

The State of Allied Health in North Carolina: From White Water Rafting to Ice Hockey

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North Carolina Health Professions Data System

Presentation to the Council for Allied Health

May 18, 2011



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Presentation Overview

North Carolina's allied health workforce planning efforts

- Supply data
- Demand data
- Linking allied health workforce shortages to economic development efforts
- Allied health workforce planning in the New World of Reform



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North Carolina
AHEC

creating a better state of health



Council for Allied Health
in North Carolina



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Allied Health Workforce Planning and Ice Hockey



“I skate to where
the puck is going to
be, not to where it
has been.” *–Wayne Gretsky*

....but how do we
know where the
puck is going to be?



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It All Starts with Robust Data from Multiple Sources

- **Supply side data on practitioners:**
licensure, employment, educational, professional data
- **Demand side data from employers:**
vacancies by employment setting, specialty and geography



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Supply Side Data



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The Allied Health Data Challenge

Validity, Reliability of Data, a *Spectrum*



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Supply Side Data: The North Carolina Health Professions Data System (HPDS)

Mission: To provide timely, objective and evidence-based analyses to inform health workforce decisions

- ~30 years of continuous, complete licensure (*not survey*) data
- A collaboration between AHEC, the University of NC and the health professions licensing boards
- Data are provided *voluntarily* by the boards—there is no legislation that requires this, there is no appropriation



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Annual Licensure Data from 1979-2010 Allow Longitudinal and Interprofessional Comparisons

- Physicians (MDs and DOs)
- Physician Assistants
- Dentists
- **Dental Hygienists**
- Optometrists
- Pharmacists
- **Physical Therapists**
- **Physical Therapist Assistants**
- **Respiratory Therapists (2004)**
- Registered Nurses
- Nurse Practitioners
- Certified Nurse Midwives (1985)
- Licensed Practical Nurses
- Chiropractors
- Podiatrists
- Psychologists
- Psychological Associates
- **Occupational Therapists (2006)**
- **Occupational Therapy Assistants (2006)**

*Have published data since 1979 for all professions unless otherwise noted in parentheses.

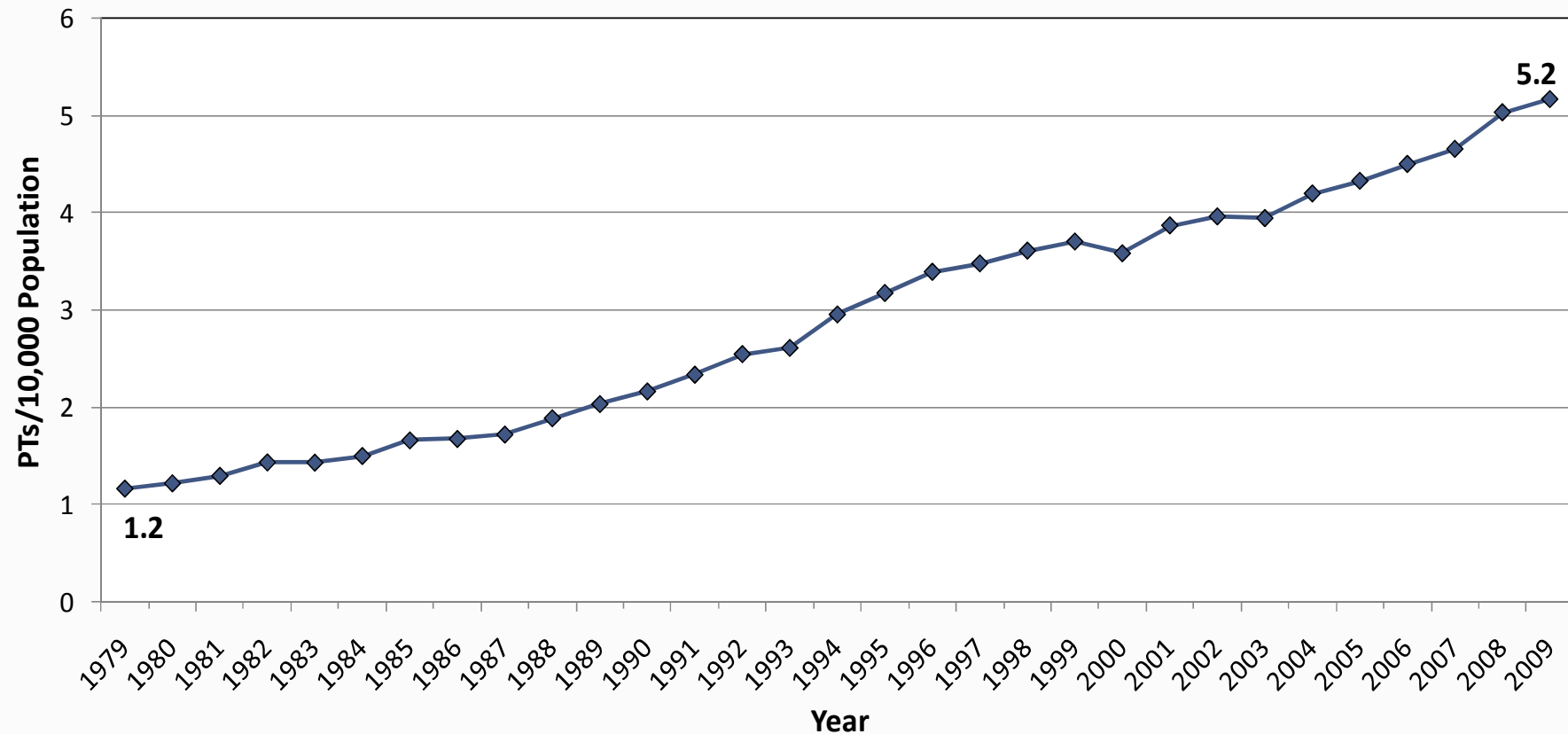


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Tracking Supply: Growth in Physical Therapists per 10,000 Population

