

How Might the Move Toward a Baccalaureate-Prepared Nursing Workforce Affect the Supply of Nurses in Rural and Underserved Communities?

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Academy Health's Annual Research Meeting
June 27, 2016

This work is supported in part with funding from the North Carolina AHEC Program, the Robert Wood Johnson Foundation and HRSA.



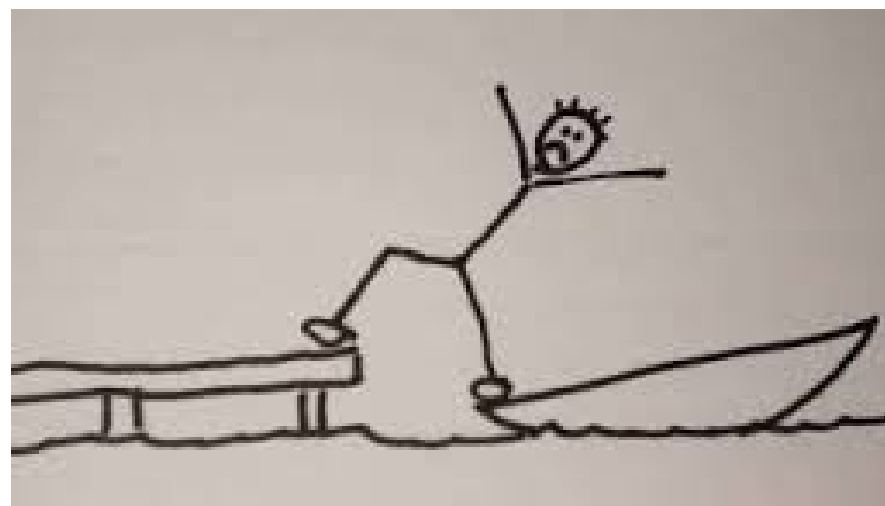
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Presentation Overview:

In words and a picture

We will use North Carolina to frame 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 rural settings



North Carolina Health Professions Data System (HPDS)

- 35 years of continuous, complete licensure data on 19 health professions from 12 boards (census)
- Data are provided voluntarily by the boards—there is no legislation that requires this, there is no appropriation
- Data are collected annually (or biennially) and are self-reported
- Included professionals are those that were in active practice, with a valid license to practice in North Carolina as of October 31st of each year

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



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

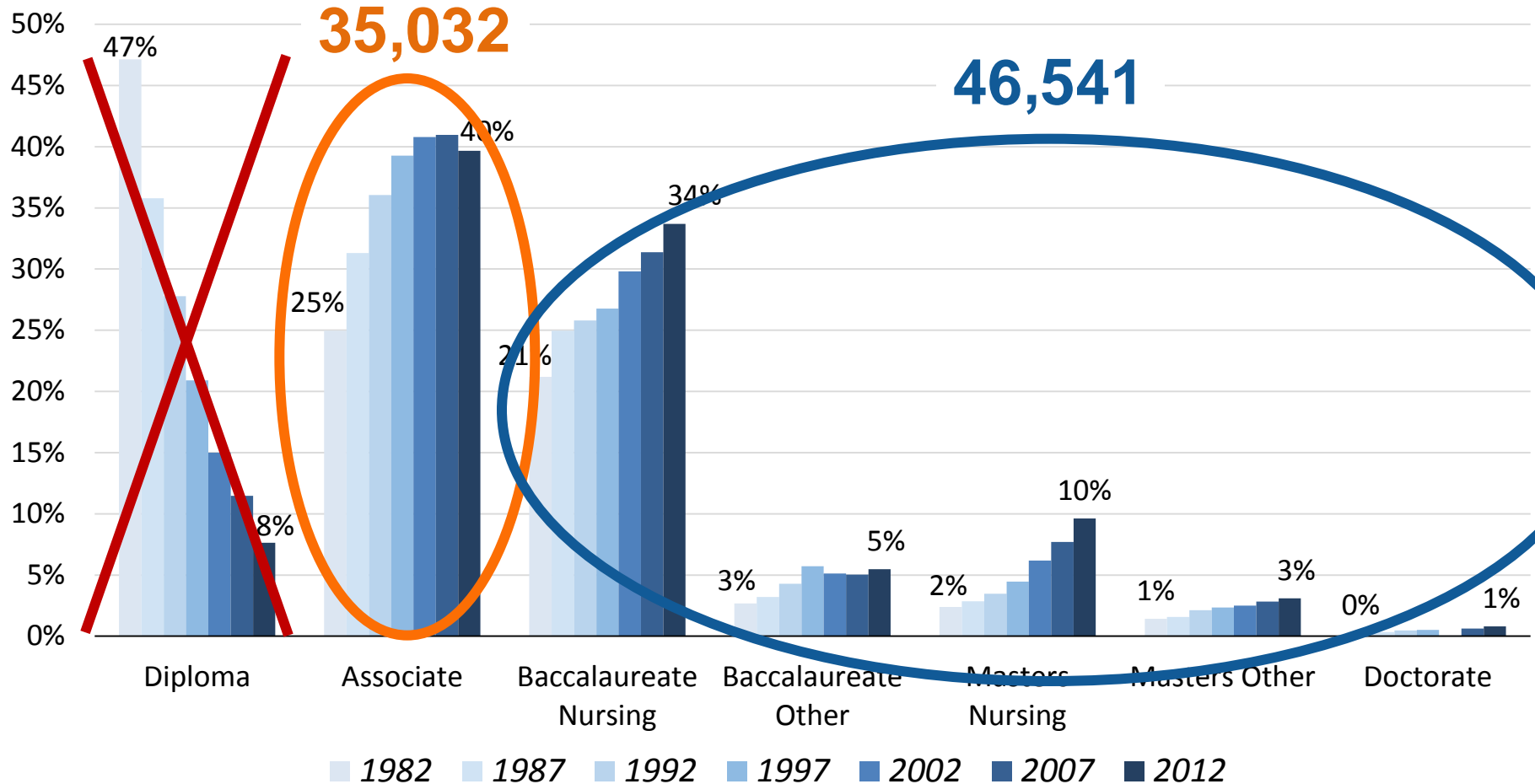


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Highest Degree of North Carolina Nursing Workforce: 1982-2012

