were identified as significant barriers to graduate program success. Competition for sites continues to grow while the availability of knowledgeable preceptors in specific specialities remains constant or decreases.
- Return of survey employer responses was less than 5% of over 900 surveys sent to employers. Thus, the validity in making decisions from the survey is questionable.
- Interest in learning more about the DNP was expressed by a number of employers and Chambers of Commerce, mostly from rural areas. It is certainly worth educating the health care public as the merits of the DNP trained employee with an understanding by students that the additional degree may contribute to the professionalization of the disciple but not bring the hoped for financial gains.

In light of the findings of the Tripp Umbach DNP Feasibility Study and the efforts of the THEC DNP Statewide Taskforce, it appears that the currently approved DNP programs in Tennessee have the capacity to meet the current needs of the State. However, the shortage of nursing faculty is clear and the University of Memphis has submitted a proposal to offer a Nursing PhD. This proposed program will help to fill the gap in academic nursing with a fall 2018 start date

THEC appreciates the diligence and commitment of the DNP Statewide Taskforce in their efforts to investigate and promote nursing solutions for Tennessee.

cc: Mike Krause
Pam Knox
Wendy Likes
Cecelia McIntosh
Patty Orr

Tennessee Higher Education Commission

Doctor of Nursing Practice Statewide Taskforce

Follow-Up Report to DNP Feasibility Study

March 2018

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Follow-Up Report to DNP Feasibility Study

Report of the Statewide Taskforce on Nursing Practice in Tennessee

The Tennessee Higher Education Commission (THEC) actively seeks to develop recommendations, programmatic initiatives, and partnerships that increase educational attainment in the state while improving education access and success for all Tennessean.[1] On October 25, 2004, the member schools affiliated with the American Association of Colleges of Nursing (AACN) voted to endorse the Position Statement on the Practice Doctorate in Nursing. This decision called for moving the current level of preparation necessary for advanced nursing practice from the master's degree to the doctorate-level by the year 2015. This endorsement was preceded by almost three years of research and consensus-building by an AACN task force charged with examining the need for the practice doctorate with a variety of stakeholder groups.

Many factors contributed to the momentum for change in nursing education at the graduate level including the rapid expansion of knowledge underlying practice; increased complexity of patient care; national concerns about the quality of care and patient safety; shortages of nursing personnel which demands a higher level of preparation for leaders who can design and assess care; shortages of doctoral-prepared nursing faculty; and increasing educational expectations for the preparation of other members of the healthcare team. Nursing is moving in the direction of other health professions such as Medicine (MD), Dentistry (DDS), Pharmacy (PharmD), Psychology (PsyD), Physical Therapy (DPT), and Audiology (AudD) to offer practice doctorates.

In 2015-2016, multiple institutions requested to establish Doctor of Nursing Practice (DNP) programs. In October 2016, the Tennessee Higher Education Commission retained Pittsburgh-based consulting firm Tripp Umbach to conduct a market assessment and feasibility study to discern the capacity for additional Doctor of Nursing Practice (DNP) programs in the State of Tennessee. Tripp Umbach is the national authority on medical and health science education expansion, with more than 50 project experiences over the past 15 years. In response to the THEC, Tripp Umbach produced a market assessment and feasibility study to assist the State of Tennessee in making an informed decision on whether or not to proceed with additional planning of DNP programs that included:

- a market and capacity assessment using existing population health data and research conducted by state and regional public health officials;

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[1] Tennessee Higher Education Commission: About THEC; https://www.tn.gov/thec/topic/about-thec.

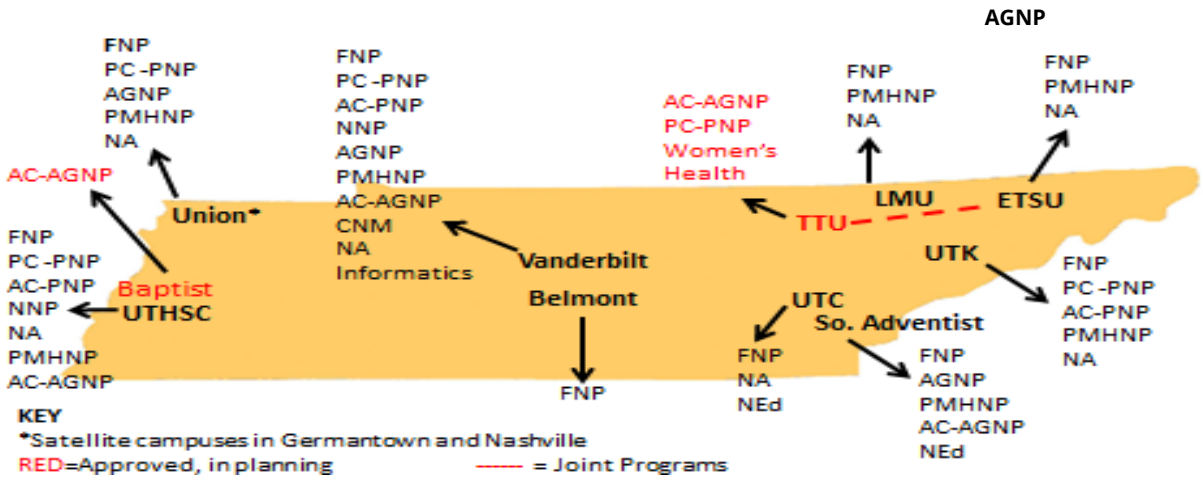
- collecting and analyzing data to describe the current supply and demand of physicians, DNPs, and students relevant to an expanded DNP education offering in Tennessee;
- an environmental scan of existing programs within the projected competitive region including types of offerings and tuition costs; and
- interviews with internal (THEC representatives) and external key stakeholders (Tennessee community colleges and universities, local community leaders, regional health care leaders).

The findings of Tripp Umbach have been integrated with the work of the THEC Statewide Taskforce on the Doctor of Nursing Practice to produce this report.

Overview of Doctor of Nursing Practice Programs in Tennessee

At the time of the March 2017 Tripp Umbach final report, Tennessee was represented geographically with ten programs offered throughout the state as reflected in Figure 1. Since that time, the Joint DNP program (ETSU and TTU) has been implemented and the Baptist College of Health Sciences has been approved for implementation.

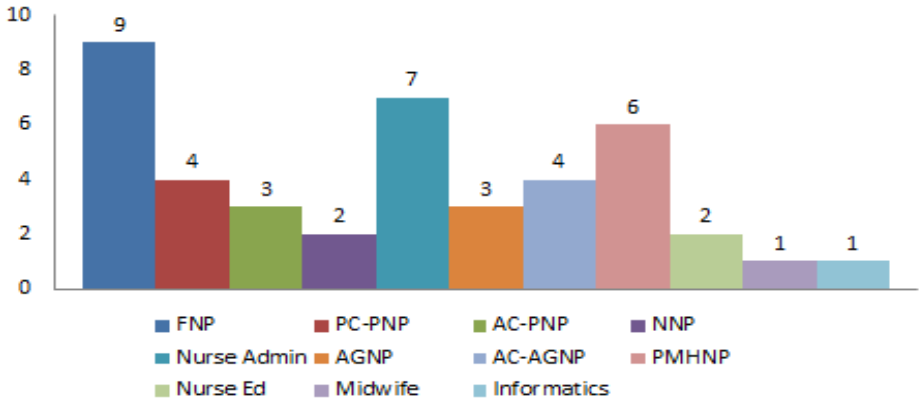
Figure 1: Established Doctor of Nursing Practice Programs and their Specializations [a] in Tennessee



[a] FNP - Family Nurse Practitioner
PC- Primary Pediatric Nurse Practitioner;
AC_PNP-Acute Care Pediatric Nurse Practitioner
NNP- Neonatal Nurse Practitioner
AGNP- Adult Gerontology Nurse Practitioner
PMHNP- Psychiatric Mental Health Nurse Practitioner
AC-AGNP-Acute Care Adult Gerontology Nurse Practitioner
CNM-Certified Nurse Midwife
NA- Nursing Administration
NEd-Nursing Education
NA – Nursing Administration

As shown in Figure 2, there is variability in the enrollments across the various specialties. The Family Nurse Practitioner program is the most frequently offered (found in nine of the ten established DNP institutions across the state), followed by seven Nursing Administration programs and six Psychiatric Mental Health Nurse Practitioner programs.

