

Envisioning the Future Optometry Workforce in North Carolina

A Case Study of the Use of Health Workforce Data to Make a Decision about a New Optometry School

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Study Purpose

- Study in response to 2014 legislation requiring a study to determine the feasibility of establishing a school of optometry in the state
- UNC General Administration asked the Program on Health Workforce Research and Policy at the Sheps Center to:
 - Analyze trends in NC's optometrist workforce
 - Report findings

Methods

North Carolina Health Professions Data System (HPDS)

- 30 years of data on 19 health professions from 12 different licensure boards
- Derived from annual licensure files from the North Carolina Board of Optometry

Optometrist Expert Advisory Group

- Provided clinical, educational, regulatory, employment and policy perspectives.

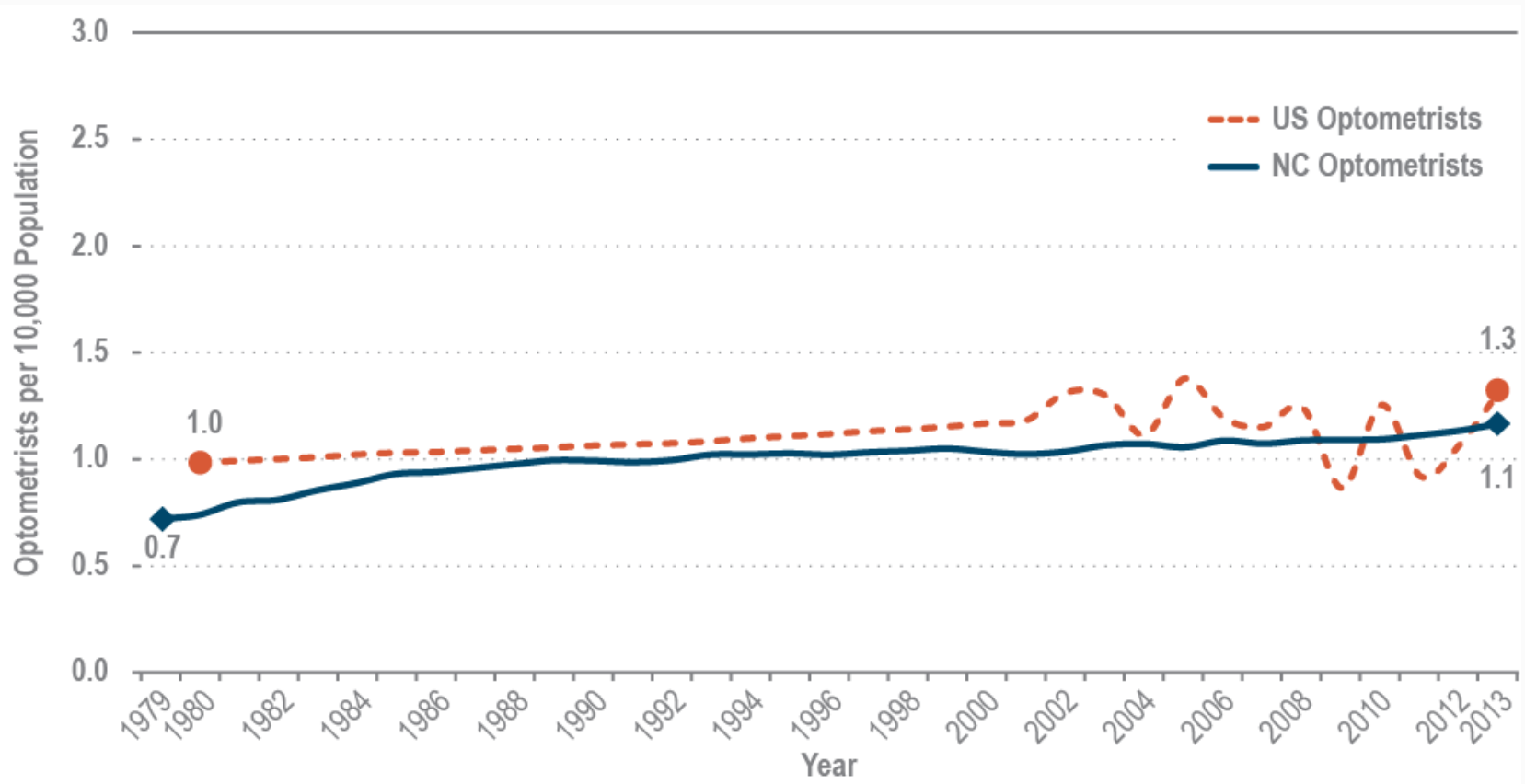
Other Sources

Supply & Distribution



North Carolina's supply of optometrists tracking with US supply

Optometrists per 10,000 Population, United States and North Carolina, 1979-2013



Note: Data include, active, in-state optometrists licensed in North Carolina as of October 31, 2013.

Source: North Carolina Health Professions Data System, with data derived from the North Carolina Board of Optometry, 1979-2013; US Bureau of Labor Statistics, various years; HRSA, BWH, NCHWA; North Carolina Office of State Planning. North Carolina Population Data are based on 1980, 2000 and 2010 Censuses.

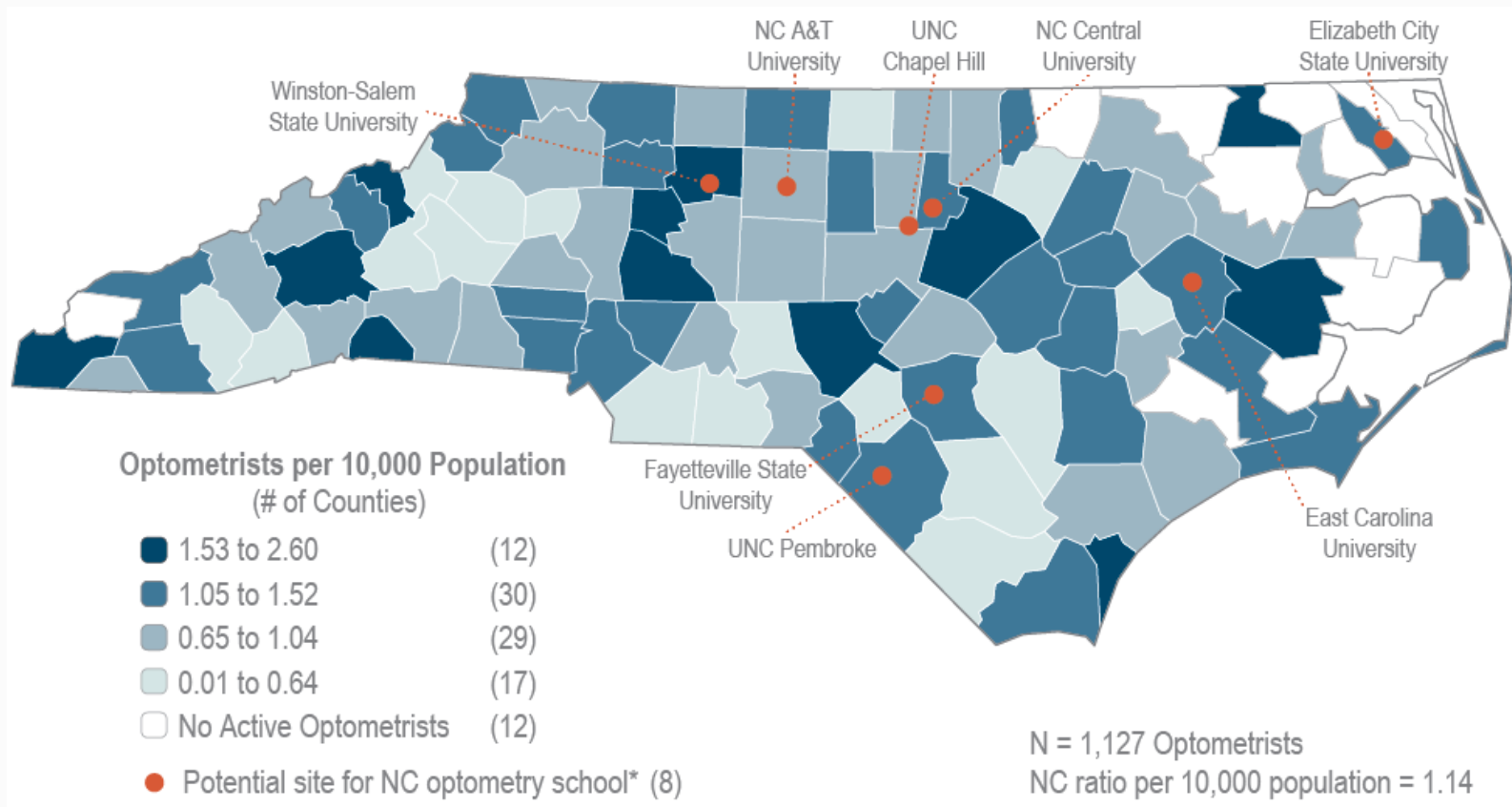
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Optometrist coverage varies by region, with limited or no optometry coverage in 9 counties

