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Shaping Health Workforce Policy through Data-Driven Analyses: The Sheps/NC AHEC Collaboration

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Presentation to the National AHEC Organization Program Directors
Washington, D.C.
April 26, 2007

Presentation Overview

- The NC Health Professions Data System (HPDS)
  - Monitoring Health Workforce Trends
  - Informing Policy Debates
- Lessons Learned
- The Challenge: Defining AHEC role in context of declining funding and limited national capacity for workforce planning
- Moving Forward: Technical Assistance

North Carolina HPDS

- 30 year collaboration between Sheps Center, NC AHEC and the health professions licensing boards
- Annual licensure data provided ***voluntarily*** by the boards—there is no legislation that requires this and no appropriation
- ~30 years of continuous, complete data
- Data remain property of licensing board, permission sought for each “new” use
- System is independent of government or health care professionals
- Funding provided by: **NC AHEC Program Office,** data request fees, project cross-subsidies, and the UNC-CH Office of the Provost.

Categories of Health Professionals in Data System

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

Basic Data Items

Data elements that ***usually*** don't change

- Name
- Date and place of birth
- Race/ethnicity
- Gender
- Basic professional degree (degree conferred, name and location of institution attended, practice qualifications)
- Unique identifier

Data Items Updated Annually

Data elements that change

- Home address
- Employment address
- Type of position
- Employment setting
- Clinical practice area
- Activity status (retired, active practice, not employed in profession)
- Average hours per week/employment status
- Highest degree
- New—Foreign language ability

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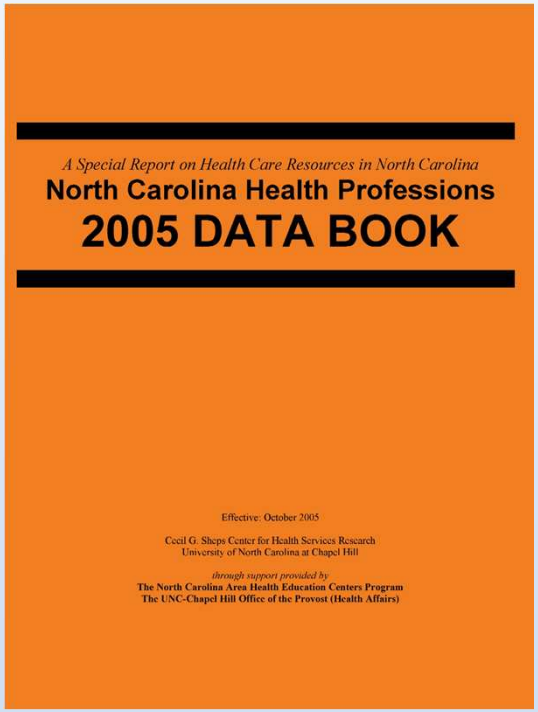
Annual North Carolina Health Professions Data Book

-Annual **Health Professions Data Book,** produced since 1979, details state and county level health professions data; current issue: October 2005 data

-Data Book used by policymakers, educators, researchers, the media and health professionals as the official source of health professions statistics in NC



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Monitoring Health Workforce Trends & Responding to Policy Makers

The HPDS Can ***Help*** Answer Questions Like:

- How many dentists are there in North Carolina? Where are they practicing?
- Are there too few psychiatrists in the state?
- Are we retaining health professionals trained in North Carolina?
- Will NC's supply of physicians keep pace with expected population growth?
- Does the ethnic and racial distribution of health professionals match the population?

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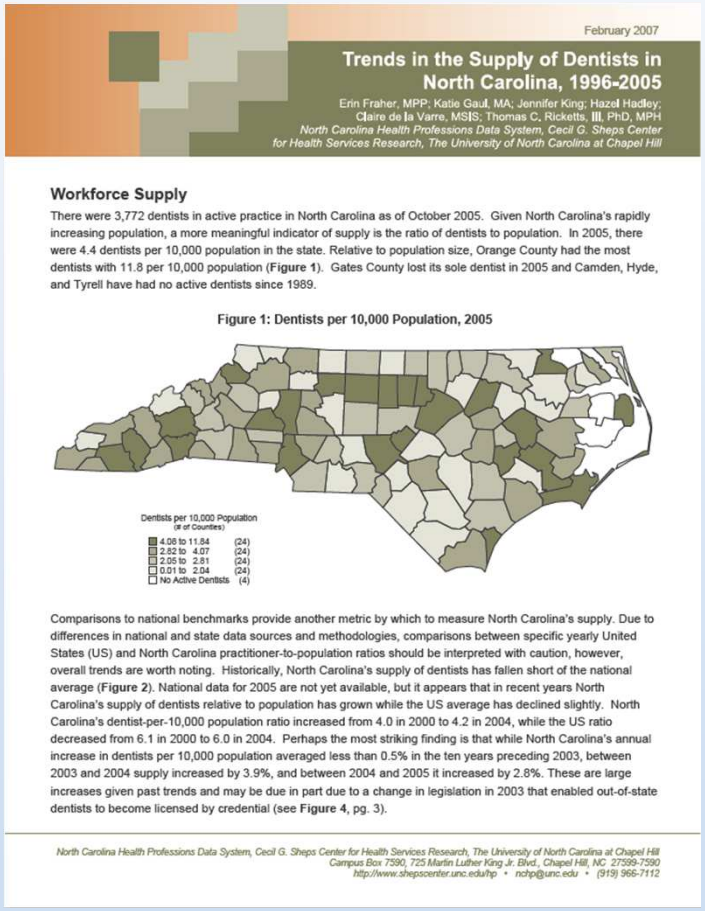
BUT it can't answer some types of questions