Figure 2: Total Number of DNP Specialties offered in Tennessee



Tennessee specific projections report and expected long-term employment for registered nurses with a 25% increase needed by 2024 to meet occupational demands[2]. According to the Bureau of Labor Statistics, *Occupational Outlook Handbook, 2016-2017 Edition* [3], Tennessee will be able to meet only half of the demands for RNs by 2020, with nurse practitioners among the fastest growing occupations with an annual growth rate of 3.5%. Despite this compelling employment data for nursing as a profession both nationally and in Tennessee, however, the data do not differentiate between masters and doctoral level training in the projections, complicating the case for the need for additional DNP training programs.

The evaluation by Tripp Umbach involved a number of factors:

- the number of DNP programs already in Tennessee and the fact that they may not be at capacity;
- the shortage of nursing faculty in Tennessee, especially at the doctoral level;
- the lack of alignment between the recognition by Tennessee employers of the stature of the DNP and the translation to higher compensation; and
- the expected projection that the supply for APRNs will outpace the demand both nationally and at the state level by 2025.

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[2] http://www.bls.gov/ooh/healthcare/registered-nurses.htm (Visited August 14, 2016)

[3] https://www.jobs4tn.gov/admins/gsipub/htmlarea/uploads/LMI/Publications/Tennessee_7-25_2014-2024_Overview_update_for_website_(REUPDTE)2016_0727.pdf

In general, Tripp Umbach proposed that an opportunity does not exist for more DNP programs; however, it appears to exist in the area of nurse educator to address the nursing faculty shortage issue. In response to their recommendations, THEC established a statewide taskforce to take a deeper dive into the following recommended areas:

1) educational models, DNP program capacity and retention;
2) MSN program capacity, DNP clinical sites and faculty shortages; and
3) employment opportunities and matching DNP skills with the marketplace.

The taskforce was chaired jointly by three statewide co-chairs (a nursing dean, a chair of excellence in nursing and a graduate dean) from each region of the state with members solicited though the co-chairs from public and private universities with DNP program across the state. Members of the taskforce are shown in Appendix A. For the purposes of this report, the works of the subcommittees have been combined into a single report.

Taskforce Methodology

To examine the current situation in Tennessee, two surveys were conducted with the deans of the colleges of nursing in Tennessee:

- An electronic survey (Appendix B) was distributed via an invitational email to the deans of all colleges of nursing within Tennessee (N=16) that had DNP and/or MSN programs. The invitation was from the Tennessee Higher Education Commission requesting their participation in an electronic survey to examine the need for clinical site placements, program concerns such as availability of consistent preceptors, site visits, faculty and administrative load, faculty mentoring/development plans, and programs capacity. A link to the survey posted on Survey Monkey, a survey website, was included in the invitational email. The electronic survey took approximately 20-25 minutes to complete and included questions related to the above objective. Nine of 16 colleges (56.3%) completed the survey. Eight programs (88.9%) responding to the survey offer a BSN program, eight (88.9%) a MSN APRN program and six (66.7%) offer a DNP program. Of the six with a DNP program, one (16.6%) offers a post-master's program only, while five (83.3%) offer both a post-master's and a post-BSN program.
- A second survey (Appendix C) consisting of a structured interview was also conducted to the educational models employed and the types of student services and professional development opportunities offered in the interest of helping the DNP educational community with identifying effective practices. Data were obtained from 10 of the 12 DNP programs across the state, a subset of the institutions contacted to participate in the electronic survey. One private institution declined to participate and two programs starting

in 2018 were excluded from this report. The programs included range from very newly started (fall 2017) to long established programs (nearly 20 years old).

Educational institutions participating in the dean surveys are shown in Appendix D. These institutions offer, in some cases, masters programs, doctoral programs or both masters and doctoral programs.

Lastly to examine the employment picture, two additional electronic surveys were created:

- The first survey was directed at employers (Appendix E). Employers (n= 3914) inclusive of hospitals and medical centers, county and regional health departments, and medical practices and 106 former and current clinical preceptors within Tennessee and border counties to Tennessee were identified. It was determined that only those sites and preceptors in Tennessee would be utilized reducing the total pool to 1100. Slightly less than 78% (n=862) with valid non-duplicative email addresses were sent a letter from the Tennessee Higher Education Commission requesting their participation in an electronic survey to examine the need for additional DNP programs to meet employer needs. Survey Monkey was utilized to collect responses. The survey link was included in the solicitation letter. Thirty-four of the 862 employers (3.9%) contacted responded to the survey request. The West Tennessee employers represented more than half of all responses (West: 58%, Middle, 29%, East 13%). The care delivery focus was largely primary care providers (54%), with 17% each outpatient specialty centers and hospitals, 11% health departments within the respondents' organizations, and 9% public health centers.
- The second electronic survey (Appendix F) was sent to the Chambers of Commerce across the state and inquired into care delivery focus, current practice of employment for Advanced Practice Registered Nurses (APRN) with DNPs degrees and employer satisfactory with these employees, the roles of these APRN DNPs, salary determinants, the greatest perceived roles for DNP, and potential interest in providing DNP preceptors. Chambers of Commerce were queried on their locations within the three grand divisions and their interest in receiving additional information on how APRNs with DNPs might meet the health care needs in Tennessee. An email invitation containing a survey link was sent to all Tennessee Chambers of Commerce via a single Chamber distribution point. Twenty-five out of the 108 Chambers of Commerce (23.1%) responded. In contrast to the sample of employers responding, East Tennessee was more highly represented (44%) followed by Middle (36%) and West Tennessee (20%).

Educational Models

Doctor of Nursing Practice (DNP) programs are of interest to working professionals who are in active practice while pursuing the advanced degree. As such, the blended model of instruction has evolved into a best practice in this discipline. All of the universities participating in the survey have designed their programs using the blended model of education which has some required, in-person (on ground) deliverables as well as online delivery for each course. Students may pursue the degree as either full-time students or part-time students at all institutions with one exception, the nurse anesthetist DNP program. One institution provides the option for DNP students to take some courses fully on ground while two offer a fully 100% online (one restricts this to students entering the DNP program already holding a master's degree).

The on-ground portion of many programs is delivered through required "Intensives" which is a broad term that covers many activities that will be described further. Intensives are a form of professional development that require students to be physically present and thus participating in "real time". Of those programs currently offering intensives, three conduct them annually while five conduct them each semester for three to six days. The one program not conducting intensives is in the process of program revision in which they will be required. There are varying penalties for non-participation up to not being able to progress further in the program until the Intensives are completed. Most programs will make some accommodation for extenuating circumstances with prior notification, but this requires making up the experience or an alternate assignment.

Many universities include some aspect of networking and/or professional development in their required Intensives which may include some face-to-face course sessions, social events, advising, guest speakers, colloquia presentations, and new student orientations. Some programs include sessions with a librarian, seminar discussions with faculty, skills/simulations, and writing workshops. Some hold qualifying exams during that time and others may have course summaries. Some have students further along in the program present the prospectus for their culminating capstone experience to other DNP students as well as nursing faculty. For several of the programs that offer social activities, regional professional associations and honor societies are invited to participate and this may include a separate activity of providing students the opportunity to participate in local and regional policy summits. Students are encouraged to join professional associations and to attend professional conferences with some students having the opportunity to give presentations at professional conferences. Several programs provide opportunities for networking among and between cohorts through the use of social media, electronic discussions, and other means through the blended courses. While all programs do some of this, only some programs do nearly all of this so there is a difference in networking and professional development opportunities between the different programs.

