

The Nursing Workforce in North Carolina: Challenges and Opportunities

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Presentation Overview: In words and a picture

We will use North Carolina to frame educational challenges and opportunities regarding:

- Current nursing workforce
- “Education mobility” nurses — those who entered workforce with ADN and have gone on to BSN or higher
- Future nursing workforce in a transformed system



Before we launch into the data, some brief introductions....The North Carolina Health Professions Data System (HPDS)

Mission: to provide timely, objective data and analysis to inform health workforce policy in North Carolina and the United States

- Based at Cecil G. Sheps Center for Health Services Research at UNC-CH, but mission is statewide
- A collaboration between the Sheps Center, NC AHEC and the health professions licensing boards
- System is independent of government and health care professionals
- Independence brings rigor and objectivity



North Carolina's health workforce data are the envy of the other 49 states

- 35 years of continuous, complete licensure (**not survey**) data on 19 health professions from 12 boards
- Data are provided **voluntarily** by the boards—there is no legislation that requires this, there is no appropriation
- Data housed at Sheps but remain property of licensing board, permission sought for each “new” use

System would not exist without data and support of licensure boards



Now let's dive into the deep end of the data



Image from: <http://flashareospace.pbworks.com/w/page/48788069/5612f1%20%20Norman%20Rockwell%20Story>

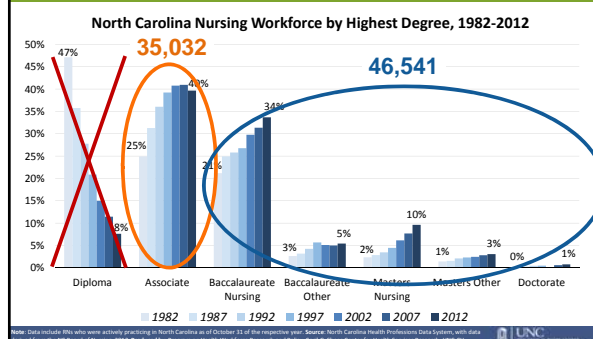


The current workforce in North Carolina: how do ADN nurses differ from nurses with a baccalaureate or higher?

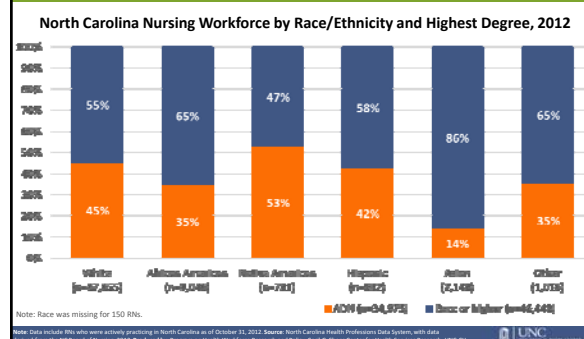


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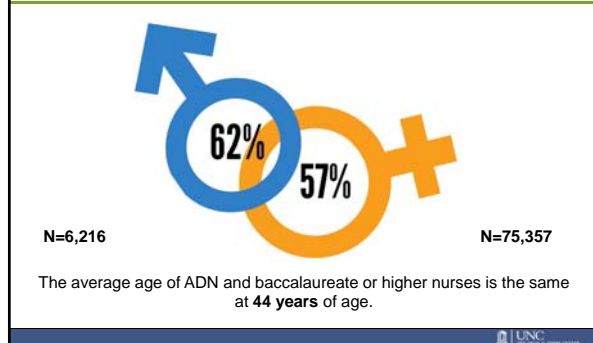
Highest Degree of North Carolina Nursing Workforce: 1982-2012



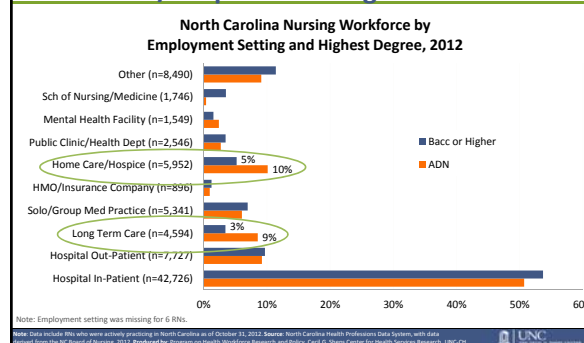
Asians, African Americans more likely to have baccalaureate or higher