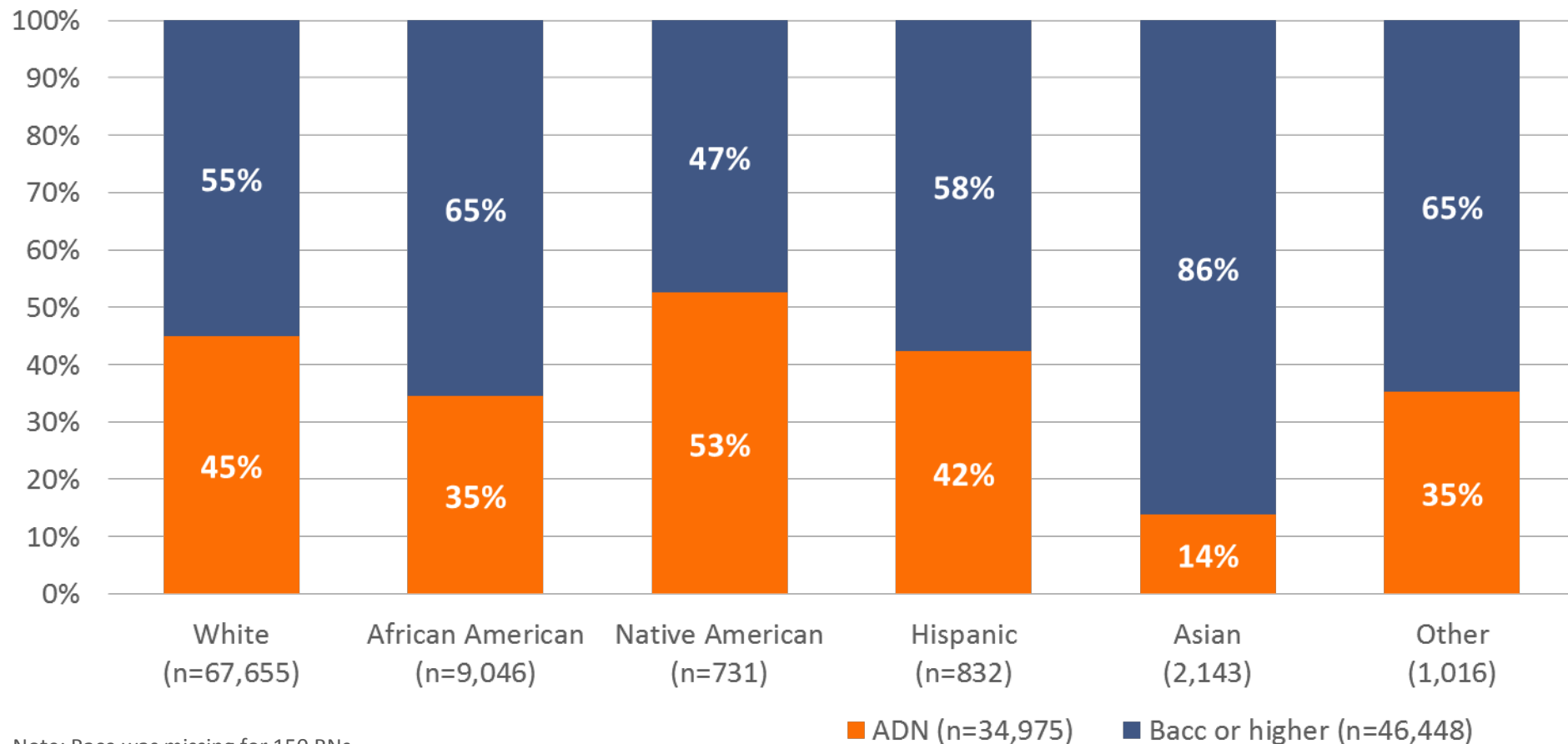
North Carolina Nursing Workforce by Highest Degree, 1982-2012



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

Asians, African Americans more likely to have baccalaureate or higher

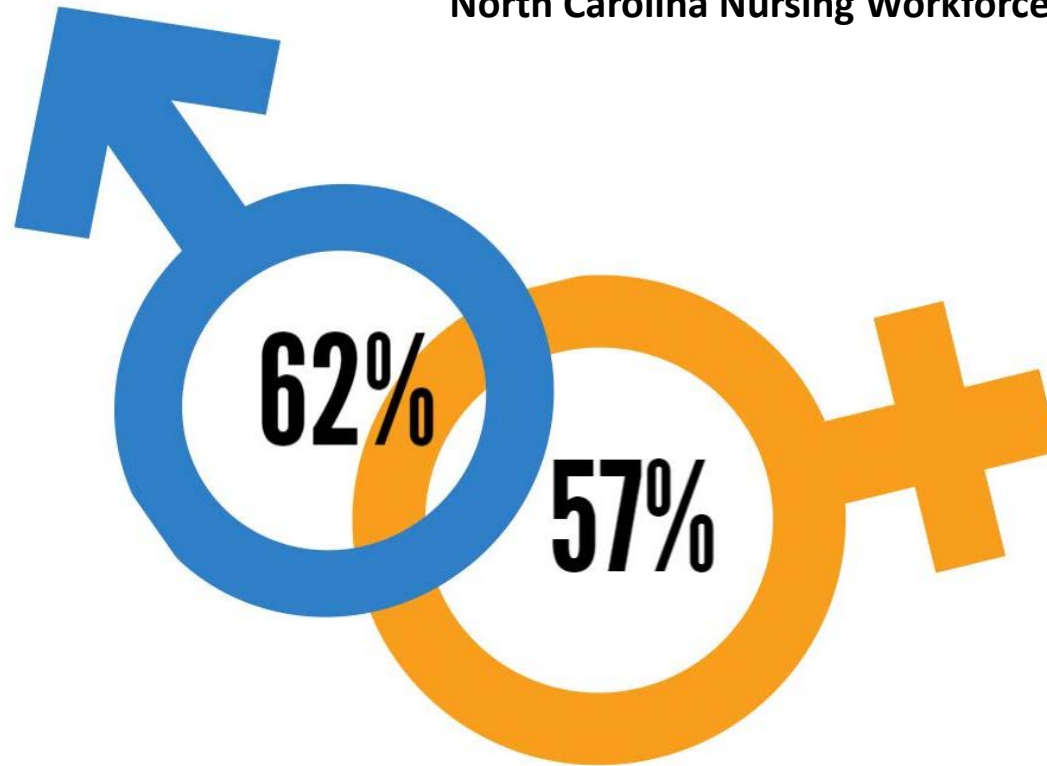
North Carolina Nursing Workforce by Race/Ethnicity and Highest Degree, 2012



Note: Race was missing for 150 RNs.