Some programs reported in their interviews university-wide opportunities in which DNP students participate. For example, many programs have students participate in their respective university annual research day or research symposia. Other things mentioned were opportunities to: participate in CEU events on campus, take formal professional development courses, or participate in focused workshops geared toward supporting program completion such as writing workshops (most programs/universities) or completion workshops in support of the capstone, thesis, or dissertation.

In addition to didactic courses and intensives, the practice element is the key to nursing programs. All programs use a range of activities for students "practice hours" (direct patient care, simulation, standardized patients, preceptors, virtual clinical experiences). In all but one program, a staff or faculty assists students with placement. One program asks the student for recommendations and subsequently assists with the process. Space for the number of students and scheduling for undergraduate programs in areas where there is competition for placements proves challenging. Administrative support for preceptors to accept students, compensation expectations, and other system issues also presents challenges. Almost two-thirds of the employers (62.9%) responding to the survey currently or had previously provided clinical preceptors. For doctoral and BSN to DNP students, finding preceptors in some specialties such as Psychiatric Mental Health, Women's Health and Pediatrics is challenging. Matching the student and clinical sites involves a number of factors as shown in Table 2.

Table 2. Factors Determining Placement in Clinical Sites for Students in the Master of Science in Nursing Advanced Practice Registered Nurses (MSN-APRN)

Factor	Percentage
Preceptor availability	100
Clinical Site Availability	88.9
Student Interest	66.8
Student Readiness	66.8
Student-Preceptor Match	66.7
Other: Site has the type of experiences needed for the student to meet course requirements/competencies, the ability to obtain an agreement/contract with the site, state regulations (Board of Nursing and Higher Education), and expectations for reimbursement	11.1

Of those programs with both MSN-APRN and DNP programs (n=5), 60% responded that they used different types of preceptors for their DNP students. Of the nine programs offering MSN-APRN programs, Nurse Practitioner, Doctors of Nursing Practice and MDs are used equally as preceptors with all students with 44.4% reporting using Physician Assistants and 44.2% reporting the use of PhDs as preceptors. All programs reported the need for new preceptors annually for both the MSN and DNP programs. The primary reasons for accepting new preceptors are shown in Table 3.

Table 3. Changes in Preceptors

Reasons for Accepting New Preceptors	MSN-APRN Program	DNP Program	Total
Former preceptor has left the vicinity	71,4%	28.6%	7
Former preceptor state he/she is no longer available for clinical site placements	75%	25%	8
Issues with former preceptor's performance	80%	20%	5
Former preceptor is not satisfied with our students' performance	100%	0%	2

All sites stated there are not enough preceptors to meet their needs. Women's health and pediatrics were noted as the most problematic for placing students due to the limited numbers of preceptors. Other challenges noted included inability to pay preceptors. Programs offer various incentives to preceptors including, library privileges, faculty appointments, preceptor awards, CEU discounts, email access, letters of recognition for re-certification, etc. in lieu of monetary compensation. Six of the nine programs responding (66.7%) provide an on-site visit by faculty once a semester. Other programs noted annual visits and email communication each semester.

Admission

Educational standards with respect to content, requirements, and learning outcomes for the different practice specialty areas are clearly identified through various accrediting bodies (e.g., American Association of Colleges of Nursing (AACN), Commissions on Collegiate Nursing Education (CCNE). Of the 10 DNP programs completing the electronic survey, all require a MSN degree for admission. Two do not admit applicants that only hold a BSN degree while other programs admit qualified BSN applicants for at least some specialty areas. However, these students have a longer program of study in order to meet the criteria for the profession and for sitting for the licensure exam. Of the four institutions (44.4%) responding to a question of enrollment by DNP specialty, Nurse Anesthesia has the highest total enrollments with 76-100 students followed by Family Nurse Practitioner with enrollments up to 75. Women's Health Care Practitioner and Nurse Executive Practice were not represented in the enrollments.

One measure of interest in programs is the number of applications submitted for admission consideration. A second measure of interest is in the number of applicants which are selected as qualified for admission. The third key consideration of interest lies in the number of applicants admitted who actually enroll in the program to which they have been admitted.

Table 4 reflects DNP application data for 2013-2017. DNP applications ranged from a four-year average of 15 to 124. Clearly there is significant interest in DNP education from those in the nursing profession.

Table 4. Number of DNP Applications: 2013-2017

	Belmont	ETSU	ETSU-TTU	King	Union	UTK	UTC	UTHSC	VU	Range	Mean	Median
2013	*NA	108	-	*NA	*NA	9	31	224	114	9-224	97.2	108
2014	17	100	-	*NA	106	8	28	185	139	8-185	113.2	100
2015	25	83	-	*NA	88	20	26	176	127	20-176	77.9	83
2016	21	73	-	*NA	122	21	63	210	117	21-210	89.6	69
2017	19	89	18	*NA	149	11	25	237	*NA	11-237	78.3	25
5 year Total	82	453	18	*NA	465	69	173	1032	497	18-497	348.6	261
4-year Mean	20.5	86.3	18	*	116.3	15	35.5	202	124.3	15-124.3	59.4	35.5
4- Year Range	17-25	73-100	-	*	88-149	8-21	25-63	176-237	117-139			
Median	20	86			124	15.5	27	210	122			

*Note: (average, range and mode provided are of most recent 4 years; ETSU-TTU program was started in 2017; * denotes unavailable; ETSU-TTU Joint program is in its first admissions cycle; Southern Adventist University's first class will begin in 2018)*

Table 5 shows the number of applicants who were admitted from 2013-2014. Not all applicants are accepted into a program and this can be for several reasons. For example, some applicants do not complete the application so cannot be considered for admission, some applicants do not meet minimum qualifications for admission set by the program, and/or the program may only be able to admit a specific number of persons each year.

Table 5. Number of Admissions - 2013-2017

	Belmont	ETSU	ETSU-TTU	King	Union	UTK	UTC	UTHSC	VU	Total	Range	Mean	Median
2013	*NA	41	-	*NA	33	8	19	*	79	180	8-41	36	33
2014	11	41	-	7	74	6	19	*		158	6-41	26.3	15
2015	18	34	-	5	75	14	23	*		152	5-75	28.2	20.5
2016	14	21	-	4	76	12	24	109		260	4-109	37.1	21
2017	17	20	13	7	76	8	15	*		169	7-76	22.3	15
5 year total	60	151	13	23	368	40	99	109	79			104.7	79
4 year total	15	38	13	6	84	10	*NA	109				39.3	39.3
4 year range	11-18	20-41		4-7	74-76	6-14	15-23						
4 year mean	15	29		5.6	75.25	10	20.3						
Median	16.5	27.5		6	75.5	10	21						

*Note: average provided is of most recent four years except as noted; * denotes data unavailable*
Southern Adventist University and Baptist College of Health Sciences first DNP class will begin in 2018.

Capacity is a critical factor for consideration. Each institution is limited in the number of students it can train and institutions seek to admit those who will enroll and complete the degree. In some cases, an applicant who is offered admission is not able to matriculate into the program. The most common factors are related to changes in employment or, most frequently, an unforeseen person/family issue demands precluding enrollment in a doctoral program at the time of admission. Some programs allow an applicant to defer until the following term; other programs may require the person to reapply when the issue has been resolved. The enrollment at individual programs varies widely. Table 6 shows the number of newly admitted students who enrolled that year and the percent yield. Each university tracks the number of enrolled students per defined concentration or specialty area (data not shown). It is not possible to project the annual yield per year due to missing admission data.

Table 6. Number of Newly Admitted Students Who Enrolled

	Belmont	ETSU	ETSU-TTU	King	Union	UTC	UTK	UTHSC	VU	Total
2013	*	*	-	*	33	14	7	1	64	119
2014	10	*	-	7	74	10	3	8	90	202
2015	13	26	-	5	79	22	12	82	85	324
2016	11	15	-	4	78	12	8	88	78	294
2017	16	19	12	7	79	9	8	*	*	150
Total	50	60	12	23	367	69	38	179	388	1186
Average Yield	83%	80%	92%	100%	99%	70%	95%	82% (2016 only)	86%	87%

*Note: average percent yield is of number of years for which data are available except as noted; * denotes data unavailable; ETSU-TTU program is new so applications and enrollment are only for fall semester; Southern Adventist University and Baptist College of Health Sciences will not admit its first class until fall 2018.*

Retention

Examining student retention mandates determining practices that have been effective as well as examining effective educational models and the potential relationships between educational models and retention. Factors that were analyzed included students that entered with bachelor's degrees versus those that entered with MSN degrees, time in workforce before matriculating in a DNP program, size of entering cohort, networking opportunities provided by programs, retention initiatives, and professional development opportunities while matriculating.