- In 2013, 1,127 optometrists were in active practice in North Carolina
- Twelve counties had no optometry primary practice locations:
 - Three counties (Bertie, Pamlico, and Warren) had general optometry coverage at a branch location
 - Seven counties only had optometrist coverage in an assisted living, rehabilitation, or nursing home setting
 - Coverage only for specific groups, not the general population
 - Two counties (Camden and Tyrrell) did not have any type of optometrist coverage

Optometrist supply is lower in the northeast, higher in counties proposed for new school

Optometrists per 10,000 Population by Primary Practice Location, North Carolina, 2013



Note: Data include, active, instate optometrists licensed in North Carolina as of October 31, 2013. Branch office locations are not included in the map.

Source: North Carolina Health Professions Data System, with data derived from the North Carolina Board of Optometry, 2013; *North Carolina State Law 2014-100, Section 11.21(a).

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Workforce Demographics

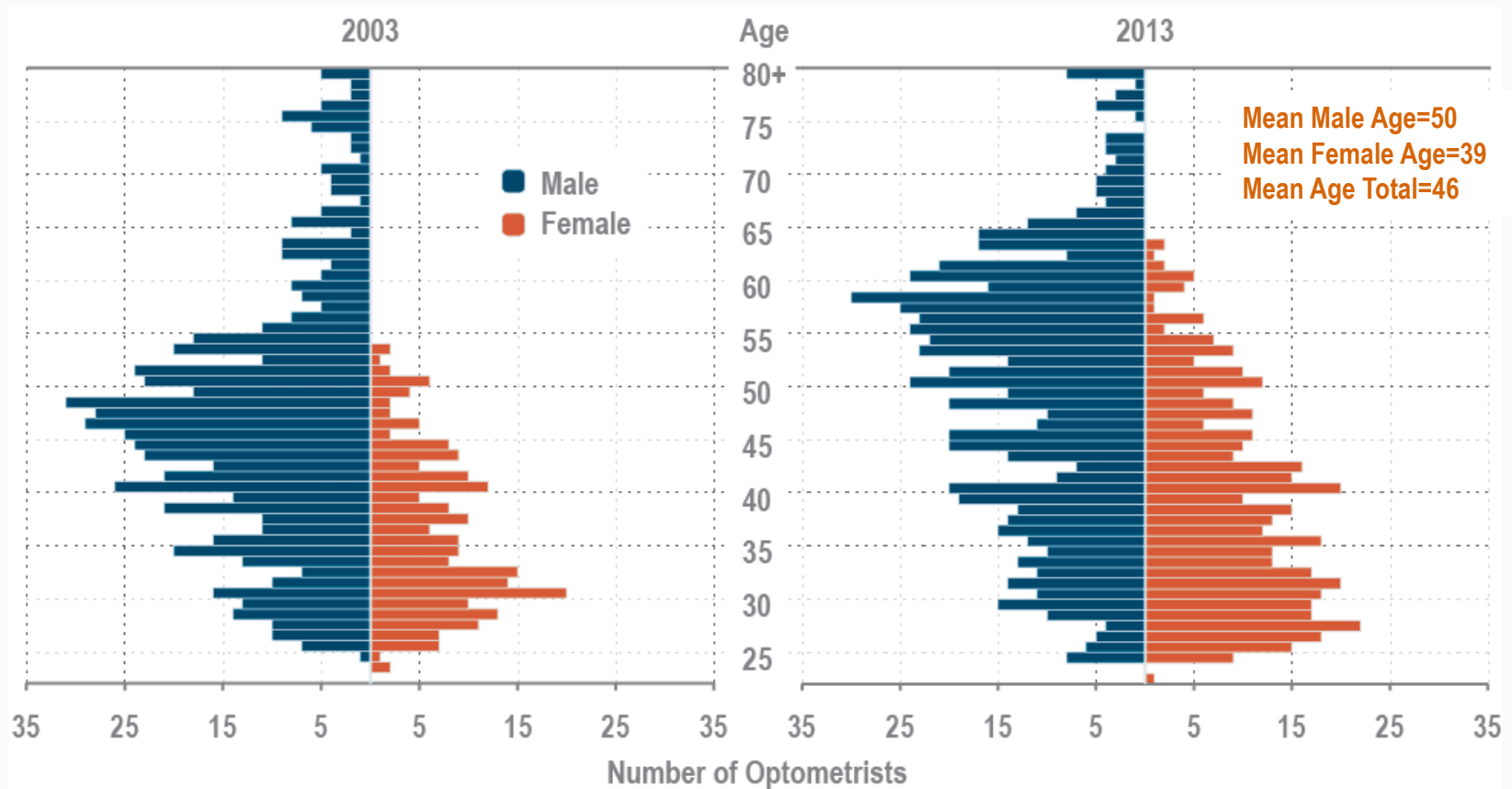


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Future supply of optometrist workforce is strong

Optometrist Workforce by Age and Gender, North Carolina, 2003 and 2013



Note: Data include, active, instate optometrists licensed in North Carolina as of October 31 of the respective year.

Source: North Carolina Health Professions Data System, with data derived from the North Carolina Board of Optometry, 2003 and 2013.

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Optometrist workforce diversifying but falls short of state diversity