Physical Therapists per 10,000 Population
North Carolina, 1979-2009



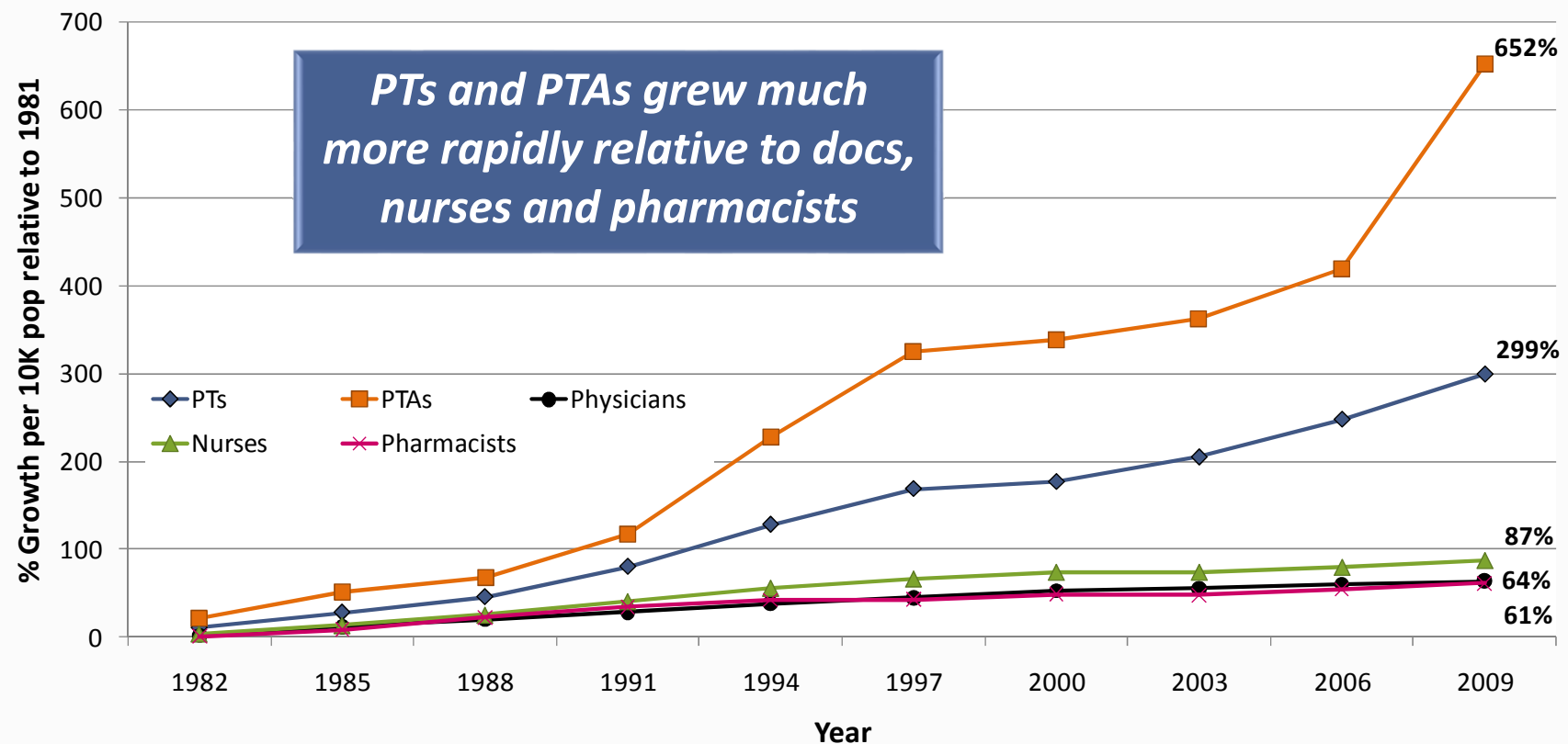
Sources: NC Health Professions Data System with data derived from the North Carolina Board of Physical Therapy Examiners.



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Tracking Interprofessional Supply Trends

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



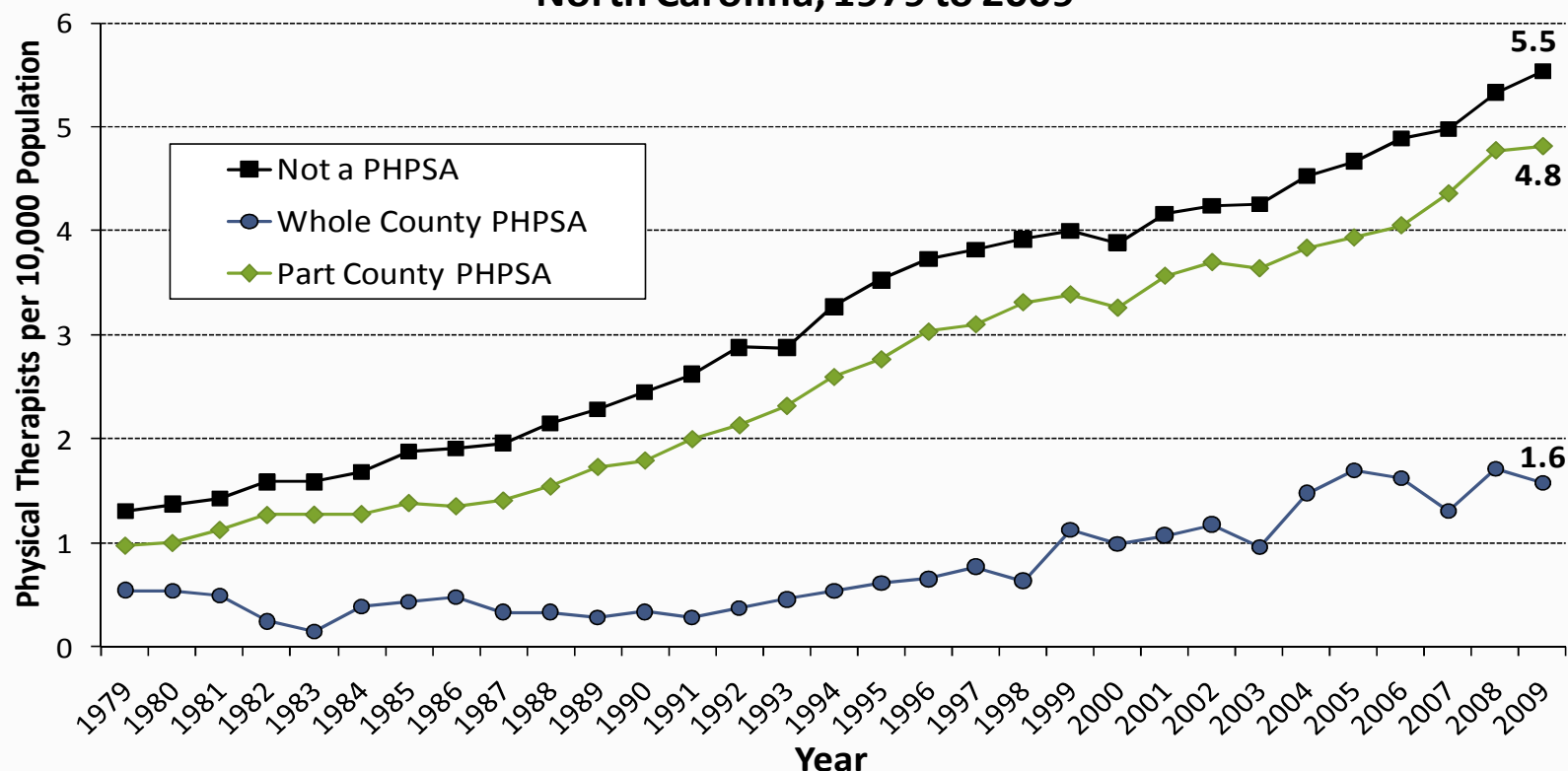
Sources: NC Health Professions Data System with data derived from the North Carolina Boards of Physical Therapy Examiners, Medicine, Nursing and Pharmacy.



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Tracking Distribution: Problematic in North Carolina's Most Underserved Areas

Physical Therapists per 10,000 Population by Persistent Health Professional Shortage Area (PHPSA) Status
North Carolina, 1979 to 2009



Sources: NC Health Professions Data System with data derived from the North Carolina Board of Physical Therapy Examiners and the Bureau of Health Professions, HRSA.



