The State of Allied Health in North Carolina

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Council for Allied Health in North Carolina
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The State of Allied Health in North Carolina

- Purpose is to provide an overview of issues and opportunities for the allied health workforce in North Carolina

- Report presents data on:
  - The importance of allied health to the state’s economy
  - Challenges confronting the workforce
  - Opportunities for future growth and collaboration

Report summarizes 6 years of workforce studies that have been a collaborative effort of:

- Council for Allied Health in North Carolina
- AHEC North Carolina Area Health Education Centers Program
- Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill
Why Should Policy Makers Care About Allied Health?
North Carolina’s economy is in transition

- 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 and Social Assistance Employment, N.C., 1990-2004

## North Carolina’s economy in transition

<table>
<thead>
<tr>
<th>Selected Industry Sector</th>
<th>% of Total NC Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1990</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>26.6%</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>8.5%</td>
</tr>
</tbody>
</table>
Allied health driving growth in the larger health care sector

- Over 42% of total job growth in the health care sector between 1999-2003 was due to growth of allied health jobs.

- Between 1999-2003, job growth in allied health outpaced growth in:
  - NC’s total workforce by 22.4%
  - broader health care sector by 5.5%.
Total Health Care Jobs in North Carolina, 2003

Total Health Care Jobs = 267,170

Allied Health Professions 35.2%
- Physicians 3.2%
- RNs 25.3%
- LPNs 6.5%
- Nurse aides, orderlies and attendants 26.5%


<table>
<thead>
<tr>
<th>Occupation</th>
<th>Hourly Mean Wage</th>
<th>Annual Mean Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>$73.55</td>
<td>$152,978</td>
</tr>
<tr>
<td>RNs</td>
<td>$23.50</td>
<td>$48,870</td>
</tr>
<tr>
<td>LPNs</td>
<td>$15.84</td>
<td>$32,940</td>
</tr>
<tr>
<td>Nursing aides, orderlies, and attendants</td>
<td>$9.00</td>
<td>$18,716</td>
</tr>
<tr>
<td><strong>Allied health professions</strong></td>
<td><strong>$17.03</strong></td>
<td><strong>$35,428</strong></td>
</tr>
<tr>
<td>Other healthcare occupations</td>
<td>$48.39</td>
<td>$100,640</td>
</tr>
<tr>
<td>All Occupations (North Carolina)</td>
<td>$16.17</td>
<td>$33,630</td>
</tr>
</tbody>
</table>

# The Spectrum of Allied Health Wages: North Carolina, 2003

## LOWER-WAGE Allied Health Occupations

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Hourly Mean Wage</th>
<th>Annual Mean Wage</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy aides</td>
<td>$9.22</td>
<td>$19,170</td>
<td>1,040</td>
</tr>
<tr>
<td>Dietetic technicians</td>
<td>$10.07</td>
<td>$20,950</td>
<td>890</td>
</tr>
<tr>
<td>Psychiatric aides</td>
<td>$10.20</td>
<td>$21,210</td>
<td>2,000</td>
</tr>
</tbody>
</table>

## HIGHER-WAGE Allied Health Occupations

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Hourly Mean Wage</th>
<th>Annual Mean Wage</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical therapists</td>
<td>$29.36</td>
<td>$61,080</td>
<td>3,430</td>
</tr>
<tr>
<td>Speech-language pathologists</td>
<td>$29.40</td>
<td>$61,160</td>
<td>2,930</td>
</tr>
<tr>
<td>Physician assistants</td>
<td>$34.15</td>
<td>$71,030</td>
<td>2,310</td>
</tr>
</tbody>
</table>

Allied health jobs projected to grow

- Allied health jobs represent a stable and relatively profitable employment sector
  - Relatively less vulnerable to international competition
  - More resilient to economic recession
  - Not as susceptible to outsourcing trends seen in manufacturing and other sectors

- Allied health projected to add 28,570 jobs between 2000 and 2010—a 36% increase over 2000 employment.
Population Growth Relative to 1995, United States and North Carolina, 1995-2004

Sources: US Bureau of the Census; North Carolina Office of State Planning
The Challenge to Estimate Allied Health Workforce Supply
How Will We Know?

