Are We Preparing the Allied Health Workforce North Carolina Will Need Now and in the Future?

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People ask us: “Will North Carolina have the right number of health professionals it needs now and in the future?”

I’d like to reframe as: **What will be the implications of rapid health system change on the:**

1. different roles health professionals will play in different employment settings?
2. competencies allied health professions need now and in future?

*How will we get to where we need to be?*
With or without health reform, current system is not sustainable

- **Demand side**: aging population, increase in chronic disease, health system consolidation, new models of care, payment policy changes, rising patient expectations

- **Supply Side**: health workforce deployment is rigid, turf wars abound, and productivity is lagging

Whether or not North Carolina implements health reform, cost and quality pressures are driving health system change
Health care employment has outpaced overall employment; allied health growing fastest

Therapies growing fastest; within therapies, assistant jobs growing most rapidly

Growth in Health Professionals per 10,000 Population Since 1981
North Carolina

PTs and PTAs grew much more rapidly relative to physicians, nurses and pharmacists

Sources: NC Health Professions Data System with data derived from the North Carolina Boards of Physical Therapy Examiners, Medicine, Nursing and Pharmacy.
2011 Allied Health vacancy data showed high demand for therapy and health information management professions

<table>
<thead>
<tr>
<th>Rank</th>
<th>Profession</th>
<th>Workforce Size</th>
<th>Vacant Positions</th>
<th>Vacancy Index</th>
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<tbody>
<tr>
<td>1</td>
<td>Occupational Therapy Assistant</td>
<td>880</td>
<td>102</td>
<td>11.6</td>
</tr>
<tr>
<td>2</td>
<td>Occupational Therapist</td>
<td>2,660</td>
<td>232</td>
<td>8.7</td>
</tr>
<tr>
<td>3</td>
<td>Physical Therapist Assistant</td>
<td>2,020</td>
<td>170</td>
<td>8.4</td>
</tr>
<tr>
<td>4</td>
<td>Physical Therapist</td>
<td>4,530</td>
<td>274</td>
<td>6.0</td>
</tr>
<tr>
<td>5</td>
<td>Speech Language Pathologist</td>
<td>3,630</td>
<td>202</td>
<td>5.6</td>
</tr>
<tr>
<td>6</td>
<td>Health Information Management</td>
<td>5,110</td>
<td>202</td>
<td>4.0</td>
</tr>
<tr>
<td>7</td>
<td>Clinical Laboratory Sciences</td>
<td>9,090</td>
<td>139</td>
<td>1.5</td>
</tr>
<tr>
<td>8</td>
<td>Medical Assistant</td>
<td>11,970</td>
<td>164</td>
<td>1.4</td>
</tr>
<tr>
<td>9</td>
<td>Imaging</td>
<td>9,680</td>
<td>68</td>
<td>0.7</td>
</tr>
<tr>
<td>10</td>
<td>Emergency Medical Services</td>
<td>8,940</td>
<td>46</td>
<td>0.5</td>
</tr>
</tbody>
</table>

The vacancy index is calculated by dividing the number of positions advertised by the profession’s total workforce size and multiplying by 100.

Sources: NC Health Professions Data System Allied Health Job Vacancy Tracking Project with funding provided by the North Carolina Department of Commerce. Job listings tracked from 9/18/11 to 11/26/11 (N=1599).
But more people are doing less

- Of $2.6 trillion spent nationally on health care, 56% is wages for health workers
- Workforce is LESS productive now than it was 20 years ago...

Health reform and the new world of health workforce planning

All about the redesign of *how* health care is delivered—less emphasis on *who* delivers care:

- Patient Centered Medical Home
- Accountable Care Organizations
- Technology

Shift will require more “flexible” workforce with new skills and competencies
Accountable Care Organizations & Patient Centered Medical Homes

Key characteristics

- Emphasis on primary and preventative care
- Health care is integrated across:
  - medical sub-specialties, home health agencies and nursing homes
  - community- and home-based services
- Technology used to monitor health outcomes
- Payment incentives promote accountability, move toward “risk-based” and “value-based” models of care
- Designed to lower cost, increase quality, improve patient experience
Different health system means different workers

A transformed health care system will require a transformed workforce.

The people who will support health system transformation for communities and populations will require different knowledge and skills....in prevention, care coordination, care process re-engineering, dissemination of best practices, team-based care, continuous quality improvement, and the use of data to support a transformed system.

Flexible workforce, with new competencies, needed in transformed system

A more flexible use of workers is needed to improve care delivery and efficiency that includes:

1. Existing workers taking on new roles in new models of care
2. Existing workers shifting employment settings
3. Existing workers moving between needed specialties and changing services they offer
4. New types of health professionals performing new functions
5. Broader implementation of true team-based models of care and education
1. Existing workers will take on new roles in new models of care

- To date, most workforce policy focus has been on:
  - asking how many new health professionals we will need
  - redesigning educational curriculum for students in the pipeline

- But it is workers already in the system who will transform care

- Need more continuing education opportunities to allow workers to upgrade their skills and gain competencies needed in new models of care, including:
  - care coordination, population health management, patient education and engagement etc.
2. Existing workforce will shift from acute to ambulatory, community- and home-based settings

- Changes in payment policy and health system organization:
  - Shift from fee-for-service toward bundled care payments, risk- and value-based models
  - Fines that penalize hospitals for readmissions
  - Rapid consolidation of care
- Will increasingly shift health care—and the health care workforce—from expensive inpatient settings to ambulatory, community and home-based settings
- Generally, we don’t train health professionals in these settings
- Current workforce not prepared to meet patient on “their turf”
Hospitals currently have the highest number of allied health vacancies, but this will change rapidly.