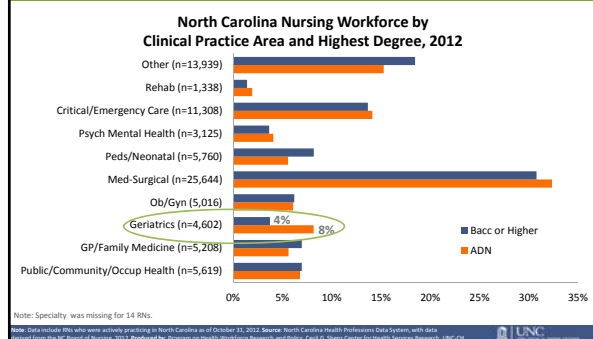
Males are more likely than females to have a BSN (2012)



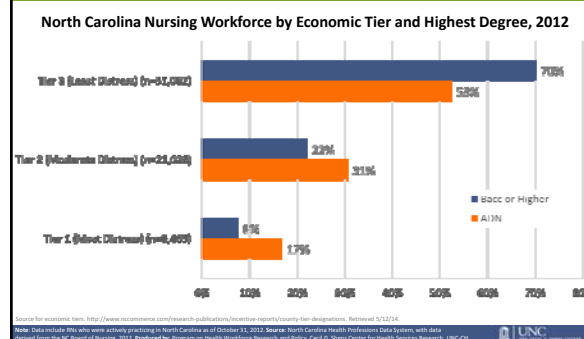
Most nurses work in hospitals but ADN nurses more likely to work in home care/hospice and long-term care



Similar distributions by clinical practice area but ADN nurses more likely to work in geriatrics

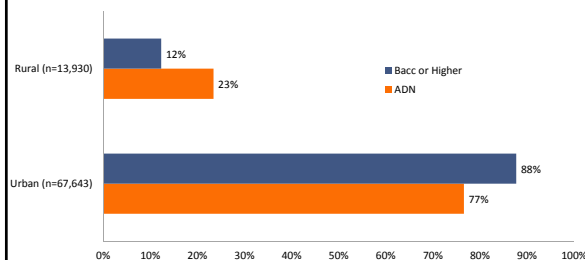


ADN nurses twice as likely to work in most economically distressed (Tier 1) counties



ADN nurses nearly twice as likely to work in rural counties

North Carolina Nursing Workforce by Rural Status and Highest Degree, 2012

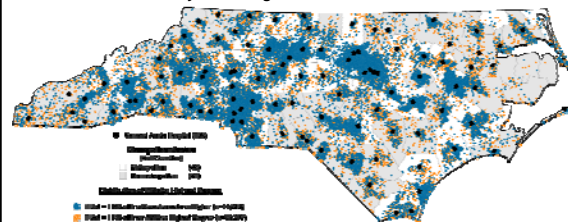


Rural source: US Census Bureau and Office of Management and Budget, March 2013. "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.

Note: Data include RNs who were actively practicing in North Carolina as of October 31, 2012. Source: North Carolina Health Professions Data System, with data reported from the NC Board of Nursing, 2012. Produced by Program on Health Workforce Research and Policy, Carol G. Steger Center for Health Services Research, UNC-CH.

ADNs are better distributed across state while baccalaureate+ nurses cluster around hospitals

Distribution of ADNs and Baccalaureate or Higher RNs Actively Practicing in North Carolina in 2012

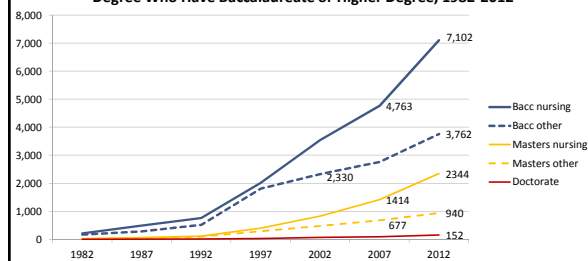


Rural source: US Census Bureau and Office of Management and Budget, March 2013. "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.

Do nurses who entered the workforce with an ADN and have a baccalaureate or higher degree *in nursing* behave more like ADNs or baccalaureate+ nurses?

Number of nurses with ADN as entry degree and baccalaureate+ as highest degree has increased dramatically

Number of North Carolina Nurses Entering with ADN as Entry Degree Who Have Baccalaureate or Higher Degree, 1982-2012



Note: Missing data ranged from 0.5% in 1982 to 11.5% in 2007.

Note: Data include RNs who were actively practicing in North Carolina as of October 31, 2012. Source: North Carolina Health Professions Data System, with data reported from the NC Board of Nursing, 2012. Produced by Program on Health Workforce Research and Policy, Carol G. Steger Center for Health Services Research, UNC-CH.

