

TENNESSEE CENTER FOR NURSING ADVANCEMENT



2023-2024 ANNUAL REPORT

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Dear Stakeholders,

We are pleased to present the 2023-2024 annual report for the Tennessee Center for Nursing Advancement. This comprehensive report outlines our achievements and plans for the future, structured into five key sections:

1. Introduction: Provides an overview of our mission and objectives.
2. Structural Formation: Details our governance and operational framework.
3. Activities and Events: Highlights key initiatives, events and programs undertaken in 2023-2024.
4. Future Directions and Plans: Outlines strategic goals and initiatives for the upcoming year.
5. Summary and Acknowledgements: Summarizes our accomplishments and expresses gratitude for our ongoing support. We value your feedback and look forward to your comments and suggestions.

Thank you for your continued support.



Debbie C. Byrd, PharmD, MBA
Interim Dean, College of Nursing Dean and Professor, Gatton College of Pharmacy



Roslyn Robinson, PhD, MBA, RN, BSN
Interim Executive Director, Tennessee Center for Nursing Advancement Associate
Dean, Practice Chief Nursing Officer, ETSU Health

INTRODUCTION

The United States is facing a critical shortage of nurses that is anticipated to worsen as the population ages and health care needs grow. The United States Census Bureau projects that the number of Americans aged 65 and older will rise from 58 million in 2022 to 82 million by 2050, comprising 23% of the population (2023). This shortage is exacerbated by challenges in expanding nursing school capacity to meet rising demand. In October 2023, The American Association of Colleges of Nursing (AACN) released a Special Survey on Vacant Faculty Positions, revealing a significant shortage with 1,977 full-time faculty vacancies identified. This survey encompassed 922 nursing schools offering baccalaureate and/or graduate programs, yielding an 84.6% response rate (2024). Key indicators project a growing gap between demand and supply, with projections indicating significant shortages by 2030. In November 2022, the Health Resources and Services Administration (HRSA) published a Health Workforce Analysis projecting a deficit of 78,610 full-time Registered Nurses (RNs) by 2025 and 63,720 by 2030.

Contributing factors include insufficient nursing school enrollments, a shortage of faculty, and an aging nursing workforce. Based on the 2022 National Sample Survey of Registered Nurses, it is projected that 23% of RNs employed in outpatient, ambulatory and clinical settings will retire or intend to retire within the next five years.

Efforts to address the shortage include advocacy for federal legislation, increased funding for nursing education, and the promotion of postbaccalaureate nurse residency programs.

Strategic partnerships between nursing schools and health care providers aim to expand student capacity and create sustainable pathways into nursing. The importance of baccalaureate-prepared nurses (BSN) in ensuring patient safety is emphasized, with research consistently linking higher nurse staffing levels to better patient outcomes. Researchers discovered that a greater presence of BSNs in hospital settings, irrespective of their educational pathway, correlates with reduced rates of 30-day inpatient surgical mortality (Porat-Dahlerbruch et al., 2021). Addressing the nursing shortage is crucial to safeguarding patient care and ensuring access to quality health care for all.

As the demand for nursing professionals continues to surge while hospital resources face strain, traditional practice models may prove inadequate. Consequently, health care and academic leaders are actively seeking innovative solutions to mitigate the challenges posed by the ongoing nursing shortage.

This annual report highlights the accomplishments of the Tennessee Center for Nursing Advancement (TCNA), formerly known as the Appalachian Highlands Center for Nursing Advancement (AHCNA), and the Tennessee Center for Nursing Advancement. While the Center has undergone a name change, it will continue to serve the Appalachian Highlands region. This report outlines the achievements and initiatives undertaken in 2023-2024 and presents a roadmap for action in 2024 and beyond, emphasizing proactive measures to address the evolving landscape of health care delivery.

1.1 FOUR PRIMARY FOCI OF THE CENTER

The four major foci for the Center include:

- **Pipeline:** The work of a nurse is driven by talent and passion, which leads to professional well-being, nurse retention, the attraction of nurses and nursing students, patient safety, and financial outcomes. The Center is uniquely positioned to help health care organizations in the Appalachian Highlands and the State of Tennessee attract and retain quality nursing students, staff nurses, nurse leaders, and nurse educators in numbers large enough to fulfill the health care needs of regional and state communities.
- **Collaboration/Innovation:** Analytics and automated reporting will not only identify effective programs for further development, but they will also pinpoint what specific aspects of each program are most effective and even when the peak effectiveness of each program occurs. Data visualization, forecasting and artificial intelligence will enhance decision-making and the Center's effectiveness evaluation.
- **Well-Being/Advocacy:** The factors that facilitate and diminish nurse well-being will be collected and analyzed to ensure improvements in practice. The data-driven quest for measurable, sustainable improvements in nurse well-being

informs the Center's program creation and optimization to empower the nursing workforce.

- **Data:** Data collection and analysis systems can be automated, using machine learning and artificial intelligence, to give every nursing work environment in the Appalachian Highlands and the State of Tennessee real-time and forecasting relevant to nursing.

These data systems will be designed for ease of use, access, and reporting. Developed datasets will also be available for the institutional review board (IRB)-approved secondary analysis or building on research related to the four foci of the Center.

These four foci encompass the current critical need to increase the nursing workforce. These areas can improve clinical-academic innovation and partnership, promote nurse well-being, and develop data as a reference point for stakeholders, including nurses, leaders, students, health care leaders and state legislators. These focus areas are consistent with the strategic direction of East Tennessee State University (ETSU), and the development of the AHCNA and TCNA fits into the plan. With the Center, nurses can be involved, pull in resources, collaborate, research, communicate and plan the future of nursing in our region.

1.2 APPALACHIAN HIGHLANDS SERVICE REGION

Appalachia has 423 counties across 13 states and spans 206,000 square miles. Our Center's area of focus is outlined as part of Appalachia's Central and South-Central regions. The Ballard Health service area below depicts the targeted Appalachian region for focus. The counties included in Tennessee are (Johnson, Carter, Unicoi, Washington, Sullivan, Hawkins, Greene, Hamblen, Cocke and Hancock counties), Virginia (Lee, Wise, Smyth, Dickenson, Russell, Scott, Washington, Buchanan, Tazewell, Grayson, Wythe counties), North Carolina (Madison, Yancey, Avery, Ashe, Watauga and Mitchell counties), and Kentucky counties of Harlan and Letcher. Figure 1 shows the subregion map, and Figure 2 displays the areas of Ballard hospitals.

Figure 1. Subregion Map (ARC, 2021a)

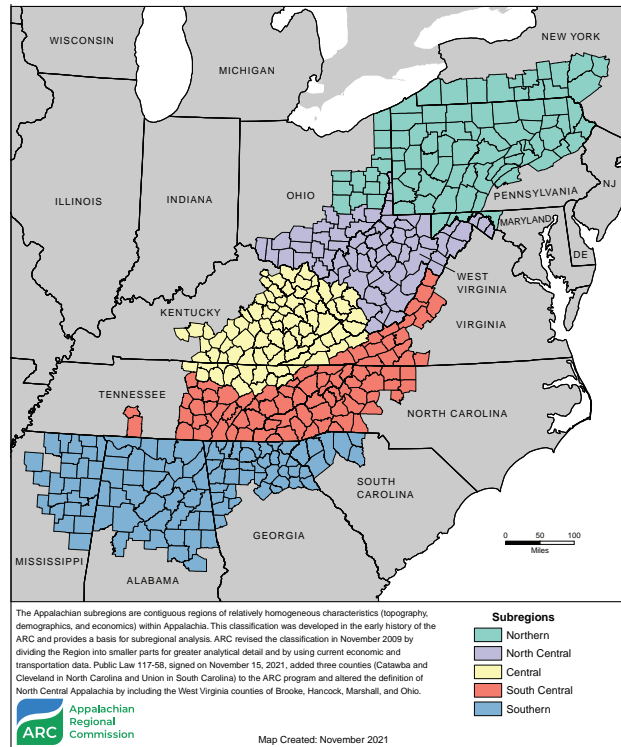
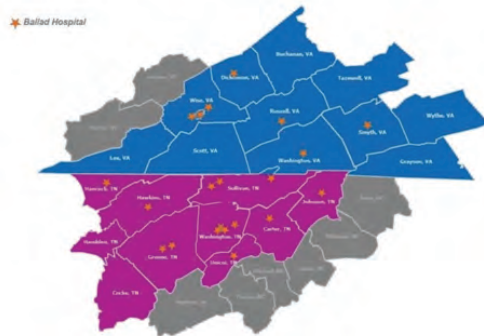


Figure 2. Ballard Hospitals (Ballad, 2024)



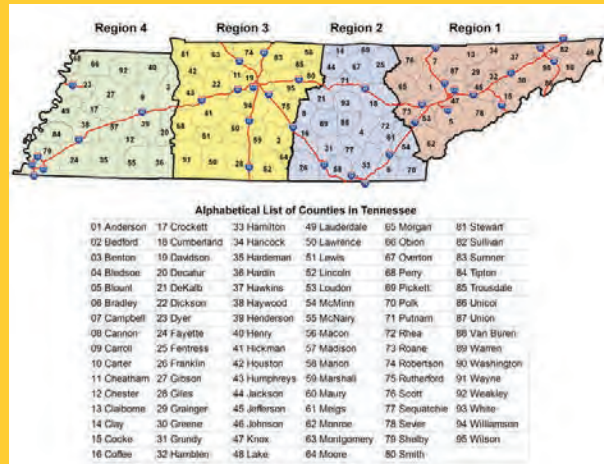
1.3 THE TENNESSEE SERVICE REGION

Figure 3. Regions and County List (tn.gov, 2024)

Tennessee has 95 counties which are divided into four regions:

Region 1: Knoxville, Region 2: Chattanooga, Region 3: Nashville, and Region 4: Jackson. Figure 3 shows the states, regions and counties.

