Creating a Healthy Economy and a Healthy Population:
Why We Need to Pay Attention to the Rising Demand for Allied Health Workers in North Carolina

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August 22, 2006
# The NC HPDS at the Cecil G. Sheps Center for Health Services Research: 3 Main Product Lines

<table>
<thead>
<tr>
<th>Maintenance of Licensure Data Files for HPDS</th>
<th>Special Projects: Service to the State and the Institution</th>
<th>Allied Health Workforce Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>This function is the <strong>backbone</strong> of our work. We collect, clean, edit, and disseminate data on eighteen licensed health professions in NC. Data are available from 1979-present.</td>
<td>The HPDS often undertakes special research projects at the request of the NC AHEC, UNC Board of Governors (respond to legislation, make presentations), licensure boards etc. We infuse data into policy discussions regarding the need for new educational programs, changes in licensure laws etc.</td>
<td>This work is funded by the Duke Endowment and is done in collaboration with the Council for Allied Health in North Carolina and the NC AHEC. Over the past 7 years, we have developed innovative ways of assessing the need for allied health workers in North Carolina. Most recently our research has focused on the importance of the allied health workforce to North Carolina’s economy.</td>
</tr>
</tbody>
</table>
Enumerating the Allied Health Workforce: How Many and Where?

Validity, Reliability of Data, a Spectrum

Low
- Optional professional certification
- Radiologic Technicians/Technologists

Medium
- Mix of licensed and certified professionals
- Speech-Language Pathology

High
- Licensed professionals
- Physicians
- Nurses
- Dentists

Spectrum
What to do about unlicensed allied health professions?

- Amount, type and quality of data available from credentialing and certifying organizations varies.
- We use data from the North Carolina Employment Commission and the Bureau of Labor Statistics (Occupational Employment Survey) to look at total employment in allied health and health care in N.C.

And.....

- What policy makers and the professions also want is a measure of demand—in response, we developed an “allied health vacancy tracking survey”
- This presentation uses both these sources of data to tell the “allied health story” in North Carolina
Why Should Policy Makers Care About the Allied Health Care Workforce?
Economic Restructuring Underway

• Major decline in manufacturing employment due to:
  – International competition
  – Increased use of technology and improved productivity in domestic manufacturing sector
  – Recent economic recession

But...

• Growth in service occupations, including health care
Manufacturing and Health Care & Social Assistance Employment, NC, 1995-2005

# Manufacturing and Health Care and Social Assistant Jobs in Rural Areas of N.C.

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<tr>
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</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>377,937</td>
<td>273,729</td>
<td>21.8%</td>
<td>11.9%</td>
<td>-27.6%</td>
</tr>
<tr>
<td>Health care and social assistance</td>
<td>153,892</td>
<td>283,535</td>
<td>8.9%</td>
<td>12.4%</td>
<td>84.2%</td>
</tr>
</tbody>
</table>

Health Care Jobs in North Carolina, 2005

Allied Health Professions, 37%

Physicians, 5%

LPNs, 5%

Nurse aides, orderlies and attendants, 26%

RNs, 24%

Other, 3%

Total Health Care Jobs = 302,270

Note: "Other healthcare occupations" includes: chiropractors, dentists, optometrists, and pharmacists.
Sample Allied Health Professions

Allied health includes individuals who:

- Perform x-rays, mammograms, MRIs and other imaging services
- Perform lead and prostate cancer marker screenings
- Monitor individuals with liver disease, diabetes and leukemia
- Provide speech, physical and occupational therapy
- Perform dental cleanings
- Provide emergency medical services (EMTs and paramedics)
- Dispense prescriptions (pharmacy technicians)
- Provide counseling services (social workers)
- Code and manage medical records (health information management)
# Healthcare and Allied Health Jobs Grew, Overall Employment Remained Stagnant

Total State, Healthcare and Allied Health Employment, North Carolina, 1999-2005

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Total N.C. Employment</strong></td>
<td>3,801,670</td>
<td>3,809,690</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>Healthcare Jobs</strong></td>
<td>251,550</td>
<td>302,270</td>
<td>20.2%</td>
</tr>
<tr>
<td><strong>Allied Health Jobs</strong></td>
<td>76,590</td>
<td>111,630</td>
<td>45.8%</td>
</tr>
</tbody>
</table>

## North Carolina’s Fastest Growing Occupations

### % Change in Employment, 2002-2012

<table>
<thead>
<tr>
<th>Rank</th>
<th>Occupation</th>
<th>Projected Openings</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Medical Assistants</td>
<td>4,950</td>
<td>60.9</td>
</tr>
<tr>
<td>2</td>
<td>Occup. Ther. Aides</td>
<td>30</td>
<td>60.0</td>
</tr>
<tr>
<td>3</td>
<td>Dental Hygienists</td>
<td>2,590</td>
<td>53.9</td>
</tr>
<tr>
<td>4</td>
<td>Dental Assistants</td>
<td>3,120</td>
<td>53.0</td>
</tr>
<tr>
<td>5</td>
<td>Social and Human Services Assistants</td>
<td>5,110</td>
<td>48.4</td>
</tr>
<tr>
<td>6</td>
<td>Med. Record Tech.</td>
<td>2,620</td>
<td>48.3</td>
</tr>
<tr>
<td>7</td>
<td>Phys. Ther. Assist.</td>
<td>720</td>
<td>47.7</td>
</tr>
<tr>
<td>8</td>
<td>Fitness Trainers</td>
<td>2,780</td>
<td>47.6</td>
</tr>
<tr>
<td>9</td>
<td>Resp. Therapy Tech.</td>
<td>330</td>
<td>47.1</td>
</tr>
<tr>
<td>10</td>
<td>Respiratory Therapists</td>
<td>1,170</td>
<td>46.8</td>
</tr>
</tbody>
</table>

