



Wisconsin Center  
for Nursing

A photograph of a middle-aged woman with short blonde hair, smiling warmly. She is wearing bright blue V-neck scrubs and has a black stethoscope around her neck. She is holding a large, plain brown clipboard against her chest with her left hand. The background is a plain, light-colored wall.

# THE WISCONSIN NURSING WORKFORCE:

*Status and Recommendations*

# Acknowledgements

Welcome to the Wisconsin Center for Nursing (WCN) report, *The Wisconsin Nursing Workforce: Status and Recommendations*. The cover of this crucial report depicts the current nursing workforce in Wisconsin: experienced, lacking in diversity and approaching retirement.

This report was accomplished with support from many individuals and partners. It is based on a review of state and national analyses, and workforce planning efforts. This report integrates findings from ongoing data analyses by WCN, made possible through mandated surveys and re-licensure fees administered as grant funding through the Wisconsin Department of Workforce Development, under Wisconsin Statutes Chapter 106.30. It also includes data from essential national workforce reports, such as from the U.S. Department of Health Services Health Resources and Services Administration (HRSA). The report affirms the 2011 Institute of Medicine Report: *The Future of Nursing: Leading Change, Advancing Health* which recommends the use of reliable data for strategic healthcare workforce planning.

We are grateful to the Governor of Wisconsin, the Wisconsin legislators, and our partners at the Wisconsin Department of Workforce Development, without whose assistance, our work would not be possible. We are honored to be part of the Wisconsin Health Workforce Data Collaborative, an innovative model in Wisconsin to support dialogue and collaboration around the importance of establishing data infrastructure and the systematic collection of healthcare workforce data. We are also grateful to the Wisconsin Department of Safety and Professional Services, for making the nursing surveys accessible to thousands of nurses in our state, and the nurses of Wisconsin for their cooperation in responding to the surveys.

WCN deeply appreciates the work of our researchers and the significant contributions of their respective institutions, specifically the University of Wisconsin–Madison School of Nursing, University of Wisconsin–Milwaukee College of Nursing, the University of Wisconsin-Oshkosh College of Nursing, Marquette University College of Nursing. In addition, we would like to recognize the many high quality nursing education programs in our state, and their lead organization, the Administrators of Nursing Education in Wisconsin (ANEW). This principal organization provides vision and leadership to assure an adequate continuing supply of nurses through collaborative educational efforts between baccalaureate and associate degree nursing programs.

WCN also extends sincere appreciation to the Faye McBeath Foundation, a long standing partner that has provided support for our mission and the nursing profession since the inception of our organization. WCN appreciates the support of a multitude partners throughout the state. A complete listing of partner organizations is provided on page 4 of this report.

*The Wisconsin Nursing Workforce: Status and Recommendations* provides strategic recommendations, and is intended for use by educators, health systems, governmental agencies, workforce planners and policy-makers to inform and implement strategies to mitigate emerging nursing workforce challenges in Wisconsin. It provides judicious information on the status of the nursing workforce, and serves as a foundation to address projected nursing shortages which will impact the future of healthcare delivery in our state. On behalf of the WCN Board of Directors, we are proud to emulate Wisconsin's motto, "Forward," as we move ahead in planning for our future nursing workforce, and we are pleased to provide this report to the people of Wisconsin.



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# The Wisconsin Center for Nursing

*Leading Today for the Workforce of Tomorrow*

### Vision

Nurses in Wisconsin speak with one voice for nursing workforce issues.

### Mission

Assure an adequate, well-prepared and diverse nurse workforce for the people of Wisconsin.

### Core Values

- Leadership
- Inclusive Excellence
- Collaboration
- Impact

### Our Partners

- Administrators of Nursing Education of Wisconsin
- AARP Wisconsin
- Faye McBeath Foundation
- Great Lakes Chapter American Assembly of Men in Nursing
- Healthier Wisconsin Partnership Program – Medical College of Wisconsin
- Milwaukee Chapter National Black Nurses Association
- Nurses Foundation of Wisconsin
- Oscar Rennebohm Foundation
- Rural Wisconsin Health Cooperative
- Southeast Wisconsin Chapter of National Association of Hispanic Nurses
- Wisconsin Associate Degree Nursing Educators & Administrators
- Wisconsin Association of Colleges & Schools of Nursing
- Wisconsin Association of Licensed Practical Nurses
- Wisconsin Association of School Nurses
- Wisconsin Area Health Education Centers
- Wisconsin Department of Health Services, Division of Public Health
- Wisconsin Department of Safety & Professional Services
- Wisconsin Department of Workforce Development, Labor Market Information
- Wisconsin Department of Workforce Development, Office of Economic Advisors
- Wisconsin Health Workforce Data Collaborative
- Wisconsin Hospital Association
- Wisconsin League for Nursing
- Wisconsin Nurses Association
- Wisconsin Nursing Coalition
- Wisconsin Organization of Nurse Executives
- Wisconsin Public Health Association
- Wisconsin State Board of Nursing

# Executive Summary

The nursing workforce is integrally related to the delivery of healthcare and, as a professional group, nurses are a critical asset and economic driver for Wisconsin. As the largest professional healthcare workforce in the state, the supply of nurses directly impacts the availability of most healthcare services and the health outcomes for Wisconsin's population. Projections indicate there is a pending nursing workforce crisis with the shortage of Registered Nurses (RNs) growing to nearly 20,000 nurses in Wisconsin by 2035. Simultaneously, there is a need to increase the educational preparation of nurses to meet evolving healthcare needs.

This crisis in the nursing workforce is being driven by a growing elderly population, rapidly aging nurse population, a continuing nurse educator shortage, and the looming impact of healthcare reform. These factors are increasing in the face of a rapidly aging population and a substantial increase in the demand for nurses in both healthcare and disease prevention sectors.

The Wisconsin Department of Workforce Development (DWD), Office of Economic Advisors predicts a gap in the state nursing workforce as high as 36.6% by the year 2035, based on sophisticated forecasting tools. The economic fallout of ignoring these factors can be significant. This report by the Wisconsin Center for Nursing (WCN) merges findings from the mandatory biennial Wisconsin nursing workforce surveys undertaken and disseminated collaboratively by DWD and WCN and the annual nursing education surveys conducted by WCN. The goal is to summarize available supply and demand data, describe the potential negative impact on the healthcare of Wisconsin residents and outline recommendations to mitigate this impact.

As the largest segment of the healthcare workforce, RNs serve in many, diverse roles and offer untapped potential for expanded roles which could improve access, customer satisfaction, cost effectiveness, and patient outcomes. This is particularly germane at a time

of rapid changes in healthcare delivery and a shift in focus to more health promotion and disease prevention models spurred by the implementation of the *Patient Protection and Affordable Care Act (ACA)*. Licensed Practical Nurses (LPNs), over 36% of whom are employed in nursing homes, will continue to provide a critical foundation of care for the elderly across the state in both long term care and home-based services. This need will continue with a projected 133% increase in Wisconsin residents aged 85 and over by 2035.

With a shortfall of over 2000 physicians in the Wisconsin workforce by 2030, as projected in *100 New Physicians a Year: An Imperative for Wisconsin* (WHA, 2011), Advanced Practice Registered Nurses (APRNs) will be called upon to provide an effective, well-prepared workforce to meet the primary care needs of Wisconsin residents which is the area of greatest physician shortage. An increased supply of nurse practitioners must be enrolled and graduated from Wisconsin nursing schools in the next several years.

In a time of national nursing shortage, it is important to note that 85.5% of Wisconsin nursing school graduates live and work in Wisconsin. This will allow state policymakers, employers and educators to address the Wisconsin nursing shortage with Wisconsin-crafted solutions. Recent Wisconsin RN surveys indicate that over 20% of the nursing workforce intends to leave direct patient care in the next 5-9 years, with a loss of another 59% of currently employed Wisconsin nurses in patient care in 10 or more years. Although an increase in nursing school enrollments and the recent economic downturn which delayed retirements for many older nurses have painted a temporarily optimistic picture of nursing workforce, extensive retirements are projected in 2015 and beyond. Immediately increasing the enrollment and graduation of a large number of new nurses who are capable and committed to Wisconsin is critical.

The loss of many of the most experienced nurses in the workforce in a short period of time will cause both workforce shortages and a significant loss of wisdom from the field at a time when nursing roles and skills are expanding to address a significant transformation



On average,  
Wisconsin RNs have  
**15 YEARS**  
of experience

in healthcare delivery. There is also a need for academic progression of nurses moving from Associate Degree Nursing (ADN) to the Bachelor of Science Degree in Nursing (BSN), in an effort to ensure patient safety and meet the expanding roles of RNs. The landmark Institute of Medicine (IOM) Report, *The Future of Nursing: Leading Change, Advancing Health*, (IOM, 2011) calls for 80% of all RNs to be educated with a Bachelor's degree or higher by 2020. For Wisconsin, this translates to a current unmet demand for BSN completion programs for nearly 20,000 nurses if we are to meet this target.

The dearth of qualified nursing faculty is impeding the ability of many nursing schools to maintain and expand current enrollments at a time when nursing programs must attempt to dramatically increase enrollments. Dwindling resources for higher education in the state has impacted the ability of nursing schools to pay salaries adequate to compete for enough nursing faculty to teach the next generation of nurses. Scarce resources also have decreased the number of graduate students able to make the educational commitment to doctoral education, thus decreasing the profession's ability to educate the next generation of faculty.

A nursing workforce that is diverse, and reflective of the population it serves, contributes to improved patient satisfaction and health outcomes. The Wisconsin nursing workforce lacks diversity on all levels. A diverse and inclusive workforce is paramount to the success of a 21st century workforce, however underrepresented populations in Wisconsin's nursing workforce, lag behind both state and national averages. In 2012, the percentage of white nurses was 93.5%, with only 6.4% from racial/ethnic minorities, and only 6.9% males. LPNs in Wisconsin, although slightly more racially

diverse in members of traditionally underrepresented groups at 11.7%, are even less likely to be male, with only 4.4% reported in 2011. WCN established a Diversity Taskforce in 2012 to address the issues and provide recommendations for enhancing nursing diversity.

Data from DWD and WCN survey reports and other reliable sources have clearly identified the factors detailed in this report as key elements of a "perfect storm" that threatens the Wisconsin nursing workforce of the future and the health of Wisconsin's population. Additional state and private resources are desperately needed to expand nursing programs to meet the impending nursing workforce crisis in Wisconsin. In addition, schools and colleges of nursing will need the support of health employers to accommodate the learning needs of a larger student population. To accomplish this, there will need to be a dedicated commitment and significant investment to support the infrastructure necessary for increased educational capacity, including clinical space, faculty positions, and enhanced financial support both for the institutions and students.

Meaningful strategies to increase the number of nursing graduates in Wisconsin will require public-private collaborative partnerships for innovative solutions to meet the needs of rapidly changing population demographics. Healthcare systems will need to invest in programs to recruit a diverse nursing workforce, and retain new graduates using evidence-based, statewide residency programs. Nursing education must address new emphasis on preparing students competent in population health at individual, family, community and systems levels. In addition, state infrastructure for community and public health nursing must be restored as community-based care models emerge with the onset of the ACA.

Finally, interprofessional strategies and technology need to be leveraged to improve both educational and clinical outcomes in a time of scarce resources. Barriers to practice must be removed to allow nurses to practice to the full extent of the law and their education if the health of the population is to be protected. Given the shortage projections from a variety of sources that project an impact as early as 2015, it is clear that the time to act is now.

Increasing educational capacity and academic progression are key issues which require time to accomplish. Positive outcomes will require public-private partnerships and innovative collaboration. Dedicated efforts to advanced nursing and interprofessional education can assure the preparation of high-performance healthcare provider teams that are prepared to work together as new models

of care delivery emerge. It is important for nursing to advance in leadership positions for this redesign of care. As health reform refocuses care on underserved populations, health promotion and disease prevention strategies, and transitional care between community and healthcare facilities, nurse educators, clinicians and administrators will need to work together and with other disciplines and policy makers to align the nursing profession with individual and population health needs.

To summarize this report, the issues and resulting recommendations, along with their strategies, have been framed using the recommendation format adopted by the 2011 Institute of Medicine (IOM) report, *The Future of Nursing; Leading Change, Advancing Health*.