The state of Tennessee spans 41,227 square miles. Our Center's area of focus is the Appalachian Highlands and the entire state of Tennessee.



1.4 RESEARCH RELATED TO THE APPALACHIAN REGION

The population composition in the Appalachian region is changing (Figure 4). While the population in the area increased by 2.1%, the number of young people aged 18 to 24 has, on the contrary, decreased; so, the increase mainly occurred in the older population (Figure 5). Table 1 displays the change in surrounding states. The demographic shift in the Appalachian regions is consistent with the demographic change nationally. Studies indicate a looming demographic challenge for higher education, particularly

expected to hit in 2025. According to the Higher Education Demand Index, there's a foreseen significant decline in potential applicants, estimating a decrease of 15 percent or more by 2029 (Grawe, 2018a; Harvey, 2021a). Adding to the complexity, the impact of this demographic shift varies widely by region and institution type (Grawe, 2018b, Harvey, 2021b). Notably, Figures 4 and 5 illustrate declining numbers of young adults in the Appalachian regions.

PART I

The aftermath of the 2008-2009 Great Recession has played a substantial role in altering American birth rate patterns, with rates remaining depressed even a decade later. Consequently, the pool of 18-year-olds in the U.S. is expected to shrink starting from 2025-2026. Furthermore, the demographic changes are likely to disproportionately affect universities in low-income regions compared to elite four-year institutions, particularly in terms of recruitment efforts. Refer to Table 1 to see the population change in the Appalachian Highlands region, which highlights the specific challenges these areas face in adapting to declining youth numbers. Understanding these dynamics is crucial for the strategic planning of both the Pipeline and Innovation/Collaboration focus.

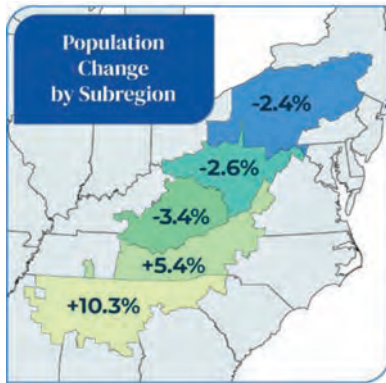
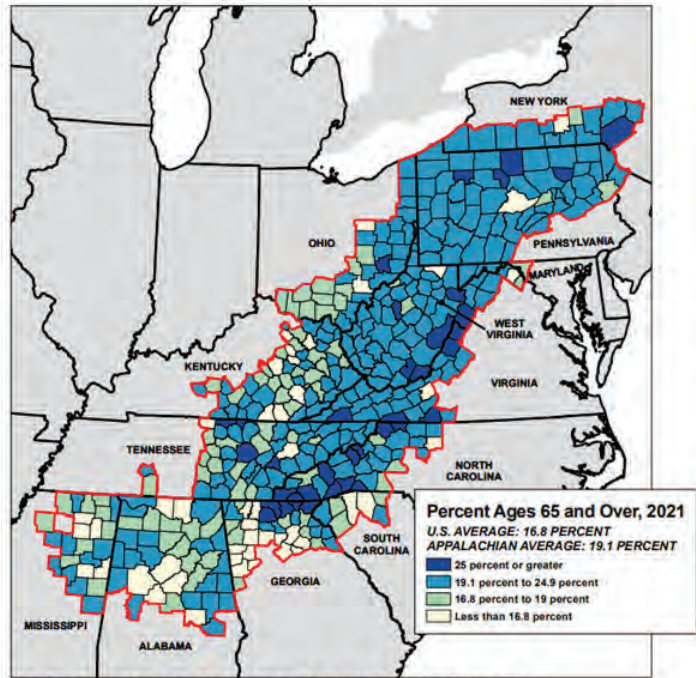


Figure 4. Appalachian Regional Population Change (ARC, 2022)

Figure 5. Appalachian Regional Commission Map (ARC, 2021b)



Map Title: Percent of Population in the Appalachian Region Ages 65 and Over, July 1, 2021
Data Source: U.S. Census Bureau, Vintage 2021 Population Estimates.

Table 1. Population Change in the Region Between April 1, 2020 to July 1, 2023. (United States Census Bureau, 2023)

Washington County TN+ 4.1%			
TN +3.1%			
US +1.0%			
Tennessee	Virginia	Kentucky	North Carolina
Carter +1.2%	Dickenson -3.5%	Harlan -5.6%	Ashe +1.8%
Cocke +3.9%	Grayson -0.3	Letcher -5.2%	Avery -1.4%
Greene +3.4%	Lee -1.9%		Madison +4.1%
Hamblen +2.7%	Russell -1.2%		Mitchell +0.7
Hancock +4.4%	Scott -0.6%		Watauga +1.2%
Hawkins +3.3%	Smyth -2.0%		Yancey +2.5
Johnson +2.4%	Tazwell -3.3%		
Sullivan +2.5%	Washington +0.2%		
Unicoi -0.9%	Wise -2.6%		
Washington +4.1%	Wythe -0.7%		

1.5 RESEARCH RELATED TO TENNESSEE

The population composition in Tennessee is changing (Figure 6). While the population in the state increased by 1.1 %, the number of young people aged 25 to 29 has, on the contrary, decreased; so, the increase mainly occurred in the older population. For a detailed view of the change by county in the state, please refer to the following link:

census.gov/data/tables/time-series/demo/popest/2020s-counties-total.html.

The demographic shift in the state of Tennessee is consistent with the demographic change nationally. Recognizing various contributing factors, the state of

Tennessee launched the Drive to 55 initiative aimed at bolstering the number of residents with postsecondary qualifications. The initiative’s ambitious goal is to ensure that 55 percent of Tennessee’s population obtains a college degree or certificate by 2025. This strategic effort comes in response to pressing needs within critical sectors such as nursing. As highlighted by a U.S. Census Bureau survey (Figure 7), the current shortage of nurses is failing to meet the demands posed by an aging population, making the Drive to 55 initiative all the more crucial in addressing this workforce gap.

Figure 6. Population Change (TNSDC, 2023)

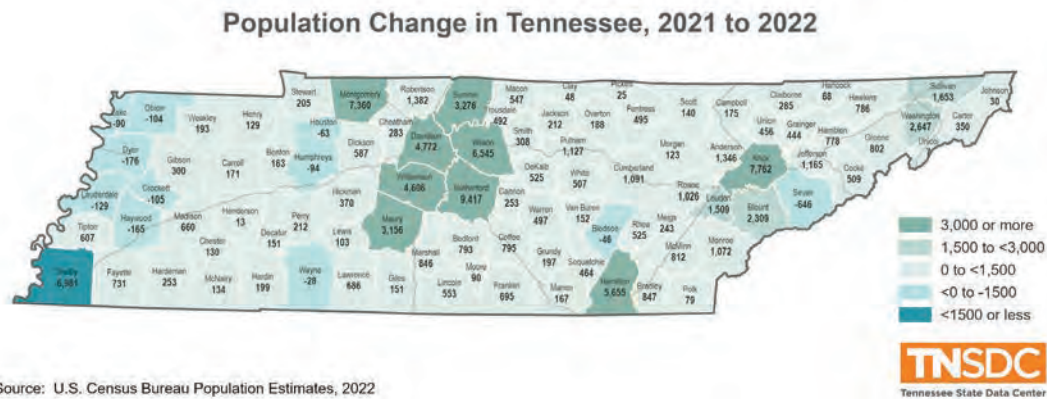
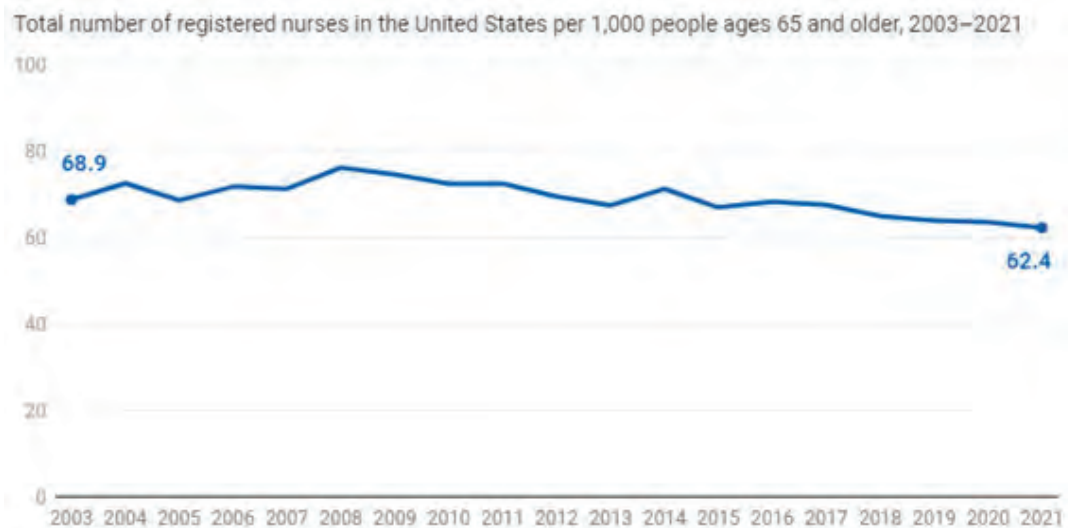