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

North Carolina Nursing Workforce by Gender, HPDS, 2012



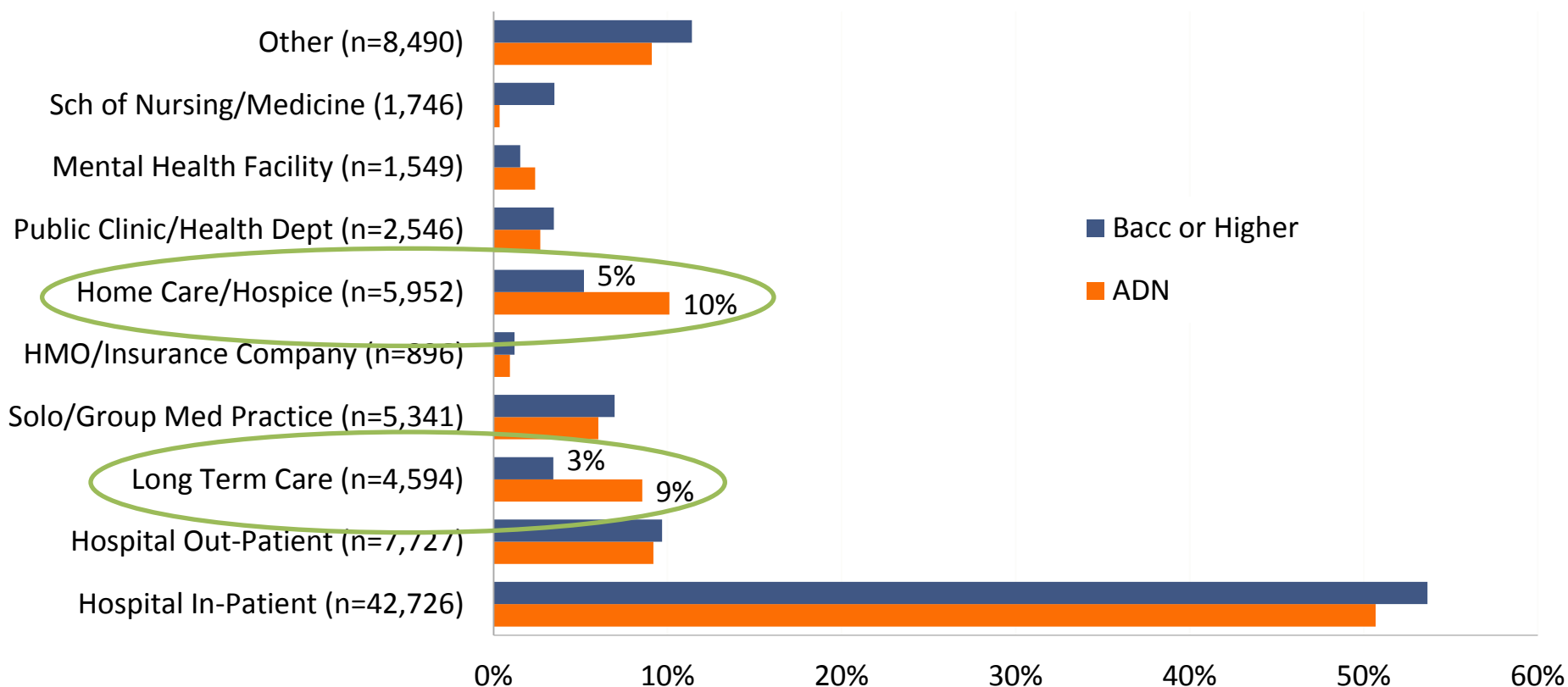
N=6,216

N=75,357

The average age of ADN and baccalaureate or higher nurses is the same at **44 years** of age.

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

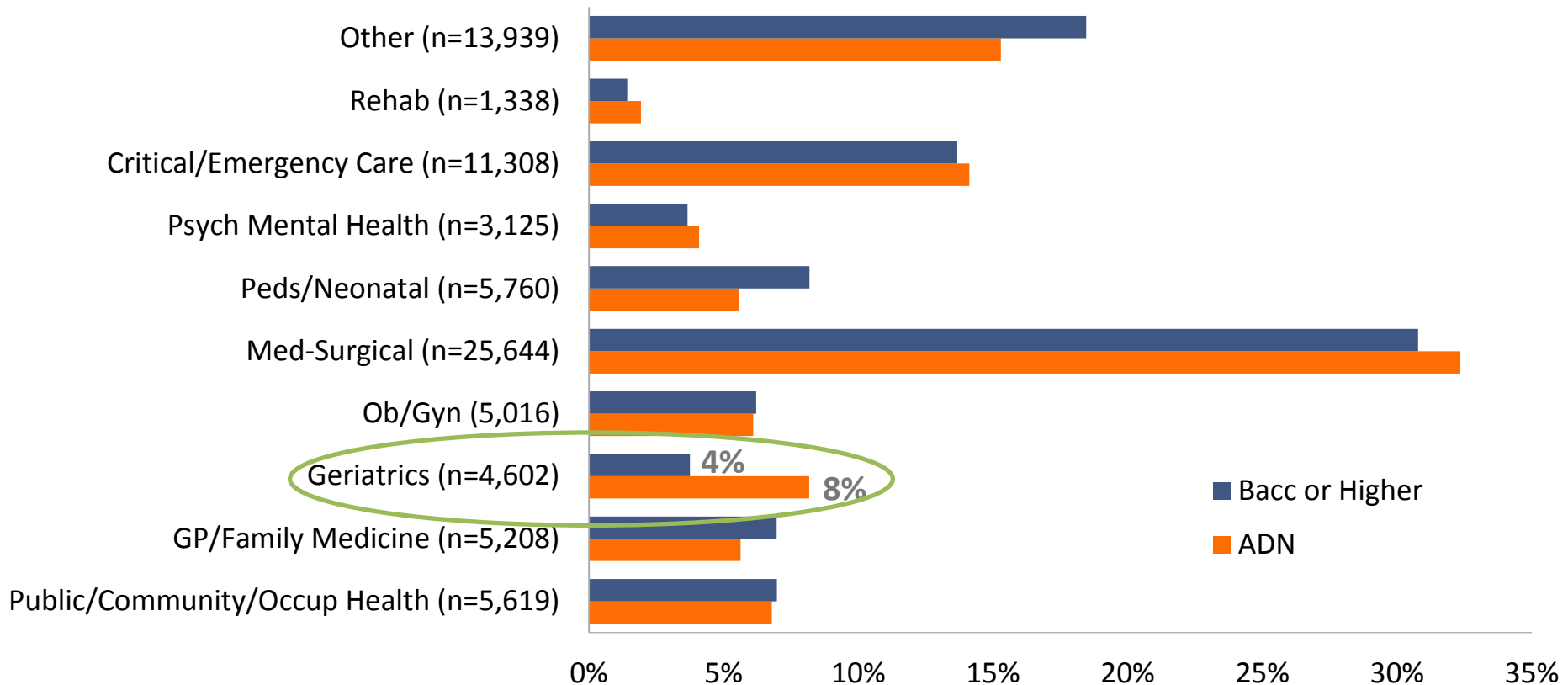
North Carolina Nursing Workforce by Employment Setting and Highest Degree, 2012



Note: Employment setting was missing for 6 RNs.