Policy makers continue to struggle to answer the key questions:

- How many allied health professionals are practicing in the state?
- Is NC producing too many, too few or the right number of professionals?
- Are the types and locations of educational programs appropriate?
- How will new technologies change the demand for certain skills within the allied health professions?
- Are changes in licensure/certification requirements, scope of practice regulations or practice acts needed?
The Allied Health Workforce Studies

- Completed 6 workforce studies

Physical Therapy 2000
Speech-Language Pathology 2001
Health Information Management 2002
The Allied Health Workforce Studies

- Completed 6 workforce studies

- The State of Allied Health in North Carolina
  - A focus on: The Respiratory Therapy Workforce
    - Respiratory Care 2004

- Scanning the Radiologic Sciences Workforce in North Carolina
  - Radiological Sciences 2003

- The State of Allied Health in North Carolina
  - A focus on: The Clinical Laboratory Sciences Workforce
    - Clinical Lab Sciences 2004
The Allied Health Workforce Studies

- Vacancy report completed in 2005

- What have we learned?
Rural/Urban Disparities

There are persistent disparities between rural and urban areas in the supply of allied health workers. For example:

- In 2000, areas not designated as health professional shortage areas (HPSAs) had 4 times as many PTs as whole county HPSAs

- In 2001, rural areas had 2.5 SLPs per 10,000 population compared to 4.3 in urban areas

- In 2003, one NC county (Hyde) did not have a radiologic technologist.

- In 2004, 13 counties did not have a respiratory therapist; 10 of these were rural and 7 were in the northeastern region of the state.
There is a greater reliance on assistive personnel in rural areas

Physical Therapist Assistants per Physical Therapist, North Carolina, 1979-2003
Allied health workers cluster near training institutions. Retention of students is high

<table>
<thead>
<tr>
<th>Percentage of Students Remaining Instate After Graduating from a North Carolina Educational Program, Select Allied Health Professions</th>
<th>% of Students Remaining Instate After Graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Information Technology</td>
<td>86</td>
</tr>
<tr>
<td>Radiologic Technology/Medical Imaging</td>
<td>84</td>
</tr>
<tr>
<td>Health Information Administration</td>
<td>77</td>
</tr>
<tr>
<td>Radiation Therapy</td>
<td>76</td>
</tr>
<tr>
<td>Physical Therapist Assistant</td>
<td>75</td>
</tr>
<tr>
<td>Nuclear Medicine Technology</td>
<td>75</td>
</tr>
<tr>
<td>Speech-Language Pathology</td>
<td>69</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>54</td>
</tr>
</tbody>
</table>

Source: Allied Health Workforce Reports
Location of Allied Health Programs* and Total Enrollment in Allied Health Programs, North Carolina Community Colleges and University Programs, 2004

Total Enrollment in Allied Health Programs**
(# of Counties)
- 500 or More (8)
- 200 to 499 (13)
- 100 to 199 (16)
- Less than 100 (21)
- No allied health programs available in county (42)

*Locations of community colleges and universities are mapped to the zip code centroid.
**Enrollment of each community college is mapped to the county where the community college is located. Sampson CC and Craven CC have allied health programs, but no students enrolled for past three years. Enrollment data were unavailable for programs at Lenoir-Rhyne College in Catawba County.

What Have We Learned?

- Educational programs face serious challenges:
  - Too few applicants
  - Too few *qualified* applicants
  - Attrition
  - Faculty shortages
  - Lack of clinical placements
Ratio of Applications to Capacity of Programs, ASAHP Survey, 2004

Programs with Fewer Applicants than Slots
Health Information Management and Rehabilitation Counseling

Programs with only 1-2 applicants per slot
Respiratory Therapist, Medical Technology, Occupational Therapy, Speech-Language Pathology/Aud., Cytotechnology, Respiratory Therapy Technician

Programs with more than 2 applicants per slot
Dietetics, Diagnostic Medical Sonography, Physical Therapy, Nuclear Medicine Technology, Dental Hygiene, Radiography, Physician Assistant
Ratio of Enrollment to Capacity of Programs, ASAHP Survey, 2004

Programs with Fewer than Half Slots Filled
Health Information Management, Rehabilitation Counseling

Programs under 90% Capacity
Cytotechnology, Speech-Language Pathology/Aud., Medical Technology, Occupational Therapy, Respiratory Therapist, Dental Hygiene, Nuclear Medicine Technology, Diagnostic Medical Sonography, Physical Therapy

Programs at or above Capacity
Physician Assistant, Respiratory Therapy Technician, Radiography, Radiation Therapy Technology, Dietetics
Community college attrition rates vary from 0-80%.