Figure 7. Number of RNs per 1000 People aged 65 and older (United States Census Bureau, 2023)



PART II

CENTER STRUCTURAL FORMATION

2.1 JOINT FORCES

Effective July 1, 2022, the Tennessee legislature established the Tennessee Center for Nursing Advancement and merged with the Appalachian Highlands Center for Nursing Advancement, thereby ensuring comprehensive coverage across the state and the Appalachian Highlands region. The Center is mandated to convene regular meetings with nursing stakeholders and deliver annual reports to the Tennessee governor's office, the Speaker of the House, and the legislature by July 1, starting in

2023. Emphasizing the invaluable role of nurses in delivering high-quality health care, the Center is committed to recognizing and enhancing their contributions to the region and the state's well-being.

For further details, the legislation creating the Tennessee Center for Nursing Advancement can be accessed via the following link: etsu.edu/nursing/ahgownurses/default.php

2.2 CENTER ORGANIZATIONAL STRUCTURE

In launching the Appalachian Highlands and Tennessee Center for Nursing Advancement, a forward-looking Visioning Leadership Group was convened to set the stage for transformative action. Bringing together academic leaders from Tennessee and Southwest Virginia, the group gathered under the guidance of Mr. Alan Levine (Ballad Health, President & Chief Executive Officer) and Dr. Brian Noland (ETSU, President) to define the Center's mission and strategic objectives. Against the backdrop of today's dynamic health care landscape, marked by unprecedented challenges such as the COVID-19 pandemic and a rapidly aging population, the session was instrumental in charting a course for the Center's role in fostering innovation and excellence in nursing practice. Drawing from diverse expertise and perspectives, the group not only articulated a compelling vision but also proposed a flexible and adaptive organizational structure to ensure the Center's effectiveness in meeting the evolving needs of health care delivery. This collaborative approach reflects a commitment to agility and responsiveness, essential qualities in addressing the complex health care challenges of our time.

Figure 8 shows the organizational chart visually representing the structure and hierarchy of the Tennessee Center for Nursing Advancement. Specific positions of the Center include:

Executive Director: Responsible for overseeing the overall operations and strategic direction of the Center.

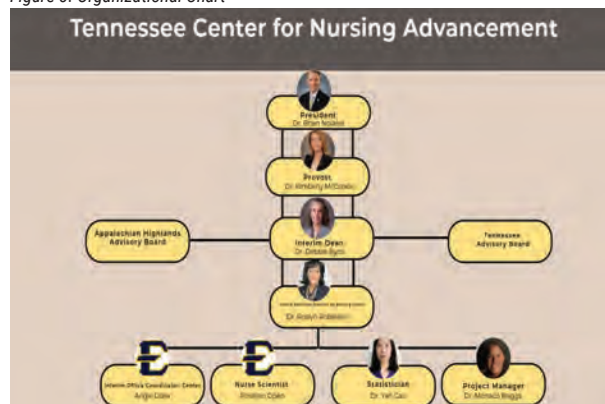
Project Manager: Responsible for overseeing all aspects of the Center's projects.

Nurse Scientist: Responsible for researching to advance knowledge, improve care and inform health care policy and practice.

Statistician: Responsible for analyzing data, interpreting results and drawing conclusions

Office Coordinator: Responsible for administrative activities within the Center.

Figure 8. Organizational Chart



2.3 ADVISORY BOARDS FORMATION

Advisory boards were established to guide and support the four focus areas of the Center, which are:

- Pipeline
- Innovation/Collaboration
- Well-being/Advocacy
- Data

The responsibilities of the advisory boards are as follows:

- Advising the leadership of the Center on policies and strategic directions.

- Supporting and championing the mission and initiatives of the Center.
- Actively engaging in fundraising efforts and advocating for the Center's interests.
- Reviewing and providing guidance on presented data pertaining to the Center's activities, as well as nursing-related matters at the state or regional level.
- Serving as advocates for nursing education, research, clinical excellence, and the development of the nursing workforce and grants.

2.3.1 APPALACHIAN HIGHLANDS CENTER FOR NURSING ADVANCEMENT ADVISORY BOARD MEMBERS

The AHCNA advisory board members include:

- Dr. Monaco Briggs, Project Manager, AHCHA
- Dr. Debbie Byrd, Interim Dean College of Nursing, ETSU
- Dr. Melinda Collins, Director of Nursing, Associate Dean of the School of Sciences and Allied Health, Milligan University
- Mr. Eric Deaton, COO, Ballad Health
- Dr. Nancy Haugen, Dean, College of Nursing UVA-Wise
- Nekia Kiker, Front Line RN, Ballad Health
- Dr. Matthew Loos, Chief Academic Officer, Ballad Health
- Dr. Morgan May, Regional Nursing VP, Southern Division, Ballad Health
- Mr. Sean McMurray, Former Wellmont Foundation Chair, Southwest Virginia
- Ms. Bobbie Murphy, Regional Nursing VP, Northern Division, Ballad Health
- Dr. Roslyn Robinson, Interim Executive Director, AHCNA
- Ms. Lottie Ryan, First Tennessee Development District, Johnson City, TN
- Dr. Jon Smith, PhD, Professor, Department of Economics and Finance, College of Business and Technology
- Dr. Lisa Smithgall, Senior Vice President/Chief Nursing Executive, Ballad Health

2.3.2 TENNESSEE CENTER FOR NURSING ADVANCEMENT ADVISORY BOARD MEMBERS

The TCNA advisory board members include:

- Dr. Monaco Briggs, Project Manager, AHCHA
- Dr. Debbie Byrd, Interim Dean College of Nursing, ETSU
- Dr. Donna Fraysier, Dean School of Nursing, King University
- Ms. Julie Hamm, RN, BSN, practicing nurse in PACU at Vanderbilt and Tennessee Nursing Association (TNA) President
- Ms. Karen Hernan, Tennessee Action Coalition
- Dr. Julie Honey, Dean School of Nursing, Belmont University
- Ms. Paula Jackson, Sr. VP, Nexstar Communications
- Dr. Wendy Likes, Dean College of Nursing, UTHSC
- Mr. Jeff McCord, President, Northeast State Community College
- Ms. Sherry Richardson, Executive Director, Tennessee Board of Nursing
- Dr. Roslyn Robinson, Interim Executive Director, AHCNA
- Dr. Leslie Sands, Director of the College of Nursing at Jackson State Community College
- Dr. Chris Smith, Professor, UC Foundation Professor, Director, School of Nursing, Chief Health Affairs Officer, UTC
- Dr. Lisa Smithgall, Senior Vice President/Chief Nursing Executive at Ballad Health
- Dr. Ferrol Thomas, DNP, Director of Workforce Strategies
- Ms. Kenyatta Wade, Director of Nursing at Blakeford Long Term Care Facility

Effective November 2024, the advisory boards of the Appalachian Highlands Center for Nursing Advancement and the Tennessee Center for Nursing Advancement will be combined to enhance the cohesiveness and effectiveness of the Center's governance. This integration aligns with the Center's vision of fostering a unified and strategic approach to nursing advancement across the Appalachian Highlands region and the State of Tennessee, for which the Center serves. By merging the advisory boards, we aim to streamline decision-making processes, strengthen collaborative efforts, and ensure more comprehensive representation of diverse perspectives. This consolidated board will provide a more cohesive and integrated framework for guiding the Center's initiatives, ultimately supporting our mission to address the nursing shortage and improve health care delivery.

CENTER'S ACTIVITIES AND EVENTS IN 2023-2024

3.1 ADVANCING NURSING PODCAST

On May 8, 2024, the Center proudly launched its podcast, *Advancing Nursing*. This 26-episode series (8 episodes released by July 1, 2024) extends well beyond the confines of our Center, serving as a dynamic conduit for disseminating invaluable knowledge, fostering robust collaboration and igniting positive change within the nursing community. Through candid discussions and insightful narratives, seasoned nursing professionals generously share their real-world experiences and innovative practices, aiming to inspire, empower and educate nurses at all stages of their careers.

This outreach initiative stands as a cornerstone of the Center's mission, allowing us to magnify our impact,

broaden our audience, and engage stakeholders across diverse health care landscapes. By facilitating meaningful dialogue, exchanging best practices, and tackling pertinent challenges confronting the nursing profession head-on, our podcast emerges as a potent catalyst for progress, transformation and excellence in nursing practice.