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

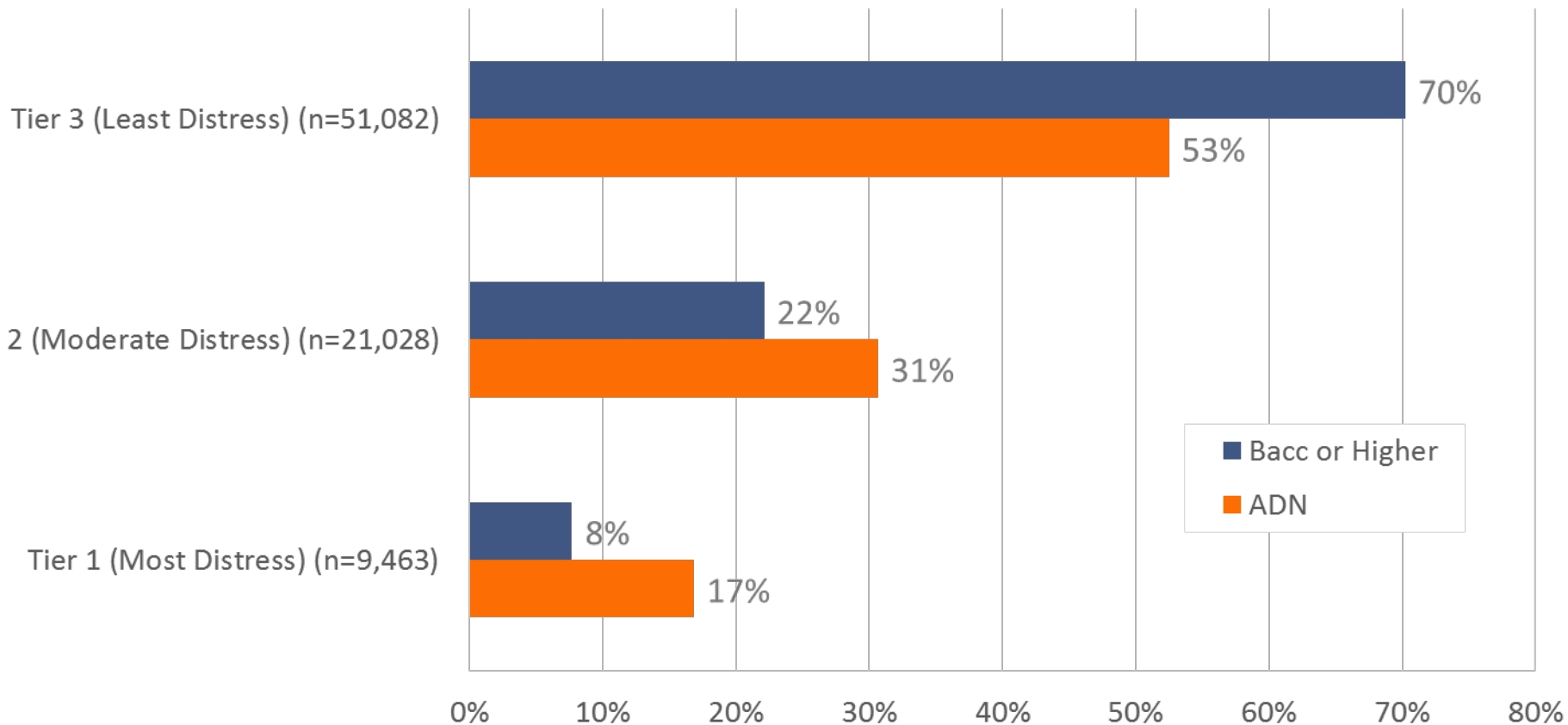
North Carolina Nursing Workforce by Clinical Practice Area and Highest Degree, 2012



Note: Specialty was missing for 14 RNs.

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

North Carolina Nursing Workforce by Economic Tier and Highest Degree, 2012

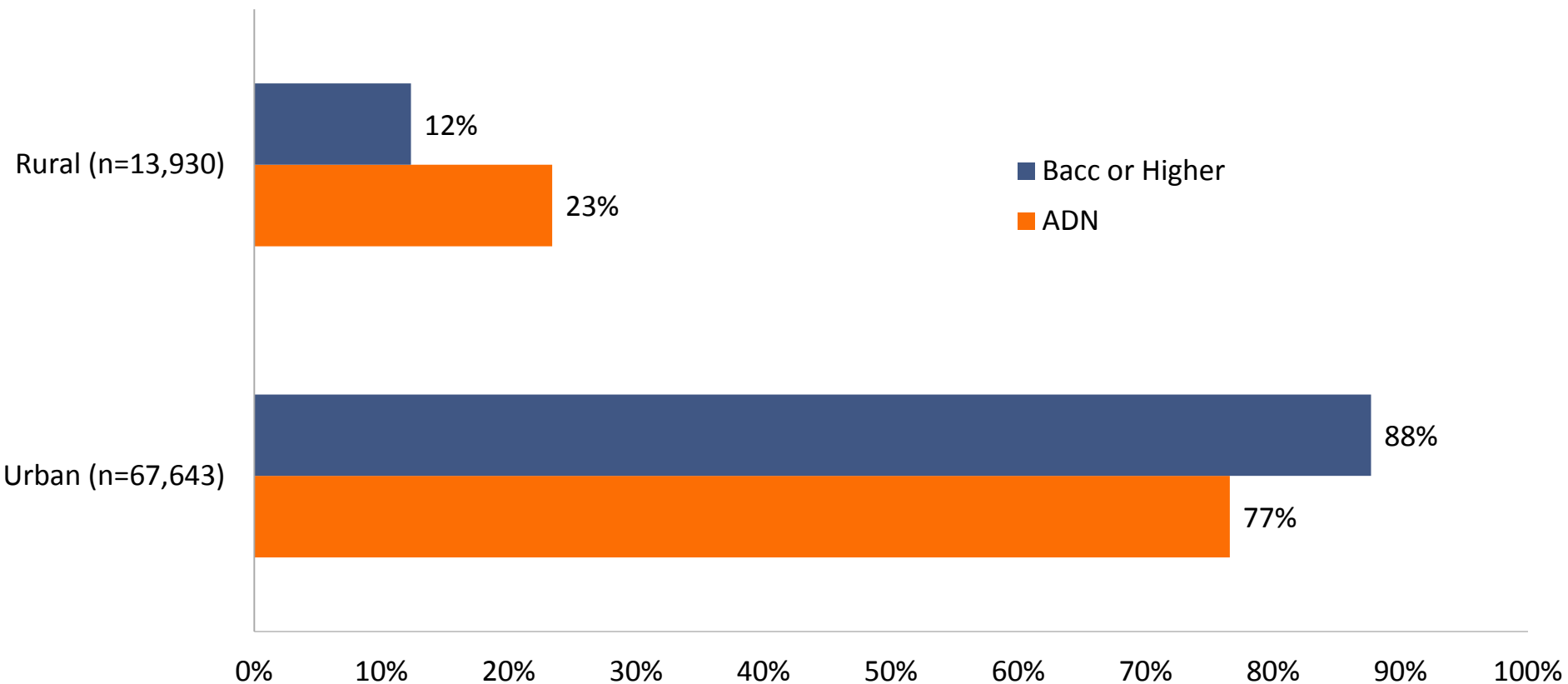


Source for economic tiers: <http://www.nccommerce.com/research-publications/incentive-reports/county-tier-designations>. Retrieved 5/12/14.

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 derived from the NC Board of Nursing, 2012. **Produced by:** Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, UNC-CH.