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Efforts to Expand Loan Repayment Nationally are “Dead”

H.R. 1426: Physical Therapist Student Loan Repayment

112th Congress ⓘ
2011-2012

Eligibility Act of 2011

Related Legislation

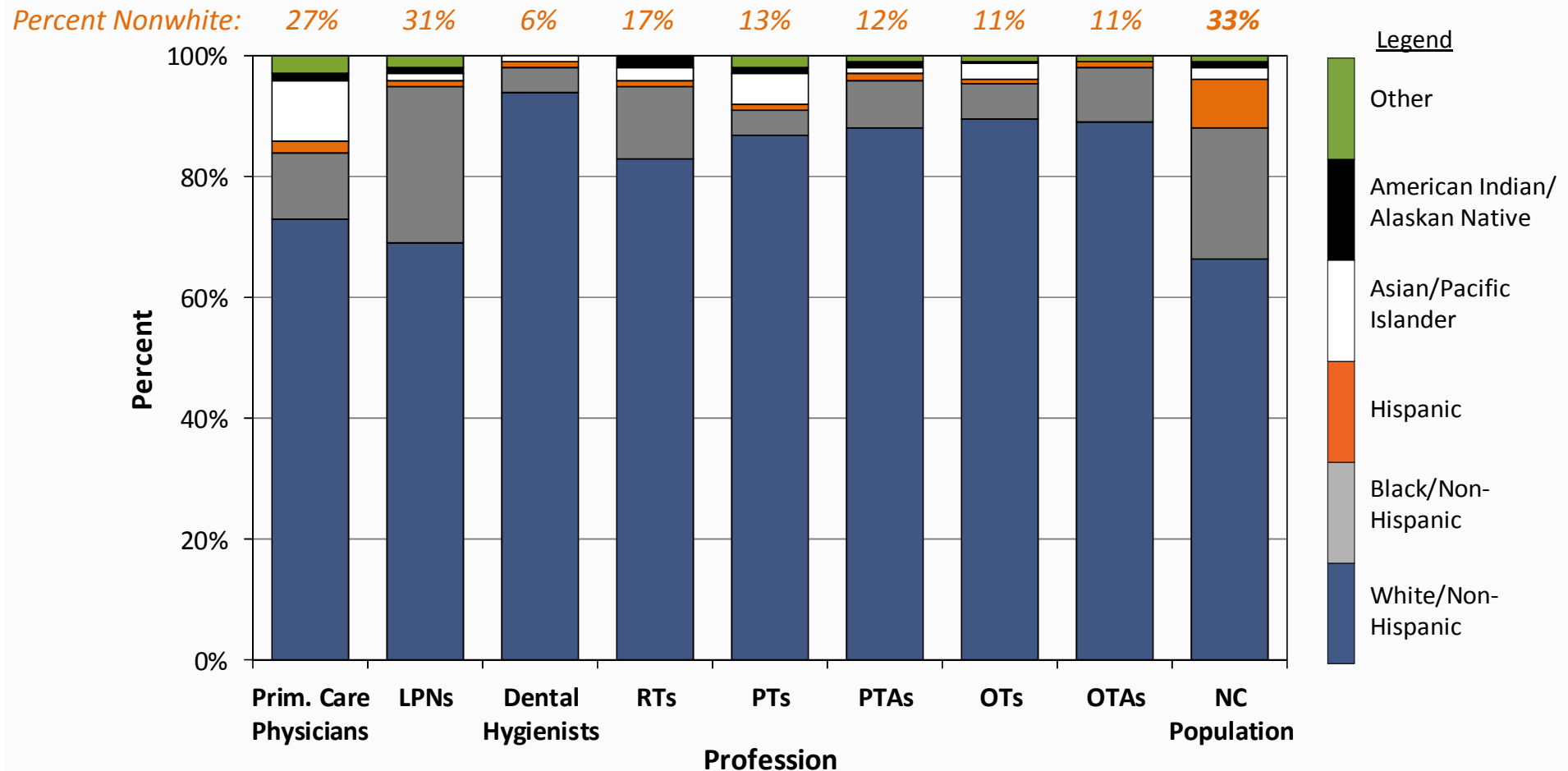
Other Legislation with the Same Title

The list below shows legislation in this and previous sessions of Congress that had the same title as this bill. Often bills are incorporated into other omnibus bills, and you may be able to track the status of provisions of this bill by looking for an omnibus bill below. Note that bills may have multiple titles.

[111th Congress: S. 1057](#) *Dead*
[111th Congress: H.R. 988](#) *Dead*
[110th Congress: S. 2485](#) *Dead*
[110th Congress: H.R. 1134](#) *Dead*
[109th Congress: H.R. 5134](#) *Dead*



Tracking Diversity: Allied Health Professions Not as Diverse as North Carolina's Population



Sources: NC Health Professions Data System with data derived from the following boards: NC State Board of Dental Examiners, NC Medical Board, NC Board of Physician Therapy Examiners, NC Respiratory Care Board and the NC Board of Occupational Therapy. Population estimates from the U.S. Census Bureau: State and County QuickFacts. Missing race data were excluded from this analysis. Accessed from: <http://quickfacts.census.gov/qfd/states/37000.html>.



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Demand Side Data



Demand Side Data: Allied Health Job Vacancy Tracking Reports



Purpose: Estimate workforce demand for selected allied health professions

Method: Monitor weekly job listings in newspaper and online sources



May 2011,
April 2007, August 2006, April 2005

Most recent report is hot off the press

Current funding provided by the North Carolina Department of Commerce, the North Carolina Health and Wellness Trust Fund, and the Florence Rogers Charitable Trust.
Previous funding provided the Duke Endowment and the NC AHEC Program.



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Allied Health Vacancy Tracking Report:

Thanks to our Sponsors

- **Funders:**

- North Carolina Health & Wellness Trust
- Department of Commerce –
Division of Workforce Development
- Florence Rogers Charitable Trust

- **Investigators:**

- Council for Allied Health in North Carolina
- Cecil G. Sheps Center for Health Services Research



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Methodology

(the boring stuff academics go on about)

- Council members surveyed in September 2010 to guide selection of professions
- Final list included 10 professions
- Job advertisements collected from online and print sources over 10-week span (September 19 – November 28, 2010)
- Vacancy information analyzed to determine overall and regional demand

Introducing the 10 Professions Monitored

Allied Health Professions Monitored

Emergency Medical Services

Health Information Management/Technology

Imaging (PET, MRI, CT)

Occupational Therapy Assistants

Occupational Therapists

Physical Therapists

Physical Therapist Assistants

Respiratory Therapists

Speech-Language Pathologists

Sources: NC Health Professions Data System Allied Health Job Vacancy Tracking Project with funding provided by the North Carolina Department of Commerce, the North Carolina Health and Wellness Trust Fund and the Florence Rogers Charitable Trust.



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Online and Newspaper Sources Monitored

Online Sources

Advance for Healthcare Careers
American Speech-Language Hearing Association
Carolina Health Care
Duke Health
Mission Hospital
NC Occupational Therapy Association
NC Physical Therapy Association
NC Speech Hearing & Language Association
North Carolina Public Schools Application System
Novant Health
Rex Health
UNC Health Care
University Health Systems of Eastern Carolina

Newspapers

Asheville Citizen Times
Charlotte Observer
Fayetteville Observer
Greensboro News & Record
Raleigh News & Observer
Rocky Mount Telegram
The Daily Reflector
Wilmington Star News
Wilson Daily Times
Winston Salem Journal

Sources: NC Health Professions Data System Allied Health Job Vacancy Tracking Project with funding provided by the North Carolina Department of Commerce, the North Carolina Health and Wellness Trust Fund and the Florence Rogers Charitable Trust.