To access the podcast, listeners can tune in via all major podcast platforms or visit our website at: etsu.edu/nursing/ahgrownurses/default.php

The podcast guest lineup and release schedule through June 30, 2024 is as follows:

3.1.1 ADVANCING NURSING PODCAST GUESTS

- Dr. Kelly Aldrich: Director of Innovation, Vanderbilt School of Nursing
- Dr. Dawna Cato: Director, Nurse Residency Program, OpusVi
- Ms. Cathy Cooper: Associate Professor of Nursing, Middle Tennessee State University
- Dr. Deborah Lee: Chair of Excellence in Nursing, Middle Tennessee State University
- Dr. Morgan May: Vice President, Regional Chief Nursing Officer, Ballad Health
- Dr. Lindsay Munn: Assistant Professor of Implementation Science, Wake Forest University School of Medicine
- Ms. Sherry Richardson: Executive Director at Tennessee Board of Nursing
- Dr. Roslyn Robinson: Associate Dean for Practice & Community Partnerships/Chief Nursing Officer ETSU Health/Interim Executive Director of the Center for Nursing Advancement, ETSU
- Dr. Ferrol Thomas: Director of Workforce Strategies, Tennessee Hospital Association

3.1.2 ADVANCING NURSING PODCAST RELEASE SCHEDULE

- May 8, 2024: Dr. Roslyn Robinson: Are you Squared Away: A Focus on Well-being
- May 15, 2024: Dr. Lindsay Munn: Creating Cultures of Safety and Resilience
- May 22, 2024: Ms. Sherry Richardson: Charting Your Course in Nursing
- May 29, 2024: Dr. Morgan May: Pathways and Pipelines: Securing the Future of Nursing
- June 5, 2024: Dr. Dawna Cato: Nursing Professional Development: Use Your Sphere of Influence to Change the Paradigm
- June 12, 2024: Dr. Kelly Aldrich: Embracing Informatics to Drive Health care Transformation
- June 19, 2024: Dr. Ferrol Thomas: Get Motivated: A Path to Happiness in Your Caring Profession
- June 26, 2024: Ms. Deborah Lee & Cathy Cooper: Not Your Grandmother's Nursing Home: The Importance of Respect in Long-Term Care

Figure 9. Advancing Podcast Logo



3.2 NATIONAL FORUM OF STATE NURSING WORKFORCE

On May 16, 2024, our team participated in an orientation led by Dr. Patricia Burwell from the National Forum of State Nursing Workforce. This organization comprises nurse workforce entities dedicated to alleviating the nursing shortage across states and contributes to ensuring a sufficient supply of qualified nurses nationwide. The Forum actively promotes both new and established nurse workforce initiatives and facilitates the exchange of best

practices in nursing workforce research, planning, development and policy formulation. Information from the Forum is disseminated through publication, annual conferences and virtual networking opportunities. During the orientation, our team explored The National Forum of State Nursing Workforce Center's website and gained valuable insights into relevant data.

3.2.1 NATIONAL FORUM OF STATE NURSING WORKFORCE CENTERS ANNUAL CONFERENCE

On June 17 to 19, 2024, Dr. Monaco Briggs, a representative from our Center, participated in the National Forum of State Nursing Workforce Centers' 2024 Annual Conference themed "Accelerating Nursing Workforce Solutions: Innovative Programs and Data to Transform Policy." The conference addressed critical issues surrounding the nursing workforce shortage, including the K-12 pipeline, prerequisite education pathways, RN and APRN education levels, nursing workforce health and well-being, upskilling through academic and mentoring programs, workforce optimization, workforce data, and state and federal policies.

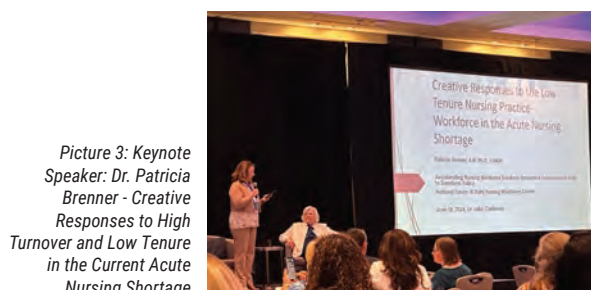
Dr. Briggs actively engaged in 16 informative sessions, seized numerous networking opportunities, and gathered essential resources to advance the Center's initiatives. In addition, Dr. Briggs had the opportunity to meet and collaborate with Tennessee Center for Nursing Advancement Advisory Board Members Drs. Ferrol Thomas and Dawna Cato, who were also attending the

conference. Their collaboration and conversations opened up new avenues for future opportunities and strengthened professional networks within the nursing community.

Picture 1: State Representative Subscriber Meeting



Picture 2: Keynote Speaker: Rear Admiral Jennifer Moon: Strengthening the Nursing Workforce through H.O.P.E.



Picture 3: Keynote Speaker: Dr. Patricia Brenner - Creative Responses to High Turnover and Low Tenure in the Current Acute Nursing Shortage



Picture 4: Poster Presentations

3.2.2 NATIONAL FORUM OF STATE NURSING WORKFORCE CENTERS COMMITTEES

Dr. Monaco Briggs is currently an active member of two committees within the National Forum: the Online Journal Committee and the Subscriber Engagement and Development Committee.

While serving on the Subscriber Engagement and Development Committee, Dr. Briggs will focus on enhancing subscriber experiences through various initiatives, including developing onboarding programs, establishing referral systems to connect subscribers with experts, creating new mentorship opportunities, and designing member recognition programs.

Meanwhile, the Online Journal Committee is dedicated to exploring the feasibility and development of an online journal for the National Forum.

3.3 MARKETING INITIATIVES

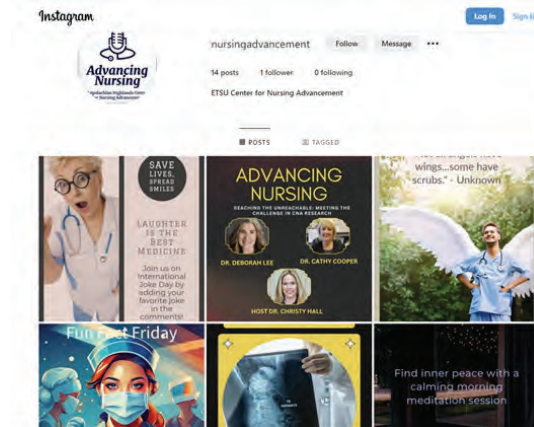
The Center has implemented a comprehensive marketing plan aimed at enhancing its outreach and engagement with stakeholders. This plan includes a thorough situation analysis, outlining current market trends, competitor activities, and internal capabilities. Clear short and long-term objectives have been established to guide the Center's marketing efforts, with a focus on increasing awareness, fostering community engagement, and promoting educational resources. The target audience encompasses health care professionals, policymakers, educators and the general public interested in nursing workforce issues.

Strategies and tactics are designed to leverage digital platforms effectively. Initially, the Center has prioritized social media marketing, leveraging platforms like Facebook (see Figure 10.) and Instagram (see Figure 11.) with targeted posts twice daily to maximize visibility and engagement. Additionally, the Center recently launched its LinkedIn account on June 26, with plans to ramp up activity to connect with a professional audience effectively. Since focusing on social media marketing, the Center has achieved remarkable growth in our Facebook metrics. From May 1, 2024, to June 30, 2024, our Facebook reach surged by an impressive 249.3% (see Figure 12), reflecting our enhanced engagement strategies and expanded online presence. During the same period, Facebook visits skyrocketed by 1,500% (see Figure 13), highlighting the significant increase in user interaction with our content. Additionally, our Facebook follows soared by 7,900% (see Figure 14), demonstrating a substantial rise in our community's interest and support. These results underscore the effectiveness of our social media initiatives and our commitment to leveraging digital platforms to advance our mission and connect with a broader audience. See Figure 15 for overall performance.

Figure 10. Facebook Page and Example Post



Figure 11. Instagram Page and Example Posts



The second approach focuses on online advertising and digital content marketing. Through a strategic partnership with Nexstar, the Center has produced two impactful digital videos aimed at highlighting key initiatives and engaging a broader online audience. Refer to Figure 16 for detailed data from the Nexstar campaign, which illustrates the reach and effectiveness of these efforts. According to Figure 17, the initial focus on social media marketing has resulted in high impression rates, while Figure 18 shows that we had high engagement on June 2, 2024, which was after releasing a new creative campaign. Figures 19 and 20, based on Nexstar data, highlight the effectiveness of the digital videos in reaching a broader online audience and promoting key initiatives.