- Are fewer physicians delivering babies because of malpractice issues?
- Are we facing a psychiatrist shortage because reimbursement rates are too low?
- Where should we put the new (dentistry, pharmacy, satellite medical) school?

- **Goal**: to provide data-driven, timely and objective analyses to inform the policy debate

Trends in the Supply of Dentists in North Carolina, 1996-2005



February 2007

Trends in the Supply of Dentists in North Carolina, 1996-2005

Erin Fraher, MPP; Katie Gaul, MA; Jennifer King; Hazel Hadley; Claire de la Varre, MSIS; Thomas C. Ricketts, III, PhD, MPH
North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill

Workforce Supply

There were 3,772 dentists in active practice in North Carolina as of October 2005. Given North Carolina's rapidly increasing population, a more meaningful indicator of supply is the ratio of dentists to population. In 2005, there were 4.4 dentists per 10,000 population in the state. Relative to population size, Orange County had the most dentists with 11.8 per 10,000 population (**Figure 1**). Gates County lost its sole dentist in 2005 and Camden, Hyde, and Tyrell have had no active dentists since 1989.

Figure 1: Dentists per 10,000 Population, 2005

Comparisons to national benchmarks provide another metric by which to measure North Carolina's supply. Due to differences in national and state data sources and methodologies, comparisons between specific yearly United States (US) and North Carolina practitioner-to-population ratios should be interpreted with caution, however, overall trends are worth noting. Historically, North Carolina's supply of dentists has fallen short of the national average (**Figure 2**). National data for 2005 are not yet available, but it appears that in recent years North Carolina's supply of dentists relative to population has grown while the US average has declined slightly. North Carolina's dentist-per-10,000 population ratio increased from 4.0 in 2000 to 4.2 in 2004, while the US ratio decreased from 6.1 in 2000 to 6.0 in 2004. Perhaps the most striking finding is that while North Carolina's annual increase in dentists per 10,000 population averaged less than 0.5% in the ten years preceding 2003, between 2003 and 2004 supply increased by 3.9%, and between 2004 and 2005 it increased by 2.8%. These are large increases given past trends and may be due in part due to a change in legislation in 2003 that enabled out-of-state dentists to become licensed by credential (see **Figure 4**, pg. 3).

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Policy Issue : Dental access in rural NC

Key Findings:

- NC lags behind national supply
- Between 1996-2005, 33% of counties experienced decline in dentists per 10K pop, 26 of 33 were rural counties
- Aging dental workforce, especially in rural counties
- 87% of dentists are white

Policy Response: Pending

Legislature considering proposal for $87 million new dental school at ECU

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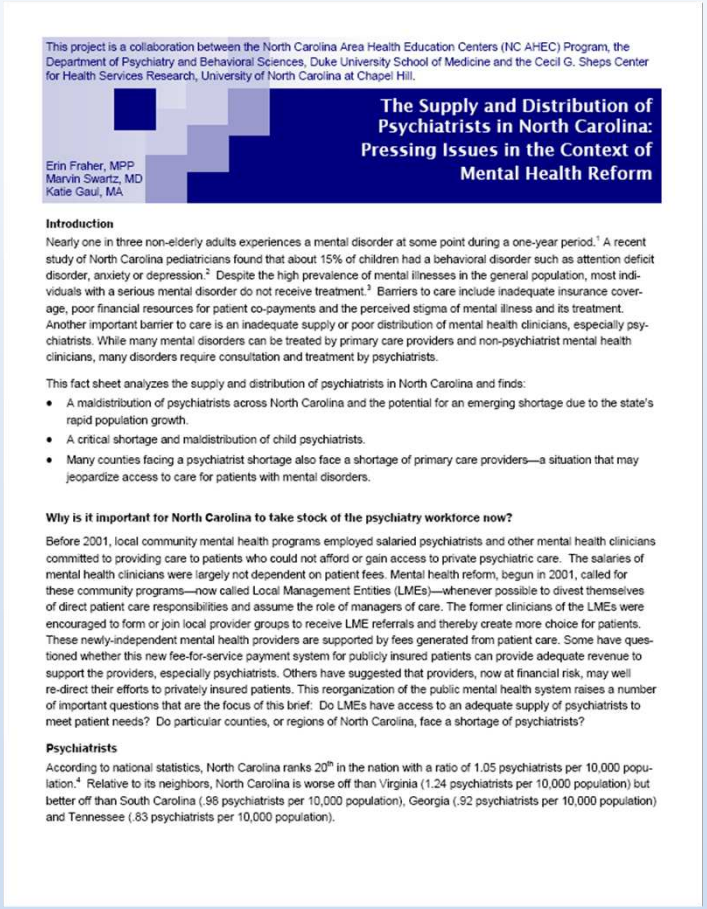
The Supply and Distribution of Psychiatrists in North Carolina: Pressing Issues in the Context of Mental Health Reform