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Results: High Demand for Therapy Professions and Assistants

Rank	Profession	Number of Positions	Workforce Size	Vacancy Index
1	Occupational Therapy Assistant	121	900	13.4
2	Physical Therapy Assistant	274	2,150	12.7
3	Physical Therapist	523	4,340	12.1
4	Occupational Therapist	214	2,730	7.8
5	Health Information Management	152	5,130	3.0
6	Speech Language Pathologist	105	3,840	2.7
7	Respiratory Therapist	53	3,160	1.7
8	Medical Assistant	139	11,140	1.3
9	Imaging	92	9,660	1.0
10	Emergency Medical Services	75	8,930	0.8

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

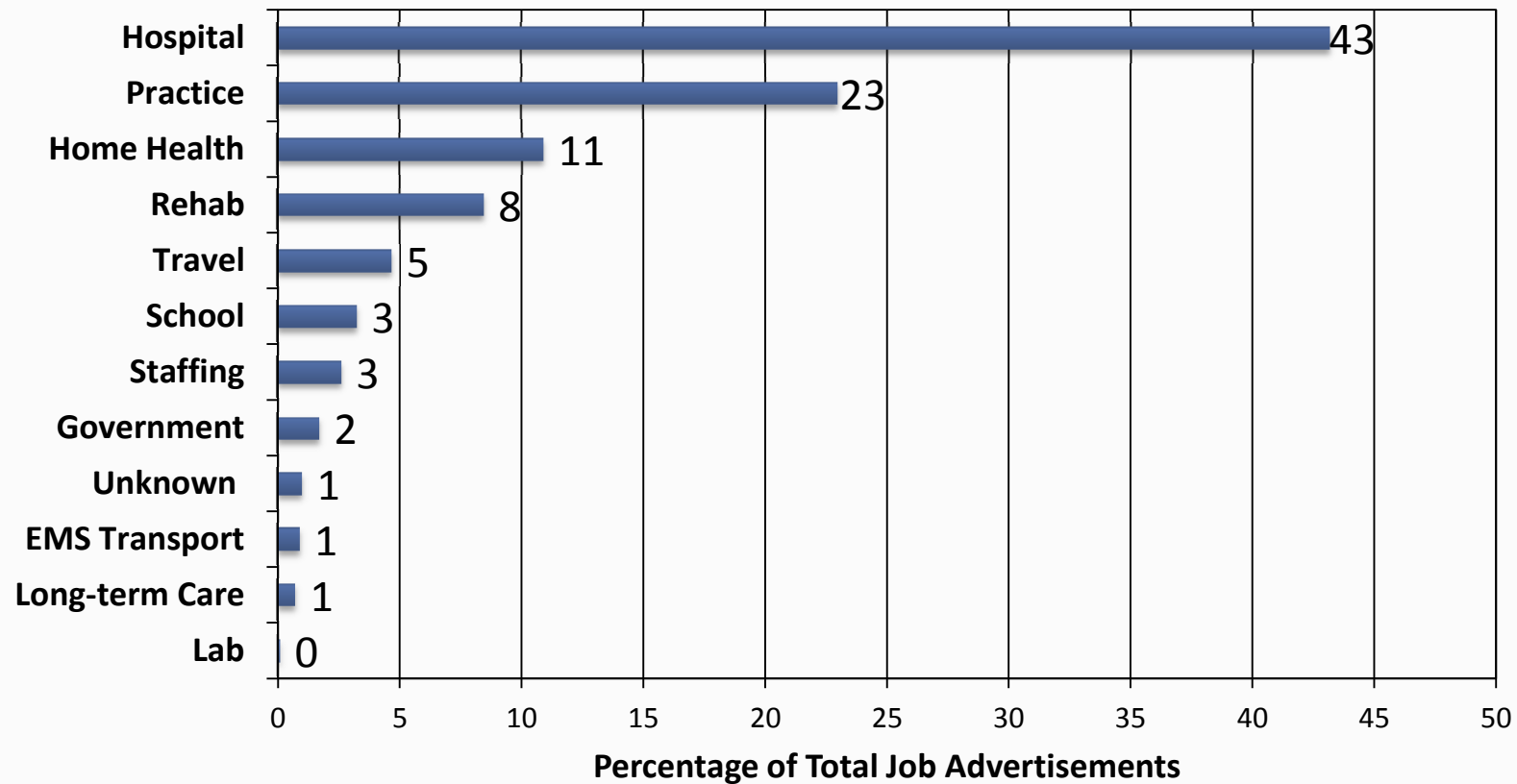
Sources: NC Health Professions Data System Allied Health Job Vacancy Tracking Project with funding provided by the North Carolina Department of Commerce, the North Carolina Health and Wellness Trust Fund and the Florence Rogers Charitable Trust.



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Allied Health Demand by Job Setting

Demand by employment setting



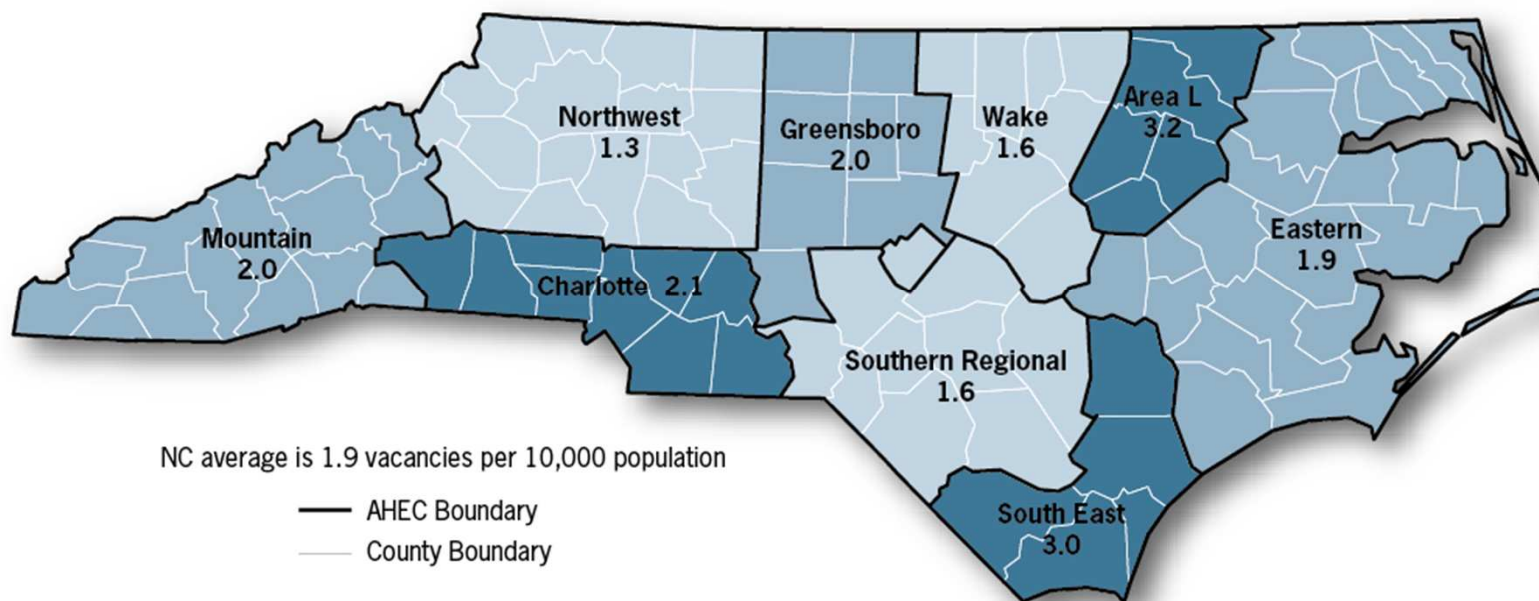
Sources: NC Health Professions Data System Allied Health Job Vacancy Tracking Project with funding provided by the North Carolina Department of Commerce, the North Carolina Health and Wellness Trust Fund and the Florence Rogers Charitable Trust.