<p><b>IOM Report Key Message:</b> Nurses should practice to the full extent of their education &amp; training.</p>	
<p><b>Wisconsin Issue #1: There is a shortage of Advanced Practice Registered Nurses (APRNs) to meet current and future access and health needs in Wisconsin.</b></p>	
<p><b>Recommendation:</b></p>	<p><b>Strategies:</b></p>
<p>Increase the number of APRNs to a minimum of 10% of the Wisconsin nursing workforce to improve access to care.</p>	<p>a. Double the number of APRNs graduating in Wisconsin by 2020 increasing capacity at current programs and adding new APRN programs.</p> <p>b. Implement a statewide loan forgiveness program for nursing students preparing to practice as APRNs in underserved areas of Wisconsin.</p> <p>c. Secure state funding to support significant expansion of Wisconsin nursing school capacity to meet demand for 200 additional APRNs per year.</p>
<p><b>Wisconsin Issue #2: Barriers exist in Wisconsin that prevent Advanced Practice Registered Nurses from practicing to the full extent of their education and certification.</b></p>	
<p><b>Recommendation:</b></p>	<p><b>Strategies:</b></p>
<p>Remove barriers to practice for APRNs by collaborative work between the Wisconsin Nurses Association (WNA), the Wisconsin Board of Nursing, the Wisconsin Center for Nursing and legislators, employers and other stakeholders to assure an independent, contemporary, and full scope of APRN practice is implemented in Wisconsin.</p>	<p>a. Review and model successful efforts in other states to achieve full scope of practice for APRNs.</p> <p>b. Improve access through the use of models of care as utilized by healthcare systems, and interprofessional teams that support contemporary use of APRNs.</p> <p>c. Support full scope of practice by APRNs through the implementation of medical staff bylaws, rules and regulation by healthcare systems and hospital boards.</p>

**IOM Report Key Message:**

Nurses should achieve higher levels of education & training through an improved education system that promotes seamless academic progression toward 80% of workforce with BSNs and double the number of nurses at the doctoral level by 2020.

**Wisconsin Issue #3: There is a need to expand educational capacity to meet the projected demand for 7,500 new graduates annually by 2020, based upon forecasting models from the Wisconsin Department of Workforce Development, Office of Economic Advisors.**

<b>Recommendation:</b>	<b>Strategies:</b>
<p>Allocate additional resources to universities and colleges to maximize program capacity and infrastructure to decrease wait lists and double capacity by 2020.</p>	<ul style="list-style-type: none"><li>a. Secure state funding to support significant expansion of Wisconsin nursing school capacity to meet demand for at least 3,000 additional BSN graduates per year.</li><li>b. Implement innovative programs, partnerships and strategies to remove barriers to access for education including funding and increased employer support.</li><li>c. Evaluate the expanded use of evidence-based clinical simulation as a teaching method to the fullest extent possible in both educational and practice settings. Administrators of Nursing Education in Wisconsin (ANEW) to recommend and disseminate standards related to use of simulation in educational programs in undergraduate education.</li><li>d. Investigate possibility of BSN completion programs in Wisconsin Technical College System.</li><li>e. Improve retention and graduation rates of nursing students, including students from underrepresented populations, through the implementation of comprehensive strategies by Wisconsin nursing education programs.</li><li>f. Implement academic-practice partnerships to establish dedicated educational units (DEUs) for nursing in practice settings that expedite clinical practicums.</li><li>g. Expand early student recruitment efforts to the nursing professions with middle and high school students through a variety of programs (e.g., summer nursing immersion experiences, such as the Discover Nursing program).</li><li>h. Create partnerships with high school based Certified Nurse Assistant (CNA) programs to connect high school students to RN programs.</li><li>i. Collaborate with university STEM Programs (Science, Technology, Engineering &amp; Math) to create curriculum related to nursing as a career option.</li><li>j. Explore opportunities to partner with Project Lead the Way to promote recruitment of high- achieving students to the nursing profession.</li></ul>



**Wisconsin Issue #4: Currently 53.5% of nurses working in Wisconsin have a BSN, or higher degree. Wisconsin will need to increase the educational capacity of BSN completion programs to support seamless academic progression options to meet the goal of 80% BSN by 2020.**

Recommendations:	Strategies:
<ul style="list-style-type: none"> <li>• Triple the number of ADN nurses completing a BSN or higher degree annually by 2020.</li> <li>• Remove identified barriers to academic progression which include: funding, access and time constraints.</li> <li>• Assist ADN graduates from underrepresented populations to achieve BSN or higher education.</li> </ul>	<ol style="list-style-type: none"> <li>a. Implement dual track enrollment between technical colleges and 4-year institutions to facilitate students' ability to attain a BSN or higher degree.</li> <li>b. Seek state funding for the expansion of capacity for face-to-face and online BSN completion programs.</li> <li>c. Expand the shared curriculum and shared competencies models and accelerated curriculum options.</li> <li>d. Evaluate and implement innovative push-pull models, with established partnerships between ADN and BSN programs to facilitate students furthering their education, including specific models to identify and support students from underrepresented populations.</li> <li>e. Develop a one credit professional course offered during the ADN program to include content on career pathways in nursing and academic requirements.</li> <li>f. Assess educational status of nursing staff by healthcare systems by 2014, develop and implement plans by December 2015, and monitor achievement of progress annually.</li> <li>g. Foster innovative strategic regional partnerships between schools and healthcare systems to advance nursing education opportunities, including increased tuition support and "time to study" (flex time) options.</li> <li>h. Seek private dollars from foundations, corporations and individuals for scholarships for undergraduate and graduate education to accelerate academic progression.</li> <li>i. Continue seamless academic progression and support for LPNs to achieve ADN or BSN degree completion.</li> </ol>

**Wisconsin Issue #5: Currently, 0.6% of Wisconsin nurses hold a doctoral degree in nursing. To assure an adequate faculty supply, along with increasing diversity, Wisconsin will need to double the number of nurses with doctoral degrees by 2020.**

Recommendation:	Strategies:
<p>Remove salary inequities for nurse faculty to provide market competition between practice and education to recruit/retain faculty and researchers.</p>	<ol style="list-style-type: none"> <li>a. Explore and expand creative public-private funding models to support additional nurse faculty positions to increase student enrollment.</li> <li>b. Increase dual faculty positions between two educational institutions, or an educational program and a clinical agency.</li> <li>c. Actively recruit faculty from underrepresented groups.</li> <li>d. Expand and enhance loan forgiveness and traineeship programs for nursing faculty.</li> </ol>

**Wisconsin Issue #6: Turnover among new graduates is higher than turnover of experienced RNs. Retention of new graduates is essential to assure an adequate workforce, improve patient safety, and decrease healthcare costs.**

Recommendation:	Strategies:
<p>Implement best practice strategies for nurse residency programs in healthcare systems and other venues to decrease turnover and ease transition to practice, in an effort to retain and recruit new graduates.</p>	<ol style="list-style-type: none"> <li>a. Implement nurse residency programs for all new RN graduates and across all venues of practice.</li> <li>b. Establish a standardized mechanism to monitor new graduate turnover.</li> <li>c. Expand foundation support for nurse residency programs.</li> </ol>

**IOM Report Key Message:**

Nurses should be full partners with MDs and other health professionals in redesigning healthcare in the United States.

**Wisconsin Issue #7: There is a need to redesign the healthcare delivery system, and assure interprofessional coordination of care.**

Recommendations:	Strategies:
<ul style="list-style-type: none"><li>• Position nurses on major healthcare boards, executive teams and other major leadership positions across all systems.</li><li>• Implement interprofessional educational models between healthcare providers and other appropriate disciplines in educational institutions.</li><li>• Develop and implement interprofessional models of care delivery and communication across all healthcare systems and practice venues.</li></ul>	<ol style="list-style-type: none"><li>a. Expand the participation of nurses on key healthcare boards and executive teams.</li><li>b. Solicit input from nursing staff in redesign activities.</li><li>c. Expand leadership development, educational programs, and mentoring strategies for nurses by employers and nursing organizations.</li><li>d. Increase number of jointly-offered interprofessional classes through interdepartmental collaboration in educational settings.</li><li>e. Utilize academic practice linkages to develop collaborative models for interprofessional teams in healthcare systems and the community.</li><li>f. Expand utilization of transitional care models, community-based care and care coordination at the individual, community and systems levels using population-based health approaches, by educational institutions and across healthcare systems.</li></ol>

**IOM Report Key Message:**

Effective workforce planning & policy-making require better data collection and an improved information infrastructure.

**Wisconsin Issue #8: There is a significant need to enhance nursing and other healthcare workforce data collection and workforce planning.**

Recommendations:	Strategies:
<ul style="list-style-type: none"><li>• Maintain mandatory nursing surveys and analyses on a biennial basis for RNs and LPNs with re-licensure, to assure monitoring of workforce trends.</li><li>• Continue to utilize the national minimum data sets for surveys with national and state benchmarking comparisons.</li><li>• Expand efforts for the collection of workforce data for other healthcare professions in collaboration with the nursing profession.</li></ul>	<ol style="list-style-type: none"><li>a. Continue mandatory LPN and RN nursing surveys and analysis biennially to assure updated Wisconsin data for benchmarking with national trends and information on nursing workforce trends.</li><li>b. Utilize national minimum data sets for nursing surveys and national and state benchmarking comparisons.</li><li>c. Partner with Wisconsin Department of Workforce Development, Office of Economic Advisors on updates to demand projections and modeling to establish and monitor annual nursing workforce targets.</li><li>d. Develop demand surveys in partnership with hospitals, long term care and other settings.</li><li>e. Monitor vacancy rates and project workforce needs, including recruitment and retention, for all healthcare professions through an established process.</li></ol>

**IOM Report Diversity:**

Diversity is an overarching recommendation within the IOM report. Diversity provides the key foundation for the composition of the nursing workforce of the future to align with population demographics and strive for inclusive excellence at regional, state and national levels.

**Wisconsin Issue #9: The nursing workforce in Wisconsin does not mirror the diversity in the state population. Currently the RN nursing workforce is only 6.9% male and only 6.4% in racial/ethnic minorities.**

Recommendations:	Strategies:
<ul style="list-style-type: none"><li>• Emphasize diversity as a workforce priority and system-wide approach from the top down in each organization, to recruit and retain students, staff and nursing leaders from underrepresented groups.</li><li>• Ensure funding and monitoring of progress through collaboration by academic and practice partners across all settings, including accrediting bodies, private and public funders.</li></ul>	<ol style="list-style-type: none"><li>a. Provide a variety of support mechanisms for underrepresented populations in both academic and practice settings including mentoring, coaching, student/employee resources, social networks for assimilation and interdisciplinary collaboration.</li><li>b. Prepare nursing staff and students to attain higher levels of cultural competency.</li><li>c. Develop a standardized system with agreed upon benchmarks for tracking data on underrepresented populations in nursing programs &amp; health systems throughout the state.</li><li>d. Increase funding for nursing scholarships and loan forgiveness programs for traditionally underrepresented populations.</li><li>e. Implement recruitment strategies to achieve 20% males by 2020 benchmark, as recommended by the American Assembly of Men in Nursing.</li></ol>

The recruitment, preparation and retention of an increasingly sophisticated nursing workforce are the keys to a healthy Wisconsin population today, and for decades to come. The health of our state depends on it. Wisconsin policymakers, employers, educators and funders must take collaborative action now to invest in its nursing workforce in order to preserve the delivery of safe, high quality and culturally relevant care for the people of our state.



## Introduction

The mission of the Wisconsin Center for Nursing (WCN) is “to assure an adequate, competent and diverse nurse workforce for the people of Wisconsin.” This work began statewide in 2001 when a group of visionary academic and practice nursing leaders committed themselves to collaborative work to meet this shared goal. This early work was foundational to the creation of the WCN in 2005. The Center continues to be dedicated to alleviating the nursing shortage and averting a potential public health crisis caused by a shortage of nurses.

Wisconsin Statutes Chapter 106.30 was enacted in 2009 to mandate workforce surveys in conjunction with licensure renewal for registered nurses (RNs) and licensed practical nurses (LPNS), to occur in alternating years. The legislation directs the Department of Safety and Professional Services (DSPS) to administer the survey, collect fees, and then transfer a specific portion of funds to the Department of Workforce Development (DWD) and subcontract with WCN to analyze the data and disseminate it broadly to Wisconsin stakeholders. To date, this important legislation has resulted in a historical first survey of 77,553 registered nurses (RN) during the re-licensure

process in 2010, a second RN survey of 81,187 nurses in 2012, and the first Licensed Practical Nurse (LPN) survey of 14,165 in 2011. The legislation calls for surveys of both RNs and LPNs to be conducted biennially by the Wisconsin Department of Workforce Development (DWD) in partnership with the WCN as a part of re-licensure to assure adequate workforce monitoring in the future.