Because the majority of persons pursuing DNP education are working professionals and because many also have family responsibilities, these are the major retention challenges reported

by the universities participating in this study. Other factors given by more than one program included financial issues and employer demands making graduate study unfeasible. Most universities have policies in place whereby a student can apply for a leave of absence from the program that includes a deadline for re-entering the program. Two institutions do not permit leave of absence rather require students to withdraw from the program and then may apply for reinstatement or reapply for admission. For the latter programs, there is no promise of reinstatement/readmission. The percentage of students who withdraw or dropout ranges from 5-20% of the students, depending on the university. This does not include students who were dismissed for not meeting academic standards. This latter number is modest overall.

Nearly all programs mentioned writing skills as the largest challenge for DNP students, most of whom are re-entering graduate education after significant time in the workforce. All programs offer writing support with some having a dedicated writing specialist for the DNP students. Several reported that students needed help with statistics and these programs offer that help. Most programs talked about the importance of faculty advisors and mentors stating that these interactions help keep students engaged and retain them. Many programs would counsel full-time students to consider moving to part-time status so as to have fewer classes per term thus decreasing time demands for working professionals. Most reported this is an effective strategy.

The DNP programs reported in interviews their use of university-wide student services to refer students as retention aids. These include writing centers, counseling services, disability services, career services, and information technology services. Because of the blended nature of the educational model, some of these services are available through electronic means (Skype, Blackboard or Desire to Learn, etc.). One institution reported veterans benefit programs, graduate librarians, food pantry, and the graduate student success specialist program as having positive impact on retention. A second institution also has a student success specialist. Two programs provide financial support for DNP students to attend conferences. Most programs indicated that it is difficult to track the precise efficacy of each intervention/service however those with a larger number of services in place reported fewer students dropping out. Opening dialogue to share retention and student service ideas between programs may provide stimulus for programs to test ideas that make sense for their respective student populations.

Existing DNP programs were also asked to provide graduation rates for BSN to DNP and MSN to DNP programs. Five of the 10 programs engaging in taskforce interviews provided time-to degree information of 90-100% of students finished within their respective program within 4-8 years. Of the nine institutions responding to the electronic survey, all institutions predicted a growth in student enrollment over the next five years ranging from 5 to more than 50%, of which all perceived they had the current resources to have capacity enrollment.

Employment

As the healthcare industry continues to grow and advance, there is a need for additional health providers to enter the workforce, especially in rural and growing urban centers. Research indicates that there will be significant shortfalls of primary and non-primary care physicians by the year 2025. The shortfall totals between 14,900-35,600 for primary care physicians; and, a shortfall of 37,400-60,300 for non-primary care physician[4]. A shortfall of physicians will not affect the rate at which patients need to be seen by a physician. Rather, the shortfall indicates that there will be a need from other healthcare professionals as well as allied health professionals across the spectrum to meet national demands.

When asked their greatest challenges, employers responded with a plethora of issues ranging from operational expenses, meeting reporting requirements, reimbursement and staff retention but also the need for nursing staff in specialty areas. Chamber of Commerce respondents stated the greatest regional shortages were in nurses as shown in Table 7.

A shortage of physicians was reported in East Tennessee (54%), Middle Tennessee (21%) and West Tennessee (79%). All respondents reported that nurse practitioners were employed in their regions. Almost 97% reported the Nurses Practitioners were trained at the master's level with 12 (53%) reporting doctoral trained nurse practitioners were employed in their areas. Almost 70% reported anticipating a shortage of physicians in which they would consider hiring a nurse practitioner.

Table 7. Shortages in Health Care Professionals as cited by Chambers of Commerce Respondents

Shortages	N	Percentage
No shortage of health care professional in my region	1	4.2%
APRN (Masters or doctoral level) shortage	2	20.2%
Physician Shortage	13	54.2%
Nurse shortage	19	79.2%
Other: First Assistant in operating room, medical staff positions. Lab and Imaging Technologist, MT and MLT, CNA, Physical Therapists, Occupational Therapists	17	29.2%

Table 8 shows the areas of practice for these APRNs with DNP degrees within the organizations with seventeen (49%) of those who employ Advanced Practice Nurses who hold a Doctor of Nursing Practice degree a satisfaction rating for those employees of 87 on a 100 point scale. Delving deeper into the percentage of time an APRN with a DNP is engaged in specific activities, it appears that employers responding are still utilizing APRNs with DNPs largely to provide direct patient care or primary care, ranging from less than 25% to 100% of their time.

[4] *Advance for Nurse Practitioner*; 2015 Salary Survey

Table 8. Areas of Practice for DNPs in Tennessee

Areas of Practice	Percentage
Primary Care Medical Practice	35.7%
Rural Community Health Center	28.6%
Community Health Center Hospitalist (Outsourced to Hospitalist Company) Nurse Practitioner Private Practice Hospital (Outpatient Care) Hospital (Emergency Department)	14.3%
Hospital (In-Patient Care) Hospital Emergency Department (Outsourced to Emergency Delivery Company) Extended/Long Term Care Single Medical Group Practice Multi-Specialty Medical Group OB-GYN/Women's Health Practice Outpatient Ambulatory Care Specialty Clinic (i.e., Urgent Care, Behavioral Health, Local County Health Department, Public Health, Administrative) Academic Health Center College Health Center University/College Faculty	7.1%
Retail Clinic State Health Department Veterans Administration Hospital	0%

Almost 30 percent of the employers reported APRNs with DNPs were engaged as providers of primary patient care in 100% of the time. Fifty percent of employers reported APRNs with DNPs were assigned as providers of direct patient care 50% of the time. Of the employers responding, 46% reported using APRNs with DNPs as clinical educators. One employer reporting 100% time utilization with additional employers stating 1-25% of time of the APRNs with DNPs allocated to this function. Other areas in which APRNs with DNPs were engaged ranged from 1-100% with the most frequent 1-25% included serving as a leader in achieving quality indicators and CMS outcomes, administrator, and as a clinical administrator. Hospitalist/Intensivist, Clinical Informatics, clinical researcher and university/college faculty were also represented but to a lesser percentage of time.

Challenges

Faculty Shortages

Training nursing students to become competent APRNs required highly trained faculty to teach in graduate programs with appropriate clinical sites to compliment the academic coursework. As with the majority of graduate programs, especially doctoral programs with practice components, DNP programs are expensive for the universities to operate necessitating sufficient student enrollment to support the program activities and a sufficient number of highly qualified faculty members to teach within the program. Tripp Umbach gathered data from

existing nursing programs in Tennessee to assess DNP student retention issues and best practices as well as faculty shortages. Fifty-six institutions within Tennessee offer nursing degrees at varying levels. Nursing education is suffering from a faculty shortage across the country, and is limiting the number of programs offered, students accepted, and quality of education.

Many factors contribute to the decline in number of faculty available. Similar too many other fields, nursing has an aging faculty. Job competition from clinical sites and other forms of healthcare competes with the university to hire. Nationally, nursing schools in the United States turned away close to 69,000 qualified applicants from baccalaureate and graduate nursing programs in 2014 due to an insufficient number of faculty, clinical sites, classroom space, clinical preceptors, and budget constraints. Almost two-thirds of the nursing schools responding to the survey pointed to faculty shortages as a reason for not accepting all qualified applicants into baccalaureate programs.[5] A special survey on vacant faculty positions was completed in 2016 by the American Association of Colleges of Nursing.[6] The surveyed institutions reported having a full-time faculty vacancy rate of 7.9%. On a more granular scale, schools located in southern states reported faculty vacancies of 10.9%. Furthermore, 59.8% of respondents reported full-time vacant faculty positions that require an earned doctorate in nursing or a related field. Institutions reported the following as barriers to faculty recruitment and retention: insufficient/noncompetitive funding; competition from other marketplaces; faculty workload; faculty willingness to conduct research/teach clinical courses; and a lack of preparation of those with a DNP for an academic role.