Figure 12. Facebook Reach 5/1/2024-6/30/2024



Figure 13. Facebook Visits 5/1/2024-6/30/2024



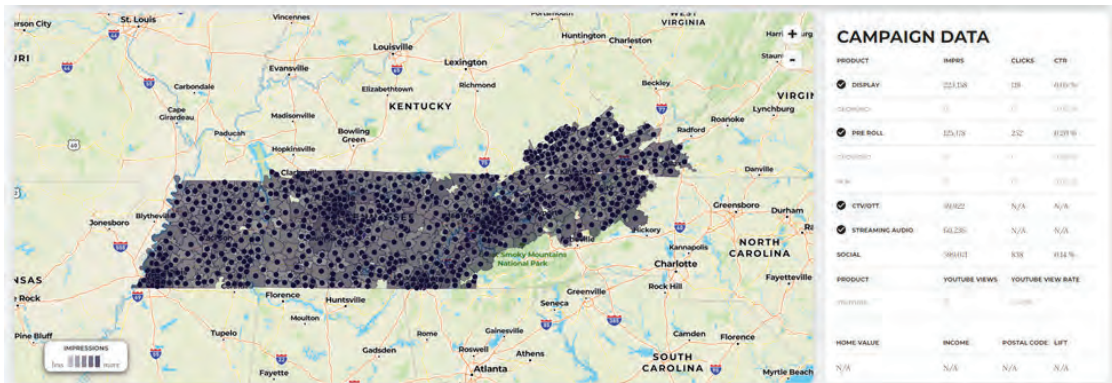
Figure 14. Facebook Follows 5/1/2024-6/30/2024



Figure 15. Facebook Performance 5/1/2024-6/30/2024



Figure 16. Nexstar Campaign Data 6/1/2024-6/30/2024



PART III

Figure 17. Nexstar Performance by Day Data 6/1/2024-6/30/2024

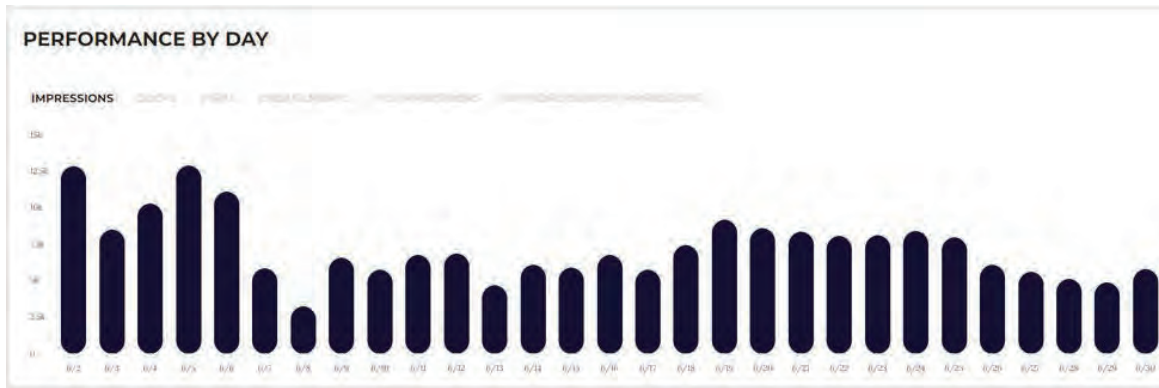


Figure 18. Nexstar Ad Marketing Screenshot

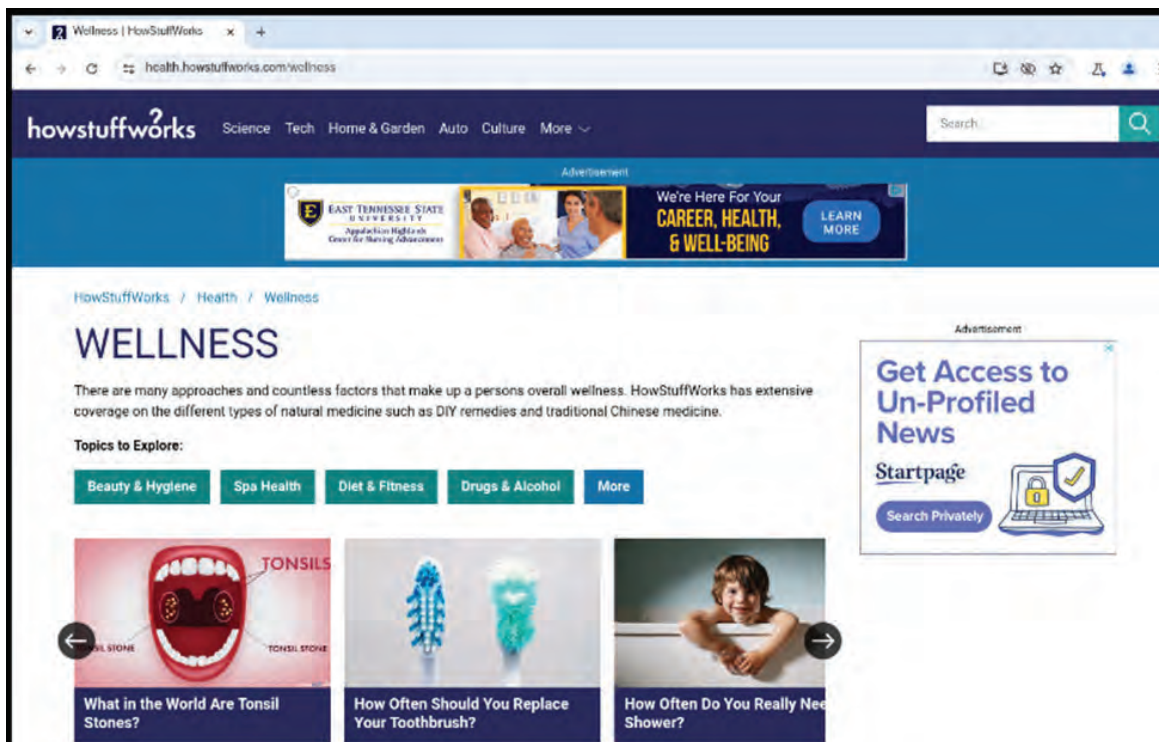


Figure 19. Nexstar Performance By Placement Data 6/1/2024-6/30/2024

PERFORMANCE BY PLACEMENT

WEBSITE	IMPRESSIONS	CLICKS	CLICK RATE
metaspoon.com	16,819	10	0.06%
wate.com	15,217	10	0.07%
dailyMail.co.uk	13,949	3	0.02%
foxnews.com	11,991	9	0.08%
tekri.com	7,089	1	0.01%
nypost.com	5,898	1	0.02%
washingtonpost.com	5,596	2	0.04%
usme.com	4,733	2	0.04%
newsweek.com	4,572	3	0.07%
fox8.com	4,474	9	0.20%

Figure 20. Nexstar Performance By City Data 6/1/2024-6/30/2024

PERFORMANCE BY CITY

CITY	IMPRESSIONS	RTG IMPRESSIONS	CLICKS	RTG CLICKS	CLICK RATE	RTG CLICK RATE	VIEW THROUGHS	VIEW THROUGH RATE
Nashville, Tennessee	40,894	0	15	0	0.04%	—	0	0.00%
Knoxville, Tennessee	20,709	0	8	0	0.04%	—	0	0.00%
Brentwood, Tennessee	17,164	0	9	0	0.05%	—	0	0.00%
Memphis, Tennessee	16,825	0	7	0	0.04%	—	0	0.00%
Antioch, Tennessee	11,608	0	5	0	0.04%	—	0	0.00%
Smyrna, Tennessee	7,289	0	3	0	0.04%	—	0	0.00%
Murfreesboro, Tennessee	6,973	0	3	0	0.04%	—	0	0.00%
Chattanooga, Tennessee	4,169	0	2	0	0.05%	—	0	0.00%
Franklin, Tennessee	3,465	0	0	0	0.00%	—	0	0.00%
Clarksville, Tennessee	3,111	0	0	0	0.00%	—	0	0.00%

PART III

3.4 NURSE LEADERSHIP PROGRAM

On June 3, 2024, we proudly launched our Nurse Leadership Program, a cornerstone initiative aimed at nurturing and empowering future leaders in nursing. This 12-week program is designed to equip participants with advanced skills in leadership, management and innovative health care practices. Through a strategic partnership with OpusVi, renowned for its expertise in leadership development, we have curated a curriculum that blends theoretical knowledge with practical application. OpusVi's tailored approach ensures that our participants gain invaluable insights and hands-on experience, preparing them to tackle the complexities of modern health care environments with confidence and efficacy.

The inaugural Nurse Leadership Program features a diverse cohort of 15 professionals representing West, Middle and East Tennessee. Participants from esteemed organizations including Ballad Health, Blount Memorial, Hardin Medical, Henry County Medical Center, Memphis Mental Health Institute, St. Francis Memphis, and West Tennessee Health care. Throughout the program, comprehensive data is collected at key points, including pre- and post-program assessments. This data will

be meticulously analyzed and compared with findings from previous nationwide groups to measure the program's impact and effectiveness.

Upon completion of the program, in August, participants will be celebrated at a special luncheon where they will receive a certificate of achievement. Additionally, they will have the opportunity to share their insights and experiences as featured guests on the Advancing Nursing podcast, further contributing to the advancement of nursing leadership across our region.

Lastly, the Center is preparing to pilot a Nurse Mentor Program, with the Nurse Leadership cohort serving as its inaugural participants. We are committed to equipping mentors with all the necessary tools and support to ensure a successful mentorship experience. The program aims to foster mutual benefit, enriching both mentors and mentees and potentially paving the way for the establishment of sustainable mentorship initiatives within participants' respective organizations. We look forward to the positive impact this program will have on advancing nursing excellence and professional growth across our community.