ADN nurses nearly twice as likely to work in rural counties

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

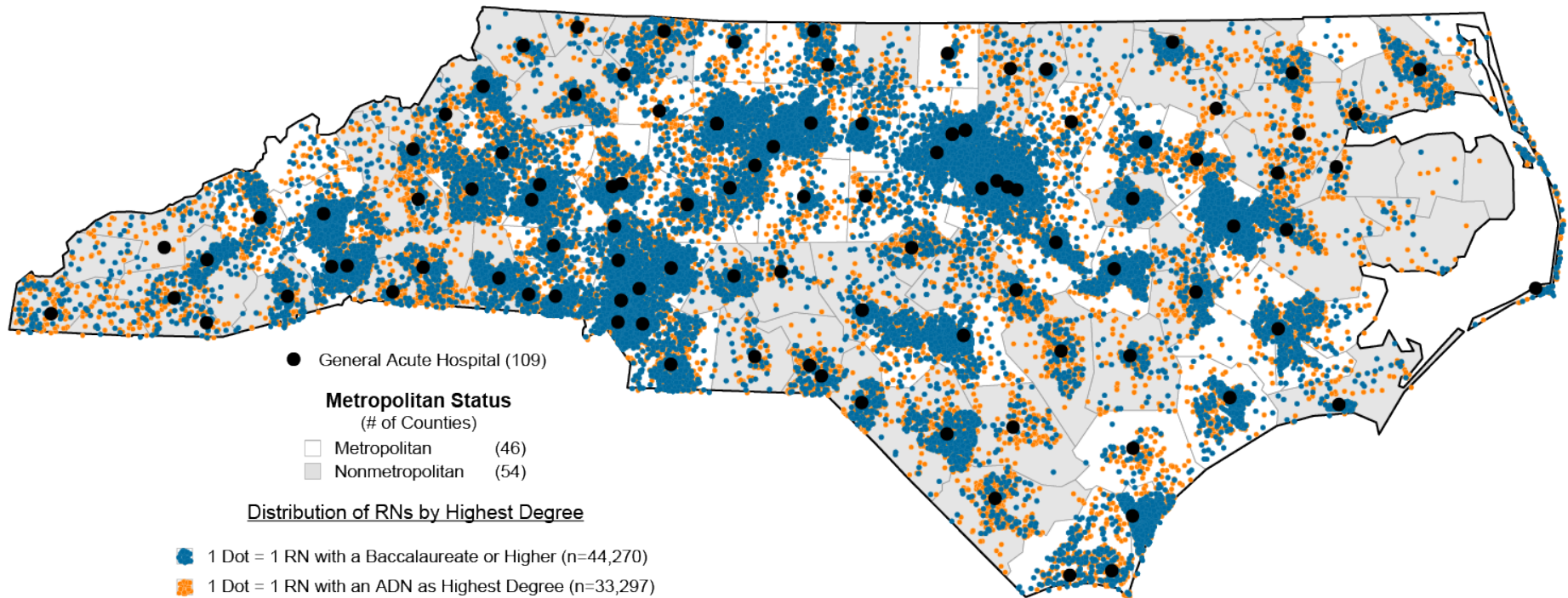


Rural source: US Census Bureau and Office of Management and Budget, March 2013. "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.

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 derived from the NC Board of Nursing, 2012. **Produced by:** Program on Health Workforce Research and Policy, Cecil G. Sheps 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



Note: Dots are scattered randomly within ZIP code areas. Data include RNs who were actively practicing in North Carolina who have an ADN as their highest degree or who have a BSN or higher as their highest degree. Data exclude 377 RNs with inadequate zip codes for mapping purposes.

Source: North Carolina Health Professions Data System, with data derived from the North Carolina Board of Nursing, 2012. Hospital locations derived from NC DHHS as of January 1, 2015 at <http://www.ncdhhs.gov/dhsr/data/hllist.pdf> and NCHA member hospital list at <https://www.ncha.org/about/member-hospitals>, retrieved 1/7/14.

Produced by: Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

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 ADN or baccalaureate+ nurses?

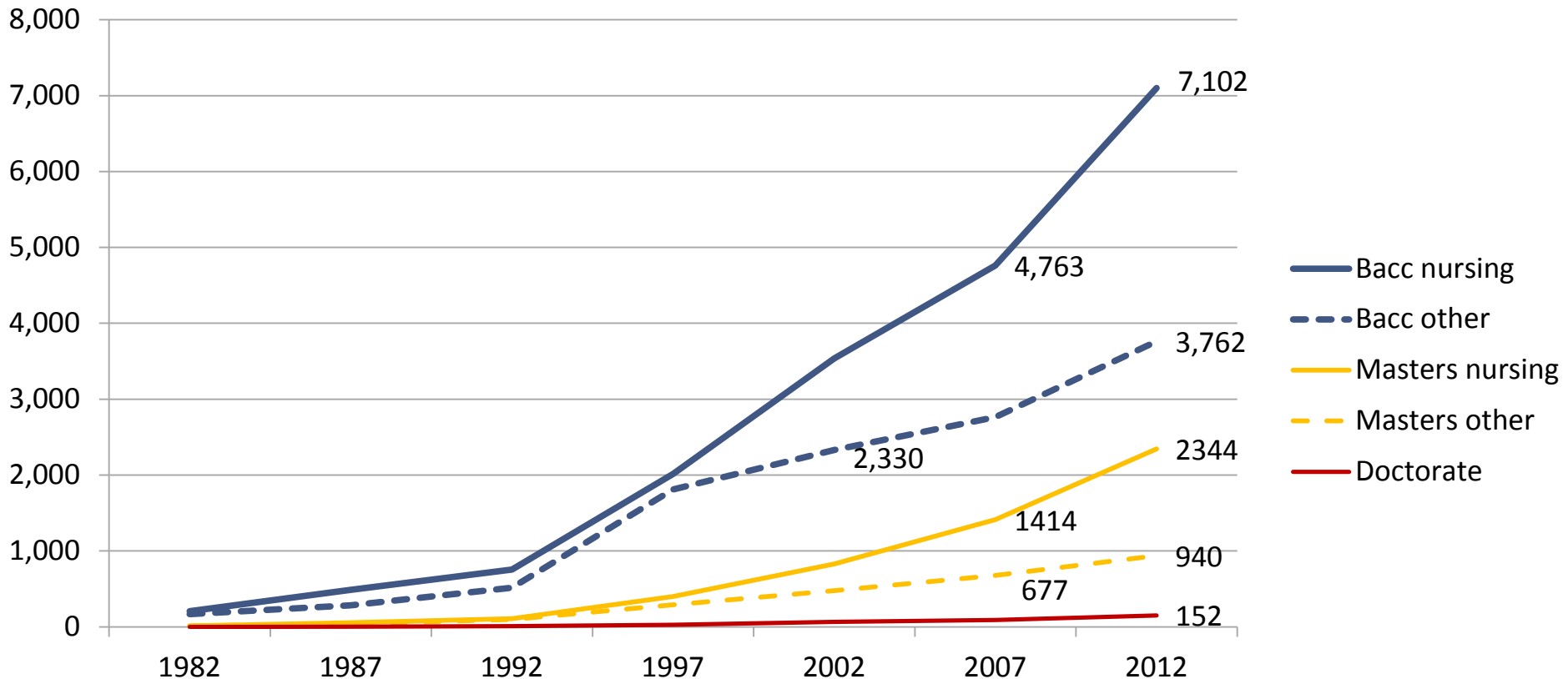


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Number of nurses with ADN as entry degree and baccalaureate+ as highest degree has increased dramatically

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 derived from the NC Board of Nursing, 2012. Produced by: Program on Health Workforce Research and Policy, Cecil G. Sheps 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:

34,058

ADN

Potential Mobility: RNs who entered with ADN and still have ADN as highest degree

