Trends in the Supply and Distribution of Optometrists in North Carolina

Erin Fraher, PhD MPP
Director
Program on Health Workforce Research & Policy
Cecil G. Sheps Center for Health Services Research, UNC-CH

Committee on Health Care Provider Practice Sustainability and Training/Additional Transparency

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Presentation overview

• What I covered in December, agenda for today
• Supply of optometrists - how many is enough?
  − Benchmark to national ratios
  − Monitor trends over time
• Distribution of optometrists - are they where we need them?
  − Rural versus urban
  − Health Professional Shortage Areas
• Demographic characteristics and hours worked
Health Workforce Presentations: Past and Present

December 16, 2013

- Physicians, dentists, new and emerging health professional roles in transformed health care system
- Graduate medical education for physicians: challenges and opportunities

January 21, 2014

- Trends in the supply and distribution of optometrists
- Trends in supply, distribution of other health professionals (categories for which we have data)

But before we dive into the deep end of the data

A short note on definitions

Image from: http://flasharespace.pbworks.com/w/page/48788369/5612ft%20%20Norman%20Rockwell%20Story
Our rural definition: based on OMB’s Core Based Statistical Areas

What’s a HPSA? And a PHPSA?

- Primary care HPSAs are counties designated by federal government (HRSA) as having:
  - inadequate number of primary health care professionals; or
  - population with unusually high needs for primary care; or
  - residents who face barriers to accessing primary care services

- **Persistent** HPSAs (PHPSAs) are counties designated as HPSAs from 1999 through 2009, or in 6 of the last 7 releases of HPSA definitions

- We use PHPSAs as proxy to identify counties facing persistent difficulty attracting and retaining health professionals

*HRSA = Health Resources and Services Administration, US Department of Health and Human Services*
Persistent Primary Care Health Professional Shortage Areas* (PHPSAs), North Carolina

North Carolina’s supply of optometrists tracking with US supply
**12 counties have no optometrists, and low supply in western and northeastern counties**

- In 2011, there were 1,054 optometrists in active practice in North Carolina
- Twelve counties had no optometrists
  - All but one, Currituck, are rural counties
  - Seven have had no optometrists since 1993
  - Ten are in eastern North Carolina; Graham and Swain counties are in the far western part of the state
- Areas that have contiguous counties with low supply
  - Western NC: includes Avery, McDowell, Burke, Caldwell and Alexander counties
  - Northeastern NC: includes Northampton, Bertie, Gates, Currituck and Camden counties

Or, if you like to see it in a picture.....

![Optometrists per 10,000 Population](image-url)

Figure includes all active, instate optometrists licensed in NC as of October 31, 2011.
Source: North Carolina Health Professions Data System, with data derived from the NC Board of Optometry, 2011.
Historically, relative even distribution between urban and rural counties, but gap widening. Rural supply at lowest level since 1985.

Supply in non-HPSA counties has been steady while supply in Persistent HPSAs has been declining.
No real threat from mass retirement. Female optometrists an average 11 years younger than male optometrists

<table>
<thead>
<tr>
<th>Age</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 and younger</td>
<td>125</td>
<td>11.9%</td>
</tr>
<tr>
<td>31-40</td>
<td>276</td>
<td>26.2%</td>
</tr>
<tr>
<td>41-50</td>
<td>255</td>
<td>24.2%</td>
</tr>
<tr>
<td>51-60</td>
<td>272</td>
<td>25.8%</td>
</tr>
<tr>
<td>61-70</td>
<td>89</td>
<td>8.4%</td>
</tr>
<tr>
<td>71 and Older</td>
<td>37</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Mean Male age=50  
Mean Female Age=39  
Mean age total=46

Figure includes all active, instate optometrists licensed in NC as of October 31, 2011.  
Source: North Carolina Health Professions Data System, with data derived from the NC Board of Optometry, 2011.

Increasing proportion of women in the optometrist workforce

Optometrists by Sex  
North Carolina, 1996 and 2011

Figure includes all active, instate 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, 1996-2011.
“Effective” workforce supply is driven by FTE, not headcount

Average Hours Worked per Week by Sex
Optometrists, North Carolina, 1996-2011

Males
Females

41.2
37.9
40.4
35.6

3.3 hour difference
4.8 hour difference

Questions?

Erin Fraher, PhD
Director
Program on Health Workforce Policy and Research
erin_fraher@unc.edu
919-966-5012
http://www.healthworkforce.unc.edu

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