3.5 BELMONT NURSE BE WELL

In April 2024, the Center initiated discussions with Dr. Julie Honey, Dean of the College of Nursing at Belmont University, to explore a partnership for the Nurse Be Well Program. This program is designed to enhance the wellbeing and resilience of undergraduate nursing students through a structured series of self-care activities, including mindfulness, integrated into both didactic and experiential learning courses. These activities are strategically scheduled to coincide with periods of heightened stress throughout the existing curriculum.

The program will pilot evidence-based strategies with the accelerated student cohort during their first semester in the nursing program. The sequencing approach will serve as a model for seamless integration across traditional cohorts and subsequent levels in the undergraduate nursing program, aiming to achieve competency-based outcomes without the necessity of creating new courses or expanding faculty resources.

While the program has not yet commenced, ongoing discussions are actively shaping this new initiative.

3.6 GEOGRAPHICAL INFORMATION SYSTEMS (GIS) DASHBOARD

Geographical Information Systems (GIS) play a pivotal role in health care by facilitating strategic planning, resource allocation and policymaking. Understanding the distribution and characteristics of the nursing workforce is crucial for ensuring accessible, high-quality, and equitable health care services. To address this need, the Center has taken proactive steps by forging a partnership with the ETSU Center for Rural Health and Research (CRHR).

By early 2025, CRHR aims to develop a comprehensive GIS dashboard designed to visualize and forecast the nursing

workforce across the entire state of Tennessee and the Appalachian Highlands region. These interactive dashboards will offer detailed insights into the geographic distribution of nurses by specialty, education level, age, race and ethnicity. Furthermore, they will incorporate data on social determinants of health (SDOH) at the community level, enhancing our ability to tailor health care strategies to local needs and disparities. This collaborative effort will empower stakeholders to make informed decisions that promote health care access and equity throughout our region.

3.7 HEALTH RESOURCES & SERVICES ADMINISTRATION (HRSA) DATA

HRSA provides extensive and easily accessible data on Health Workforce programs, offering dashboards for tracking loan and scholarship awards and downloadable datasets detailing grant funding for health professions training programs.

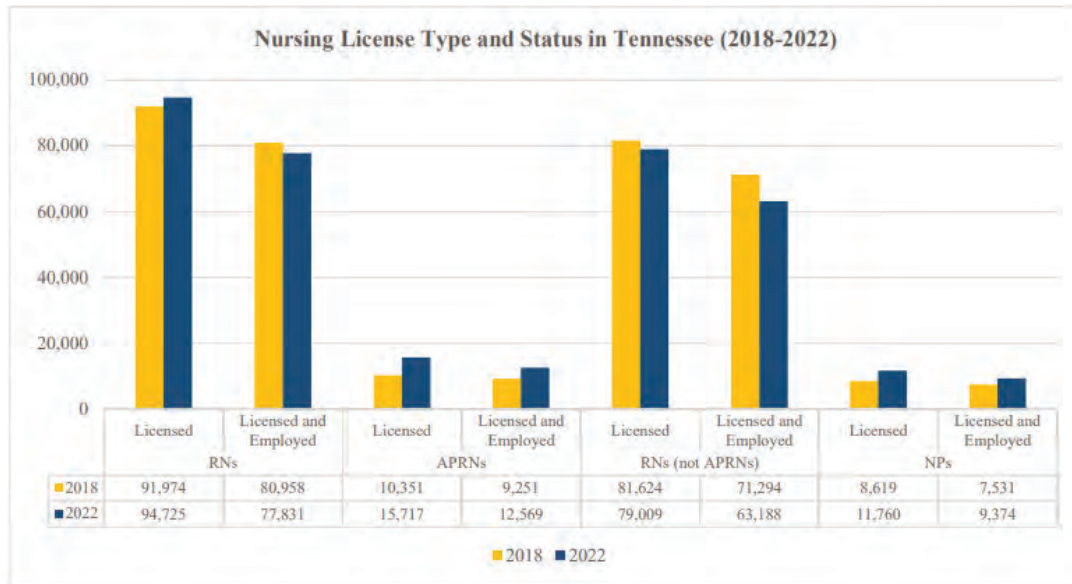
In early 2024, the Center accessed HRSA data to conduct an in-depth analysis. By June 2024, the Center produced a comprehensive report utilizing this data, which compares the nursing workforce between 2018 and 2022.

The report presents detailed insights into demographics, education and licensure status, employment trends, types of employment, work environments and earning specific to RNs, APRNs and NPs.

The analysis reveals a notable shift in the nursing workforce dynamics from 2018 to 2022. While the number of RNs and non-APRN RNs has decreased, there has been a concurrent increase in APRNs and NPs. This shift underscores evolving trends in nursing roles and responsibilities over the past four years (see Figure 21).

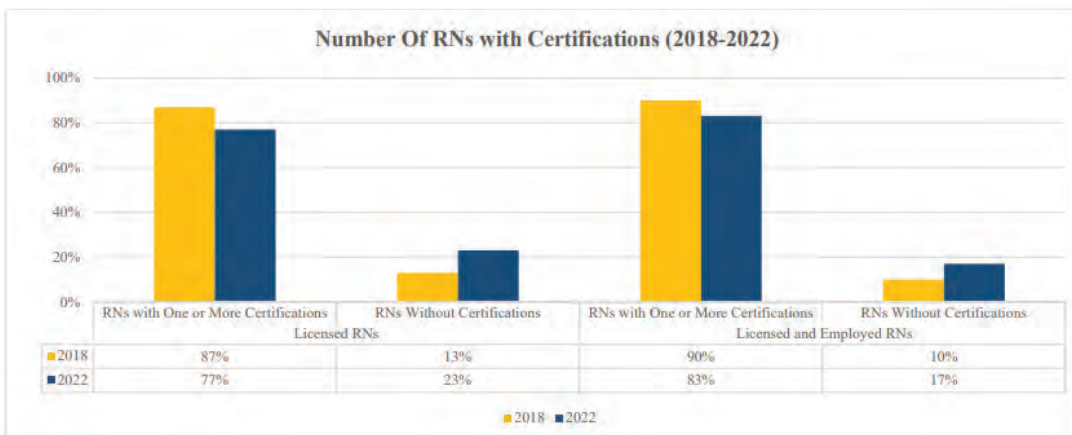
For the full report, visit etsu.edu/nursing/ahgrowurses/data.php.

Figure 21. Nursing License Type and Status in Tennessee (2018-2022)



Between 2018 and 2022, the proportion of licensed RNs holding one or more certifications declined from 87% to 77%, while those without certifications increased from 13% to 23%. Among licensed and employed RNs, the percentage with certifications decreased from 90% to 83%, with a corresponding rise in those without certifications from 10% to 17%. These trends highlight a notable shift in certification patterns among RNs over the four-year period (see Figure 22).

Figure 22. Number of RNs with Certification (2018-2022)

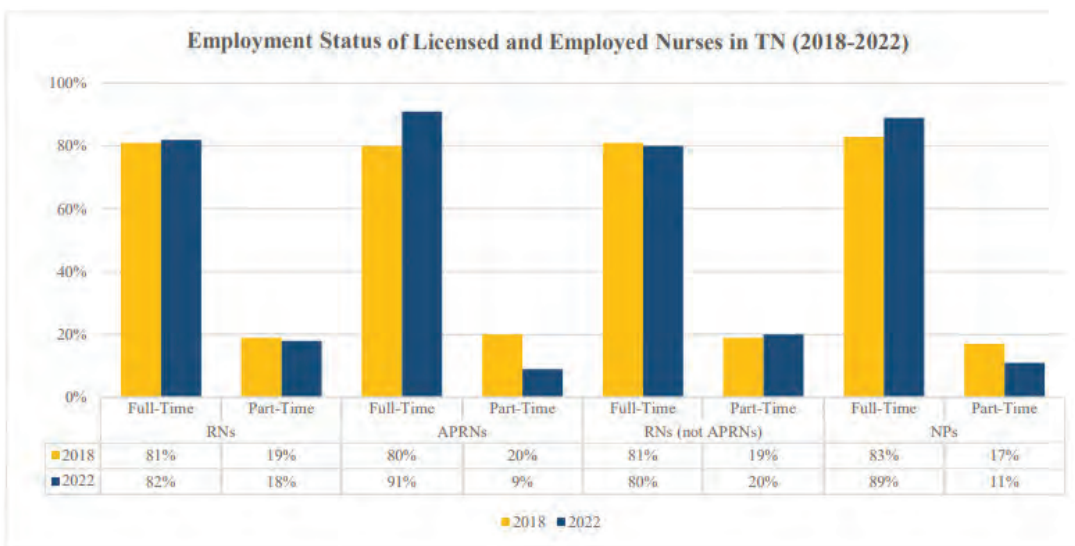


PART III

Between 2018 to 2022, the employment status of licensed nurses in Tennessee revealed a consistent trend toward full-time work across all categories. For RNs, the proportion of full-time employment showed a slight increase from 81% to 82%, while part-time employment decreased marginally from 19% to 18%. APRNs experienced a notable increase in full-time employment, rising from 80% to 91%, accompanied by a decrease in part-time employment from 20% to 9%.