In the next 5-10 years, this chart will likely “flip” so rehabilitation, home health, and long-term care will top vacancies.

**Demand by Employment Setting**

<table>
<thead>
<tr>
<th>Employment Setting</th>
<th>Percentage of Total Vacancies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>37%</td>
</tr>
<tr>
<td>Long-term care facility</td>
<td>21%</td>
</tr>
<tr>
<td>Practice</td>
<td>20%</td>
</tr>
<tr>
<td>Home health</td>
<td>8%</td>
</tr>
<tr>
<td>School</td>
<td>7%</td>
</tr>
<tr>
<td>Government</td>
<td>2%</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>2%</td>
</tr>
<tr>
<td>Staffing</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
</tbody>
</table>

*Fall 2011 Data*

Sources: NC Health Professions Data System Allied Health Job Vacancy Tracking Project with funding provided by the North Carolina Department of Commerce. Job listings tracked from 9/18/11 to 11/26/11 (N=1599).
3. Existing workforce will need more career flexibility

- Rapid and ongoing health system change will require a workforce with “career flexibility”
- “Clinicians want well-defined career frameworks that provide flexibility to change roles and settings, develop new capabilities and alter their professional focus in response to the changing healthcare environment, the needs of patients and their own aspirations” (NHS England)
- Need more generalists, fewer specialists
4. New types of health professional roles are emerging in evolving system

- Patient navigators
- Nurse case managers
- Care coordinators
- Community health workers
- Care transition specialists
- Living skills specialists
- Patient family activator
- Grandaids
- Paramedics
- Home health aids
- Peer and family mentors

- All these professions play role in managing patient transitions between home, community, ambulatory and acute care health settings
- Evidence shows improved care transitions reduce unnecessary hospital admissions, lower costs and improve patient satisfaction
5. Need to develop true team-based models of care and education

- How do new roles “fit” with existing health professionals in team-based models of care?
- Chicken or egg: what comes first team-based practice or team-based education?
- Significant professional resistance exists

Real and lasting change cannot happen without simultaneously addressing payment, regulatory and education policy.
Who is on the team? Allied Health professions surprisingly not diverse

Allied Health Diversity vs. State Diversity, North Carolina, 2009

<table>
<thead>
<tr>
<th>Profession</th>
<th>NC DIVERSITY</th>
<th>PT</th>
<th>PTA</th>
<th>OT</th>
<th>OTA</th>
<th>RT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=9,045,705</td>
<td>n=4,738</td>
<td>n=2,183</td>
<td>n=2,343</td>
<td>n=1,057</td>
<td>n=3,828</td>
</tr>
<tr>
<td>Other/Multiracial</td>
<td>33%</td>
<td>13%</td>
<td>12%</td>
<td>11%</td>
<td>11%</td>
<td>17%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>67%</td>
<td>87%</td>
<td>88%</td>
<td>89%</td>
<td>89%</td>
<td>83%</td>
</tr>
<tr>
<td>African American/Black</td>
<td>17%</td>
<td>11%</td>
<td>11%</td>
<td>17%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>White</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

(%) nonwhite

n=9,045,705  n=4,738  n=2,183  n=2,343  n=1,057  n=3,828
Need more proactive workforce planning. But how do we get there from here?
Engaging clinicians and patients in designing new models of care (1)

- New Zealand doing innovative work engaging clinicians and patients in designing future health care system
- Transforming from ground up, rather than top down
- Constructing “idealized patient journeys” in mental health, aged care, primary care, maternity services, rehabilitation services, eye health and musculoskeletal health
- Identifying workforce changes needed to enable new models of care
Engaging clinicians and patients in designing new models of care (2)

- Process involves asking clinicians to:
  - Identify clinical vignettes that account for majority of patient encounters in each clinical service area
  - Work with patients to describe a typical patient journey versus the “ideal” journey for each vignette

- Ideal journey must meet doubling of demand at cost < 140% and no decrease in access or quality

- Outcome produces two results:
  - Identifies what workers, IT and facilities are needed to enable scenarios
  - Develops implementation plan that identifies barriers to implementing idealized journeys
Engaging employers in reconfiguring the workforce (1)

- Employers under huge pressure to retool workforce
- Countless experimentationations underway with new roles
- Employers recognizing that rapid health system change:
  - requires not only producing “shiny new graduates” but also upgrading skills of existing workforce
  - focusing less on professions, more on flexible roles needed to better coordinate and integrate care across settings
  - identifying and codifying emerging health professional roles and then training for them
Engaging employers in reconfiguring the workforce (2)