Across the 9 DNP programs in Tennessee, 24 vacancies for doctorate-prepared faculty and 13 for MSN-prepared faculty were noted. On average each program has three doctorate-prepared faculty vacancies and two MSN-prepared faculty vacancies. On a 100 point scale, programs rate their ability to hire faculty with teaching experience at a 76, however, the rating drops to 56 when indicating their ability to hire faculty with graduate teaching experience. The majority of programs take one full academic year or more to fill vacancies. The most frequent barriers reported at all levels including undergraduate include a limited pool of applicants, matching the correct expertise and the program location. Eight programs (88.9%) responding to the electronic survey noted that if faculty were available, they would be able to expand their enrollment numbers in both the MSN and DNP programs.

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[5] American Association of Colleges of Nursing: Nursing Faculty Shortage Fact Sheet; http://www.achn.nche.edu/media-relations/Faculty/ShortageFS.pdf

[6] American Association of Colleges of Nursing; Special Survey on Vacant Faculty Positions for Academic Year 2016-2017; http://aacn.nche.edu/leading-initiatives/research-data/vacancy16.pdf

Program Capacity

Because interested persons submit an application for a specific specialty/practice area, programs were asked to report if they had current existing capacity to enroll more students each year. It is difficult to assign a particular number of additional students who could be admitted into each specialty area state-wide as student interests vary each year due to the complexity of assessing capacity. While a program may not be at capacity overall, the various specialties within the nursing program and the students preferences, faculty and clinical placements for those specialties create barriers which may not allow for additional students and impede the program's success. Table 9 summarizes individual specialties in which more students could be accommodated.

Table 9. Capacity to Admit More DNP Students into Existing Tennessee DNP Programs

	Belmont	ETSU	ETSU-TTU	King	Union	UTC	UTK	UTHSC	VU
Post-BSN DNP Program of Study	Yes (FNP only)	Yes (FNP, AC-PCNP, PMHNP, EL)	Yes (FNP, AC-PCNP, PMHNP, PC, WHNP, EL)	n/a	Yes (except NANP)	n/a	Yes	Yes (FNP)	n/a
Post Masters DNP Program of Study	Yes (FNP only)	Yes (FNP, AC-PCNP, PMHNP, EL)	Yes (FNP, AC-PCNP, PMHNP, EL)	Yes	Yes	Yes (MSN-DNP)	Yes	No (most other tracts)	No (PC, PMHNP, sometimes AC-ACNP)

Note: (FNP = family; PC = pediatric; PMHNP = psychiatric/mental health; AC-ACNP = adult/gerontology acute care; WHNP = women's health; NANP = nurse anesthesia; EL = education leader)

However, very rough estimates based on data that were reported by the program directors in Tennessee indicate existing capacity to enroll 100+ more students per year in Family Nurse Practitioner programs, 30+ in Pediatric Nurse Practitioner programs, 50+ in Psychiatric/Mental Health Nurse Practitioner programs, 30+ in Adult/Gerontology Nurse Practitioner programs, 20+ in Women's Health Nurse Practitioner programs, and 40+ in Executive Leader Nurse Practitioner programs. Only one program stated that it was at capacity. Fifty percent of the programs offering MSN programs stated they have the capacity to grow with their current resources. All current DNP program respondents stated that they have the capacity to grow enrollment with their current resources. Therefore, it is clear that more than sufficient enrollment capacity exists currently for additional nurses to obtain a DNP credential in Tennessee.

Clinical Placements

A lack of preceptors, faculty, and clinical sites were noted by nursing deans electronically as the significant barriers to graduate program success. Competition for sites continues to grow while the availability of knowledgeable preceptors in specific specialties remains constant or decreases. Certainly a number of these factors play a role in creating the program culture which heavily influences student retention in all graduate programs.

Employer Recognition of DNP Nurses

The nursing community and AACN advocates for nurses who have completed a DNP program as more desirable and marketable in the workforce. With physician shortfalls present, DNP-prepared nurses are able to take on some of the roles of traditional doctors in a healthcare setting. *Advance for Nurse Practitioners* magazine reported an average of $4,465 more in salary for DNP-prepared nurse practitioners (NP) than master's-prepared Nurse Practitioners.[7] Additionally, results from the survey indicated a decreased salary in 2014 to 2015 for DNP-prepared Nurse Practitioners from $113,618 to $107,585.

Based on the Taskforce's Employer Survey, the traditional pay in Tennessee is less than what was reported by *Advance for Nurse Practitioners* magazine. The majority of employers (18 of 33) reported that no additional compensation was provided for DNP employees. Key stakeholders interviewed for the purposes of salary information reported a range from $70,000 to $120,000, $60-65 hourly or $130 per hour contractually. Employers are willing to recognize the stature of a DNP degree, but in most cases, Tripp Umbach market analysis echoed the same sentiments for recognition and pay scale. The employers' survey conducted by the THEC Statewide Nursing Taskforce suggests also a number of external factors which take the determination of salary out of the hands of the employer. For those who practice in rural and low-income areas, compensation for the role is not as competitive as it would be in an urban center or higher income area.

Ninety percent of the respondents in the Tennessee employer survey reported that the primary salary determinant was productivity in seeing patients; 10% said ability to train as a hospitalist, intensivist or Emergency Department; and 10% said systems improvement manager that drives improved patient and population outcomes. Other responses included: contract positions; productivity based or revenue generated for all providers and staff; experience, education and pay equity; years of service; salary scale established by the county or regional means with zero incentive programs. Only 16.7% reported knowledge or skills set gaps existed in

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[7] *Advance for Nurse Practitioner*; 2015 Salary Survey

the APRN DNPs employed. One respondent cited the individual was a practice novice and had not been in the field long enough prior to getting the DNP. The other comments related more to public health and cardiology deficiencies as well management versus direct care.

All of the respondents to the Chambers of Commerce survey stated that nurse practitioners were employed within their region. Of those, 95% were masters level nurse practitioners. Of those hired in their respective specialty areas, 52.2% of those are also trained at the doctoral level.

SUMMARY

Of the participants in the nursing program interviews, one interviewee stressed the importance of investing significant effort in the admissions process to ensure that each potential student understands completely the necessary time and personal commitment to the program. This was felt to be especially important for adult learners who have many additional demands on their time. Writing skills were also mentioned as a challenge that faced many DNP students. Many students enter the program unprepared for the writing component of a doctoral program. DNP programs should provide extensive writing assistance and guidance, including education about plagiarism issues, throughout the program for students. Additional strategies to address the issues listed above include the following:

- Working with students individually to enable part-time status for students who face time commitment difficulties;
- Gathering student feedback to identify and address areas of difficulty for students;
- Remediation programs led by faculty for struggling students; and
- Ongoing communication of the value of the DNP degree to students.

Considering the significant cost of both providing and receiving a DNP degree, retention of enrolled students should be a priority for all programs. Further, retention efforts to bolster MSN to DNP programs should be a special focus as these efforts will increase the number of students who bring practical work experience to the program, a perceived advantage noted by many of the interviewees.

Educating doctoral-level clinical nurses equipped with these skills would likely improve care, routinize care with greater consistency, and improve patient outcomes– all of which should contribute to lower healthcare costs. The healthcare system is currently facing the challenges of rising costs without subsequent improvement in quality of care. DNP graduates possess a versatile skill set that uniquely prepares them to tackle these challenges.

For those programs reporting no current or limited capacity for increased numbers of students, the most common issue was availability of clinical site placements within proximity to the university as well as lack of faculty available to expand existing capacity. Several volunteered information on what barriers exist for them increasing enrollment. It is clear that there is

significant capacity to enroll additional students each year within the existing participating DNP programs in Tennessee. Because all programs offer blended program delivery designed to make this education accessible to working professionals and because these programs are located throughout the state, DNP education is currently accessible throughout the state of Tennessee.