What might our workforce look like if all ADN nurses went on to higher nursing education?

In 2012, 14,300 nurses had ADN for entry degree and baccalaureate or higher as highest degree:

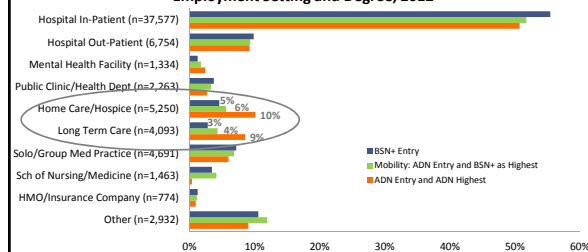
- 9,516 nurses entered with ADN and have baccalaureate or higher *in nursing* as highest degree—the “education mobility” nurses
- 4,784 nurses entered with ADN and have baccalaureate or higher *outside nursing*—the “career mobility” nurses

Our analysis compares:



Mobility nurses less likely to practice in home care/hospice and long-term care than ADN nurses without additional education

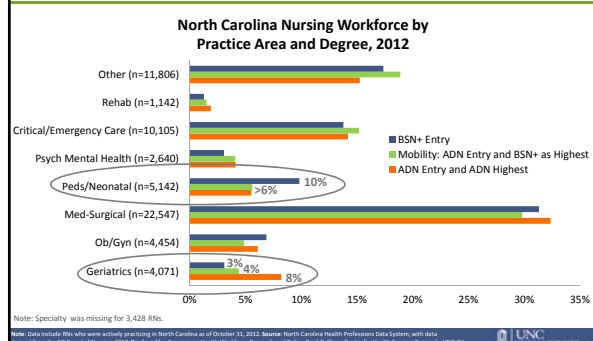
North Carolina Nursing Workforce by Employment Setting and Degree, 2012



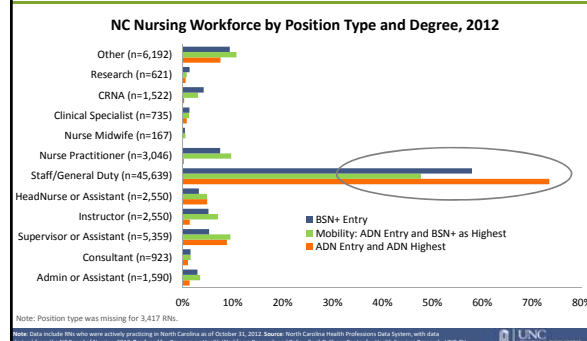
Note: Employment setting was missing for 3,420 RNs.

Note: Data include RNs who were actively practicing in North Carolina as of October 31, 2012. Source: North Carolina Health Professions Data System, with data reported from the NC Board of Nursing, 2012. Produced by Program on Health Workforce Research and Policy, Carol G. Steger Center for Health Services Research, UNC-CH.

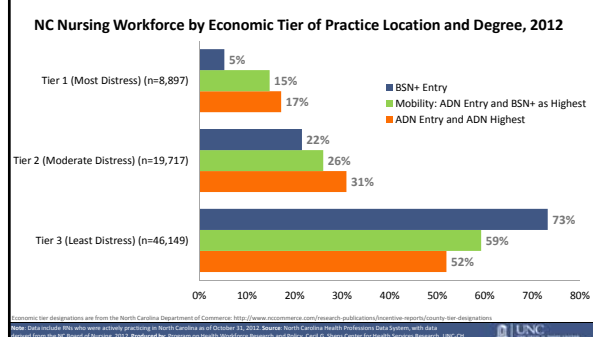
Mobility nurses less likely to practice in geriatrics than ADN nurses without additional education. Nurses with BSN+ at entry more likely to practice in pediatrics



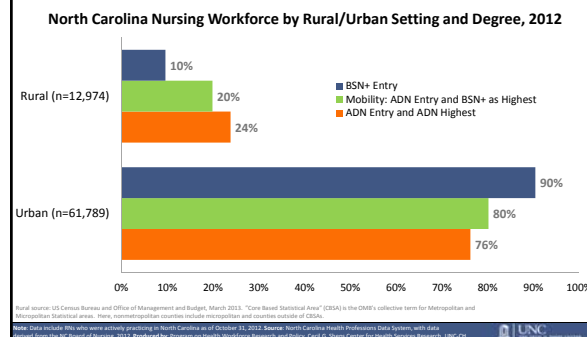
Mobility nurses less likely to practice as staff/general duty nurses



Mobility nurses 3 times more likely to practice in NC's most distressed counties compared to BSN entry nurses



Mobility nurses twice as likely as BSN+ nurses to practice in rural counties



So ... do mobility nurses behave more like ADNs or baccalaureate+ nurses? It depends

After seeking additional education, mobility nurses behave:

More like BSN+ nurses in terms of specialty and setting

- Less likely to practice in home care, hospice, long-term care and geriatrics

More like ADN nurses in terms of geographic dispersion.