WCN also facilitates partnerships among key stakeholders to monitor trends in nursing education and practice and evaluate effectiveness to increase access to programs, promote diversity within the profession, enhance nursing career mobility and nursing leadership development, and achieve policy consensus to ensure an adequate, competent and diverse nursing workforce for Wisconsin.

To assure a comprehensive, cost-effective and scholarly approach to the data analyses, WCN has developed partnerships with research nursing programs in Wisconsin. Nursing researchers have participated from the University of Wisconsin-Madison School of Nursing, the University of Wisconsin-Milwaukee College of Nursing, Marquette University College of Nursing and the University of Wisconsin-Oshkosh College of Nursing. Additionally, services of

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# By 2035, predicted shortage gaps in nursing project vacancy rates of 35%: nearly **20,000** nurses

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statisticians have been secured through the University of Wisconsin and the Medical College of Wisconsin. This research process has been effective with both the RN and LPN state mandated surveys, and resulted in broad, well-articulated reports.

Although not mandated, annual education surveys of nursing programs to complement the supply surveys, have been conducted by WCN since 2010. These were undertaken by nurse researchers at the University of Wisconsin-Milwaukee College of Nursing. The educational surveys have provided invaluable supply data that identify the nursing education capacity and trends in Wisconsin.

The strong public-private partnership between DWD and WCN provides Wisconsin with the capacity to assess and validate nursing workforce information longitudinally, and provides an evidence-based foundation for the promotion and creation of strategies to prepare and utilize nurses in existing and evolving roles to improve healthcare access and delivery of quality care which will ultimately reduce health disparities and improve the overall health and well-being of the people of our state.

The Wisconsin Center for Nursing continues to actively engage nurses, other healthcare providers, healthcare organizations, public and private academic programs, government agencies, and both public and private funders to work together as collaborative partners in an effort to ensure an adequate, competent and diverse nursing workforce for the people of Wisconsin.

Through a continued partnership with the Wisconsin Department of Workforce Development, the Center strives to accurately and continually collect, analyze and disseminate nursing workforce data to assist healthcare organizations and academic institutions to fully assess both supply and demand data and craft strategic practices and policies to avert the projected nursing workforce crisis in the state.

*All WCN data analyses that have been used to inform this workforce report are published and accessible online at the WCN website [www.wicenterfornursing.org](http://www.wicenterfornursing.org).*

# Nursing Workforce: The National Context

Registered nurses are the foundation of the nation's healthcare system, representing the largest segment of any healthcare profession at more than 3 million providers. Nursing has a major impact on both the quality of care and innovation in healthcare. As new avenues open through transformed healthcare delivery systems, RNs with extensive professional knowledge and potential for expanded roles will lead efforts to improve access, customer satisfaction, cost effectiveness, and patient outcomes. Currently, workforce demand data indicate a total projected deficit nationally of 918,232 RN jobs by 2030 (Juraschek, Zhang, Ranganathan & Lin, 2012).

Nurses impact the health of a community, improve access to healthcare, and provide cost-effective services in areas that have a shortage of physician providers. For decades, it has been demonstrated that implementing programs and policies that support nurses to practice to the full extent of their education and also provide population-based care can positively impact health outcomes at individual, community and systems levels (Keller, Stroschein, Lia-Hoagberg & Schaffer, 1998)

In 2008, in anticipation of the evolution in healthcare policy, the Robert Wood Johnson Foundation® (RWJF) and the Institute of Medicine (IOM) partnered on a two-year initiative to assess the need to transform nursing in response to challenges of changing healthcare systems. The resulting landmark report entitled, *The Future of Nursing: Leading Change, Advancing Health* (2011), features key messages and recommendations critical to addressing the need for healthcare transformation through the expanded roles of nurses.

During the RWJF/IOM initiative, the *Patient Protection and Affordable Care Act* (ACA), was vetted and was passed by the U.S. Congress in 2010. Implementation of the ACA is expected to provide health insurance coverage to an additional 32 million Americans. This will require substantial transformation of the healthcare delivery system and health professions education programs, including the nursing profession, the largest segment of the healthcare workforce.

**26%** of Wisconsin nurses intend to leave patient care in 2-9 years.  
Another **43%** in 10+ years

The *United States Registered Nurse Workforce Report Card and Shortage Forecast* predicts shortages in all 50 states occurring between 2009 and 2030 (Juraschek, et. al., 2012). This report models and forecasts the future supply and demand taking into consideration population, age, and staffing ratios, and gives Wisconsin a potential grade of "D" by 2030. It is in anticipation of this potential crisis in the nursing workforce in Wisconsin, that this data-based report seeks to present the complex context of a severe nursing shortage and concludes with recommendations for changes that, if implemented immediately, could help to avert a public health crisis in Wisconsin.

# Assuring a Sufficient Nursing Workforce in Wisconsin

The nursing workforce is a critical asset and economic driver for the State of Wisconsin. The supply of nurses directly impacts the availability of healthcare services and health outcomes for the state’s population. This report is based on the analysis and trending of Wisconsin nursing workforce data that takes into consideration current trends, and the impact on both the supply and demand for nursing services. Factors include:

- Growing elderly populations in the Wisconsin
- Increasing diversity of Wisconsin’s populations
- Aging nursing and healthcare labor force
- Aging nursing faculty and significant current shortages
- Expanding roles for nurses due to the impact of healthcare reform

Both the nation and Wisconsin are facing a substantial future deficit of nurses. The nursing shortage will occur at the same time as sizable projected shortages of other healthcare professionals, including physicians. This results in concerns about healthcare access and the overall health of Wisconsin residents. Resolving the nursing shortage could provide a viable solution to a potential public health crisis. The increased utilization of nurses in expanded roles consistent with their full scope of practice, including primary care, midwifery and anesthesia and community based care models, such as transitional care coordination, could mitigate impending shortages in physicians and other professionals.

Wisconsin’s population by 2035 is projected to be 6.65 million, nearly 1.3 million more than the 2000 Census count of 5.36 million. The state’s population is expected to grow by 24.1% during the period between 2000 and 2035.

TABLE 1

## Wisconsin Projected Population by Age Group, 2000-2035

Age Group	Census 2000	Projected 2015	Projected 2035	Percent Change
0-17	1,368,756	1,349,090	1,448,200	5.8
18-64	3,292,406	3,739,160	3,720,200	13.0
18-24	520,629	553,530	577,800	11.0
25-44	1,581,724	1,547,380	1,570,350	-0.7
45-64	1,190,053	1,638,250	1,572,050	32.1
65 & over	702,553	900,170	1,485,570	111.5
65-84	606,928	764,710	1,263,020	108.1
85 & over	95,625	135,460	222,550	132.7

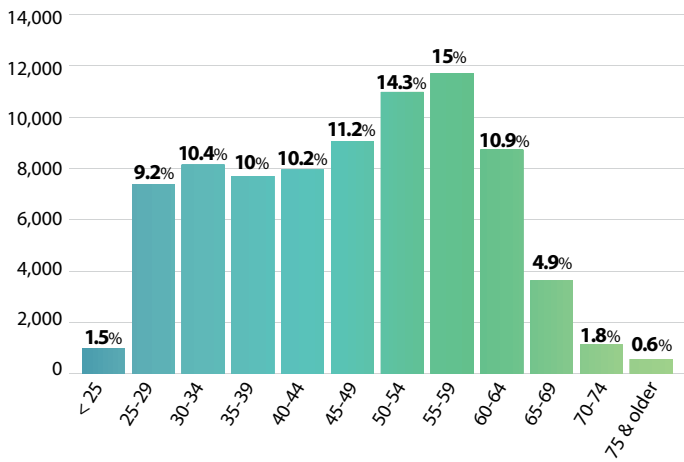
Source: Egan-Robertson, D., Harrier, D. & Wells, P. (2008).

Table 1 shows that baby boomers over 65 will increase 111% by 2035. Additionally the population aged 85 and older will increase an alarming 133% with a concomitant need for significantly increased levels of healthcare.

An aging nurse workforce in combination with this aging population compounds the problem (Fig. 1.)

FIGURE 1:

### 2012 Wisconsin RN Workforce Survey Registered Nurses by Age (n=78,159)



Source: Wisconsin DWD, Labor Market Information, 2012.

Nurses play an important role in the health of communities where people work, learn, play and live. The health of a community depends on a multitude of factors, including the environment, education, individual behaviors and access to care (Wisconsin County Health Rankings, 2013). The health plan for Wisconsin, *Healthiest Wisconsin 2020: Everyone Living Better, Longer*, identifies clear priorities to improve health and eliminate health disparities to create a better quality of life for all the people of our state. (Wisconsin Department of Health Services, 2010). Although “health is everyone’s business” (p. 9), and no single entity can achieve the objectives of this plan without collaborative partnerships, nurses can make a formidable contribution to achieving the objectives of Wisconsin’s health plan.

A goal of WCN has been to advocate for the collection and dissemination of valid and reliable nursing workforce data to support long range planning. WCN supports a collaborative approach to data collection, dissemination and planning, and is a participant in the Wisconsin Health Workforce Data Collaborative (WHWDC). This progressive group was created by key stakeholders, including the Rural Wisconsin Health Cooperative, the Wisconsin Hospital Association, the

Wisconsin Department of Workforce Development, Labor Management Information and Office of Economic Advisors, the Wisconsin Department of Health Services, Wisconsin Area Health Education Centers, and WCN, to advocate for data collection and analysis to support meaningful workforce planning for all healthcare professions.

Funded in part by the Healthier Wisconsin Partnership Program (HWPP), DWD economists from the Office of Economic Advisors (OEA), in collaboration with the Wisconsin Health Workforce Data Collaborative undertook the development of an innovative, evidence-based forecasting model for Wisconsin’s nursing workforce. The model was developed by DWD healthcare policy analysts and OEA economists in 2007, but its application was limited by inadequate data. The 2010 Wisconsin RN Survey, the first legislatively mandated effort in the state to collect discipline specific workforce data, served as an opportunity to meet the mission of WHWDC, and the application of the forecasting model. The use of the model with scenarios is presented in a report by Walsh and colleagues (2011), *Wisconsin Registered Nurse Supply and Demand Forecasting: Results Report 2010-2035*, and provides critical forecasting information for this WCN report. One of the most stunning findings is that regardless of scenario modeling methodology, the future demand-supply gap for RNs in Wisconsin ranges from 34.4% to 36.6% by 2035 (Walsh, Udalova & Winters, Wisconsin DWD-OEA, 2011).

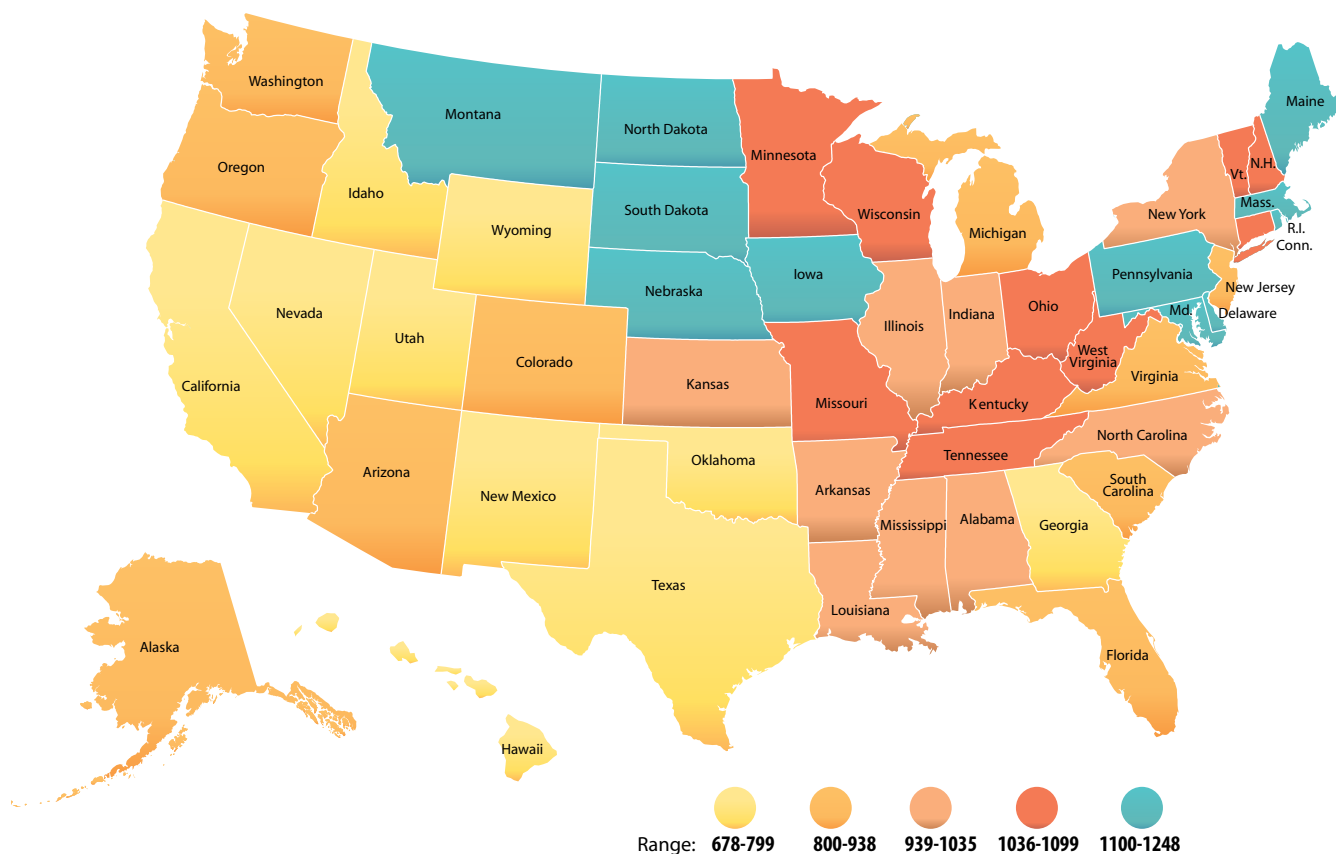
Competitive Wisconsin Inc. and the Manpower Group partnered on a year-long workforce study, *Be Bold 2: Growing Wisconsin’s Talent Pool*, which reveals major challenges in shortages of the Wisconsin workforce. Based on *Be Bold 2* findings, Wisconsin will experience significant shortages in skilled workers, including in the nursing and healthcare sector. Findings suggest that by 2018, 24% of all jobs in Wisconsin will be in nursing and health related professional career cluster and projects a 43% increase in jobs with only a 13% increase in the supply of nurses and healthcare professionals (Competitive Wisconsin, 2012).