Diversity in the North Carolina Population and Optometry Workforce

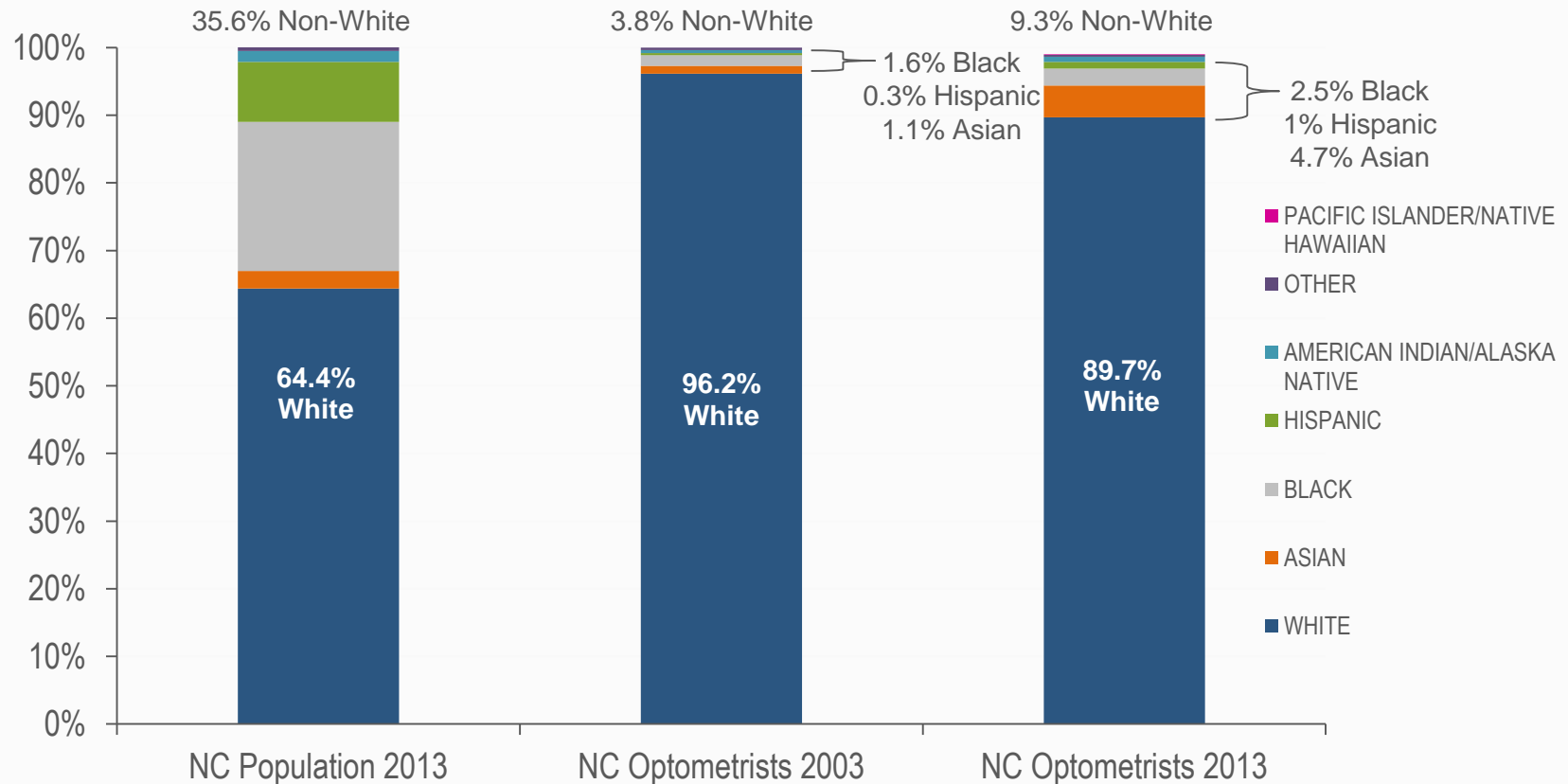


Figure includes all active, in-state optometrists licensed in NC as of October 31 of the respective year.

Source: North Carolina Health Professions