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Relatively High Vacancies in Area L and South East AHECs

Allied Health Job Vacancy Advertisements per 10,000 Population
by AHEC Region, North Carolina, Fall 2010



Notes: North Carolina newspaper and online listings for select allied health professions tracked from September 19 to November 28 (N=1,748).

Source: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, 2011.

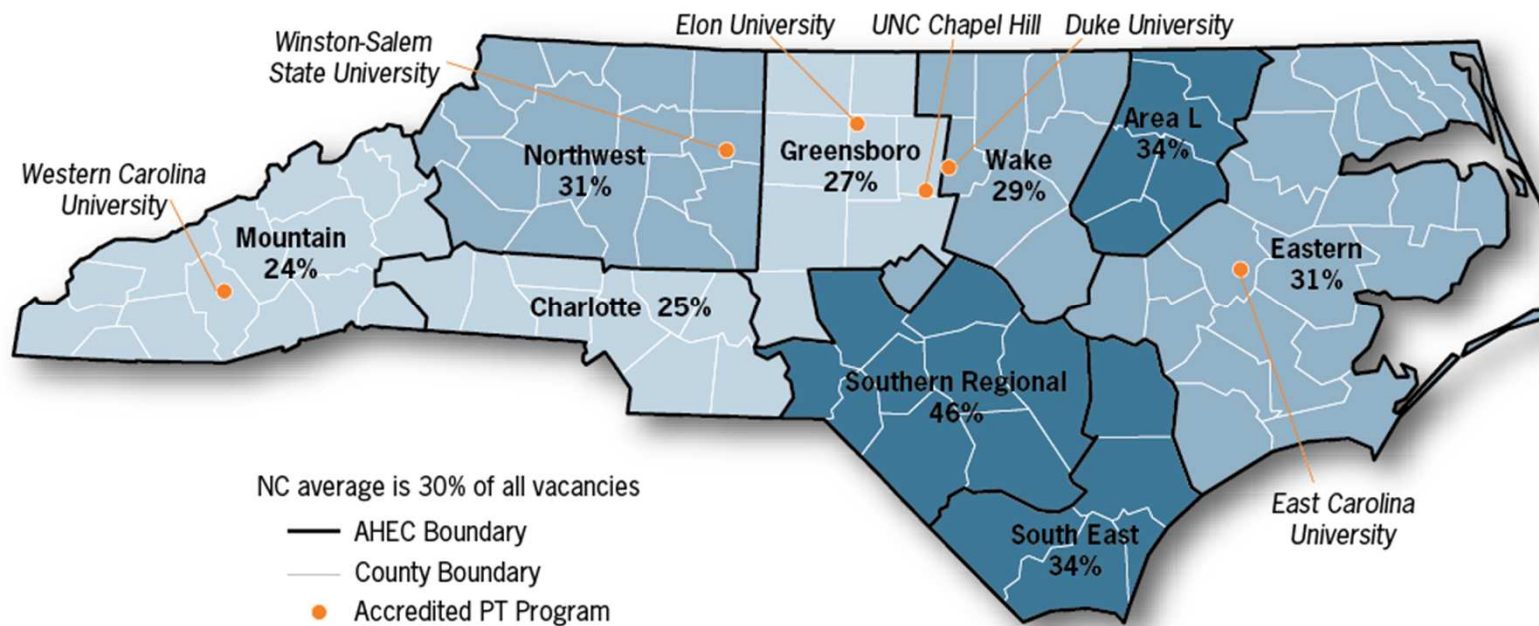
Sources: NC Health Professions Data System Allied Health Job Vacancy Tracking Project with funding provided by the North Carolina Department of Commerce, the North Carolina Health and Wellness Trust Fund and the Florence Rogers Charitable Trust.



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Labor Markets are Regional

**Physical Therapist Job Vacancy Advertisements as Percent of All Vacancies by AHEC Region, and Location of Accredited Physical Therapy Education Programs
North Carolina, Fall 2010**



Notes: North Carolina newspaper and online listings for select allied health professions tracked from September 19 to November 28 (N=1,748).
Source: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, 2011;
North Carolina State Board of Physical Therapy Examiners, <http://www.ncptboard.org/documents/PT%20%20PTA%20School%20List.pdf>, accessed 5/13/11.

Sources: NC Health Professions Data System Allied Health Job Vacancy Tracking Project with funding provided by the North Carolina Department of Commerce, the North Carolina Health and Wellness Trust Fund and the Florence Rogers Charitable Trust.

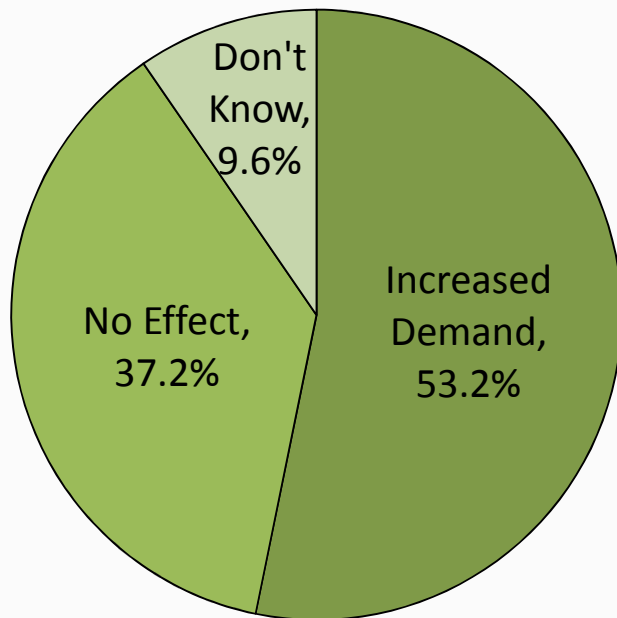


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Speculating About Health Reform

(everyone else is doing it....)

Council members asked how health reform would affect demand for their profession



“Increased patient access will significantly increase the demand for allied health professionals.”