# The Status of Registered Nurse Supply in Wisconsin

In Wisconsin there are 1,073 RNs per 100,000 populations, which is above the U.S. average, and the state is ranked as 13th in the nation, as documented in *U.S. Nursing Workforce: Trends in Supply and Education* (HRSA, 2013) (Fig. 2).

FIGURE 2:  
The RN Workforce per 100,000 Population by State



Source: The U.S. Nursing Workforce: Trends in Supply and Education (HRSA, 2013).

Although the state licenses slightly over 3,000 nurses per year, demand projections reveal that significant gaps in nursing workforce will occur beginning as early as 2015 and over the next 20 years. The comprehensive supply and demand analysis of nursing workforce undertaken by the Wisconsin DWD Office of Economic Advisors (OEA) projected the future gap of RNs in Wisconsin to increase dramatically by 2035 (Walsh, et. al., Wisconsin DWD-OEA, 2011) This forecasting tool provides ten scenarios that can be used for a variety of models and projections, and is a national exemplar of projecting workforce needs.

The ten scenarios vary in their applications, but project minimum vacancy rates based upon demand using demographics, population growth, nurse staffing intensity, and healthcare usage by setting and age. Rapidly increasing demand and flat supply is caused by changing population demographics. To put it simply, the baby boom population is retiring, and there are not enough RNs entering the labor force to keep up with the increasing demand of the aging population. Regardless of the scenario, the forecasts show that demand for nurses will continue to rise while supply is expected to flatten after 2015. The projected shortage of

RNs by 2035 for the ten scenarios varies between a high of 36.6% and a low of 34.4% (Walsh, et. al., Wisconsin DWD-OEA, 2011).

Scenario 1.2 depicts the educational capacity needed and is shown in Table 2.

TABLE 2

**Scenario 1.2: Projected Wisconsin RN Demand and Gap Analysis Broad Nursing Workforce (2010-2035) (Headcount)**

	New Graduates needed annually to close the projected demand
2010 Observation	2,700
2015 Scenario Estimate	4,500
2020 Scenario Estimate	7,500
2025 Scenario Estimate	11,300
2030 Scenario Estimate	14,100
2035 Scenario Estimate	15,500

Source: Wisconsin DWD Office of Economic Advisors, November 2011 (p. 5)

This scenario projects the number of new nurses needed annually to fill the gap with new nurses if there are no constraints in educational capacity. Currently, Wisconsin schools graduate slightly over 3,000 nurses a year indicating an initial gap of approximately 1,500 nurses beginning in 2015, and steadily increasing through 2035. By example, in 2020 alone, nursing school graduates would need to more than double to meet the projected demand (Walsh et. al., Wisconsin DWD-OEA, 2011, p.5).

Wisconsin Schools currently graduate slightly over **3,000 nurses/year**

Scenario 2.2 depicts projections based upon public insurance (Medicare/Medicaid) and predicts demand after adjustments to eliminate unnecessary healthcare services through stricter review of unnecessary care as shown in Table 3 (Walsh, et.al., Wisconsin DWD-OEA, 2011, p. 13).

TABLE 3

**Scenario 2.2 Projected Wisconsin RN Demand and Gap Analysis (2010-2035) (Headcount)**

Result	2010	2015	2020	2025	2030	2035
Base Supply	53,036	56,060	56,424	55,705	55,228	55,539
Base Demand	53,036	57,663	61,439	65,790	70,570	75,270
Gap	0.0	-1,603	-5,014	-10,085	-15,342	-19,731
Percent Gap	0.0%	-2.9%	-8.9%	-18.1%	-27.8%	-35.5%

Source: Wisconsin DWD, Office of Economic Advisors November 2011 (p. 13)

This scenario again reveals demand increasing to as much as 35.5% by 2035. This gap represents a shortage of nearly 20,000 RNs in Wisconsin. If the gap is to be filled by new nurses, dramatic increases in enrollment need to occur immediately.

Surveys of nurses re-licensing in Wisconsin were conducted in 2010 and 2012. These surveys are conducted biennially with RNs alternating with LPNs, and provide comprehensive baseline and trend data for the state nursing workforce. Currently Wisconsin nursing schools graduate slightly over 3,000 nurses a year. At this current rate there is already an RN workforce deficit of approximately 1,500 nurses projected for 2015. By 2020, projections indicate the

need for 7500 new graduates per year, a 250% increase. There is also the need to increase the proportion of nurses prepared at the BSN or graduate levels to fill population health needs for both specialty settings, and geographical regions that are underserved. An equally urgent need exists to prepare many more nurse educators to meet the demand to educate this number of nurses more nurses in the future.

The projected increase percentages affecting demand for RNs in Wisconsin from 2010 to 2035 by various work settings is depicted in Table 4.

TABLE 4

### 2010 Wisconsin RNs and Projected Demand Change by Work Setting

	2010 RNs	% Change 2010-2035
Nursing Home/Extended Care	7,291	88
Home Health	3,008	82
Inpatient	21,484	41
Emergency	3,068	16
Surgery	5,700	36
Ambulatory	8,939	30
Public Health	2,963	17
Other	8,664	17
Nurse Educators	1,844	38
Total	62,962	41

Source: Wisconsin DWD Labor Market Information, Office of Economic Advisors, 2010 Forecasting Model.

**48** The average age of a Wisconsin RN

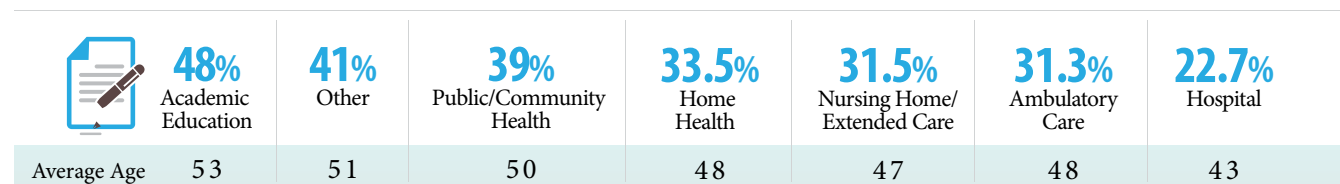
In the U.S., a majority of nurses (63.2%) provide care in acute care and outpatient settings (HRSA, 2013). This is also true in Wisconsin where in 2010, 64.5% worked in hospital or ambulatory care. In 2012, however, this percentage increased to 70.9%, with a nearly 3% increase in ambulatory care alone in Wisconsin (DWD-WCN Summaries, 2010, 2012). It is anticipated that this shift in healthcare will continue as more emphasis is placed on community-based care to accommodate changing systems and models of delivery.

81,187 nurses renewed their license in 2012. 83.9% of respondents reported living or working in the state (DWD-WCN 2012 Summary). Key findings from the survey analysis indicate that, on average, Wisconsin RNs have 15 years of experience. Of the total workforce, 76.9% provide direct patient care and of those, 30.4% plan to leave direct patient care in next nine years. (Murray, Westphal, Acord, Schiffman & Henriques, 2013).

Nationally, the average age of RNs has increased over the last decade, with about one third of the workforce being over age 50 (HRSA, 2013). Although Wisconsin's average RN age is 48 (Murray, et.al. 2013), the total Wisconsin over-50 workforce in 2010 was above the national figure at 45.9%. In the 2012 survey, this percentage increased to 47.5%, validating that older nurses are staying in the workforce and delaying their retirements (DWD-WCN Summaries, 2010, 2012). (Fig. 3.)

FIGURE 3:

### 2012 Wisconsin RN Workforce Survey Percent Age 55 & Over by Work Setting with Average Age



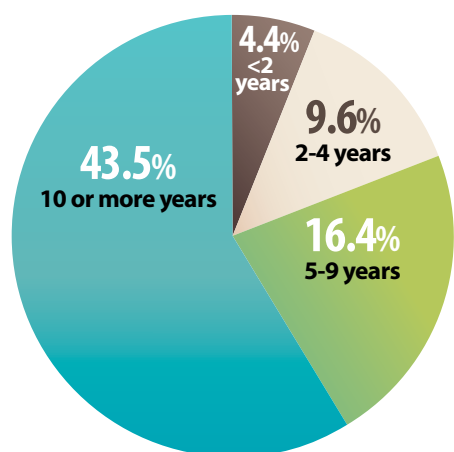
Source: WCN-DWD 2012 RN Survey Summary

Delayed retirements driven by the U.S. economic recession have required nurses to remain in the workforce longer than in previous years. This occurrence creates a false security by causing the workforce to appear adequate and even somewhat inflated at the current point in time. Growth in the workforce in the last several years has been the largest in four decades, but was an outcome of the recession. As the economy recovers, a wave of retirements is likely to occur and result in a significant nursing shortage. Thus, the current respite should not be construed as providing certainty for a sufficient workforce to exist in the future (Staiger, Auerbach & Buerhaus, 2012). A recent study by the Wisconsin Hospital Association (WHA), *Wisconsin's Healthcare Workforce 2012 Report*, reports RN vacancy rates as low as 3.7% in 2011 (WHA, 2012) which adds to a false sense of security about the adequacy of the nursing workforce.

In the 2010 Wisconsin RN Survey, responses on intention to retire revealed that over 2,000 nurses planned to leave direct patient care in the next two years, and within nine years, over 15,000 nurses (33% of the workforce) in direct patient care planned to retire (Dean-Baar, Murray, Acord & Henriques, 2012). In the 2012 RN survey, although a slightly smaller percentage (30.4%) of nurses working in Wisconsin indicated they planned to leave direct patient care within nine years, another 43.5% revealed they planned to leave in 10 or more years (Murray, et. al., 2013)(Fig. 4).

FIGURE 4:

### 2012 Wisconsin RN Workforce Survey Plans to Leave Direct Patient Care in Wisconsin



Source: WCN Wisconsin 2012 RN Survey Report

These findings support national data suggesting a surge in retirements in the near future, and its potential impact on the size of the nursing workforce in Wisconsin.

**5.7%** of Wisconsin RNs are credentialed as **APRNs**, compared to a national average of **8.7%**

The wide age range of nurses in the workforce today also presents other challenges. Previously, earlier retirements have kept three generations working together, but for the first time in history the workforce has four generations side-by-side, each with its own characteristic work habits and styles. These generational differences present a unique type of diversity, creating more complexity in the workforce. Instead of viewing these differences as contradictory or conflicting, but rather seeing them as complementary with the opportunity to build upon their strengths will fortify the workforce and utilize the best skills of all for improved healthcare delivery (Stokowski, 2013). These same generational differences also impact nurses working together in Wisconsin, with nurses age 30 and under comprising less than 11% of the total workforce and age 55 and older, 27.6% of the workforce (Murray, et.al. 2013).