9,516

ADN to
BSN+

Mobility: Nurses who went on to pursue additional nursing education

31,189

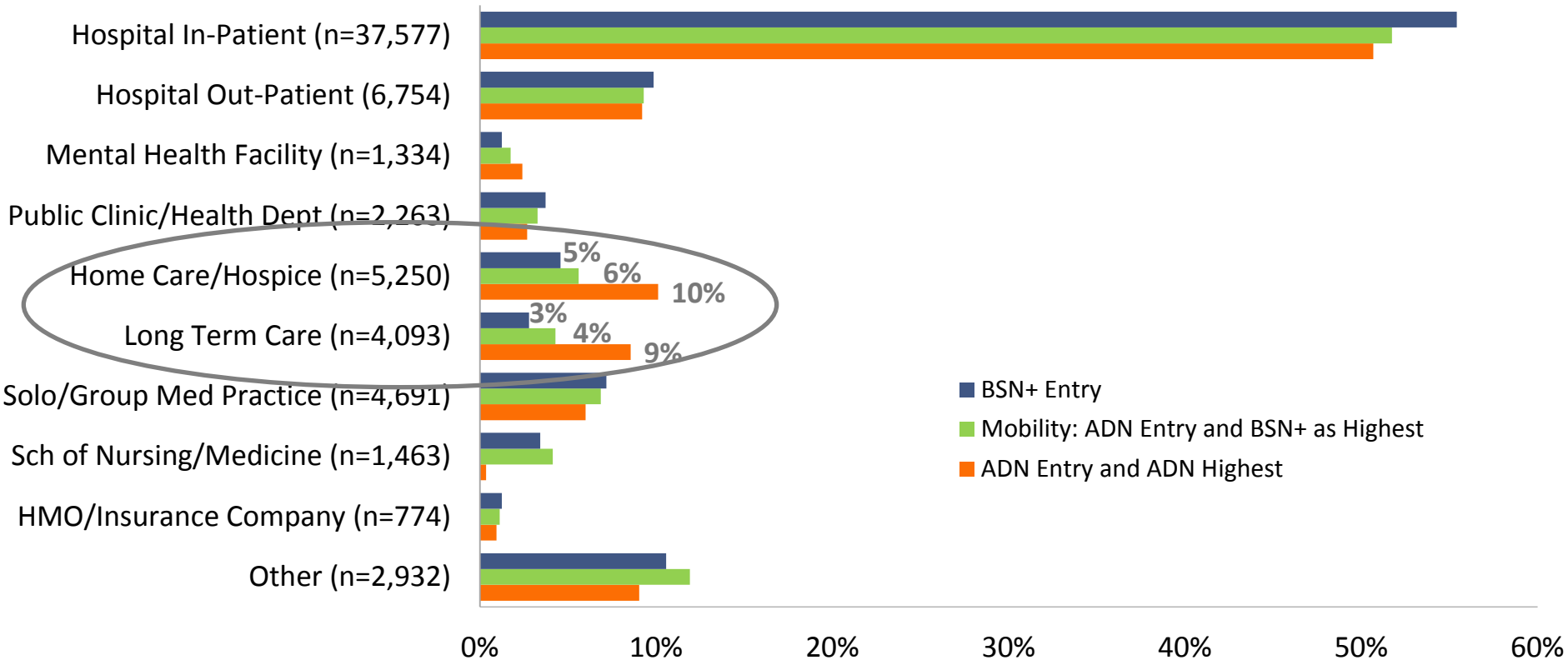
BSN+
at Entry

Already BSN+: Nurses who entered with a BSN (or higher)



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

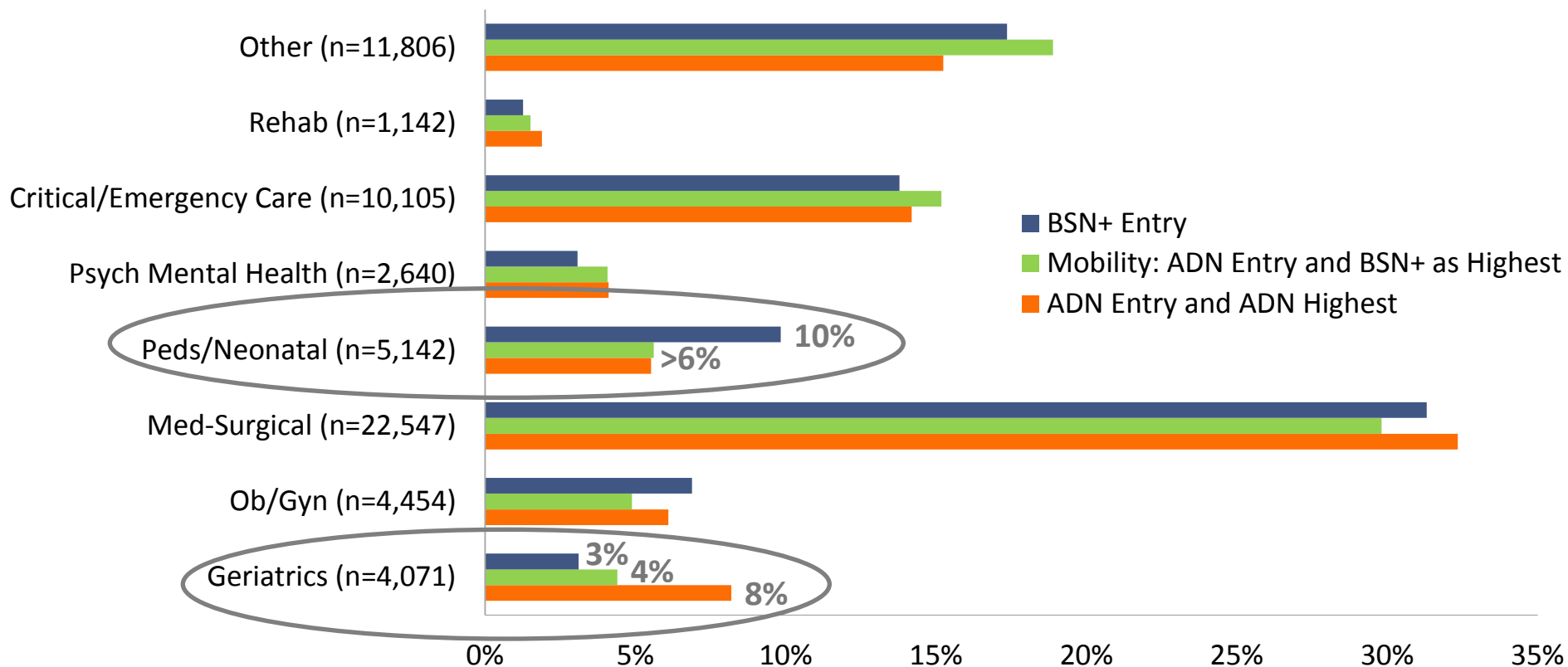
North Carolina Nursing Workforce by Employment Setting and Degree, 2012