Data System, with data derived from the NC Board of Optometry, 2003 & 2013.

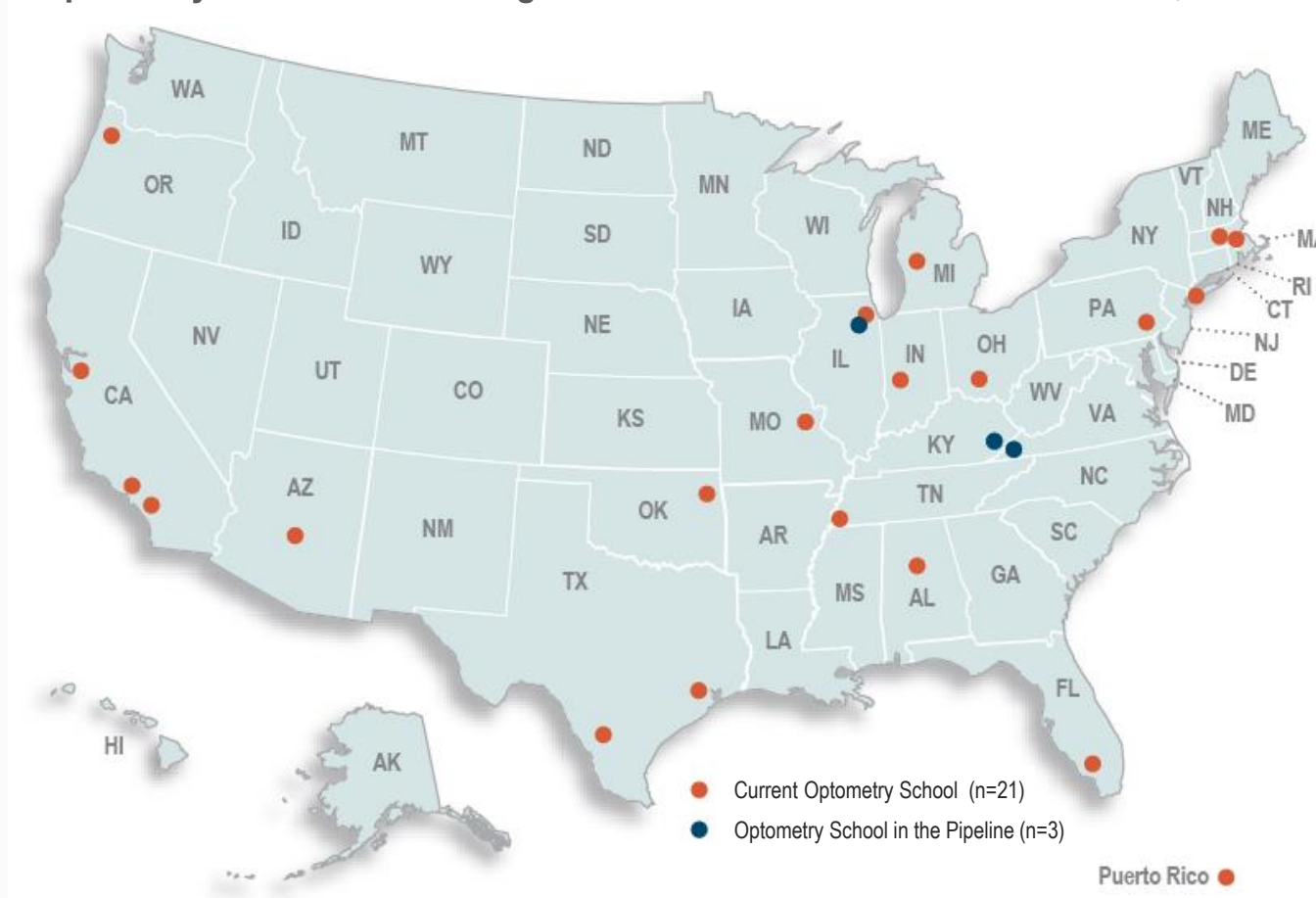
State population diversity data derived from U.S. Census Bureau 2013 State and County QuickFacts. Race data missing for 11 observations in 2013.