Return of survey employer responses was less than 5% of a sample of over 900 surveys sent to employers indicates that validity in making decisions from the survey is questionable. The challenge for value of the DNP to employers is clearly expressed in one response to the employer survey critical for consideration by training institutions:

> "Currently DNP does not offer any benefit for regular practice APRNs. Perhaps if a DNP were in an education/university setting DNP would be beneficial or if there was a research focus, however, for providing APRN care to patients, a DNP is not required and honestly not preferred as we are not able to pay any more than a typical APRN salary. Additionally, all MSN and DNP programs seeking to train and teach APRNs should help the students find their clinical placement and not place that burden upon students who are already paying and should have precepting sites set up for them. We get numerous calls from students seeking placement and that places extra burden upon providers in having to take these calls and arrange placement. This should not be left upon students and should also not be left upon providers to repeatedly be contacted by various students. It is honestly starting to become such an issue that we are limiting even more how many students we are willing to accept."

Interest in learning more about the DNP was expressed by a number of employers and Chambers of Commerce, mostly from rural areas. It is certainly worth educating the health care public as the merits of the DNP trained employee with an understanding by students that the additional degree may contribute to the professionalization of the disciple but not bring the hoped for financial gains. The THEC Statewide Taskforce on Nursing will engage in efforts to educate employers on the value proposition for the DNP to Tennessee employers.

In light of the findings of Tripp Umbach and the efforts of the THEC DNP Statewide Taskforce for which the Tennessee Higher Education Commission expressed its deepest gratitude, it appears that the currently approved DNP programs in Tennessee have the capacity to meet the current needs of the State for service providers. However, the shortage of nursing faculty is clear. At the presentation by Tripp Umbach in March 2017, the University of Memphis expressed an interest in developing a Nurse Education doctorate. At the time of this report, the University of Memphis has been authorized to develop the program with the intent being the preparation of future nursing faculty in nursing practice.

The proposed program has satisfied all of the requirements with conducting a site visit and responding satisfactorily to the recommendations of the external reviewers. The THEC is awaiting approval of the Board of Trustees at the University of Memphis before the program will be formally considered by the Commission.

Appendix A: DNP Statewide Taskforce

DNP Student Retention and Educational Models

Chair: Dr. Cecilia A. McIntosh, *Dean School of Graduate Studies*, East Tennessee State University

Members:

Dr. Kelly Harden, *Dean School of Nursing,* Union University

Dr. Judy Rice, *Associate Professor of Nursing*, East Tennessee State University

Dr. Terri Allison, *Director DNP Program*, Vanderbilt University

Dr. Sharon Davis, *Interim Chair of DNP Program & Clinical Assistant Professor*, UT Knoxville

DNP Clinical Sites/Faculty Shortage and Program Capacity

***Chair*:** Dr. Wendy Likes, *Dean of Nursing and Professor*, UT Health Science Center

Members:

Dr. Myra Clark, *Associate Dean College of Nursing*, East Tennessee State University

Dr. Joanie Jackson, *DNP Coordinator and Assistant Professor*, UT Chattanooga

Dr. Karen Hande, *Assistant Professor of Nursing*, Vanderbilt

Employment and Clinical Placement Opportunities

Chair: Dr. Patty Orr, Professor Chair of Excellence in Nursing, Austin Peay State University

Members:

Dr. Wendy Nehring, *Dean College of Nursing*, East Tennessee State University

Dr. Kathy Martin, *Executive Director of TN eCampus MSN Program*, Tennessee Board of Regents

Dr. Lisa Beasley, *Clinical Associate Professor and Director Clinical Education*, University of Memphis

Dr. Diane Todd Pace, *Associate Professor and DNP Program Director,* UT Health Science Center

Appendix B. Nursing Sites and Capacity Survey

We are interested in exploring the opportunities and challenges associated with nursing clinical site placements, the nursing faculty shortage in Tennessee and current nursing program capacity issues for both Masters of Science in Nursing Advanced Practice Registered Nurses (MSN-APRN) and Doctor of Nursing Practice (DNP) programs.

1. Your institution:

2. Indicate all the nursing programs your institution offers.

   BSN a) Yes b) No
   MSN APRN a) Yes b) No
   DNP a) Yes b) No
   Other:

3. Indicate if your Doctor of Nursing Practice (DNP) program is:
   a) We do not have a DNP program
   b) Post-Masters Only
   c) Post Bachelor of Science in Nursing (BSN) Only
   d) Both Post-Masters and Post BSN

4. What activities are included under the category of "practice hours" for nursing students at your institution regardless of the degree level?

5. What methods do you use to simulate clinical experiences for nursing students at your institution regardless of the degree level?

6. Who is responsible for your clinical site placements for nursing students at your institution regardless of the degree level?
   a) Program Director
   b) Clinical Director
   c) Other (please specify)

7. What are the credentials of the individual(s) responsible for your nursing clinical site placements?

8. Indicate all factors which determine placement in clinical sites at your institution for students in the Master of Science in Nursing Advanced Practice Registered Nursing (MSN-APRN) Program.
   a) Student interest
   b) Student readiness
   c) Clinical site availability
   d) Preceptor Availability
   e) Student-Preceptor match
   f) Other (please specify)

9. What challenges do you experience with nursing clinical site placement for each of your nursing programs?

10. In your opinion, the difficulty with locating clinical placement for students in your Master of Science in Nursing Advanced Practice Registered Nursing (MSN-APRN) program

Decreasing Significantly | Neither Decreasing Nor Increasing | Increasing Significantly

11. Rate the impact on your program of being able to locate appropriate clinical placements for students in the Master of Science in Nursing Advanced Practice Registered Nursing (MSN-APRN) program

No Impact | Neutral Impact | Extreme Impact | NA

12. What are the credentials of the preceptors for your students enrolled in your Master of Science in Nursing Advanced Practice Registered Nursing (MSN-APRN) program?
    a) MSN
    b) DNP
    c) MD
    d) PA
    e) Other (Please specify)

13. Do you require clinical site practice hours for students enrolled in your Doctor of Nursing Practice (DNP) program?
    a) Yes
    b) No
    c) We do not have a DNP program

14. Do you use different types of preceptors for students enrolled in the Master of Science in Nursing Advanced Practice Registered Nurse Program (MSN-APRN) program and the Doctor of Nursing Practice (DNP) program?
    a) Yes
    b) No
    c) My institution does not offer a DNP program

15. For each of your graduate nursing programs, are your preceptors:

Consistent from year to year, i.e., "set"

MSN-APRN Program

a) Yes
b) No

DNP Program

c) Yes
d) No

New preceptors as needed annually

MSN-APRN Program

e) Yes
f) No

DNP Program

g) Yes
h) No

Many preceptors are consistent but we also have new preceptors annually

MSN-APRN Program

i) Yes
j) No

DNP Program

k) Yes
l) No

Other (please specify):

16. Provide the reason(s) for accepting new preceptors to your graduate nursing programs:

Former preceptor has left the vicinity

a) MSN-APRN Program
b) DNP Program

Former preceptor states he/she is no longer available for clinical site placement

c) MSN-APRN Program
d) DNP Program

Issues with former preceptor's performance

e) MSN-APRN Program
f) DNP Program

Former preceptor not satisfied with our student's performance

g) MSN-APRN Program
h) DNP Program

Other (please specify)

i) MSN-APRN Program
j) DNP Program

17. What incentives do you offer preceptors for Master of Science in Nursing Advance Practice Registered Nurse (MSN-APRN) and Doctor of Nursing Practice (DNP) students?