Compared to BSN entry nurses:

- Twice as likely to practice in rural
- Three times more likely to practice in NC's Tier 1 counties

Like neither group in terms of job title

- Less likely to be in staff/general duty positions

Implications for education

- Need more rotations outside of hospital—in home health, long-term care, hospice, public health and other community-based settings
- Continue to diffuse BSN+ education out to ADNs in rural and underserved areas
- There are over 8,000 ADNs practicing in rural counties who have not pursued additional education in nursing
- But it's not just a numbers game....we need to think about new roles for nurses

The future nursing workforce: New roles in a transformed health system



Let 1,000 flowers bloom: ongoing experiments in health system transformation

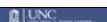
- Growing number of patient centered medical homes, accountable care organizations and integrated delivery systems
- CMS actively funding demonstration projects
- Secretary Burwell recently announced 50% of Medicare payments tied to value by 2018



New models of care: key characteristics

Goal: provide patients with more comprehensive, accessible, coordinated and high quality care at lower costs

- Payment based on value, not volume (accountability)
- Emphasis on primary, preventive and “upstream” care
- Care is coordinated between:
 - medical sub-specialties, home health agencies and nursing homes
 - health care system and community-based social services (social determinants of health)
- EHRs used to monitor patient & population health—increased use of data for risk-stratification and hot spotting
- Interventions focused on both patient- and population-level



Nursing in a Transformed Health Care System: New Roles, New Rules

“What will it take to optimize the contributions of nurses in these changing systems?”

- **Redesign** the nursing curriculum to impart new competencies;
- **Retrain** existing nurses to impart new skills and knowledge;
- **Revamp** licensing examination and requirements to reflect the new curriculum; and
- **Restructure** the state regulatory system to allow flexible deployment of the new workforce.”



http://ldi.upenn.edu/uploads/media_items/inqri-ldi-brief-nursing.original.pdf

Quoted from Janet Weiner, MPH, Penn LDI Voices Blog, “Re: Nurses,” June 25, 2015. <http://ldi.upenn.edu/voices/2015/06/25/re-nurses/>

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How do nurses fit in new models of care?

- PCMHs and ACOs emphasize care coordination, population health management, patient education, health coaching, data analytics, patient engagement, quality improvement, etc.
- Moving more toward ambulatory settings and community care
- New job titles and roles emerging
- “Boundary Spanners”
- Requires application of skills in new ways and development of new skills

Sources: Bodenheimer, T., Berry-Millett, R. Care management of patients with complex health care needs. Princeton, NJ: Robert Wood Johnson Foundation; 2009.



New and evolving role areas

- Population health
- Complex older adults and family caregivers
- Care coordination and transitional care
- Use of data, evidence and other performance improvement skills
- Interprofessional collaboration



Source: Fraher, E., Spetz, J., Naylor, M. Nursing in a Transformed Health Care System: New Roles, New Rules. Iqurri-LDI Brief. June 2015.



But how do we redesign structures to support these roles? → Education

- Must redesign education system so nurses can flexibly gain new skills and competencies
- Retrain and upgrade skills of the 2.9 million nurses *already* in the system – **they are the ones who will transform care**
- Training must be convenient – timing, location, & financial incentives
- Need to prepare faculty to teach new roles and functions
- Clinical rotations need to include “purposeful exposure” to high-performing teams and ambulatory settings

Source: Fraher E, Spetz J, Naylor M. Nursing in a Transformed Health Care System: New Roles, New Rules. *UNC/NCOR Research Brief*. June 2015. <http://www.healthworkforce.unc.edu/research/brief>.
 Case Workforce. *Reimbursement Opportunities from the Primary Care Team: Learning from Effective Ambulatory Practice Projects*. *Academic Medicine*. 2013; 88(12): 1580-1590.

But how do we redesign structures to support these roles? → Regulation

To create a more dynamic regulatory system, we need:

- To develop evidence to support regulatory changes, especially for new roles
- Better evaluation of pilot workforce interventions to understand if interventions improve health, lower costs and enhance satisfaction
- To establish a national clearinghouse to provide up-to-date and reliable information about scope of practice changes in other states
- Remove regulatory barriers to let nurses utilize skills to max benefit of patients

Source: Osmer C, Moore J, Langstaff M. It is time to restructure health professions' scope-of-practice regulations to remove barriers to care. *Health Aff (Millwood)*. 2013 Nov; 32(11):1912-1915. <http://www.healthworkforce.unc.edu/research/brief>.
 2013 Nov; 32(11):1912-1915.