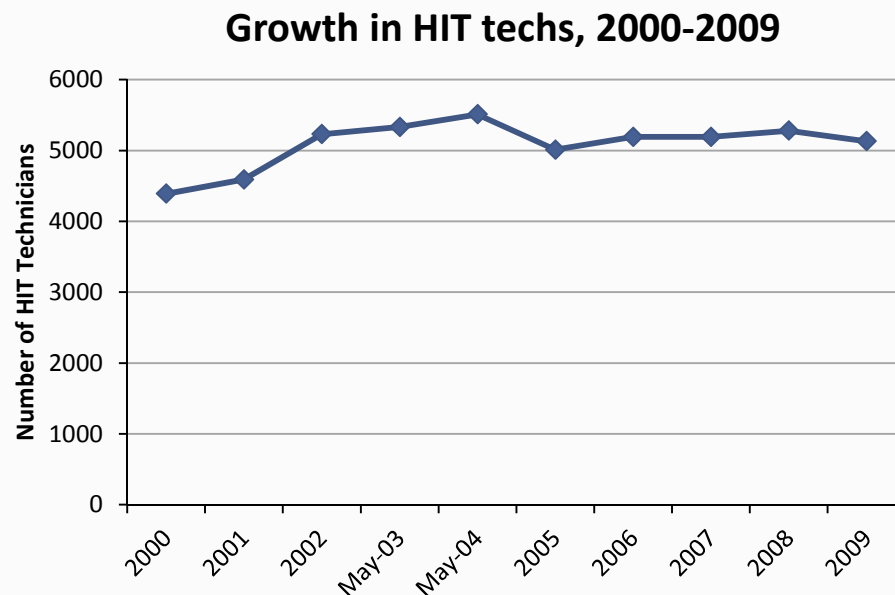
“There will be greater demand with more hospitals ...providing even better quality care for patients.”

“Hard to tell but shortage of PTs may ultimately limit size of workforce if non-PTs do PT functions.”

“Implementation of electronic health records will necessitate the demand for highly skilled HIT professionals.”

But is the HIT Workforce Growing?

US Bureau of Labor Statistics predicts employment of medical records and health information technicians expected to much faster than average through 2018



- Ranks 5th on the list of professions tracked
- Higher demand in the hospital setting
- Likely to see stronger demand as EHRs fully roll out in outpatient settings

Making the Link to Economic Development



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Even with data, had trouble getting policy makers to pay attention to allied health

- Decided to make explicit link the between **allied health workforce growth** and **economic development**
- Emphasize allied health as “jobs machine”
 - Even in recession, strong job growth
 - Potential to sustain local economies, particularly rural ones
 - Less vulnerable to outsourcing
 - Job growth likely to continue, given demographic changes, population growth, epidemiological trends, insurance expansion



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Produced “State of Allied Health Report”

The State of Allied Health in North Carolina

October
2010

North Carolina Health Professions Data System

An overview of issues and opportunities for the allied health workforce

What is allied health?

Sometimes it's easier to define what allied health is NOT. Typically we think of allied health professionals as anyone in the field other than physicians, nurses, pharmacists, dentists, home health aids and a few others. Allied health professionals participate in all aspects of care including identifying disease, providing technology support, counseling on diet and nutrition, as well as providing rehabilitation services among others.

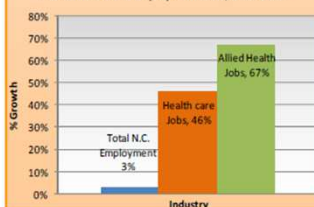
Did you know...?

Allied health is driving growth in the larger health care sector.

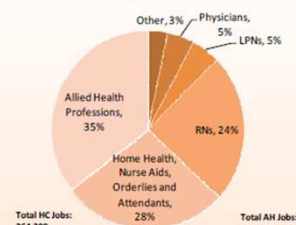
- Between 1999 and 2009, over 44% of job growth in the health care sector was due to growth of allied health jobs.
- Between 2006 and 2016, medical assistants and physical therapy assistants are projected to be in the top 10 fastest growing occupations in North Carolina by percentage change.

The total number of jobs in North Carolina increased 2.5% from 1999-2009 to 3,896,750. During this same period, health care employment grew 46% to 367,320, and within health care, the number of allied health jobs increased by over 67% to 128,150.

Percent Growth in Employment in NC, 1999-2009



Healthcare Jobs in North Carolina, 2009



Total HC Jobs: 364,300

Total AH Jobs: 128,150

Note: "Other healthcare occupations" includes chiropractors, dentists, optometrists, pharmacists, and podiatrists.

The challenge to estimate allied health workforce supply

Despite the fact that the demand for allied health workers is strong and expected to grow, state policy makers still struggle with basic questions:

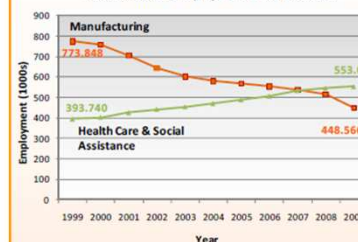
- How many professionals are practicing in the state?
- Is N.C. producing too many, too few, or the right number of professionals to meet the needs of the population?
- How many educational programs are in the state?
- Are the types and locations of educational training programs appropriate?

Because the vast majority of the allied health workforce is not licensed, it is difficult to estimate whether North Carolina's citizens have adequate access to a well-distributed and well-prepared allied health workforce.

Sources: North Carolina Health Professions Data System with data derived from the U.S. Bureau of Labor Statistics, Occupational Employment Statistics (2009), <http://www.bls.gov/oes/>, accessed 8/15/2010.

North Carolina's economy in transition: 1999-2009

Total Employment in Manufacturing and Health Care and Social Assistance Employment in NC, 1999-2009



As recently as 1999, the manufacturing sector accounted for 21% of jobs statewide and 27% of jobs in rural counties. After almost two decades of plant closings and downsizing, the manufacturing industry now accounts for only 12% of the state's total workforce.

Between 1999 and 2009, rural areas:

- Lost over 130,000 manufacturing jobs
- Gained more than 140,000 jobs in health care and social assistance.

Allied health jobs projected to grow

Allied health is projected to add 35,930 new jobs between 2006 and 2016—a 30.4% increase over 2006 employment.

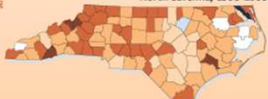
Allied health jobs represent a stable and relatively profitable employment sector, being:

- Relatively less vulnerable to international competition
- More resilient to economic recession
- Not as susceptible to outsourcing trends seen in manufacturing and other sectors.

Percent Change in Number of Health Care & Social Assistance Jobs North Carolina, 1999-2009