### Advanced Practice Registered Nurses

Advanced practice registered nurses (APRNs) include nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives. In Wisconsin there are approximately 8,095 APRNs currently licensed, with 193 certified as a nurse midwife and 729 as certified registered nurse anesthetists. Approximately 3,023 are nurse practitioners, with the largest percent (8.6%) holding adult credentials and 3,267 (78.6%) report being currently licensed as an advanced practice nurse prescribers (Murray, et. al., 2013). The same report indicates that the western and northern regions of the state have fewer APRNs with prescriptive authority.

A 2011 report predicted a shortfall of over 2,000 physicians by 2030, with primary care physicians being most in demand (WHA, 2011). While the report identified the solution of increasing the number of non-physician providers, APRNs were not specifically named as part of the solution. Enhanced utilization of APRNs in the primary care arena could provide an efficient and effective way to offset potential physician shortages in this area. Findings and recommendations of the IOM Report, indicate excellent patient outcomes and satisfaction with the expanded APRN role (IOM, 2011).

The Robert Wood Johnson Foundation® (2013) supports the full utilization of the skills and knowledge of APRNs to improve patient access to care. In *Charting Nursing's Future. Reports on Policies That Can Transform Healthcare*, preventing these specialists from practicing to their fullest capacity can result in delayed treatment and disruptions in continuity of care. According to Diana Mason, RN, PhD, FAAN, Rudin Professor of Nursing and co-director of the Center for Health, Media, and Policy at Hunter College of the City University of New York, and strategic adviser for the *The Future of Nursing™ Campaign for Action*, “If we continue to cripple the mass of RNs with barriers to full practice, we will further increase healthcare costs, treatment delays, and human suffering” (p.5). Full scope of practice for APRNs can maximize the potential to increase healthcare access and leverage skills for innovative models of care.

Many APRNs already effectively practice primary care in Wisconsin, thereby increasing access to healthcare. A survey of graduate nursing programs in Wisconsin reports over 200 nurse practitioners graduating in 2010–2011. By removing Wisconsin legislative barriers to APRN practice, healthcare access for underserved populations could be improved almost immediately. Because the *Patient Protection and Affordable Care Act (ACA)* will be fully implemented in 2014 further increasing the demand for providers, it is critical that APRNs be allowed to practice to the full extent of their education and training in the state.

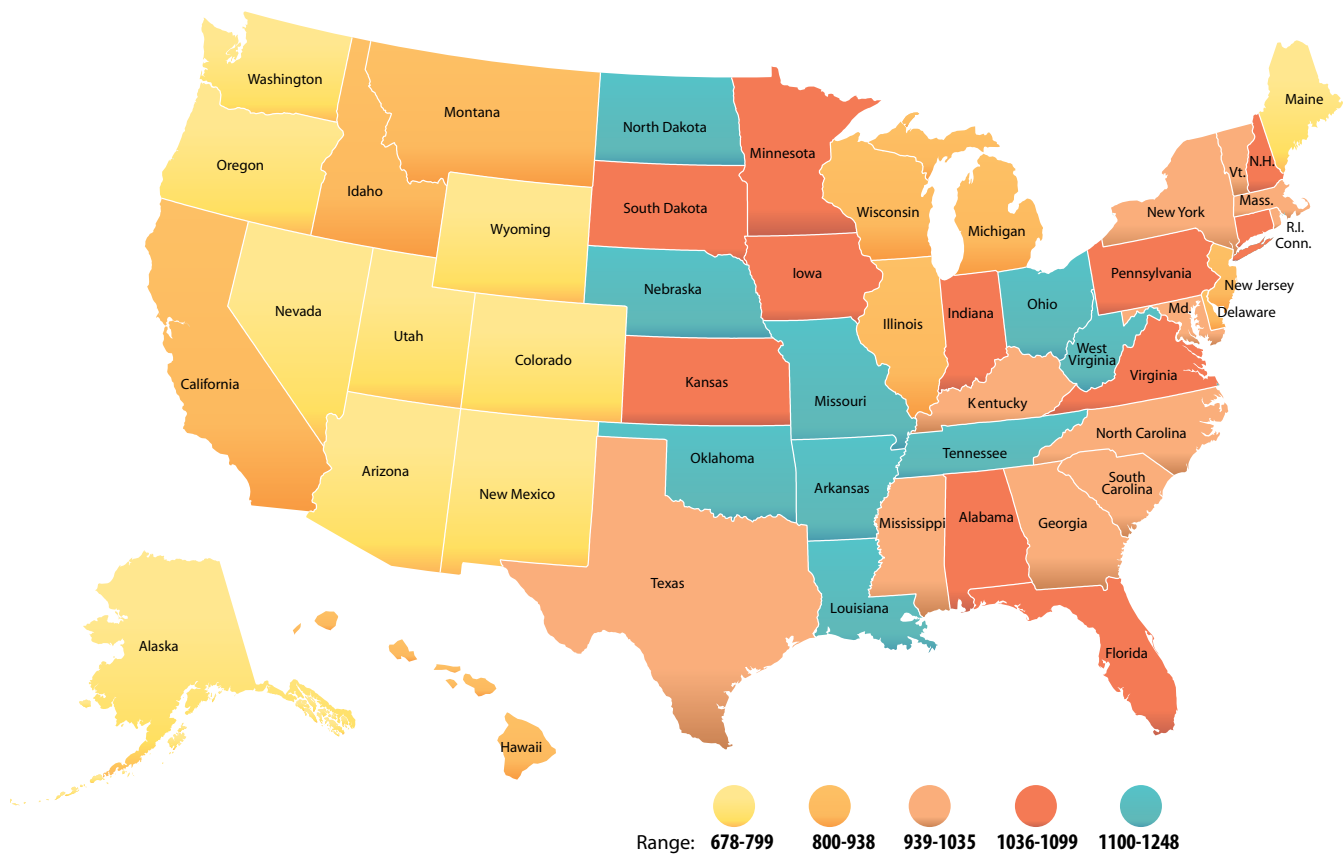
In Wisconsin, 5.7% of RNs are credentialed as APRNs, compared to a national average of 8.7% of the workforce (HRSA, 2010). It will be important to identify strategies to increase the number of APRNs to meet the projected need. Given that the median age of APRNs is 50 years, it also will be essential to increase the graduates of educational programs in sufficient numbers to both replace the retiring workforce as well as to meet a new demand (Murray, et.al. 2013).

# The Status of Licensed Practical Nurse Supply in Wisconsin

There were 14,165 respondents to the 2011 Wisconsin LPN Survey (Larsen, Acord & Pruszynski, 2011). Based upon this number, LPNs comprise approximately 14.8% of the total nursing workforce in Wisconsin. Based

on the *U.S. Nursing Workforce: Trends in Supply and Education*, Wisconsin is ranked 35th with an LPN ratio of 181.1 LPNs per 100,000 populations well below the national average (HRSA, 2013). (Fig. 5)

FIGURE 5:  
The LPN Workforce per 100,000 Population by State



Source: The U.S. Nursing Workforce: Trends in Supply and Education (HRSA, 2013).

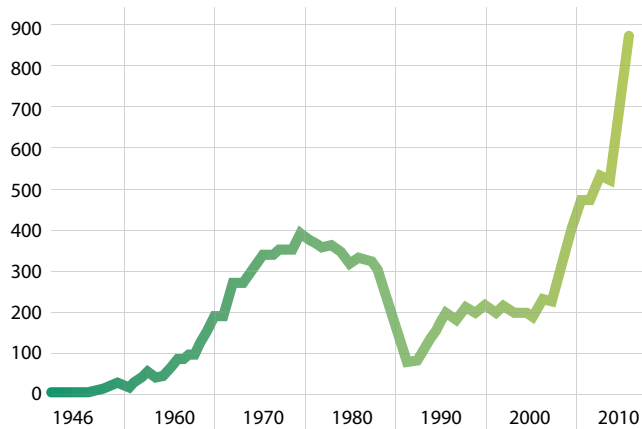
For LPNs, the national number passing the NCLEX®PN was slightly over 59,800 (73%). For LPNs, the 2012 first time pass rate for the NCLEX® PN (U.S. educated) was 84%. In 2012, 1,000 new LPNs entered the workforce in Wisconsin with a pass rate of 96.5%, surpassing the national pass rate by 12.5% (National Council of State Boards of Nursing, 2012).

**50** The average age of a Wisconsin LPN

In Wisconsin the number of LPNs has steadily increased and is linked to changes in the Wisconsin Technical Collage Associate Degree (ADN) curriculum that allow ADN students to assume the role of LPN midway through the coursework for the ADN degree (Larsen, et.al., 2013) (Fig. 6).

FIGURE 6:

**Number of Initial LPN Licenses per Year**



Source: WCN Wisconsin 2011 LPN Survey Report

This has been an attractive economic option for students and provides additional clinical experience but does not resolve the long term care staffing issues.

The LPN workforce is more racially and culturally diverse than the Wisconsin RN workforce overall (Dean-Baar, et.al. 2012), but still does not mirror the demographics of the state. 72.2% of the LPNs are working in nursing homes, ambulatory care, inpatient hospitals and extended care, with nursing homes as the primary place of employment for 36.7% of LPNs (Larsen, et.al. 2013). (Table 5).

The average age of LPNs is 49.9 years. A significant finding of the analysis was that within nine years, 59.5% of the LPNs anticipate leaving the workforce with the most acute loss in the Northern region of the state at almost 63.3% (Larsen, et.al. 2013). This projected exodus of staff from long term care is particularly disconcerting as the baby boomer generation is entering the long term care continuum. Significant staffing gaps are projected in long term care settings.

The 2011 LPN survey findings recommend implementation of programs and initiatives that are designed to retain LPNs in the workplace and promote their academic progression to RNs. These strategies will be critical to maintaining an adequate workforce in long term care. (Larsen, et.al. 2013).

TABLE 5

**Current LPN Practice in Primary Position Compared with the RN Workforce Survey (N=11,106)**

Primary place of work	LPN n	LPN %	2010 RN %*
Nursing Home	3,980	36.7	11.1
Ambulatory care	2,239	20.7	14.2
Inpatient hospital	867	8.9	50.4
Extended care	635	5.9	Not queried
Public health	247	2.3	4.6
Hospice	190	1.8	Not queried
Corrections	184	1.7	Not queried
Other	1,758	16.2	Not queried

\*Dean-Baar, et al., 2012

Source: WCN Wisconsin 2011 LPN Survey Report

# The Status of Nursing Education in Wisconsin

As the largest healthcare profession, nurses are knowledge workers who guarantee that quality care is delivered in hospitals and community-based practice settings in the U.S. An adequate, well-prepared and diverse nursing workforce depends upon academically rigorous education programs and adequate resources to prepare the next generation of high quality professional nurses. Currently there is a critical need to increase enrollment in nursing schools in order to respond to the projected 35% gap in the 2035 nursing workforce projected by analysts at the Wisconsin DWD Office of Economic Advisors (2011).

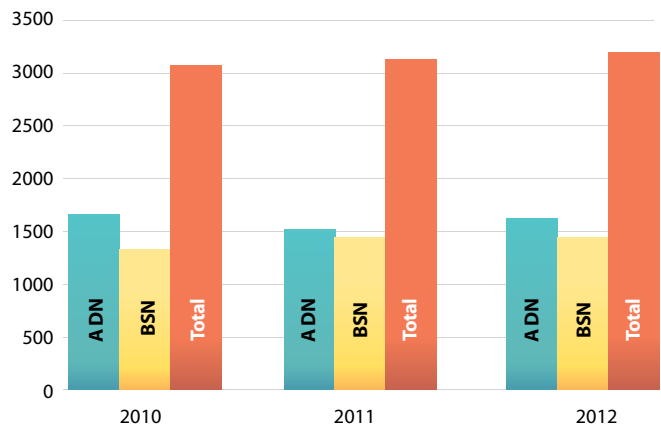
**91.8%** pass rate on the NCLEX-RN by Graduates of Wisconsin Nursing Schools

Working closely with the Association of Nurse Educators in Wisconsin (ANEW), launched in 2001 as a partnership among the Wisconsin Technical College System (WTCS) and all UW System and private university-based nursing programs, WCN is the premier organization for nursing workforce and education data in the state, and works collaboratively to proactively address the needs in nursing education.