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

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

North Carolina Nursing Workforce by Practice Area and Degree, 2012

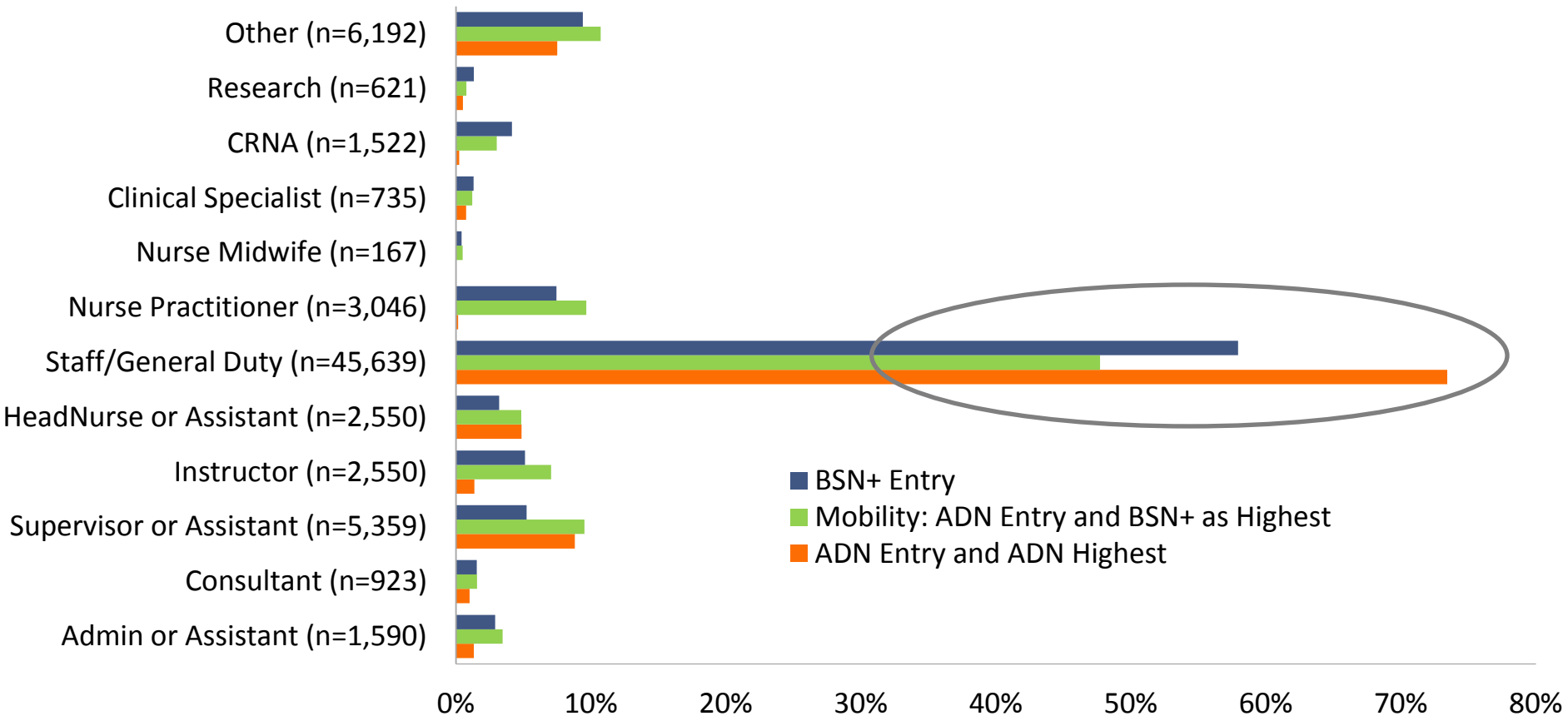


Note: Specialty was missing for 3,428 RNs.

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 derived from the NC Board of Nursing, 2012. Produced by: Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, UNC-CH.

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

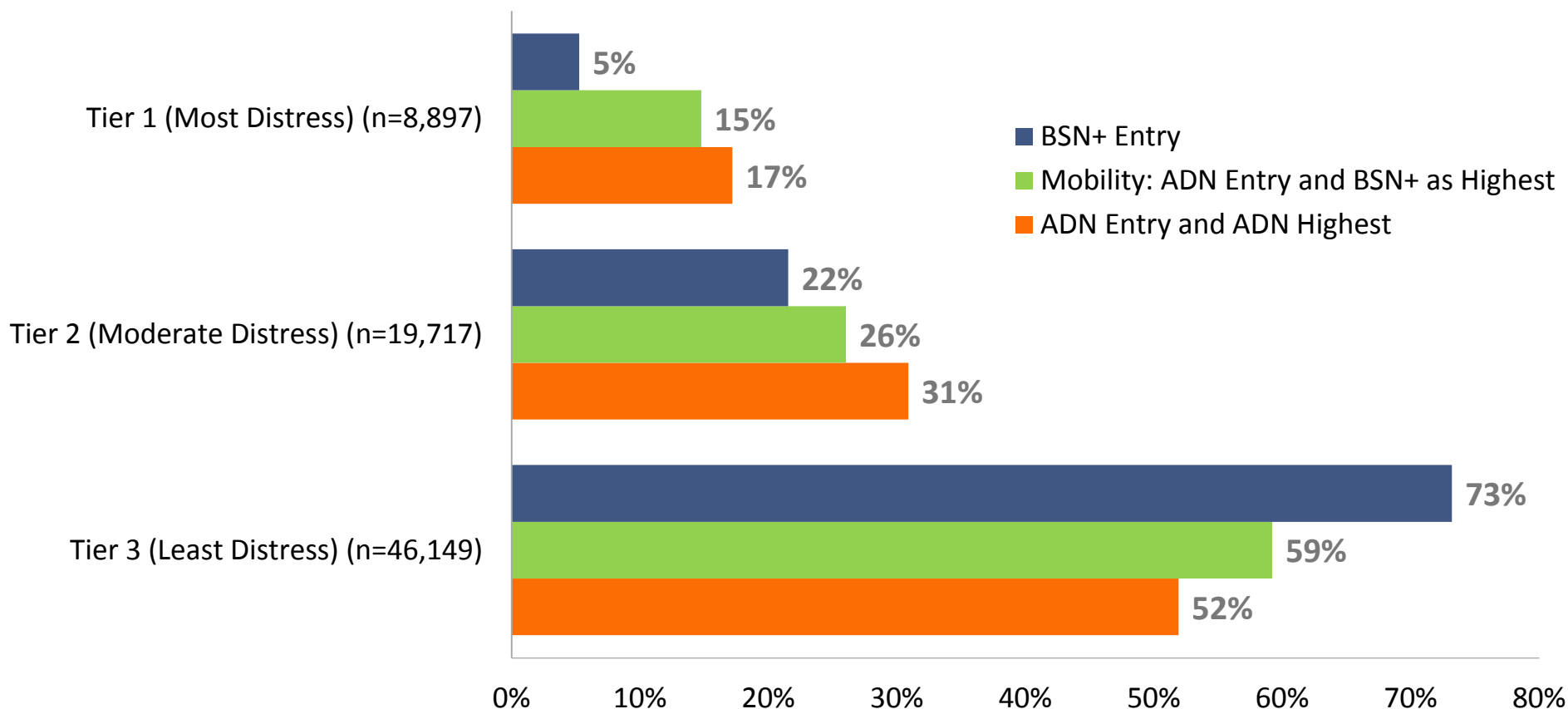
NC Nursing Workforce by Position Type and Degree, 2012



Note: Position type was missing for 3,417 RNs.