This project is a collaboration between the North Carolina Area Health Education Centers (NC AHEC) Program, the Department of Psychiatry and Behavioral Sciences, Duke University School of Medicine and the Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

The Supply and Distribution of Psychiatrists in North Carolina: Pressing Issues in the Context of Mental Health Reform

Erin Fraher, MPP
Marvin Swartz, MD
Katie Gaul, MA

Introduction

Nearly one in three non-elderly adults experiences a mental disorder at some point during a one-year period.[1] A recent study of North Carolina pediatricians found that about 15% of children had a behavioral disorder such as attention deficit disorder, anxiety or depression.[2] Despite the high prevalence of mental illnesses in the general population, most individuals with a serious mental disorder do not receive treatment.[3] Barriers to care include inadequate insurance coverage, poor financial resources for patient co-payments and the perceived stigma of mental illness and its treatment. Another important barrier to care is an inadequate supply or poor distribution of mental health clinicians, especially psychiatrists. While many mental disorders can be treated by primary care providers and non-psychiatrist mental health clinicians, many disorders require consultation and treatment by psychiatrists.

This fact sheet analyzes the supply and distribution of psychiatrists in North Carolina and finds:

- A maldistribution of psychiatrists across North Carolina and the potential for an emerging shortage due to the state's rapid population growth.
- A critical shortage and maldistribution of child psychiatrists.
- Many counties facing a psychiatrist shortage also face a shortage of primary care providers—a situation that may jeopardize access to care for patients with mental disorders.

Why is it important for North Carolina to take stock of the psychiatry workforce now?

Before 2001, local community mental health programs employed salaried psychiatrists and other mental health clinicians committed to providing care to patients who could not afford or gain access to private psychiatric care. The salaries of mental health clinicians were largely not dependent on patient fees. Mental health reform, begun in 2001, called for these community programs—now called Local Management Entities (LMEs)—whenever possible to divest themselves of direct patient care responsibilities and assume the role of managers of care. The former clinicians of the LMEs were encouraged to form or join local provider groups to receive LME referrals and thereby create more choice for patients. These newly-independent mental health providers are supported by fees generated from patient care. Some have questioned whether this new fee-for-service payment system for publicly insured patients can provide adequate revenue to support the providers, especially psychiatrists. Others have suggested that providers, now at financial risk, may well re-direct their efforts to privately insured patients. This reorganization of the public mental health system raises a number of important questions that are the focus of this brief: Do LMEs have access to an adequate supply of psychiatrists to meet patient needs? Do particular counties, or regions of North Carolina, face a shortage of psychiatrists?

Psychiatrists

According to national statistics, North Carolina ranks 20th in the nation with a ratio of 1.05 psychiatrists per 10,000 population.[4] Relative to its neighbors, North Carolina is worse off than Virginia (1.24 psychiatrists per 10,000 population) but better off than South Carolina (.98 psychiatrists per 10,000 population), Georgia (.92 psychiatrists per 10,000 population) and Tennessee (.83 psychiatrists per 10,000 population).

Policy Issue: State decentralizing mental health services—will there by an adequate supply of psychiatrists?