Education Data



There are 21 optometry schools in the US and Puerto Rico, with 3 more in development

Optometry Schools and Colleges in the United States and Puerto Rico, 2014



Data source: Association of Schools and Colleges of Optometry, 9/23/14

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

Optometry schools in the pipeline



3 optometry schools are currently in development:

- **University of Pikeville**
Pikeville, KY
Entering class of 60 Students
Fall 2016
- **Appalachian College of Optometry and Emory & Henry College**
Grundy, VA
Entering class of 48 Students
Fall 2016
- **Midwestern University**
Downers Grove, IL
Entering class of 50 Students
Projected Start Unknown

Optometry student enrollment is increasing

- 1,818 first year students enrolled in professional O.D. programs in the U.S. in 2013
 - a **22%** increase from 2008 (n=1,486).
 - **86%** of this increase was due to four schools that opened between 2008 and 2013, adding 286 first year students
 - **14%** of this increase was due to increases in first year enrollment (n=46)
- When proposed schools in KY, VA, and IL open, an additional 158 students will enroll each year
 - a **9%** increase from 2013

On average, approximately 30 NC residents enroll in optometry school each year

First Year NC Resident Enrollment in Optometry School

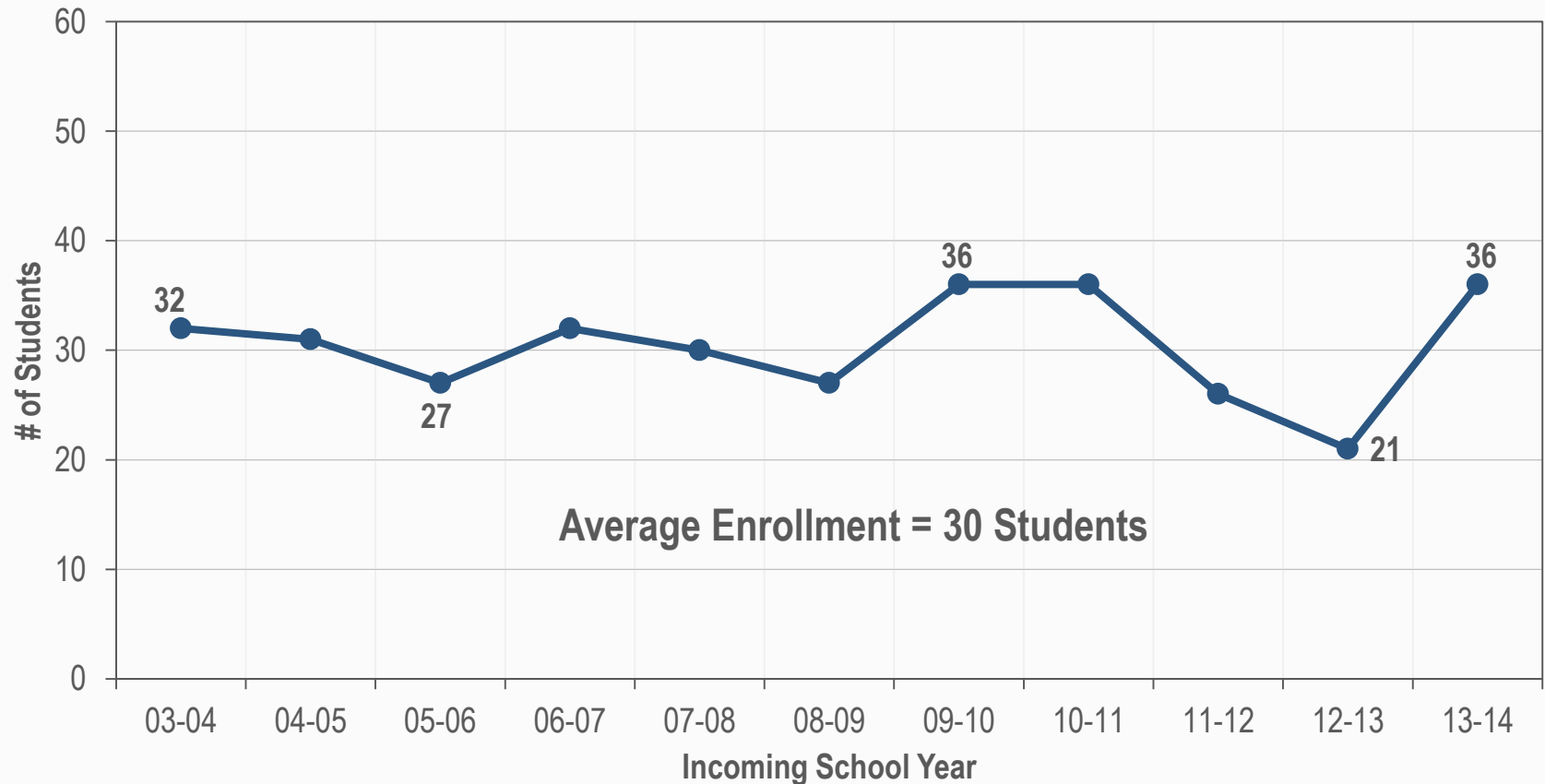


Figure includes all NC permanent residents entering their 1st year in optometry school, 2003 – 2014.
Source: Data derived from the Association of Schools and Colleges of Optometry, 2003 – 2014.

Optometry Expert Advisory Group



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Discussion

Changes in Practice Environment and Scope of Work

- Independent practices are struggling to compete with online and chain retailers on glasses and contacts
- Co-location of optometrists in practices with ophthalmologists is increasingly prevalent
- Optometrists provide varying scopes of services depending on the availability of other practitioners

Recommendations

- Reinststate the SREB Regional Contract Program in order to make tuition costs more equitable
- Structure loan forgiveness programs to require service in underserved areas of NC
- Expand clinical training opportunities for optometrists in NC through externships and residencies

Conclusions

- Strong future supply in pipeline
- Rapid growth of other optometry programs in other states
- North Carolina has reputation for being progressive state in which to practice
- State has attracted optometrists despite lack of an optometry school

Policy Implications

The UNC Board of Governors considered workforce and costs to start and annually maintain a school of optometry

They recommended against starting an optometry school in the UNC system, potentially saving state an estimated \$12-\$40 million in initial start-up costs and an estimated \$8-19 million in annual operation costs

Questions?

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