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

NC Nursing Workforce by Economic Tier of Practice Location and Degree, 2012



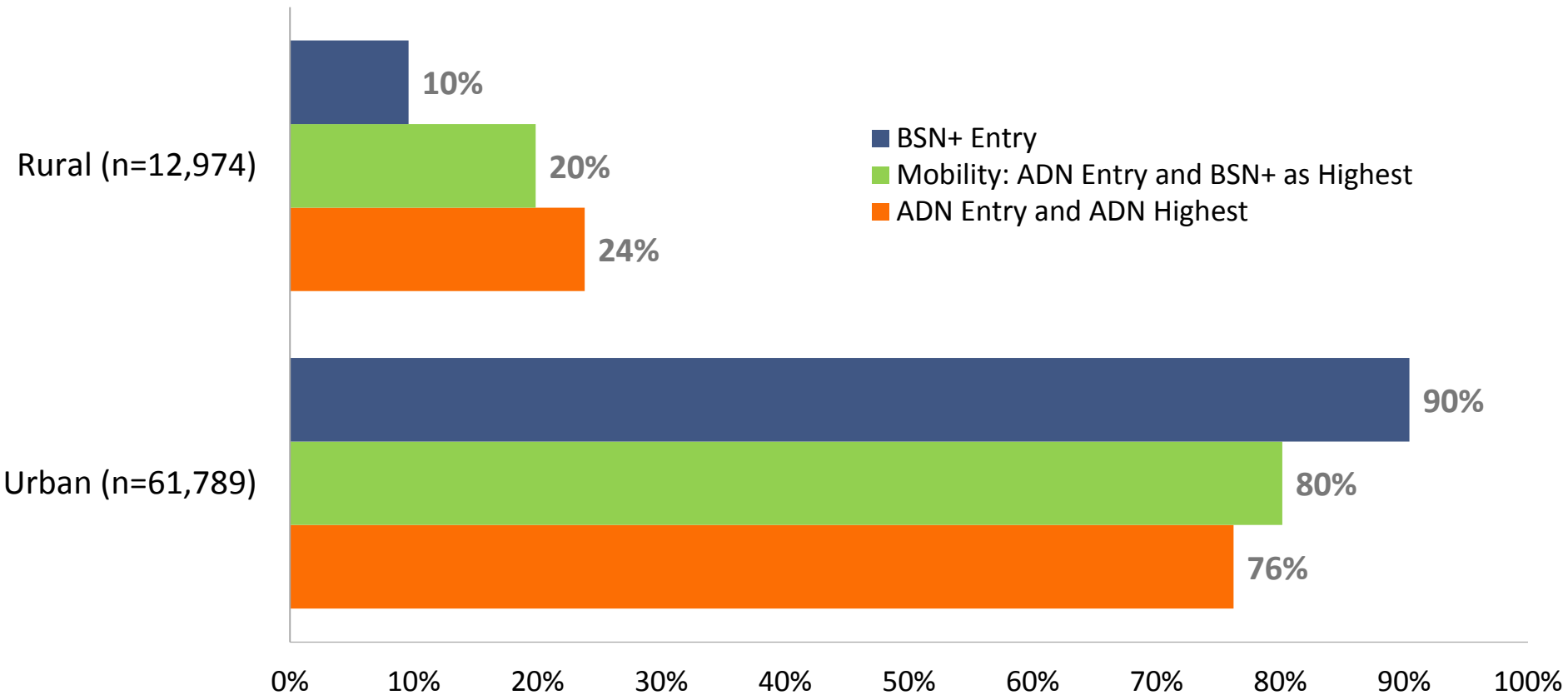
Economic tier designations are from the North Carolina Department of Commerce: <http://www.nccommerce.com/research-publications/incentive-reports/county-tier-designations>

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 derived from the NC Board of Nursing, 2012. **Produced by:** Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, UNC-CH.



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

North Carolina Nursing Workforce by Rural/Urban Setting and 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 derived from the NC Board of Nursing, 2012. **Produced by:** Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, UNC-CH.

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

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Extra Slides

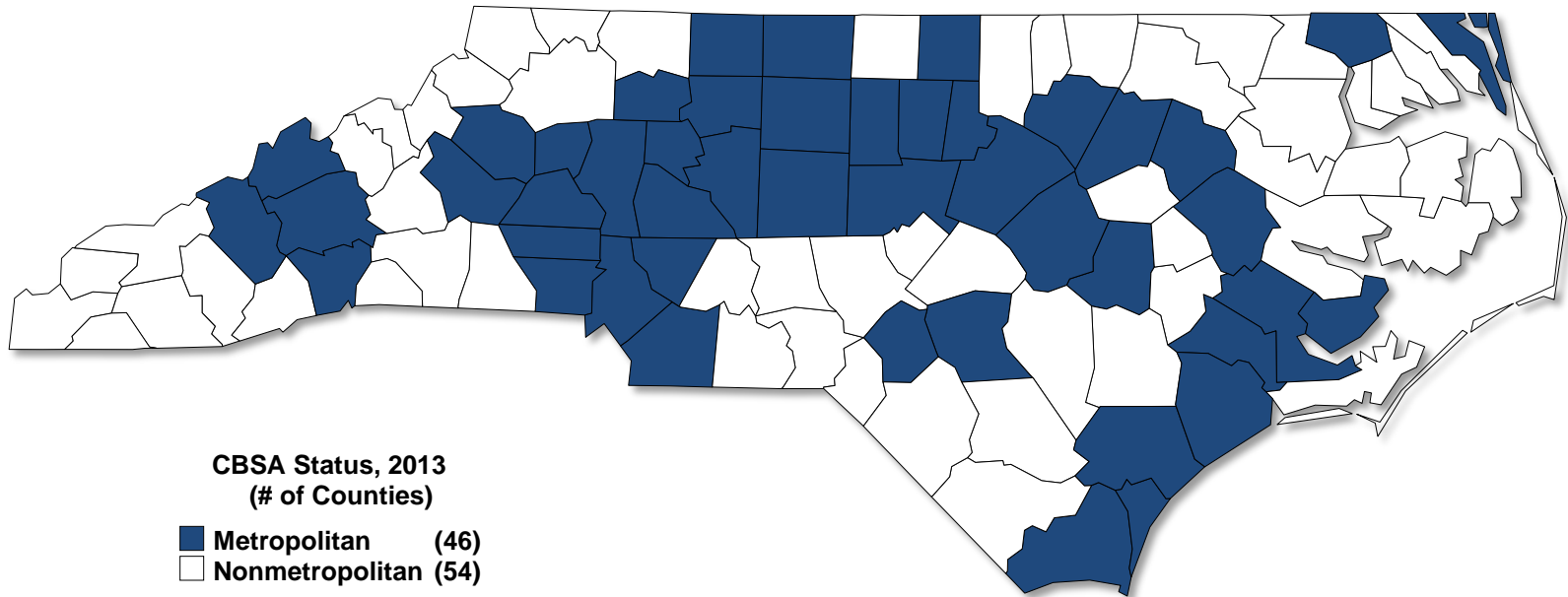


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Our rural definition: OMB's Core Based Statistical Areas

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.