Historically, there are three major ways to obtain an RN license: 1) 3 year RN program, as part of a hospital; 2) an Associate Degree in Nursing (ADN), typically affiliated with a technical college; and 3) a Bachelor's in Nursing (BSN) granted by a university or college. Wisconsin no longer has any diploma programs. Over the past few years, the number of nursing graduates in all Wisconsin programs has risen slightly, but the proportion of nurses graduating from technical colleges and university programs in the state has remained relatively equal (National Council of State Boards of Nursing, 2013 Quarterly Reports). (Fig. 7)

FIGURE 7:

## 2010-2012 State of Wisconsin Distribution of Nursing Graduates by Program Type



Source: National Council State Boards of Nursing (NCSBN) State of Wisconsin Quarterly Report.

## Undergraduate education: Quality and Capacity

Wisconsin's nursing schools are the critical supplier of the nursing workforce and these educational programs prepare excellent nurses. In 2012, 3006 graduating nurses passed the NCLEX®RN exam in Wisconsin, with a 91.8% first time pass rate, higher than the national rate of 90.2% (National Council of State Boards of Nursing, 2012). Graduates of Wisconsin nursing programs also tend to stay to work in Wisconsin. According to 2010 and 2012 data, more than 85% of the nurses who are educated in Wisconsin schools of nursing are working in Wisconsin. (Murray et. al., 2013)

**58** The mean age of Wisconsin nursing faculty



## Academic progression

The IOM report calls for increasing the numbers of baccalaureate prepared nurses in the workforce to 80% by 2020. This is based on evidenced-based recommendations that show improved outcomes and decreased mortality for patients along with the knowledge base that is needed to meet the demands of changing patient needs (IOM, 2011). Evidence shows that the educational level of nurses is a key factor in patient safety and quality outcomes. The BSN nurse is able to practice in a variety of settings with a broader scope and knowledge in leadership, case management, and health promotion. The American Association of Colleges of Nursing (AACN) identifies the connection to adequate staffing and the impact on patient care (AACN, 2012).

The practice of nursing is complex and requires superior critical thinking skills. With an increase in the need

for strong science preparation for professional nurses capable of addressing the increasing complexity of patient needs and the healthcare clinical environment, future nurses must be well educated in the STEM (science, technology, engineering, and math) areas. To address the projected needs for greater numbers of nurses at the BSN level and above, significant emphasis must be placed on early recruitment interventions that support nursing career path development at the middle and high school levels, and with emphasis on traditionally underrepresented groups.

Currently of nurses working in Wisconsin, the percentage of BSN nurses and above is 53.7% (Murray, et.al., 2013). Table 6 summarizes the highest academic nursing degrees held by nurses working in Wisconsin. Significant efforts to partner with practice settings and schools of nursing are needed to achieve the 80% target by 2020.

TABLE 6

### Educational Preparation for Nursing Practice of Nurses Working in Wisconsin (n=68,735)

Highest Nursing Degree	State		Southern		Southeastern		Northeastern		Western		Northern	
	n	%	n	%	n	%	n	%	n	%	n	%
Diploma	6,495	9.4	1,300	9.5	2,447	9.3	1,355	9.8	682	10.6	711	8.4
Associate Degree	25,292	36.8	4,914	35.8	8,501	32.2	5,056	36.6	2,943	45.8	3,878	46.1
Bachelor Degree	30,294	44.1	5,944	43.3	12,918	48.9	6,177	44.7	2,227	34.7	3,028	36.0
Master's Degree	6,266	9.1	1,466	10.7	2,352	8.9	1,164	8.4	550	8.6	734	8.7
Doctorate of Nursing Practice	136	0.2	20	14.7	67	49.3	24	17.6	7	5.1	18	13.2
Doctorate of Nursing Science or Nursing Doctorate (DNSc, DSN, ND, or DN)	22	0.03	8	36.4	*	*	*	*	*	*	*	*
PhD in Nursing	232	0.3	55	23.7	110	47.4	33	14.2	7	3.0	27	11.6

Source: WCN Wisconsin 2012 RN Survey Report

In 2013, WCN was awarded a State Implementation Program (SiP) grant from the Robert Wood Johnson Foundation® to implement selected recommendations of the 2011 IOM Report, *The Future of Nursing: Leading Change, Advancing Health*. Dialogue with key stakeholders resulted in consensus on the areas of focus being leadership, academic progression and diversity. The Wisconsin SiP grant, *Taking the LEAD for Nursing*

*in Wisconsin: Leadership, Educational Advancement and Diversity*, began February 1, 2013 for a two year period ending January 31, 2015. This important source of support will provide greater opportunities in the state for BSN completion, nursing leadership development and increasing diversity in the profession. Wisconsin nurse educators have been exceptionally collaborative at developing innovative programs and partnerships to

provide academic progression opportunities for RNs. A summary of options is listed below.

- **Bridge Programs for BSN Completion:**

Wisconsin nursing programs have implemented a number of creative options to promote ADN to BSN options. Students in these programs are primarily working ADNs who are completing their BSN degree part-time. The majority of college and university nursing programs in Wisconsin offer BSN completion programs. An early example of these “bridge programs” was developed collaboratively by the five nursing campuses of the UW System (UWS) nearly 15 years ago to provide the web-based *BSN@Home* program to students from all parts of the state. Students are able to complete coursework online followed by a capstone clinical course at the UWS campus of their choice. In addition, there are face to face and online bridge programs available through a number of private Wisconsin nursing programs. In recent years, there have been a number of other nationally-based online options for BSN completion offered in the state, but no data are currently available on the capacity in these programs.

These programs have proved very successful in advancing ADNs to BSN preparation, but the state needs to invest in student scholarships and program expansion to increase program capacity if they are to meet the project needs in the next decade.

- **BSN Flex Degree Option:** A new and promising additional option for BSN completion, the *UW System BSN Completion Flex Option* program, is scheduled to admit students in fall 2013. UW-Milwaukee College of Nursing has been selected as the first nursing program in the state system to provide competency evaluation, teaching/mentoring/coaching, and assessment for RNs seeking the BSN degree. The program is designed to accelerate the completion time for the bachelor’s degree.

- **ADN to Master’s Option:** Another emerging academic progression program is the ADN to Masters curricular model. These programs, similar to the ADN to BSN “bridge options,” accelerate ADN nurses to a master’s degree. These programs have become popular curricular options in many schools and colleges of nursing for ADN students.

- **Second Degree Options:** Other innovative educational options to respond to the nursing workforce gap include programs that accelerate the path to a professional nursing degree at both the bachelor’s and the master’s levels for individuals with a non-nursing degree who wish to change careers. These options are pre-licensure programs and are sometimes referred to as “second degree” or “fast track” option. Once the necessary pre-requisite STEM courses are completed, students complete their BSN requirements in an intensive accelerated curriculum. In the case of second degree masters programs, students sit for the NCLEX exam following their BSN coursework, while continuing to complete the additional requirements for Clinical Nurse Leader (CNL) certification, a Masters of Nursing (MN), or an MS in Nursing degree. This has proved a very popular option for students seeking nursing as a second career, and has the potential to strengthen and renew the nursing workforce. Students with degrees in the basic and social sciences, law, business and engineering are attracted to the career opportunities in nursing. The interest in new second degree BSN students was demonstrated in increased enrollments from 99 in 2009-2010 to 121 in 2010-2011. Unfortunately, there is insufficient capacity in nursing programs to accommodate the interest in them, and the percent of rejected applicants in second degree BSN programs increased to 61.3% in 2010-2011 from 45% in 2009-2010. Again, an investment in nursing faculty and nursing education programs will be necessary to take advantage of the strong interest in the field by many highly qualified applicants at a time of impending shortage.

## Use of Clinical Simulation

The use of clinical simulation has expanded in the state with a number of schools actively using simulation facilities. Clinical simulation has been adopted across most educational programs but implementation across practice has not been as widely disseminated. There are, however, a growing number of partnerships between health systems and nursing education programs that will benefit the profession. The Southeast Wisconsin Simulation Consortium, for example, has been formed to share best practices, enhance networking and promote partnerships among key stakeholders. Another exemplar is the Center for Nursing Excellence in Madison – a partnership between Meriter Hospital, St Mary’s Hospital and Edgewood College of Nursing which included simulation as a program cornerstone.

**Insufficient capacity** in nursing second degree programs resulted in

**61%** rejected applicants

Clinical simulation has great potential as a key learning activity for both students and practicing clinicians, but cannot completely replace in vivo clinical learning experiences for students. Research on the use of simulation and the potential for it to replace clinical time by as much as 30-50% in nursing curricula is underway nationally with results of a major evaluation expected in 2014. Providing students with actual clinical experience in busy practice settings in combination with the lack of availability of clinical sites, both of which are identified as barriers to increasing enrollments, can be augmented with clinical simulation experiences. Interdisciplinary use of simulation across the continuum in partnership between practice and education should be encouraged as the technology is leveraged to improve competencies, patient safety, and the development of high-functioning teams.

## Graduate Education

### Advanced Practice Registered Nurses

Healthcare is rapidly evolving. Advanced Practice Registered Nurses (APRNs) provide answers to many of the problems in the current healthcare system.

According to the IOM report:

...“the changing landscape of the healthcare system and the changing profile of the population require that the system undergo a fundamental shift to provide patient-centered care; deliver more primary as opposed to specialty care; deliver more care in the community rather than the acute care setting; provide seamless care; enable all health professionals to practice to the full extent of their education, training, and competencies; and foster interprofessional collaboration. Achieving such a shift will enable the healthcare system to provide higher-quality care, reduce errors, and increase safety (IOM, 2011).”

The total number of new enrollees in APRN educational programs in Wisconsin almost doubled from 247 in 2010 to 487 in 2011. This growth appears to be predominately in the Nurse Practitioner (NP) area where new enrollment nearly tripled from 129 in 2010 to 304 in 2011, and in DNP programs where new enrollment increases almost doubled from 51 to 95. The number of students graduating from APRN programs also increased significantly in NP programs from 140 in 2010 to 204 in 2011. Even with the significant increase of NP enrollment in response to workforce needs, there is still a 15% rejection rate of qualified applicants for NP programs across the state (Dean-Baar, Cook & Ke, 2013).

A trend in nursing education nationally and in Wisconsin is the transition from master level preparation to doctoral level preparation for APRNs. Several new Doctor of Nursing Practice (DNP) programs were initiated in both public and private universities in the past 3 years. Graduates from DNP programs were similar with 10 in 2010 and 12 in 2011, but a significant increase is projected for 2015 and beyond.

## Nurse Faculty and Researchers

The IOM report has also called for the nation to double the number nurses prepared at the doctoral level by 2020 (IOM, 2011). The intent of this recommendation is threefold.

- Prepare the number of nurse faculty(PhD) to meet the education needs at all levels
- Enhance the preparation of nurse administrators and researchers to meet the needs of a rapidly evolving healthcare delivery system.
- Increase numbers of highly educated APRNs prepared with the DNP as a full partner with physicians and other healthcare professionals in many areas of specialty care to augment the supply of physicians in key areas such as primary care, women’s health and anesthesia.

Wisconsin PhD nursing programs showed significant increases in program capacity measures from 2010 to 2011. Qualified applicants almost doubled from 20 to 38, the number of admitted students increased from 18 to 36, and new enrollees increased from 16 to 31. Although the number of graduates decreased from 29 to 25, the increased enrollment is projected to result in an increased number of graduates in future years. (Dean-Baar et. al., 2013)

The major challenge in meeting the nursing supply gap in Wisconsin is the capacity of nursing schools in the state to admit qualified applicants. There is a high interest in nursing across the state and a large pool of qualified applicants to nursing programs. Throughout the past decade, there have been many more qualified applicants to nursing education programs than can be admitted.

TABLE 7

### Program Capacity Measures for Pre-licensure Programs, Academic Year 2010-2011

	LPN Generic	ADN Generic	ADN Bridge	BSN Generic	BSN 2nd Degree	Pre-licensure MSN
# of qualified applicants	225	2105	179	3641	313	21
# of student seats	152	1287	130	1896	119	16
# of students admitted	132	1187	106	2546	121	19
# of rejected applications	93	918	73	1095	192	2
% of rejected applications	41.3%	43.6%	40.8%	30.1%	61.3%	9.5%
# of new enrollees	129	1068	122	1725	121	16
# of seats left vacant	23	219	8	171	0	0

Source: WCN Wisconsin Nursing Education and Nurse Faculty: 2011 Survey Results

Table 7 provides an overview of current educational capacity for pre-licensure programs from the 2010-2011, and depicts a statewide rejection rate for qualified applicants to nursing programs of 30%-61% depending on the educational program type (Dean-Baar et. al., 2013). As an exemplar, UW-Milwaukee College of Nursing, the largest nursing program in the state, had 229 qualified applicants for 96 open undergraduate spaces for the fall 2013 entering BSN programs.