18. Indicate the modality and frequency of clinical site visits you conduct (check all that apply):

At least one per semester by

a) Phone
b) Email
c) In-Person

Annually by

d) Phone
e) Email
f) In-person

Infrequently by

g) Phone
h) Email
i) In-person

Never by

j) Phone
k) Email
l) In-Person

19. Faculty in your nursing programs:
Total number of nursing faculty:

a) Faculty teaching in the MSN-APRN program:
b) Faculty teaching in the DNP program:
c) Total faculty vacancies:
d) Total faculty vacancies in the MSN-APRN Program:
e) Total vacancies in the DNP Program:
f) Vacancies requiring a MSN-APRN:
g) Vacancies requiring a doctorate:

20. What is the teaching load in semester credit hours (SCH) for academic administrative leaders in nursing at your institution?

21. Using the slider, indicate how often you are able to hire faculty with expertise in teaching.

22. Using the slider, indicate how often you are able to hire nursing faculty with graduate level teaching experience.

23. When you have a vacancy for a doctoral level faculty with expertise in teaching how long typically does it take your institution to fill the position?
    a) a single semester
    b) an academic year
    c) multiple years

24. Rank the barriers to filling faculty positions for your undergraduate nursing program that your institution experiences from 1-5 with 1 being the greatest.
    a) Finding the correct expertise
    b) Funding
    c) Limited Pool of applicants
    d) Our Location
    e) Other

25. Rank the barriers to filling faculty positions for your graduate nursing program(s) that your institution experiences with 1 being the greatest.
    a) Finding the correct expertise
    b) Funding
    c) Limited Pool of applicants
    d) Our Location
    e) Other

26. If there were nurses available to fill your faculty positions, do you currently have the resources to expand your Doctor of Nursing Practice (DNP) and/or Master of Science in Nursing Advanced Practice Registered Nurse (MSN-APRN) program?
    a) Yes
    b) No

27. Indicate in your program, how many nurse administrative leadership positions (i.e., Directors, Assistant and Associate Deans, etc.) are currently "unfilled", i.e., vacant.

28. Do you have a formal mentoring plan for new faculty?
    a) Yes, if so, please describe
    b) No

29. Do you have a formal development plan for new faculty?
    a) Yes, if so, please describe
    b) No

30. What is your current enrollment in your Master of Science in Nursing Advanced Practice Registered Nurse (MSN-APRN) program?

31. Do you predict enrollment in the next 5 years in your Master of Science in Nursing Advanced Practice Registered Nurse (MSN-APRN) program will:
    a) We do not offer an MSN program
    b) Increase by more than 50%
    c) Increase by 26-50%
    d) Increase by 11-25%
    e) Increase by 5-10%
    f) Remain Stable
    g) Decrease by 5-10%
    h) Decrease by 11-25%
    i) Decrease by 26-50%
    j) Decrease by more than 50%

32. What is your current target enrollment for your Master of Science in Nursing Advanced Practice Registered Nurse (MSN-APRN) program?

33. What is the current student enrollment in your Doctor of Nursing Practice (DNP) program?

34. If you have a Doctor of Nursing Practice (DNP) program, what is the current DNP student enrollment by specialty?
    a) Adult-Gerontology Primary Care NP
    b) Executive Leadership
    c) Family Nurse Practitioner
    d) Nurse Anesthesia
    e) Nurse Executive Practice
    f) Neonatal Nurse Practitioner
    g) Psychiatric/Mental Health NP
    h) Women's Health Care Practitioner

35. Do you predict student enrollment in the next 5 years in your Doctor of Nursing Practice (DNP) program will:
    a) We do not offer an DNP program
    b) Increase by more than 50%
    c) Increase by 26-50%
    d) Increase by 11-25%
    e) Increase by 5-10%
    f) Remain Stable
    g) Decrease by 5-10%
    h) Decrease by 11-25%
    i) Decrease by 26-50%
    j) Decrease by more than 50%

36. What is your current target student enrollment for the Doctor of Nursing Practice (DNP) program?

37. With your current resources, do you have the capacity for enrollment growth?

MSN-APRN

a) Yes
b) No

DNP

c) Yes
d) No

38. From your perception, what are your biggest barriers to your graduate program(s) success?

39. If there is additional information that the survey did not ask that you would like to provide, please tell us here.

40. Thank you for your participation in this survey. If you would like to receive the results of this survey, please provide your email address.

Appendix C. DNP Student Retention and Educational Models Interview Questions

Questions to be asked of DNP program directors or others with ready access to information. Note not all questions were asked for each interviewee.

1. Persistence to graduation with DNP vs exiting with MSN (for those who have BSN-DNP option) vs dropping out altogether
    a) Obtain data by school/program, focus area, and note if BSN-DNP or MSN-DNP: Ask for Applications, admission, enrollment, and graduates by focus area and by entry level per year for the past 5 years; Does the program have capacity to admit more DNP students? If so, in what specialty areas? If not, what are reasons that capacity cannot be expanded at this time?
    b) Is the program delivered part-time (less than 9 graduate credits per term) or full-time (9 or more graduate credits per term)? What percentage of students finish "on schedule?) What does this program use as graduation date cutoff? Trying to get at whether or not program is capable or designed for accommodating FT and PT students so may want to look at graduation rates with 5-6 years of matriculation into program? Ask if the programs have matriculation limits (limit on time to degree). Also do this by entry level (BSN or MSN) and specialty area)
    c) What is the program (by specialty) average time to degree?
    d) Does the program allow students to take a short leave of absence and then return? If not, how is this handled? If so, for those that took leave and returned, what was reason for leave of absence? For returning?
    e) For each specialty and entry level, how many students have dropped out in the past 5 years? Why did they drop out?
    f) For any that dropped out or exited with MSN rather than DNP (if this is possible in the programs), what were reasons for dropping out of program? (family issues, health issues, financial issues, Other (please describe). Distinction needs to be made for academic dismissals versus student drop-out or stop-out.
    g) For students who dropped out or struggled, what services or interventions might have helped students persist in the program? (writing skills help, graduate student success specialist help (time management, study skills; change in plan of study; moving from full-time to part-time; peer tutoring;) Other (please describe).
    h) Ask for information on demographics of who dropped out and # years past RN, Age, years of work experience, UG GPA, grad GPA, GRE
    i) How does your program identify (early) a student who is at-risk academically?
    j) What services or interventions (through College of Nursing or university-wide) are available for your DNP students? Which do you think are the most effective in helping to retain students?

2. What are educational models for programs across the state
    a) Full-time study? Part-time study? Both available?
    b) Standard calendar (semesters) or accelerated (latter meaning that program is delivered in a shorter time frame with shorter semesters and each semester with heavy course load: committee thought that because of clinical hours, this is likely not

done, but we should ask)? Another way to ask is what is the number of semesters in the program?

c) Blended (some on-line and some on-ground), 100% on-line, or 100% on-ground? (Ask by specialty area and entry level).
d) Does your program(s) require in-person "intensives"? If so, frequency and duration? What is policy/practice if a student does not attend an intensive?
e) What are activities that occur during the Intensives?
f) Types and frequency of professional networking activities?
g) Accessible to working professionals?
h) Specialized students services available? (university-wide and/or through CON) Examples: tutoring, writing help, counseling, peer mentoring/case work (e.g. graduate student success specialist), Other (please describe)
i) Professional development opportunities? (university-wide and/or through CON) Examples: classes or workshops in translational skills, hosting conference, supporting travel to conferences, guest speakers, Other (please describe)
j) Do any of these appear to correlate with retention and persistence to graduation
k) What is your program's culminating experience (s) (i.e., dissertation, DNP project, capstone project, other)? Is there a choice of two (or more) options? How are these structured?

Appendix D. Institutions Participating in Survey and Interviews

Institution	Survey Participants (MSN & DNP Programs)	Interview Participants (DNP Programs only)
Baptist College of Health Sciences *		
Belmont University		X
Carson Newman University	X	
East Tennessee State University	X	X
King College		X
Lincoln Memorial University**		
Middle Tennessee State University	X	
Southern Adventist University ***		
Tennessee e-Campus		
Tennessee Joint Doctor of Nursing Practice (ETSU-TTU)		X
Tennessee State University		
Tennessee Technological University		
Union University	X	X
University of Memphis	X	
University of Tennessee, Chattanooga	X	X
University of Tennessee, Knoxville	X	X
University of Tennessee Health Sciences Center	X	X
Vanderbilt University	X	X

**Baptist Health Sciences Center will not start its first class until 2018.*

***Lincoln Memorial University declined to participate.*

****Southern Adventist University will not start its first class until 2018.*

Appendix E. Tennessee Nursing Employers Survey

The Tennessee Higher Education Commission (THEC) is interested in learning of the demand for quality nurse in our state presently and in the future. We appreciate your time in completing this survey.