Percent Change in Number of Manufacturing Jobs North Carolina, 1999-2009



North Carolina Health Professions Data System

Cecil G. Sheps Center for Health Services Research
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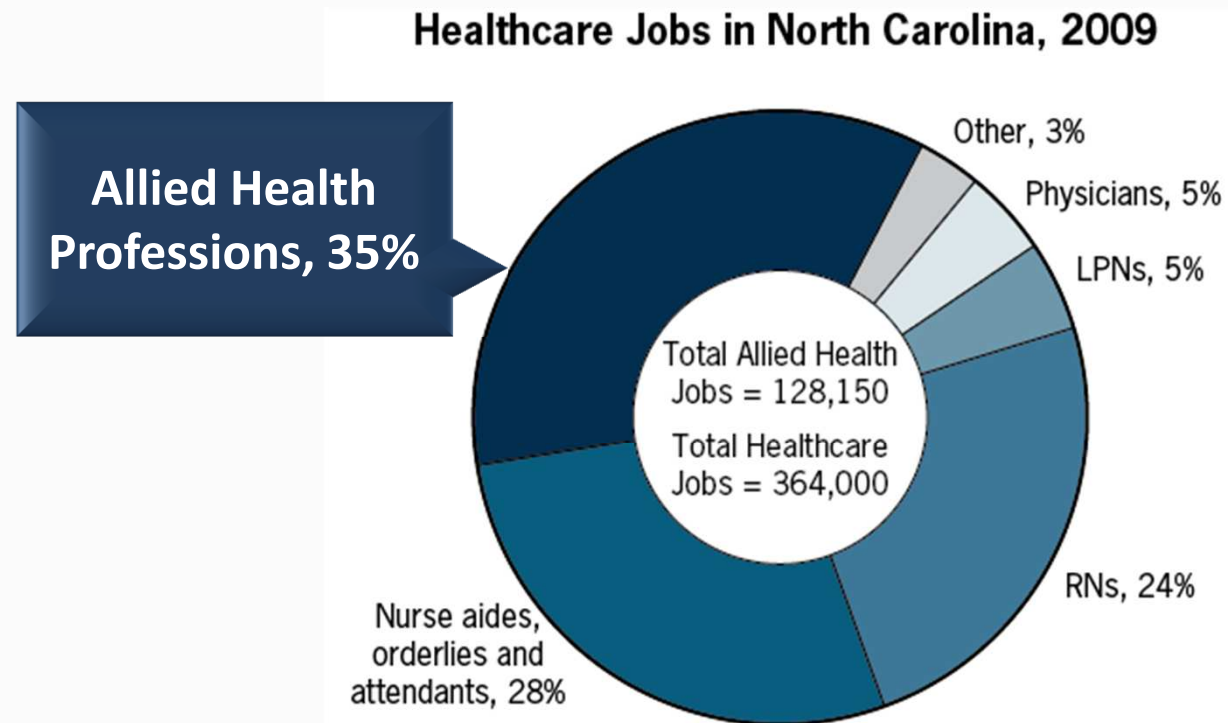
Sources: NC Health Professions Data System with data derived from the NC Employment Security Commission, Employment and Wages by Industry, 1998-2008. <http://www.ncsc1.com/industry/industryMain-NEW.asp>, accessed 6/20/10.



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The Dilemma of Inclusionary / Exclusionary Definitions of Allied Health



Note: "Other" healthcare occupations includes chiropractors, dentists, optometrists, pharmacists and podiatrists.
Source: North Carolina Health Professions Data System with data from U.S. Bureau of Labor Statistics, Occupational Employment Statistics (2009). URL: <http://www.bls.gov/oes/>.

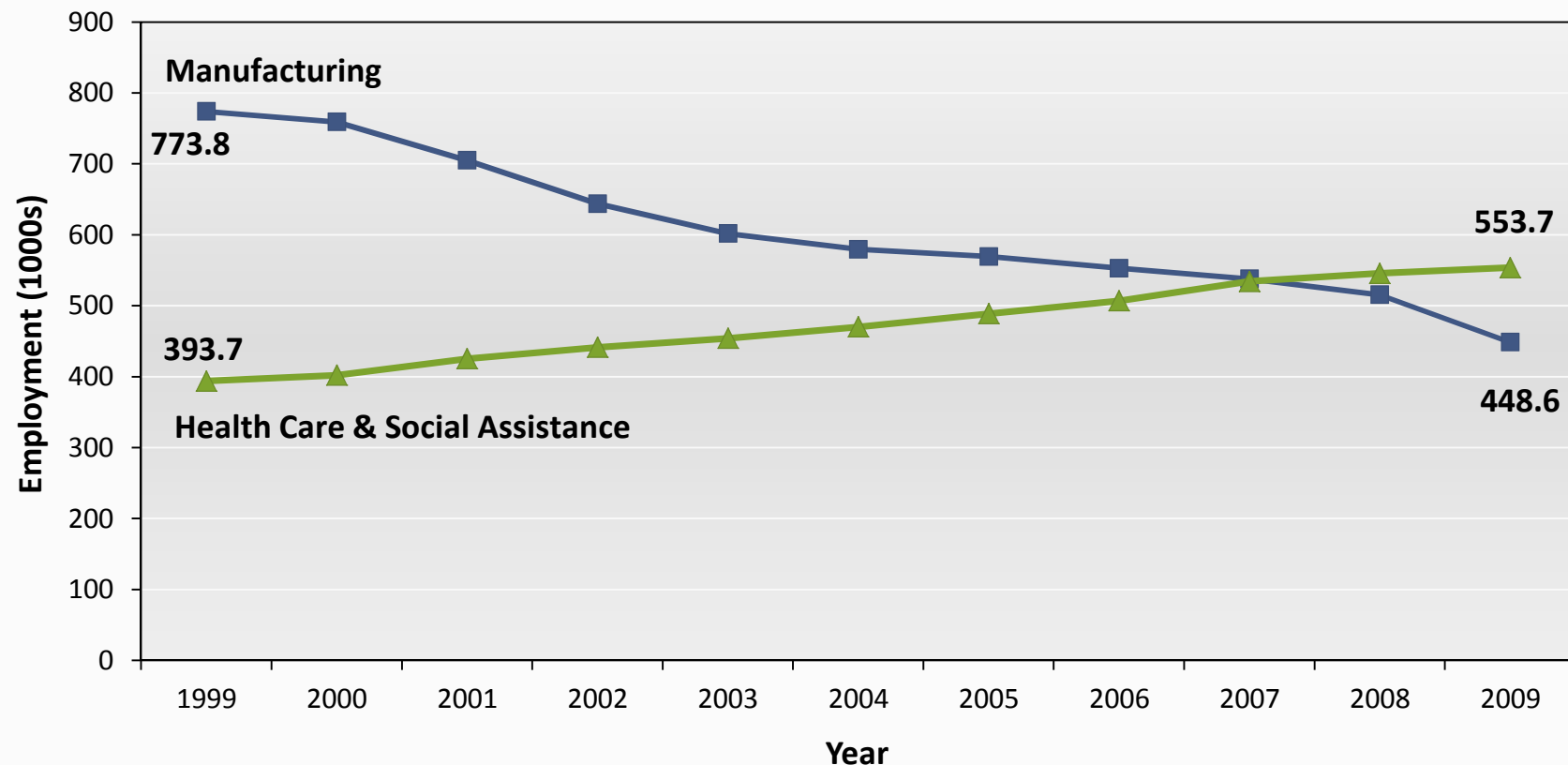


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The Transformation of North Carolina's Economy

Total Employment in Manufacturing and Health Care and Social Assistance Employment in NC, 1999-2009