**33%** of Wisconsin nursing faculty plan to retire in 4 years or less

A critical resource affecting the ability of schools of nursing to educate an adequate future supply of nurses is the availability of faculty (Table 8).

TABLE 8

### Filled and Vacant Faculty Positions by Institution Type

Institution Type	Filled Faculty Positions		Vacant Faculty Positions	
	Full-time	Part-time	Full-time	Part-time
LPN	18	6	3	0
ADN	250	74	6	13
BSN and higher	383	474	23	1
<b>Total</b>	<b>651</b>	<b>554</b>	<b>32</b>	<b>14</b>

Source: WCN Wisconsin Nursing Education and Nurse Faculty: 2011 Survey Results

In the most recent survey, Wisconsin nursing schools report 32 full time faculty vacancies and another 14 part-time faculty vacancies. The vacancy rate for full-time faculty in ADN institutions increased from 0.8% in 2010 to 2.3% in 2011. LPN programs report a full-time faculty vacancy rate of 14.3%. The vacancy rate for full-time faculty decreased in BSN and higher institutions from 9.8% in 2010 to 5.7% in 2011, but the same factors which have kept clinical nurse vacancy rates artificially low have also delayed retirements for nursing faculty. A key finding in the *2012 RN Survey Report* is that there are 1,600 faculty members over the age of 50 and 33% plan to work 4 more years or less. The mean age of nursing faculty in Wisconsin is 58 years, so it is reasonable to expect an increase in the number of anticipated retirements expected (Murray, et.al, 2013). Both ADN programs and BSN programs indicated they would add faculty positions if resources were available (18 in ADN, 42 in BSN).

A major limiting factor to expanding student capacity is consistently non-competitive faculty salary levels that are inadequate to attract nurse faculty (Dean-Baar, et.al., 2013). Exacerbating faculty recruitment challenges is the fact that faculty salaries are well below their practice counterparts for advanced degrees, often closer to entry level positions in the practice area.

National data reveal significant disparities between nurses and nurse educators. In 2010, registered nurses showed an average salary of a nurse in clinical practice at \$85,000, compared to an average of \$63,949 for nurse educators (HRSA, 2010).

To meet future faculty needs the IOM recommends that the number of PhDs be doubled by 2020. Wisconsin currently has 260 nurses prepared at the PhD, Nursing Doctorate (ND) and Doctorate in Nursing Science (DNSc) level for research preparation. Another 142 individuals in Wisconsin hold a Doctorate of Nursing Practice (DNP). The DNP is a relatively new degree that is showing increasingly robust student enrollment. The nursing profession will need studies to determine the optimal balance between PhD (including ND, DNSc) and DNP prepared nurses to serve the healthcare and educational needs of the citizens.

Public-private partnerships to fund infrastructure and innovative models to increase program capacity will be essential. As an example, an innovative \$5M federal grant to the Zablocki Veterans Administration Medical Center and Marquette University College of Nursing will fund an additional 10 faculty positions and increase undergraduate program capacity by 100 graduates over five years for an additional 20 students each year.

# The Status of Nursing Diversity in Wisconsin

It is well documented that enhanced diversity within the healthcare professions will provide greater capacity for the delivery of culturally competent and sensitive care (Sullivan Report, 2004). Greater diversity among all healthcare professionals not only increases access to care with enhanced choices for patients, but also achieves greater satisfaction with their care (IOM, 2004). Diversity in the workforce will strengthen cultural competency throughout healthcare delivery systems, and the new challenges posed by changing demographics can be addressed by health professionals educated in culturally dynamic environments (Sullivan Report, 2004).

The U.S. Health Resources and Services Administration reports the racial and ethnic distribution of RNs is still significantly different than that of the country's population. In 2008, 65.6% of the U.S. population was non-Hispanic White, while 83.2% of RNs were non-Hispanic White, but the percentage of non-white nurses increased to 25% during the last decade, with whites declining. Although still a predominantly white profession, Black/African Americans, Asians, and Hispanic/Latinos have all made gains, but they are still underrepresented in the profession (HRSA, 2010, 2013).

In Wisconsin, recent surveys show minimal gains in diversity in the nursing workforce, which do not mirror state population demographics. In 2010, the RN Survey revealed 94.7% were Caucasian, and the remaining 5.3%

as African-American, Hispanic or 'other.' In 2012, the percentage of white nurses decreased slightly to 93.5%, with an increase to 6.4% in the African-American, Hispanic or 'other' categories. (DWD-WCN Summaries 2010, 2012) By contrast, in 2011, the state population had an overall white population of 83.1%, with 16.1% in the African-American, Hispanic or 'other' categories, demonstrating both classifications of nurses are still below state demographics (U.S. Census, 2011). (Table 9)

LPNs are slightly more diverse than RNs nationally and in Wisconsin. Nationally, the percentage of LPNs from minority racial/ethnic groups has increased over time from about 32% to 37% (HRSA, 2013). In the 2011 WI LPN survey, 88.1% identified themselves as white, and 11.8% were from underrepresented groups (DWD-WCN Summary, 2011).

Nursing continues to be a female dominated profession, both in the U.S. and Wisconsin, however more gains have been made at the national level with an increase from 7.7% to 9.1% in male nurses (HRSA, 2013) In Wisconsin, the number of males in the nursing profession still reveals substantial gaps, and no significant gains have been realized. In 2010, 6.8% of nurses were reported to be male, and in 2012, this percentage only increased to 6.9%. LPNs in Wisconsin are even less likely to be male with only 4.4% reported in 2011 (DWD-WCN Summaries 2010, 2011, 2012). (Table 10).

TABLE 9

## Wisconsin Nurses by Race/Ethnicity

	% White	% African American	% Hispanic	% Other
2012 WI RN	93.5	2.0	1.4	3.0
2011 WI LPN	88.1	6.0	1.7	4.1
Wisconsin Population*	83.1	6.5	6.1	3.5
U.S. Population*	63.4	13.1	16.7	6.4

Source: WCN DWD 2011-2012 Wisconsin Nurse Survey Summaries  
\*Source: 2011 U.S. Census Bureau

TABLE 10

## Wisconsin Nurses by Gender

	% Female	% Male
2010 WI RN	93.2	6.8
2012 WI RN	93.1	6.9
2011 WI LPN	95.4	4.9

Source: WCN DWD 2010-2012 Wisconsin Nurse Survey Summaries

An integrated review of literature related to men in nursing was accomplished by researchers and colleagues at the University of Wisconsin-Oshkosh College of Nursing, and reveals attractions, barriers, and experiences of men in the workforce that will provide critical insight to influence their entry into the field (MacWilliams, Schmidt & Bleich, 2013). Additionally, the American Assembly of Men in Nursing has set as its benchmark, the goal of 20% men in nursing by the year 2020.

Only **6.4%** of Wisconsin nurses come from racial/ethnic minorities and **6.9%** are males

Encouraging data which can also mitigate the diversity imbalance comes from analysis of the *WCN 2012 Nursing Education Survey Report*, in which currently enrolled nursing student demographic characteristics closely approximated the population of Wisconsin, as well as national distributions. This was not true for doctoral students, however, who continue to be largely Caucasian (Dean-Baar, Cook & Laurent, 2011).

The *2012 Nursing Education Survey Report* demonstrated that Wisconsin's population demographics approximated the makeup of students in all types of nursing programs, with LPN programs having the greatest diversity, and 8.6% African-American students in Associate Degree Nursing (ADN) programs. (Dean-Baar, et.al, 2013). This percentage surpassed the state population of 6.3% African Americans (U.S. Census Bureau 2011). The increase in African-American students also represented a greater percentage than the 7% previously reported in the *2010 Education Survey* (Dean-Baar, et.al., 2013).

Diversity in the general population varies across the different geographical regions of the state. A commitment must be made to achieve a diverse workforce that is consistent with regional demographics. This is challenging in Wisconsin with the wide range of diversity in rural and urban regions of the state. Disproportionate distribution makes workforce planning more difficult, but for

population health to improve there must be the right concentration of diverse nurses to match the demographic composition of the service area. Measurable and intentional change is needed to meet the goal of a more regionally diverse workforce within the state.

The Inclusive Excellence (IE) change model is a sophisticated organizational model which holds diversity as a core value for creating institutional excellence and is being implemented to advance diversity, inclusion, and equity throughout institutions of higher education across the country. IE has the dual focus of building greater structural diversity and improving the organizational culture. The achievement of organizational excellence requires inclusion, and inclusion requires equality. IE supports the adoption of organizational, departmental and academic quality benchmarks, and can serve as a framework to coordinate quality improvement efforts in the education and the workplace settings (University of Wisconsin System, 2012; Williams, Berger, & McLendon, 2005). IE may offer a viable organizational model to guide statewide implementation of the recommendations outlined by the IOM Report and the WCN Diversity Taskforce.

The Taskforce was initiated in February, 2012 and comprised of members from academic and practice settings who were racially, ethnically and geographically diverse. The purpose of the Taskforce was to review current strategies that promote diversity, and to make recommendations to enhance nursing diversity, recruitment and retention in Wisconsin. This was accomplished through environmental scans of existing diversity initiatives in the state.

The findings reveal that many attempts are being made to enhance nursing diversity, but success has not always been realized, and there exists a lack of standardized approaches throughout the state. The reasons for these limitations are multiple, not the least of which are the well-known financial and geographical restraints. The work of the Taskforce was summarized in a formal report, *Enhancing Diversity in the Nursing Workforce: A Report by the Wisconsin Center for Nursing Diversity Taskforce*. The report includes recommendations and strategies for healthcare organizations and nursing education programs.

# Retention: Nursing Graduates' Transition to Practice

**T**urnover and retention of nursing staff is a significant issue which impacts the quality, patient safety and financial costs of care. Nursing orientation costs an estimated \$40,000–\$64,000 per nurse (Blanzola, Lindeman & King, 2004). In addition to orientation costs, turnover costs include marketing and recruitment expenses, salaries for overtime and/or external staffing resources to cover clinical staffing needs, and the potential effect on customer satisfaction scores. Nursing turnover has been estimated to cost 75%–125% of the average annual nursing salary (Pine & Tart, 2007).

Turnover of new graduates in the practice setting is often significantly higher in the first three years of practice with reported rates between 18-50%. A national report by the U.S. Department of Health and Human Services (2010) indicates that 40% of new graduates had intent to leave their current position within 3 years, with 22% that changed positions or employers. Job stress, poor management, and inadequate staffing are frequently cited as reasons for turnover (Bratt & Felzer, 2012).

The IOM report recommends the implementation and evaluation of residency programs to decrease turnover and ease the transition into practice. Given the future gap of nurses it will be important to implement significant strategies to improve retention and decrease turnover of new graduates. The federally-funded Wisconsin Nurse Residency Program (WNRP) and the SOAR-RN Rural Nurse Residency Program, first offered in 2005, are national exemplars.

Involving over 60 hospitals, these programs address the professional socialization needs of newly licensed nurses in urban and rural areas with ongoing research of program outcomes (Bratt, 2013; Bratt, Baernholdt, & Pruszyński, 2012; Bratt & Felzer 2011, 2012). Participating organizations have experienced an average two-year new graduate retention rate of 83% (Bratt, 2009). In addition, the UHC/AACN Post-Baccalaureate Nurse Residency Program™ implemented at the University of Wisconsin Hospital and Clinics is recognized as an exemplary program by the Magnet® Commission and accredited by the Commission on Collegiate Nursing Education.

Nursing turnover has been estimated to cost **75%–125%** of average annual salary

Residency programs have been shown to be an effective strategy to decrease turnover and ease transition into practice. These programs show great potential to increase nurse retention if expanded to all clinical sites with rapid adoption and sharing of best practice strategies.



# Summary and Strategic Recommendations

**D**ata included in this report clearly identify factors as key elements of a “perfect storm” that threatens the Wisconsin nursing workforce of the future and the health of Wisconsin’s population. Additional state and private resources are desperately needed to expand nursing programs to meet the impending nursing workforce crisis in Wisconsin. In addition, schools and colleges of nursing will need the support of health employers to accommodate the learning needs of a larger student population. To accomplish this, there will need to be a dedicated commitment and significant investment to support the infrastructure necessary for increased educational capacity, including clinical space, faculty positions, and enhanced financial support both for the institutions and students.