1. Name of your organization

2. In which of the three grand divisions of Tennessee us your organization located?
    a) West
    b) Middle
    c) East

3. Your position title:

4. What type of healthcare organization best describes your care delivery focus? (Check all that apply)
    a) Hospital
    b) Primary Care Providers
    c) Outpatient Specialty Center (Indicate Type of Center)
    d) Public Health Center
    e) Health Department in your organization
    f) Other

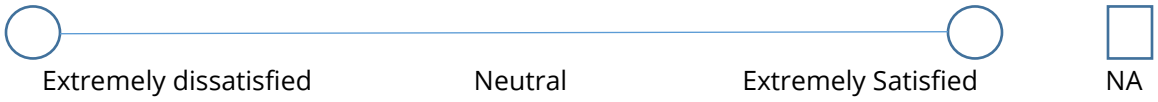
5. Looking at the focus of your organization: If the focus is primary care and achieving cost effective quality care, what are the three top challenges your organization?

6. Looking again at the focus of your organization: If the focus is providing acute care and achieving cost effective quality care, what are the three top challenges your organization?

7. Does your organization presently provide clinical preceptors for placement of students who are Advanced Practice Registered Nursed (APRN) pursing a Doctor of Nursing Practice?
    a) Yes
    b) We do not currently but we would consider doing so in the following specialties: (Please Specify)
    c) No
    d) I do not know

8. Do you currently employ Advance Practice Registered Nurses (APRN) who have a Doctor of Nursing Practice (DNP) degree in your healthcare organization?
    a) Yes
    b) No (Skip to Question 14)
    c) I do not know (Skip to Question 14)

9. Using the slider, if your organization currently employs one or more Advance Practice Registered Nurses (APRN) who have a Doctor of Nursing Practice (DNP) degree, how satisfied are you with their work?



10. Thinking about those same Advance Practice Registered Nurses (APRN) who have a Doctor of Nursing Practice (DNP) degree that you presently employ, is there a gap in their knowledge base or skill set that is needed in your organization?
    a) Yes: If so, describe the improvements or problems for which you would need a better solution:
    b) No
    c) I don't know

11. Indicate all areas in which Advanced Practice Registered Nurses (APRN) who have a Doctor of Nursing Practice (DNP) degree are employed within your organization.
    a) Hospital (In-Patient Care)
    b) Hospital (Out-Patient Care)
    c) Hospital Emergency Department
    d) Hospital Emergency Department (Outsourced to Emergency Delivery Company)
    e) Hospitalist (Outsourced to Hospitalist Company)
    f) Veterans Administration Hospital
    g) Community Health Center
    h) Rural Community Health Center
    i) Extended Care/Long-Term Care Facility
    j) Single Medical Group Practice
    k) Multi-Specialty Medical Group Practice
    l) Primary Care Medical Practice
    m) OB-GYN/Women's Health Practice
    n) Nurse Practitioner Owned Practice Retail Clinic
    o) Outpatient Ambulatory Care Specialty Clinic (Specify type in the Comment Box)
    p) State Health Department (Specify type in the Comment Box)
    q) Academic Health Center
    r) College Health Center
    s) University/ College Faculty

12. Indicate, within your healthcare organization, the percentage of time any Advanced Practice Registered Nurses (APRN) who have a Doctor of Nursing Practice (DNP) degree is engaged in these activities.
    a) Provider or Primary Patient Care
    b) Provider of Direct Patient Care
    c) Hospitalist/Intensivist
    d) Clinical Researcher

e) Leader in achieving quality indicators and CMS outcomes
f) Administrator
g) Clinical Administrator
h) Clinical Informatics
i) Clinical Educator
j) University/College Faculty

13. How are salaries determined for Advanced Practice Registered Nurses (APRN) who have a Doctor of Nursing Practice (DNP) degree in your organization? (Mark all that apply)
    a) Productivity in seeing patients
    b) Ability to train as a Hospitalist, Intensivist or Emergency Department Provider
    c) Ability to conduct clinical research/write grants
    d) Systems improvement manager that drives improved patient and population outcomes
    e) Other (please specify)

14. In your organization, what is the salary range traditionally paid for an Advanced Practice Registered Nurses (APRN) who does **not** have a Doctor of Nursing Practice (DNP) degree and for an Advanced Practice Registered Nurses (APRN) who **has** a DNP degree?
    a) APRN without DNP
    b) APRN with DNP
    c) I don't know

15. Would your organization consider hiring an Advanced Practice Registered Nurse (APRN) who has a Doctor of Nursing Practice (DNP) degree if the individual could cost-effectively address new requirements/measures that are being made by the Centers for Medicaid and Medicare Services (CMS)?
    a) Yes (Describe the need in the "Other" box)
    b) No
    c) I do not know

16. What role(s) of the Advanced Practice Registered Nurses (APRN) who has a Doctor of Nursing Practice (DNP) degree would be most important to your organization? Mark all that apply.
    a) Acute Care Hospitalist
    b) Acute care Emergency Provider
    c) Primary Care Provider
    d) Chronic Disease Coordinator and Provider
    e) Specialty Practice (Indicate Specialty)
    f) Clinical Researcher
    g) Process Improvement Leader
    h) Other (specify)

17. Would you consider having clinicians in your organization serve as clinical preceptors?
    a) Yes, we already do so in the following areas (List Specialties below)
    b) We do not currently but would consider doing so in the following areas (List Specialties :)
    c) No

18. Are you interested in receiving more information about Advanced Practice Registered Nurses (APRN) who has a Doctor of Nursing Practice (DNP) degree and how they can meet health care needs in Tennessee?
    a) Yes
    b) No

19. If you are interested in receiving an electronic summary of the findings of this survey, please provide your email address:

20. If there is additional information that you would like to provide, please use the comment box.

21. IF you would be interested in speaking with someone on the Tennessee DNP Taskforce, please provide your name, means of contact and best time to reach you.

    Thank you for your willingness to complete this survey.

Appendix F. Tennessee Nursing Employers Survey for Chambers of Commerce

The Tennessee Higher Education Commission (THEC) is interested in learning of the demand for quality nurse in our state presently and in the future. We appreciate your time in completing this survey.

1. Name of your organization

2. In which of the three grand divisions of Tennessee us your organization located?
    a) West
    b) Middle
    c) East

3. Your position title:

4. To your knowledge, does your region employ nurse practitioners?
    a) Yes
    b) No

5. At what level are nurse practitioner hired in your area? (indicate all that apply)
    Trained at Masters Level
        a) Yes
        b) No
        c) I do not know

    Trained at Doctoral Level
        a) Yes
        b) No
        c) I do not know

6. If you are experiencing a shortage of health care professional in your region, in what disciplines are there shortages? (Indicate all that apply)
    a) There is no shortage of health care professional in my region
    b) Physician shortage
    c) Advanced Practice Nurse (Masters or Doctoral Level) shortage
    d) Nursing shortage
    e) Other (please specify)

7. If you currently or in the future experience a shortage of physicians, would you consider hiring nurse practitioners?
    a) Yes
    b) No
    c) I don't know

8. Are you interested in receiving more information about Advance Practice registered Nurse (APRN) who have a Doctor of Nursing Practice (DNP) degree and how they can meet health care needs in Tennessee?
    a) Yes; Please provide an email address _____
    b) No

9. Is there anything you would like to share with us about the need for Doctors of Nursing Practice (DNPs) to meet health care needs in your area?

10. If there is additional information that you would like to provide regarding health care needs in your area, please use the space below.