High degree of variability in attrition rates between educational programs and types of allied health training programs:
- 10% for medical technologist versus 47% for medical laboratory technician
- 30% for respiratory therapy programs
- 13-23% for radiation therapy and 22% for radiologic technology programs
Why Such High Attrition Rates?

- Academic underpreparedness
- Motivation and commitment issues
- Students unprepared for reality of working with body fluids, night and weekend work and physical demands
- Financial difficulties
- NC community college system developing consistent definition of attrition and has identified “model” programs to identify factors that lead to a greater than 70% retention rate.
Faculty Recruitment and Retention

- Faculty salaries cannot compete with clinical salaries and increasing accreditation standards require faculty to have advanced degree. Some faculty prefer to return to clinical practice or retire.

- Faculty shortages constrict future supply by reducing number of individuals able to teach courses and supervise clinical placements:
  - Almost two-thirds of respiratory programs and one-third of medical laboratory programs couldn’t find enough individuals to supervise clinical rotations
  - Nearly half of respiratory therapy programs and one-third of medical technologist programs couldn’t find enough faculty to teach coursework.
Clinical Placements

- Lack of clinical sites is chief complaint of some educational institutions but not all sites being used….better communication is needed between educational institutions and employers.

- Clinical education is expensive. National: average cost to student of in-state two-year associate degree in allied health = $5,000, average cost to community college = $35,000 (AMA).

- North Carolina State Board of Community Colleges has asked legislature (H.B. 573) to declare allied health programs high cost.
Diversity in the Allied Health Professions

- In 2003, 31% of North Carolinians identified themselves as non-white or hispanic
- Most associations and credentialing entities do not collect data on racial and ethnic diversity
- Data from licensure files indicate the workforce is not as diverse as the population:

<table>
<thead>
<tr>
<th>Profession</th>
<th>% non-white</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Hygienists</td>
<td>5%</td>
</tr>
<tr>
<td>Physical Therapists</td>
<td>6%</td>
</tr>
<tr>
<td>Physical Therapist Asst.</td>
<td>9%</td>
</tr>
</tbody>
</table>
But student body is increasingly diverse

Allied Health Students Enrolled in North Carolina Community Colleges by Race and Ethnicity, 2003-04

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, Non-Hispanic</td>
<td>62%</td>
</tr>
<tr>
<td>Black, Non-Hispanic</td>
<td>32%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2%</td>
</tr>
<tr>
<td>American Indian</td>
<td>2%</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>1%</td>
</tr>
<tr>
<td>Other/Unknown/Multiple</td>
<td>1%</td>
</tr>
</tbody>
</table>

Total Students Enrolled in Allied Health Programs = 12,031

Source: PARE, NCCCS, 04/26/05, data exclude students in Nursing, Nursing Assistant, Practical Nursing and Veterinary Medical Technology
What role does the Council play in addressing allied health workforce issues?
The Council’s Role

- Council plays role as neutral convener to develop, nurture and sustain solid partnerships with employers, practitioners and educators to solve local/regional/state workforce shortages

- Council needed to support data collection and ongoing workforce surveillance
Current Allied Health Supply Cycle

- **Ideal intervention point**
- **Typical intervention point**

Allied health professions
Ideal Allied Health Supply Cycle

- Supply
- Time

- Ideal intervention point
- Typical intervention point

Allied health professions
The Council’s Role

Council plays role in disseminating health workforce findings to:

- The UNC Board of Governors and the North Carolina Community College System to assist in educational program planning efforts and initiatives

- AHECs and Regional Workforce Planning Groups
  - In collaborative workforce planning initiatives involving educators, employers, local workforce development boards
Workforce data provide objective information for discussions of difficult professional issues to facilitate communication among disparate groups:

- Between competing HIM credentialing organizations about development of minimum educational qualifications
- Between SLP licensure board and school employers about differences in licensing requirements
Results and Outcomes of the Reports:
Increased Attention to Allied Health Workforce Issues

- **Press**
  - Brought exposure to the allied health professions
  - Featured in local, state and national publications (newspapers, magazines, newsletters)

- **Technical Assistance**
  - To other states and/or organizations to assess allied health trends
Future Role of Council?

- Increased partnering with workforce development boards to transition displaced workers into allied health professions.