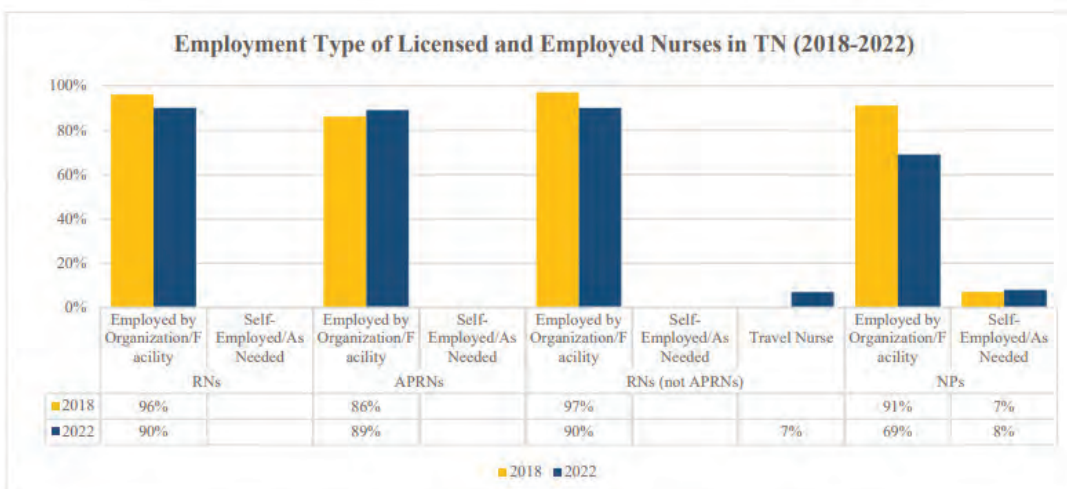
RNs (excluding APRNs) maintained a stable full-time employment rate of approximately 80%, with part-time employment remaining steady at 19-20%. NPs similarly saw an increase in full-time employment up, from 83% to 89%, while part-time employment decreased from 17% to 11%. These shifts underscore significant changes in employment patterns among different categories of nursing professionals over the four-year period (see Figure 23).

Figure 23. Employment Status of Licensed and Employed Nurses in TN (2018-2022)



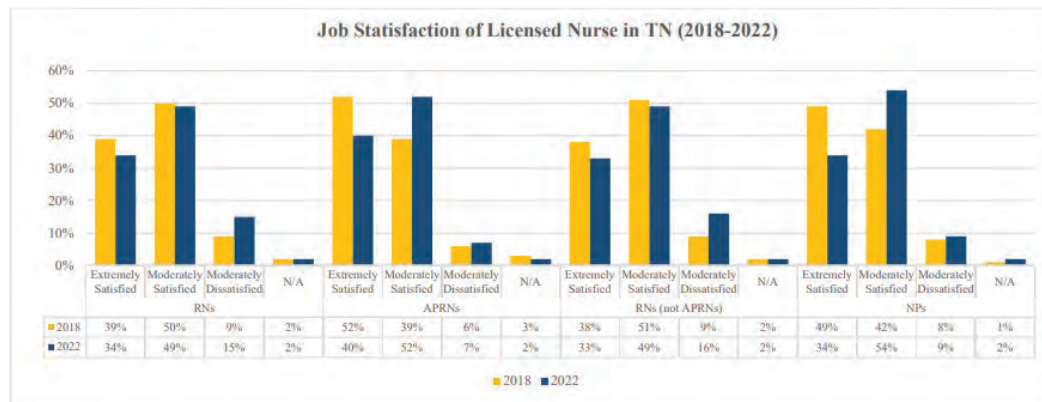
In both 2018 and 2022, the majority of RNs and APRNs were employed by organizations or facilities, although the percentage declined slightly over time. Specifically, in 2018, 96% of RNs were employed by organizations, decreasing to 90% by 2022. APRNs, on the other hand, saw an increase from 86% in 2018 to 89% in 2022. Among RNs who were not APRNs, employment by organizations decreased from 97% in 2018 to 90% in 2022, with 7% opting for roles as travel nurses. For NPs, organizational employment decreased from 91% in 2018 to 69% in 2022, while self-employment saw a slight increase from 7% to 8%. These shifts reflect evolving employment preferences and trends among nursing professionals over the four-year period (see Figure 24).

Figure 24. Employment Type of Licensed and Employed Nurses in TN (2018-2022)



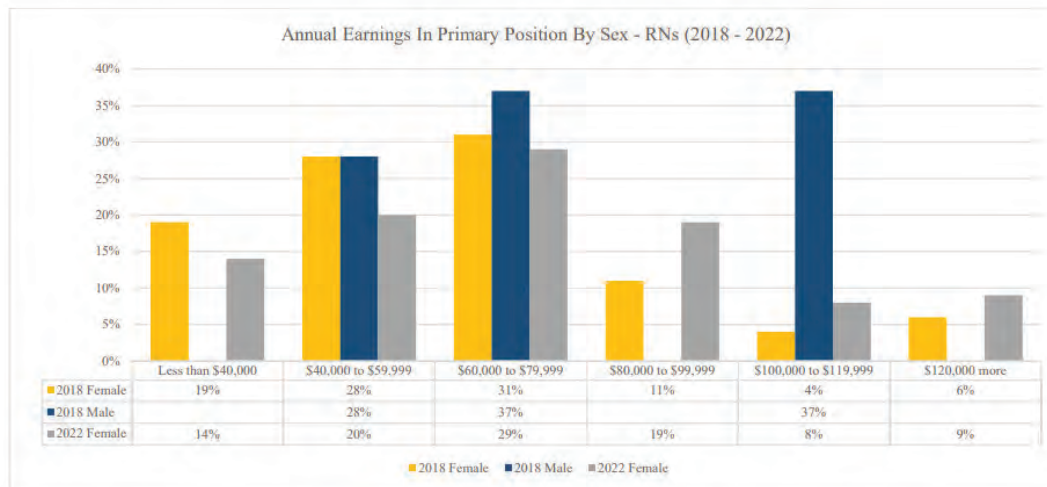
From 2018 to 2022, satisfaction levels among RNs showed notable shifts: extreme satisfaction decreased from 39% to 34%, while moderate satisfaction saw a slight decline from 50% to 49%. Conversely, moderate dissatisfaction increased from 9% to 15%. Among APRNs, there was a significant drop in extreme satisfaction from 52% to 40%, accompanied by an increase in moderate satisfaction from 39% to 52% and a slight rise in moderate dissatisfaction from 6% to 7%. NPs also experienced changes, with extreme satisfaction decreasing from 49% to 34% and moderate satisfaction increasing from 42% to 54%. Moderate dissatisfaction among NPs rose slightly from 8% to 9%. Overall, there is a noticeable trend of decreasing extreme satisfaction and increasing moderate dissatisfaction across all categories of nursing professionals during this period (see Figure 25).

Figure 25. Job Satisfaction of Licensed Nurse in TN (2018-2022)



Between 2018 to 2022, the annual earnings of Registered Nurses (RNs) indicate a notable shift toward higher income brackets for both female and male nurses. In 2018, 47% of female RNs earned less than \$60,000, a figure that decreased to 34% by 2022. Conversely, the proportion of female RNs earning between \$60,000 and \$119,999 increased from 42% in 2018 to 56% in 2022. While detailed income ranges for male RNs in 2022 are not provided, data from 2018 shows that 65% of male RNs earned between \$40,000 and \$99,999. These findings suggest an overall trend of rising earnings among RNs during this period, reflecting broader economic shifts in the nursing profession (see Figure 26).

Figure 26. Annual Earnings in Primary Position by Sex – RNs (2018-2022)



3.8 DATA ANALYSIS OF THE TENNESSEE BOARD OF NURSING, DECEMBER 2022

The Center is currently awaiting data from the Tennessee Board of Nursing. The Center will conduct an analysis to compare nursing schools in Tennessee with national benchmarks across several key metrics. The findings will be detailed in the upcoming 2024-2025 report, focusing on:

- RN/PN pass rates
- ADN/BSN/LPN pass rates
- Regional pass rates
- Quarterly pass rates
- Pass rates relative to the number of programs in each region
- Pass rates for public versus private schools
- Pass rates for for-profit versus nonprofit institutions
- Pass rates based on accreditation status
- Pass rates in relation to declared program sizes

3.9 WORKFORCE-RELATED GRANTS

The Center partnered with the College of Nursing’s Center for Nursing Research to apply for funding aimed at supporting nursing workforce initiatives. In 2023-2024, we pursued and maintained several health care workforce-related grants.