But how do we redesign structures to support these roles? → Policy

- **Insurance reimbursement rules**
 Current system creates inefficiencies and hinders nurses from delivering optimal services;
 Shift toward value-based care will likely support efforts to maximize nursing contributions to care
- **Regulation of entry-level nursing education**
 Modify state licensure board rules governing pre-licensure programs to ensure grads have new skills and competencies needed; adjust clinical training requirements to include more ambulatory experiences
- **NCLEX**
 Curricula designed to ensure graduates can pass NCLEX;
 If NCLEX changes to reflect new roles, curricula will change to keep up
- **Federal and state funding agencies**
 Funding can drive innovation and encourage transformation

Source: Fraher E, Spetz J, Naylor M. Nursing in a Transformed Health Care System: New Roles, New Rules. *UNC/NCOR Research Brief*. June 2015.

Who is going to pay for all this retooling we need to do?

- Adequate and sustainable payment models to retool and redeploy the workforce are lacking
- Many workforce innovations are supported by one-time funds. If payment models don't change rapidly enough, will these interventions be sustainable?
- 1,000 flowers are blooming but are adequate dollars available to conduct research and evaluations necessary to develop evidence base needed to support workforce redesign?

Source: Fraher E, Spetz J, Naylor M. Nursing in a Transformed Health Care System: New Roles, New Rules. *UNC/NCOR Research Brief*. June 2015.

Why the nursing workforce is critical to health system transformation

- With nearly 3 million nurses in active practice, nursing is **by far** largest licensed health profession (*about four times as many nurses as physicians*)
- Nursing care linked to quality and satisfaction measures that will increasingly be tied to value-based payments
- Nurses provide whole-person care across health and community-based settings
- Nurses are the ultimate “flexible” workforce taking on new roles in transformed health system

Source: Fraher E, Spetz J, Naylor M. Nursing in a Transformed Health Care System: New Roles, New Rules. *UNC/NCOR Research Brief*. June 2015.

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Source: Fraher E, Spetz J, Naylor M. Nursing in a Transformed Health Care System: New Roles, New Rules. *UNC/NCOR Research Brief*. June 2015.

Extra Slides



Boundary spanning roles growing quickly

- Increasing number of staff focused on roles that shift focus from visit-based to population-based strategies
- Two examples:

Panel Managers

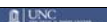
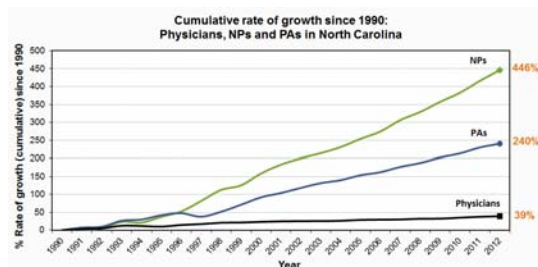
Assume responsibility for patients between visits. Use EHRs and patient registries to identify and contact patients with unmet care needs. Often medical assistants but can be nurses or other staff

Health Coaches

Improve patient knowledge about disease or medication and promote healthy behaviors. May be medical assistants, nurses, health educators, social workers, community health workers, pharmacists or other staff



The NP workforce is exploding



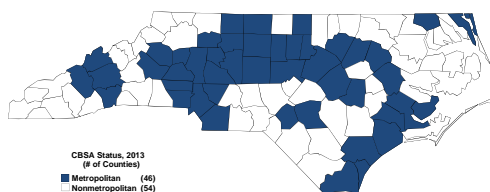
But wait – what about APRNs?

- Notion of “clinical greenness” – new advanced care practitioner graduates lack confidence
- Solution? Post-graduate fellowship with structured didactic, clinical and precepting components
 - Community Health Center, Inc. <http://www.npresidency.com/>
 - Carolinas Healthcare System Center for Advanced Practice <http://www.carolinashealthcare.org/center-for-advanced-practice>
 - Western North Carolina Community Health Services <http://www.safetynetresidency.org/>



Our rural definition: OMB's Core Based Statistical Areas

Metropolitan Status* North Carolina, 2013



Source: US Census Bureau and Office of Management and Budget, March 2013.
 *Note: "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.
 Produced By: North Carolina Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