Much of this work is occurring on the “the fly”; we need better coordination of efforts, including:

- Employers working more closely with the education system to develop new curriculum needed so health professionals can take on new roles in new models of care

- Employers, educators, and AHEC working together to:
  - develop more community- and home-based clinical placements
  - identify and support innovative, “model” interprofessional practice sites
Engaging employers in reconfiguring the workforce(3)

- As innovators in clinical practice, employers need to play lead role in:
  - testing and evaluating outcomes of innovative roles for existing workers
  - measuring outcomes of introducing new health professionals into practice
  - identifying successful training needed to enable workers to function in new roles and new settings
- This role is essential to build evidence base required to allow changes in licensure, accreditation and credentialing required for more flexible deployment of workforce
Designing a workforce for health, not a health workforce

- Increased focus on keeping people out of hospital and caring for patients in community and home
- Need to expand health workforce planning efforts to include workers in community and home-based settings
- Embrace role of social workers, patient navigators, community health workers, home health workers, dieticians and other community-based workers
- Need better integration between health workforce and public health workforce planning
- Need to workforce plan for population health, not for needs of professions
Building stronger partnerships with community colleges

- University system needs to secure future pipeline—more than 20% of graduates of four year institutions enter from community college system\(^1\)

- In last 15 years, NCCCS has trained over a quarter million (258,713) allied health professionals. More than nursing.

- Over half (56%) were Emergency Medicine professionals who upgraded skills through continuing education

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Distribution of allied health program completers by type of program, 1997-2012

N=258,713 allied health professionals trained in the NCCS between 1997-2012

- EMT: 56%
- Other health care professionals: 16%
- Health Information: 10%
- Dental Care: 3%
- Vision Care: <1%
- Therapy/Rehab: 3%
- Diagnostic Services: 12%

Allied health programs with top 10 number of program completers

<table>
<thead>
<tr>
<th>Rank</th>
<th>Program</th>
<th># Completers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EMT Basic</td>
<td>82,766</td>
</tr>
<tr>
<td>2</td>
<td>EMT Paramedic</td>
<td>30,633</td>
</tr>
<tr>
<td>3</td>
<td>Healthcare Billing and Coding</td>
<td>23,315</td>
</tr>
<tr>
<td>4</td>
<td>Phlebotomy</td>
<td>23,122</td>
</tr>
<tr>
<td>5</td>
<td>EMT Intermediate</td>
<td>16,763</td>
</tr>
<tr>
<td>6</td>
<td>Pharmacy Technology</td>
<td>16,399</td>
</tr>
<tr>
<td>7</td>
<td>Medical Responder</td>
<td>14,384</td>
</tr>
<tr>
<td>8</td>
<td>Medical Assisting</td>
<td>12,729</td>
</tr>
<tr>
<td>9</td>
<td>Human Services Technology</td>
<td>4,614</td>
</tr>
<tr>
<td></td>
<td><em>(includes Animal Assisted Interactions, Dev. Disabilities, Gerontology, Mental Health, Social Service and Substance Abuse)</em></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Radiography</td>
<td>4,300</td>
</tr>
</tbody>
</table>

Building stronger partnerships with community colleges

Allied health career ladders are broken and missing rungs

- Speech Language Pathology Assistant, Physical Therapy Assistant, Occupational Therapy Assistant and Pharmacy Technology are terminal degrees
- Yet Speech Language Pathology, Physical Therapy, Occupational Therapy, and Pharmacy require Masters or Doctoral degree for entry to practice
- Students with associate degree and prior experience in EMS, PTA, OTA, etc. are stronger candidates for these four year programs
Building stronger partnerships with community colleges

To allow students to upgrade skills, need to develop:

- **Statewide** articulation agreements that expand 2+2 programs beyond existing programs in nursing and neurodiagnostics/sleep science

- **New statewide** 2+4 programs that allow students to matriculate into post-baccalaureate programs such as PT, Pharmacy, OT and SLP
Using workforce data to shape policy

Traditionally, workforce planning efforts in NC

- Are reactive—we wait for educational program to ask permission to plan, rather than identifying areas of state or health professions where new programs are needed
- Lack coordination between university system, community college systems and employers
- Limited attention paid to one of largest segment of health workforce—allied workers
Using workforce data to shape policy

The Sheps Center is available to work with UNC General Administration and Board of Governors, the North Carolina Community College System and AHEC to:

• better use data to inform health professions educational program planning

• proactively identify need for new education programs
Announcing.....

The Cecil G. Sheps Center has received a four year $1.8 million award from the Bureau of Health Professions in the Health Resources and Services Administration to launch the

Center for Workforce Innovation, Research and Policy

**Director:** Erin P. Fraher, PhD MPP

**Deputy Director:** Cheryl Jones PhD RN FAAN

**Investigators:** Mark Holmes PhD, Don Pathman MD, Jacqueline Halladay MD, Tom Ricketts PhD, Perri Morgan PhD PA

**Center’s Mission:** conduct and disseminate timely policy-relevant research on the flexible use of workers to improve health care delivery and efficiency in new models of care
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