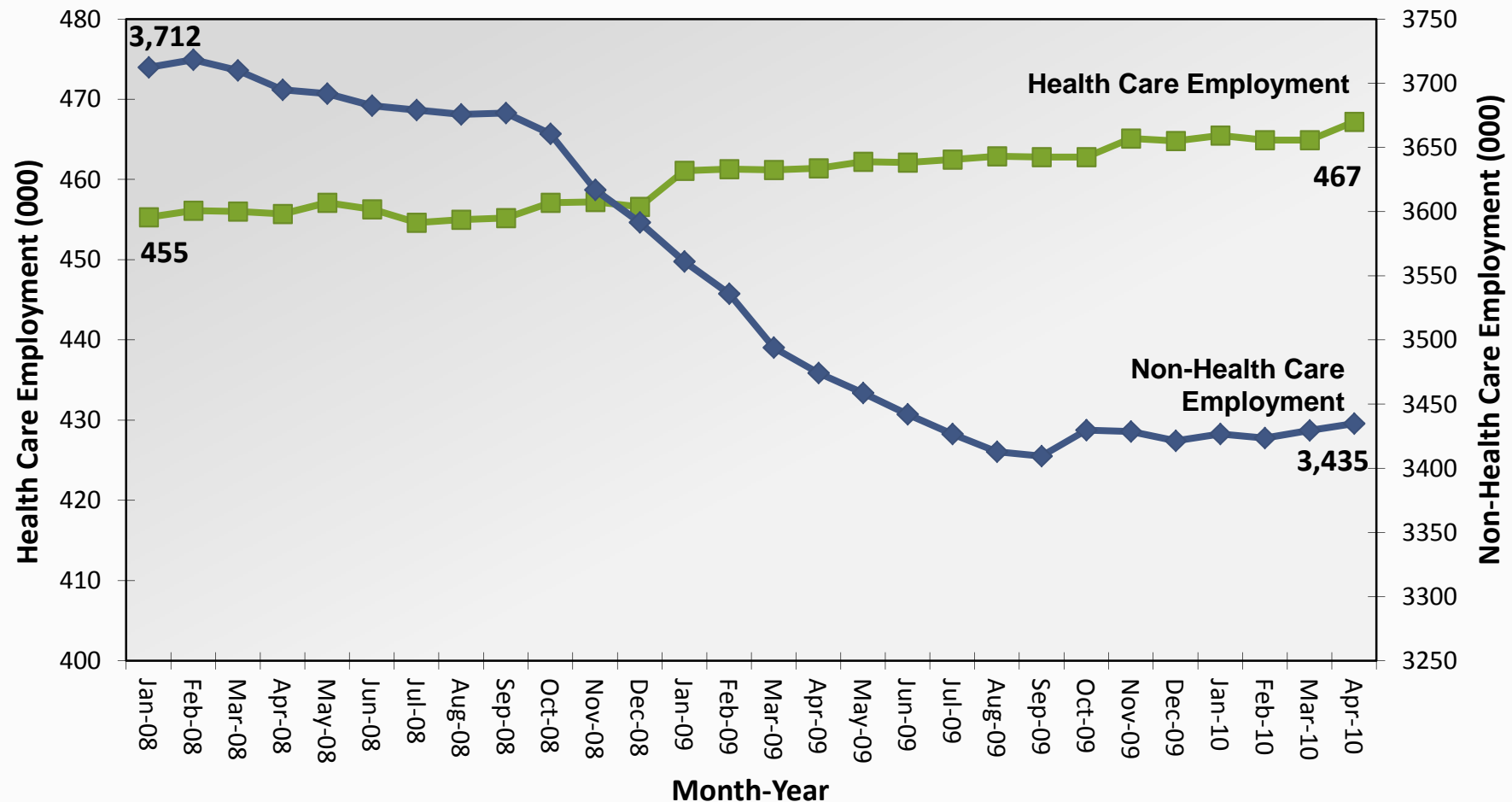


Source: North Carolina Health Professions Data System with data derived from the North Carolina Employment Security Commission, Employment and Wages by Industry, 1998-2009.
<http://www.ncesc1.com/lmi/industry/industryMain-NEW.asp>, accessed 6/1/2010.



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Health Care vs. Non-Health Care Employment, North Carolina, January 2008-April 2010



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Lots of Potential...But State-Based Health Workforce Planning Efforts Are Fragmented

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



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Allied Health Workforce Planning the Traditional Way



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Broadened Our Collaborations to Include Governor's Office and NC Workforce Development Commission

- NC Department of Commerce invested in Allied Health Regional Skills Partnerships (RSPs)
 - 7 planning grants for \$55,000 for 15 months
 - 4 chosen for implementation grants of \$250,000 over 2 years, ending June 30, 2011
- Address allied health workforce issues in region focusing on:
 - increasing sector's competitiveness
 - creating employment and career advancement opportunities for unemployed and dislocated workers
- RSPs partnered with community colleges, local government, health care employers, AHEC and other regional stakeholders



But Many Others Use Data

Government

General Assembly
Office of Rural Health
State Center for Health Stats
Department of Commerce
County Health Depts.

Workforce Policy

NC AHEC
NC Institute of Medicine
Council for Allied Health in NC
NC Licensure Boards

Education, Research

UNC General Administration
NC Community
College System
Private Colleges,
Universities
Individual Researchers

Funders

Duke Endowment
Kate B. Reynolds
Charitable Trust
Health and Wellness
Trust Fund

National Organizations

HRSA
AMA
AAMC
IOM

Professional Associations

NCAFP
NC Medical Society
NC Hospital Association

Other

Media; Students; Health Professionals; Individuals; Attorneys; Continuing Education; Health Systems



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How Do They Use Our Data?

Government

Policy Decisions
Allocate funding
Program planning
Evaluation
HPSA analysis
Grant proposals

Workforce Policy

Evaluation
Program planning
Policy analysis
Regulatory questions
Grant proposals
Pipeline and diversity

Education, Research

Planning for new schools
Planning for new programs
Pipeline and diversity
Evaluation
Research projects
Grant proposals

Funders

Program planning
Allocate funding
Evaluation

National Organizations

National policy
Evaluation
Dissemination
Improve data quality

Professional Associations

Advocacy, Membership
Policy analysis
Program planning
Grant proposals

Other

News stories; class projects; locational analysis; loan repayment; court cases; advertise seminars



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Health Reform and the New World of Workforce Planning

- Economy is important but next generation of workforce planning will also be determined by large-scale policy change
- New world of Patient-Centered Medical Homes (PCMH) and Accountable Care Organizations (ACO)
- All about redesign of **how** health care is delivered, less emphasis on **who** delivers care



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Workforce Planning Challenges Presented by PCMHs and ACOs

Full implementation of PCMH and ACO models will require:

- Shifting workforce planning away from specific health professional groups or employment sectors toward planning:
 - For health service needs of defined populations
 - By service area and/or patient pathway
- Evaluating cost and quality outcomes of different:
 - Models of care
 - Skill mix configurations



North Carolina's State Health Care Workforce Planning Grant

Assess

- Key health care services provided by PCMHs
- Number and types of professionals needed in PCMHs
- How well supply matches needs of population

Identify

- Need for new programs
- Mechanisms to retool existing workforce
- Need for new professions to meet PCMH needs



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Services and Professions in the Patient Centered Medical Home

Services and Professions adapted from the American College of Physicians definition

Primary Care Practitioners

Physicians
PAs
NPs

Team-Based Services

Nursing
Pharmacy
Administration
HIT
Mental/Behavioral Health
Direct Care
Allied Health

PCMH “Neighbors”

Specialist Physicians
Allied Health
Oral Health
Vision Care
Long-Term Care
Community Services
Other

Emerging Professional Roles

HIE/HIT
Case Management

Client Coordination
Disease Management

Health Education
Community Health

Source: Erickson, SM. The Patient Centered Medical Home (PCMH): Overview of the Model and Movement, Part I. American College of Physicians. Accessed from: http://www.acponline.org/running_practice/pcmh/understanding/erickson1.pdf on December 10, 2010.



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Lessons Learned

- Deciding to engage in workforce planning
- Building on NC's leadership in data collection/analysis
- Collecting demand side data
- Partnering with health, education and labor organizations
- Getting allied health a “seat” at policy table



Challenges

- Distribution
- Diversity
- Growth of assistive personnel: credentialing?
 - Link workforce supply to cost and quality of patient care
 - Identify new and emerging health professional roles needed to fully roll out PCMHs
 - Build capacity to engage in population-based workforce planning
- Securing resources



Questions?

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See our website for allied health publications:

<http://www.shepscenter.unc.edu/hp>



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