Table 2. College of Nursing Health Care Workforce-Related Grants

Title	Funding Agencies
Appalachian Highlands Center for Nursing Excellence	Ballad Health
CHC FQHC Safety Net 2024-2025	TDOH
Dental Safety Net FY 24-25	TDOH
ELC Enhancing Detection through Coronavirus Response and Relief (CRR)	TDOH
FY 2023 Bridge Access Program	HRSA
Health Center Infrastructure Support	HRSA
Mountain City Safety Net FY 24-25	TDOH
NFLP	HRSA
Northeast Tennessee Nurse-Family Partnership (NETNFP)	TDOH
Rural Expansion Program for At-risk Communities to Promote Health Outcomes through the Integration of Mental Health and Enabling Services in an Existing Primary Care School-Based Setting (REACH ME)	HRSA
Simulation Equipment to Revolutionize Nursing Student Education at ETSU	ARC
TBCSP Coordinator	TDOH
USDA Telehealth & Distance Learning Grant	USDA

FUTURE DIRECTIONS AND PLANS IN 2024-2025

To address the challenges confronting the health care system and the nursing profession, it is imperative to implement several strategic actions aimed at fostering a sustainable, skilled and fulfilled nursing workforce over the long term. The following recommendations and plans outline the Center's strategic priorities and initiatives.

To achieve our strategic vision through 2025 and beyond, our focus will be on the following key goal areas:

- Infrastructure Build
- Further Development of Foci
- Program Development

4.1 INFRASTRUCTURE BUILD

GOAL 1 - Complete Strategic Planning and Infrastructure Build

OBJECTIVE 1- Hire remaining staff

ACTION:

- Develop and/or review job descriptions
 - ◊ Executive Director
 - ◊ Office Coordinator
 - ◊ PhD Data Analyst
 - ◊ Nurse Scientist
- Review additional positions that may be needed
 - ◊ Communications Manager
 - ◊ Marketing Manager
 - ◊ Evidence & Quality Improvement Specialist
- Advertise positions, interview and hire staff

OBJECTIVE 2 - Further develop advisory boards, leadership committees and the Center's budget

ACTION:

- Determine the leadership committees, boards and organizational structure
 - ◊ AHCNA Board and TCNA Board (Combining in November)
 - ◊ Engagement Strategy Committee
 - ◊ State Nursing Education Committee
- Schedule quarterly meetings with advisory boards and committees
 - ◊ Include financials
- Create bylaws for the Board meetings
- Identify a chair for the Advisory Board
 - ◊ Schedule monthly meetings with the Executive Director
- Develop a detailed budget for a new strategic direction
 - ◊ Budgets need approvals
 - ◊ Budgets to be presented quarterly
- Develop an Effectiveness Evaluation Plan for the Center
 - ◊ Determine success using defined metrics
 - ◊ Determine areas of improvement

OBJECTIVE 3 - Hold Summit Annually

ACTION:

- Invite key stakeholders
- Solidify short-term (quick-win) strategies
- Prioritize long-term strategies

OBJECTIVE 4 - Charter Strategic Plan

ACTION:

- Review and update strategic plan
- 2024 Annual Report
- 2025 Annual Report

OBJECTIVE 5 - Develop robust identity and communication platform

ACTION:

- Attend regional & state meetings to report the Center's mission & activities
- Develop a list of press contacts throughout the state and press releases
- Develop nursing contact list
 - ◊ Licensed nurses
 - ◊ Nursing education programs
 - ◊ Grant programs
 - ◊ State government
- Develop a logo for the Center
- Develop additional social media accounts
 - ◊ YouTube
 - ◊ X (formerly Twitter)
- Create & Communication 2023 baseline data

OBJECTIVE 6 - Create a data science/ management plan

ACTION:

- Devise data infrastructure plan
 - ◊ Public interfacing visualization
 - ◊ Forecast modeling
- Vendor selection for website
 - ◊ 3 vendors to review
- System development life cycle plan for website
 - ◊ Public interfacing and forecasting

OBJECTIVE 7 - Create a Financial Sustainability Plan

ACTION:

- Create a Financial Sustainability Plan for the Center
 - ◊ Explore opportunities for additional funding

PART IV

GOAL 2 - Further Development of Foci

OBJECTIVE 1 - Further develop workgroups

ACTION:

- Expand foci workgroups
 - ◊ Include representatives from across the state

OBJECTIVE 2 - Foci 1: Pipeline

ACTION:

- Compile Pipeline ideas from Summit
- Connect with already existing programs in other states
 - ◊ Connecticut
 - ◊ Colorado
 - ◊ Pennsylvania
 - ◊ Florida
- Select a short-term program to implement or develop
 - ◊ Explore using the Lottery Leadership Designate TN Promise Funds to nursing education
 - ◊ Build partnerships among nursing academics, health care and explore opportunities for certification, evening programs, dual enrollment and Middle/High school exposure
 - ◊ Align state funding goals with priorities
 - ◊ Align shared goals with Tennessee Nursing Association (TNA) and Tennessee Hospital Association (THA)
- Implement short-term program
- Continue development of long-term programs

OBJECTIVE 3 - Foci 2: Innovation/Collaboration

ACTION:

- Compile Innovation/Collaboration ideas from Summit
- Connect with already existing programs in other states
- Select a short-term program to implement or develop
 - ◊ Be the hub for all things nursing
 - ◊ Resource Evidence-Based Practice (EBP), EDU, Data, Growth
 - ◊ Increase the visibility and voice
 - ◊ Marketing for region and statewide
 - ◊ Dedicated education unit
 - ◊ Explore technology including artificial intelligence

- ◊ Leverage scheduling as a strategic asset to focus
- ◊ Nursing gala yearly
- Implement short-term program
- Continue development of long-term program

OBJECTIVE 4 - Foci 3: Well-Being/Advocacy

ACTION:

- Compile Well-Being/Advocacy ideas from Summit
- Connect with already existing programs in other states
 - ◊ ANA Program
 - ◊ WA Burnout Program
- Select a short-term program to implement or develop
 - ◊ Establish a well-being baseline in TN
 - ◊ Define well-being metrics
 - ◊ Dedicated education unit
- Implement short-term program
 - ◊ Mental Health Support programs
 - ◊ Belmont Nurse Be-Well
- Continue development of long-term programs

OBJECTIVE 5 - Foci 4: Data

ACTION:

- Compile Data ideas from Summit
- Examine other state's available data reports and dashboards
 - ◊ Utah
 - ◊ Florida
- Create a data collection plan
 - ◊ Hire staff
 - ◊ Contract with 3rd party website
- Gather and analyze supply, education and demand data to develop trend reports
- Develop dashboard
- Determine additional data needs and collection methods
 - ◊ Define data collection metrics for baseline
 - ◊ Adopt a unique Nurse ID in TN
 - ◊ Utilize data to create a legislative platform for change
 - ◊ Define collection sources and partnerships, TN Board of Nursing, HRSA, THA, National Council of State Board of Nursing (NCSBN)

4.3 PROGRAM DEVELOPMENT

GOAL 3 - Create Programs to Support the Center's Strategic Plan

OBJECTIVE 1 - Develop Rewards & Recognition Programs

ACTION:

- State-level nurse recognition program
- Gala to honor and recognize winners
- Acquire grant funding

OBJECTIVE 2 - Nursing Science Programs

ACTION:

- Develop programs of research for new knowledge and scientific inquiry
- Disseminate data

- Disseminate recommendations
- Disseminate policy recommendation
- Acquire grant funding

OBJECTIVE 3 - Professional Practice Transformation

ACTION:

- Transition research findings to practice environments
- New grad transition to practice program and preceptor programs
- Robust nurse training, continuing education and retention plan
- Policy recommendations
- Acquire grant funding
- Leverage nurse scheduling systems

SUMMARY AND ACKNOWLEDGMENT

5.1 CONCLUSIONS

Nursing plays a crucial role in health care, with nurses' health and performance serving as the bedrock of high-quality patient care and the cornerstone of a robust health care system and a thriving nation. This report outlines the ongoing evolution and initiatives of the Tennessee Center Nursing Advancement in 2023-2024.

The journey of building these centers began with visionary leadership in Tennessee and the Appalachian Highlands region, setting the stage for a transformative initiative. Moving forward, our goal is to further develop

the Center into a premier hub—recognized for their contributions in education, resource accessibility, collaborative opportunities and data analysis. Challenges may arise along the way, yet our resolve remains strong. As Nelson Mandela wisely stated, 'The greatest glory in living lies not in falling, but in rising every time we fall.' Guided by our steadfast commitment to the health and well-being of Tennesseans and Appalachian Highland people, we are confident in our ability to navigate these challenges and continue to elevate our impact.

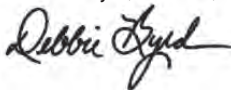
5.2 ACKNOWLEDGMENT

The Center extends its heartfelt gratitude to the funding agencies, institutions and individuals whose support has been instrumental in our development. We are deeply appreciative of the contributions from various government offices, health care institutions, university leaders and dedicated individuals, including but not limited to:

- All Tennessee nurses
- Ballad Health
- East Tennessee State University
- Members of the Advisory Boards for the Appalachian Highlands Center for Nursing Advancement and the Tennessee Center for Nursing Advancement
- Tennessee Board of Nursing
- The Tennessee Governor's Office
- U.S. Representative Diana Harshbarger and her office

Your commitment and collaboration have been invaluable to our mission. Thank you all sincerely for your ongoing support.

Debbie C. Byrd, PharmD, MBA



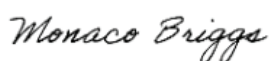
Interim Dean, College of Nursing
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