Meaningful strategies to increase the number of nursing graduates in Wisconsin will require public-private collaborative partnerships for innovative solutions to meet the needs of rapidly changing population demographics. Healthcare systems will need to invest in programs to recruit a diverse nursing workforce, and retain new graduates using evidence-based, statewide residency programs. Nursing education must address new emphasis on preparing students competent in population health at individual, family, community and systems levels. In addition, state infrastructure for community and public health nursing must be restored as community-based care models emerge with the onset of the ACA.

Interprofessional strategies and technology need to be leveraged to improve both educational and clinical outcomes in a time of scarce resources. Barriers to practice must be removed to allow nurses to practice to the full extent of the law and their education if the health of the population is to be protected. Given the shortage projections from a variety of sources that project an impact as early as 2015, it is clear that the time to act is now.

Given the potential magnitude of healthcare reform, an aging population, and the emerging nursing shortage, it is essential that a multi-pronged strategic

approach, as recommended in the Institute of Medicine (IOM) Report, *The Future of Nursing: Leading Change, Advancing Health*, (IOM,2011) is immediately implemented in Wisconsin to assure that:

1. Nurses at all levels are practicing to the full extent of their education and training.
2. An adequate, well-prepared and diverse nurse workforce for the people of Wisconsin by increasing the proportion of nurses prepared at the BSN level and above through a revitalized nursing education system.
3. Nurses are included as full partners with physicians, other health professionals, educators, policy makers in redesigning healthcare and healthcare professionals’ education in Wisconsin.
4. Collection, analysis and broad dissemination of nursing workforce data to inform decision-making and policy in all sectors is continued and expanded to monitor trends over time.

Increasing educational capacity and academic progression are key issues which require time to accomplish. Positive outcomes will require public-private partnerships and innovative collaboration. Dedicated efforts to advance nursing and interprofessional education can assure the preparation of high-performance healthcare provider teams that are prepared to work together as new models of care delivery emerge. It is important for nursing to advance in leadership positions for this redesign of care.

As healthcare reform refocuses care on underserved populations, health promotion and disease prevention strategies, and transitional care between community and healthcare facilities, nurse educators, clinicians and administrators will need to work together and with other disciplines and policy makers to align the nursing profession with population health needs, as well as continued provision of acute and long-term care.

To summarize this report, the issues and following recommendations have been framed using the recommendation format adopted by the 2011 Institute of Medicine (IOM) report, *The Future of Nursing: Leading Change, Advancing Health*.

— IOM Report Key Message—

Nurses should practice to the full extent of their education & training.

## Wisconsin Issue #1:

There is a shortage of Advanced Practice Registered Nurses (APRNs) to meet current and future access and health needs in Wisconsin.

### Recommendation:

- Increase the number of APRNs to a minimum of 10% of the Wisconsin nursing workforce to improve access to care.

### Strategies:

- a. Double the number of APRNs graduating in Wisconsin by 2020 increasing capacity at current programs and adding new APRN programs.
- b. Implement a statewide loan forgiveness program for nursing students preparing to practice as APRNs in underserved areas of Wisconsin.
- c. Secure state funding to support significant expansion of Wisconsin nursing school capacity to meet demand for 200 additional APRNs per year.

## Wisconsin Issue #2:

Barriers exist in Wisconsin that prevent Advanced Practice Registered Nurses from practicing to the full extent of their education and certification.

### Recommendation:

- Remove barriers to practice for APRNs by collaborative work between the Wisconsin Nurses Association (WNA), the Wisconsin Board of Nursing, the Wisconsin Center for Nursing and legislators, employers and other stakeholders to assure an independent, contemporary, and full scope of APRN practice is implemented in Wisconsin.

### Strategies:

- a. Review and model successful efforts in other states to achieve full scope of practice for APRNs.
- b. Improve access through the use of models of care as utilized by healthcare systems, and interprofessional teams that support contemporary use of APRNs.

- c. Support full scope of practice by APRNs through the implementation of medical staff bylaws, rules and regulation by healthcare systems and hospital boards.

— IOM Report Key Message—

Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression toward 80% of workforce with BSNs and double the number of nurses at the doctoral level by 2020.

## Wisconsin Issue #3:

There is a need to expand educational capacity to meet the projected demand for nurses which is 7,500 new graduates needed annually by 2020, as based upon forecasting models from the Wisconsin Department of Workforce Development, Office of Economic Advisors.

### Recommendation:

- Allocate additional resources to universities and colleges to maximize program capacity and infrastructure to decrease wait lists and double capacity by 2020.

### Strategies:

- a. Secure state funding to support significant expansion of Wisconsin nursing school capacity to meet demand for at least 3,000 additional BSN graduates per year.
- b. Implement innovative programs, partnerships and strategies to remove barriers to access for education including funding and increased employer support.
- c. Evaluate the expanded use of evidence-based clinical simulation as a teaching method to the fullest extent possible in both educational and practice settings. Administrators of Nursing Education in Wisconsin (ANEW) to recommend and disseminate standards related to use of simulation in educational programs in undergraduate education.
- d. Investigate possibility of BSN completion programs in Wisconsin Technical College System.
- e. Improve retention and graduation rates of nursing students, including students from underrepresented populations, through the implementation of comprehensive strategies by Wisconsin nursing education programs.

- f. Implement academic-practice partnerships to establish dedicated educational units (DEUs) for nursing in practice settings that expedite clinical practicums.
  - g. Expand early student recruitment efforts to the nursing professions with middle and high school students through a variety of programs (e.g., summer nursing immersion experiences, such as the Discover Nursing program).
  - h. Create partnerships with high school based Certified Nurse Assistant (CNA) programs to connect high school students to RN programs.
  - i. Collaborate with university STEM Programs (Science, Technology, Engineering & Math) to create curriculum related to nursing as a career option
  - j. Explore opportunities to partner with Project Lead the Way to promote recruitment of high-achieving students to the nursing profession.
- e. Develop a one credit professional course offered during the ADN program to include content on career pathways in nursing and academic requirements.
  - f. Assess educational status of nursing staff by healthcare systems by 2014, develop and implement plans by December 2015, and monitor achievement of progress annually.
  - g. Foster innovative strategic regional partnerships between schools and healthcare systems to advance nursing education opportunities, including increased tuition support and “time to study” (flex time) options.
  - h. Seek private dollars from foundations, corporations and individuals for scholarships for undergraduate and graduate education to accelerate academic progression.
  - i. Continue seamless academic progression and support for LPNs to achieve ADN or BSN degree completion.

## Wisconsin Issue #4:

Currently 53.5% of nurses working in Wisconsin have a BSN, or higher degree. Wisconsin will need to increase the educational capacity of BSN completion programs to support seamless academic progression options to meet the goal of 80% BSN by 2020.

### Recommendations:

- Triple the number of ADN nurses completing a BSN or higher degree annually by 2020.
- Remove identified barriers to academic progression which include: funding, access and time constraints.
- Assist ADN graduates from underrepresented populations to achieve BSN or higher degree education.

### Strategies:

- a. Implement dual track enrollment between technical colleges and 4-year institutions to facilitate students’ ability to attain a BSN, or higher degree.
- b. Seek state funding for the expansion of capacity for face-to-face and online BSN completion programs.
- c. Expand the shared curriculum and shared competencies models and accelerated curriculum options.
- d. Evaluate and implement innovative push-pull models, with established partnerships between ADN and BSN programs to facilitate students furthering their education, including specific models to identify and support students from underrepresented populations.

## Wisconsin Issue #5:

Currently, 0.6% of Wisconsin nurses hold a doctoral degree in nursing. To assure an adequate faculty supply, along with increasing diversity, Wisconsin will need to double the number of nurses with doctoral degrees by 2020.

### Recommendation:

- Remove salary inequities for nurse faculty to provide market competition between practice and education to recruit /retain faculty and researchers.

### Strategies:

- a. Explore and expand creative public-private funding models to support additional nurse faculty positions to increase student enrollment.
- b. Increase dual faculty positions between two educational institutions, or an educational programs and a clinical agency.
- c. Actively recruit faculty from underrepresented groups.
- d. Expand and enhance loan forgiveness and traineeship programs for nursing faculty.

## Wisconsin Issue #6:

Turnover among new graduates is higher than turnover of experienced RNs. Retention of new graduates is essential to assure an adequate workforce, improve patient safety, and decrease healthcare costs.

### Recommendation:

- Implement best practice strategies for nurse residency programs in healthcare systems and other venues to decrease turnover and ease transition to practice, in an effort to retain and recruit new graduates.

### Strategies:

- a. Implement nurse residency programs for all new RN graduates and across all venues of practice.
- b. Establish a standardized mechanism to monitor new graduate turnover.
- c. Expand foundation support for nurse residency programs.

### — IOM Report Key Message —

Nurses should be full partners with MDs and other health professionals in redesigning healthcare in the United States.

## Wisconsin Issue #7:

There is a need to redesign the healthcare delivery system, and assure interprofessional coordination of care.

### Recommendations:

- Position nurses on major healthcare boards, executive teams and other major leadership positions across all systems.
- Implement interprofessional educational models between healthcare providers and other appropriate disciplines in educational institutions.
- Develop and implement interprofessional models of care delivery and communication across all healthcare systems and practice venues.

### Strategies:

- a. Expand the participation of nurses on key healthcare boards and executive teams.
- b. Solicit input from nursing staff in redesign activities.

- c. Expand leadership development, educational programs, and mentoring strategies for nurses by employers and nursing organizations.
- d. Increase number of jointly-offered interprofessional classes through interdepartmental collaboration in educational settings.
- e. Utilize academic practice linkages to develop collaborative models for interprofessional teams in healthcare systems and the community.
- f. Expand utilization of transitional care models, community-based care and care coordination at the individual, community and systems levels using population-based health approaches, by educational institutions and across healthcare systems.

### — IOM Report Key Message —

Effective workforce planning & policy-making require better data collection and an improved information infrastructure.

## Wisconsin Issue #8:

There is a significant need to enhance nursing and other healthcare workforce data collection and workforce planning.

### Recommendations:

- Maintain mandatory nursing surveys and analyses on a biennial basis for RNs and LPNs with re-licensure, to assure monitoring of workforce trends.
- Continue to utilize the national minimum data sets for surveys with national and state benchmarking comparisons.
- Expand efforts for the collection of workforce data for other healthcare professions in collaboration with the nursing profession.

### Strategies:

- a. Continue mandatory LPN and RN nursing surveys and analysis biennially to assure updated Wisconsin data for benchmarking with national trends and information on nursing workforce trends.
- b. Utilize national minimum data sets for nursing surveys and national and state benchmarking comparisons.

- c. Partner with Wisconsin Department of Workforce Development, Office of Economic Advisors on updates to demand projections and modeling to establish and monitor annual nursing workforce targets.
- d. Develop demand surveys in partnership with hospitals, long term care and other settings.
- e. Monitor vacancy rates and project workforce needs, including recruitment and retention, for all healthcare professions through an established process.

### — IOM Report *Diversity* —

Diversity is an overarching recommendation within the IOM report. Diversity provides the key foundation for the composition of the nursing workforce of the future to align with population demographics and strive for inclusive excellence at regional, state and national levels.

## Wisconsin Issue #9:

The nursing workforce in Wisconsin does not mirror the diversity in the state population. Currently the RN nursing workforce is only 6.9% male and only 6.4% in racial/ethnic minorities.

### *Recommendations:*

- Emphasize diversity as a workforce priority and system-wide approach from the top down in each organization, to recruit and retain students, staff and nursing leaders from underrepresented groups.
- Ensure funding and monitoring of progress through collaboration by academic and practice partners across all settings, including accrediting bodies, private and public funders.

### *Strategies:*

- a. Provide a variety of support mechanisms for underrepresented populations in both academic and practice settings including mentoring, coaching, student/employee resources, social networks for assimilation and interdisciplinary collaboration.
- b. Prepare nursing staff and students to attain higher levels of cultural competency.
- c. Develop a standardized system with agreed upon benchmarks for tracking data on underrepresented populations in nursing programs & health systems throughout the state.
- d. Increase funding for nursing scholarships and loan forgiveness programs for traditionally underrepresented populations.
- e. Implement recruitment strategies to achieve 20% males by 2020 benchmark, as recommended by the American Assembly of Men in Nursing.

The recruitment, preparation and retention of an increasingly sophisticated nursing workforce are the keys to a healthy Wisconsin population today and for decades to come. The health of our state depends on it. Wisconsin policymakers, employers, educators and funders must take collaborative action now to invest in its nursing workforce in order to preserve the delivery of safe, high quality and culturally relevant care for the people of our state.

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