[http://eslmi23.esc.state.nc.us/projections/EmploymentOutlook.asp?version=aopengp&AreaType=01&Area=000037&PeriodID=06](http://eslmi23.esc.state.nc.us/projections/EmploymentOutlook.asp?version=aopengp&AreaType=01&Area=000037&PeriodID=06)
## Hourly and Annual Wages for Selected North Carolina Occupations, 2005

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Hourly Mean Wage</th>
<th>Annual Mean Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>$73.60</td>
<td>$153,072</td>
</tr>
<tr>
<td>RNs</td>
<td>$24.99</td>
<td>$51,970</td>
</tr>
<tr>
<td>LPNs</td>
<td>$16.80</td>
<td>$34,940</td>
</tr>
<tr>
<td>Allied health professions</td>
<td>$18.68</td>
<td>$39,647</td>
</tr>
<tr>
<td>All Occupations (North Carolina)</td>
<td>$16.57</td>
<td>$34,460</td>
</tr>
</tbody>
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The Allied Health Job Vacancy Tracking Project

- Purpose of project was to monitor newspaper and online listings for job vacancies
- Data collected February 7 – April 30, 2006
- Vacancy report data includes:
  - The number of vacancies
  - The distribution of vacancies across the state and between different professions
  - Types of employers advertising for allied health job vacancies

Collaborative effort between:

- Council for Allied Health in North Carolina
- AHEC North Carolina Area Health Education Centers Program
- SHEPS Center for Health Services Research, University of North Carolina at Chapel Hill
The Allied Health Job Vacancy Tracking Project

- Monitored newspapers, professional association websites, Indeed.com, and other online sources for vacancies of:
  
  - Medical Technologist
  - Medical Laboratory Technician
  - Occupational Therapist
  - Certified Occupational Therapy Assistant
  - Emergency Medical Technicians
  - Physical Therapist
  - Physical Therapy Assistant
  - Radiologic Technician
  - Radiologic Technologist
  - Speech Language Pathologist
  - Speech Language Pathology Assistant
**NC facing high vacancy rates in some allied health professions**

<table>
<thead>
<tr>
<th>Profession</th>
<th>Vacancies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Occupational Therapy Assistant</td>
<td>21.8</td>
</tr>
<tr>
<td>Physical Therapist</td>
<td>17.4</td>
</tr>
<tr>
<td>Occupational Therapist</td>
<td>13.4</td>
</tr>
<tr>
<td>Physical Therapy Assistant</td>
<td>9.8</td>
</tr>
<tr>
<td>Speech-Language Pathologist</td>
<td>7.5</td>
</tr>
<tr>
<td>EMT</td>
<td>4.1</td>
</tr>
<tr>
<td>Radiologic Technologist/Technician</td>
<td>4.0</td>
</tr>
</tbody>
</table>
Demand varies by region: Greatest demand in Area L, Coastal and Southern Regional AHECs

Allied Health Job Vacancy Advertisements per 10,000 Population by AHEC Region, North Carolina, 2006

Notes: North Carolina newspaper listings for select Allied Health professions tracked from February 5 to April 23, 2006 (N=2060). Sample excludes listings missing employer location (N=108) and listings for which candidates with multiple degree types were eligible (N=78). Source: North Carolina Allied Health Vacancy Tracking Project, Cecil G. Sheps Center for Health Services Research, 2006. Produced by: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill.
Demand for EMTs Highest in Eastern North Carolina

Ads for Emergency Medical Technicians as a Percent of Total Vacancy Ads by AHEC Region, North Carolina, 2006

- Mountain: 13%
- Eastern: 27%
- Coastal: 33%
- Charlotte: 11%
- Greensboro: 11%
- Southern Regional: 7%
- Northwest: 7%
- Wake: 9%
- Area L: 29%


Produced by: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill.

Notes: North Carolina newspaper listings for select Allied Health professions tracked from February 5 to April 23, 2006 (N=2060). Sample excludes listings missing employer location (N=108) and listings for which candidates with multiple degree types were eligible (N=78).
Summary of Issues: What Do We Know?

- As economy shifts from manufacturing to service employment, allied health employment is increasingly important to local and state economy.
- Allied health employment in North Carolina expected to increase and the state faces high vacancy rates in some professions.
- Vacancy rates are generally higher in rural, eastern North Carolina.
- Vacancy rates exacerbate existing maldistribution of health care workers.
- Potential investment in educating allied health workers pay large and immediate dividends due to high retention rates.
- Increasing number of allied health workers has potential to increase access to employment and improve access to health care services.
What’s Needed? Better Coordination of Allied Health Workforce Development Efforts
Allied Health Workforce Development Efforts are Fragmented

- Limited collaboration exists between policy makers, educators, employers and others charged with monitoring, planning and implement workforce strategies at the local and state level.

- Workforce shortages are not unique to individual employers or parts of the state and strategies to ameliorate these strategies needs to be coordinated.
Challenges to Moving Forward

Despite promising potential, issues exist:

• Salary and benefits of entry-level allied health care jobs not high

• Better marketing needed because allied health educational programs face serious challenges:
  – Too few applicants
  – Too few qualified applicants
  – Attrition
  – Faculty shortages
  – Lack of clinical placements
**Future Opportunities**

- Create opportunities for better collaboration between health workforce entities and workforce development boards
- Target specific health care professions and/or regions of the state for allied health workforce development
- Identify “best practices”—support and duplicate statewide:
  - programs to attract students to allied health education programs
  - innovative strategies to reduce attrition from community college programs
  - distance learning and multi-institution collaborative educational programs
  - career laddering opportunities: i.e. articulation agreements and collaboration between certificate, two-year and four-year educational programs.
  - data collection efforts on allied health workforce