Key Findings:

- Overall supply adequate, distribution is a problem
- 44 counties qualify as mental health professional shortage areas
- Of 19 counties that qualify as primary care HPSAs, 11 have shortage of psychiatrists
- 43 counties have no child psychiatrists

Policy Response:

- Legislature gave $500,000 of one-time funding to AHEC to address maldistribution and increase NP & PA mental health training

January 2006

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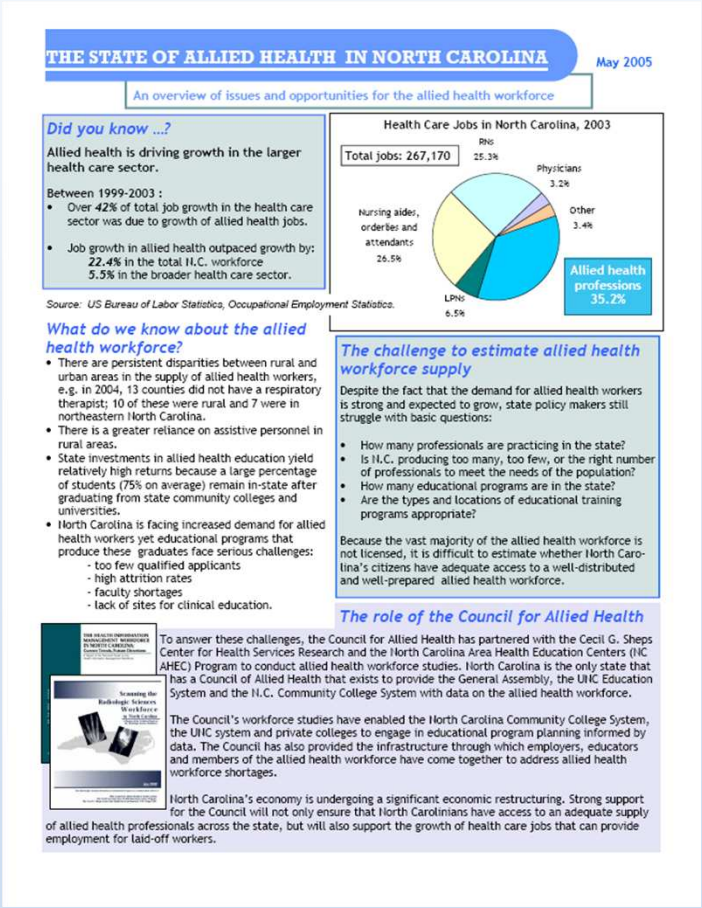
The State of Allied Health in NC



THE STATE OF ALLIED HEALTH IN NORTH CAROLINA

May 2005

An overview of issues and opportunities for the allied health workforce

Did you know ...?

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

Between 1999-2003 :

- Over 42% of total job growth in the health care sector was due to growth of allied health jobs.
- Job growth in allied health outpaced growth by:
  22.4% in the total N.C. workforce
  5.5% in the broader health care sector.

Health Care Jobs in North Carolina, 2003

Total jobs: 267,170

RNs 25.3%
Physicians 3.2%
Other 3.4%
Nursing aides, orderlies and attendants 26.5%
LPNs 6.5%
Allied health professions 35.2%

Source: US Bureau of Labor Statistics, Occupational Employment Statistics.

What do we know about the allied health workforce?

- There are persistent disparities between rural and urban areas in the supply of allied health workers, e.g. in 2004, 13 counties did not have a respiratory therapist; 10 of these were rural and 7 were in northeastern North Carolina.
- There is a greater reliance on assistive personnel in rural areas.
- State investments in allied health education yield relatively high returns because a large percentage of students (75% on average) remain in-state after graduating from state community colleges and universities.
- North Carolina is facing increased demand for allied health workers yet educational programs that produce these graduates face serious challenges:
  - too few qualified applicants
  - high attrition rates
  - faculty shortages
  - lack of sites for clinical education.

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.

The role of the Council for Allied Health

To answer these challenges, the Council for Allied Health has partnered with the Cecil G. Sheps Center for Health Services Research and the North Carolina Area Health Education Centers (NC AHEC) Program to conduct allied health workforce studies. North Carolina is the only state that has a Council of Allied Health that exists to provide the General Assembly, the UNC Education System and the N.C. Community College System with data on the allied health workforce.

The Council's workforce studies have enabled the North Carolina Community College System, the UNC system and private colleges to engage in educational program planning informed by data. The Council has also provided the infrastructure through which employers, educators and members of the allied health workforce have come together to address allied health workforce shortages.

North Carolina's economy is undergoing a significant economic restructuring. Strong support for the Council will not only ensure that North Carolinians have access to an adequate supply of allied health professionals across the state, but will also support the growth of health care jobs that can provide employment for laid-off workers.

Policy Issue: Making link between allied health workforce vacancies and economic development in rural NC

Key Findings:

- Between 1999-2005, overall employment in NC grew by 0.2% compared to 20.2% growth in health care jobs and 45.8% increase in allied health employment
- Allied health comprises 37% of all health care jobs
- 8 of top 10 fastest growing professions (across all employment sectors in are in allied health)

Policy Response: Pending

We have requested funding for continued monitoring of allied health workforce

May 2005

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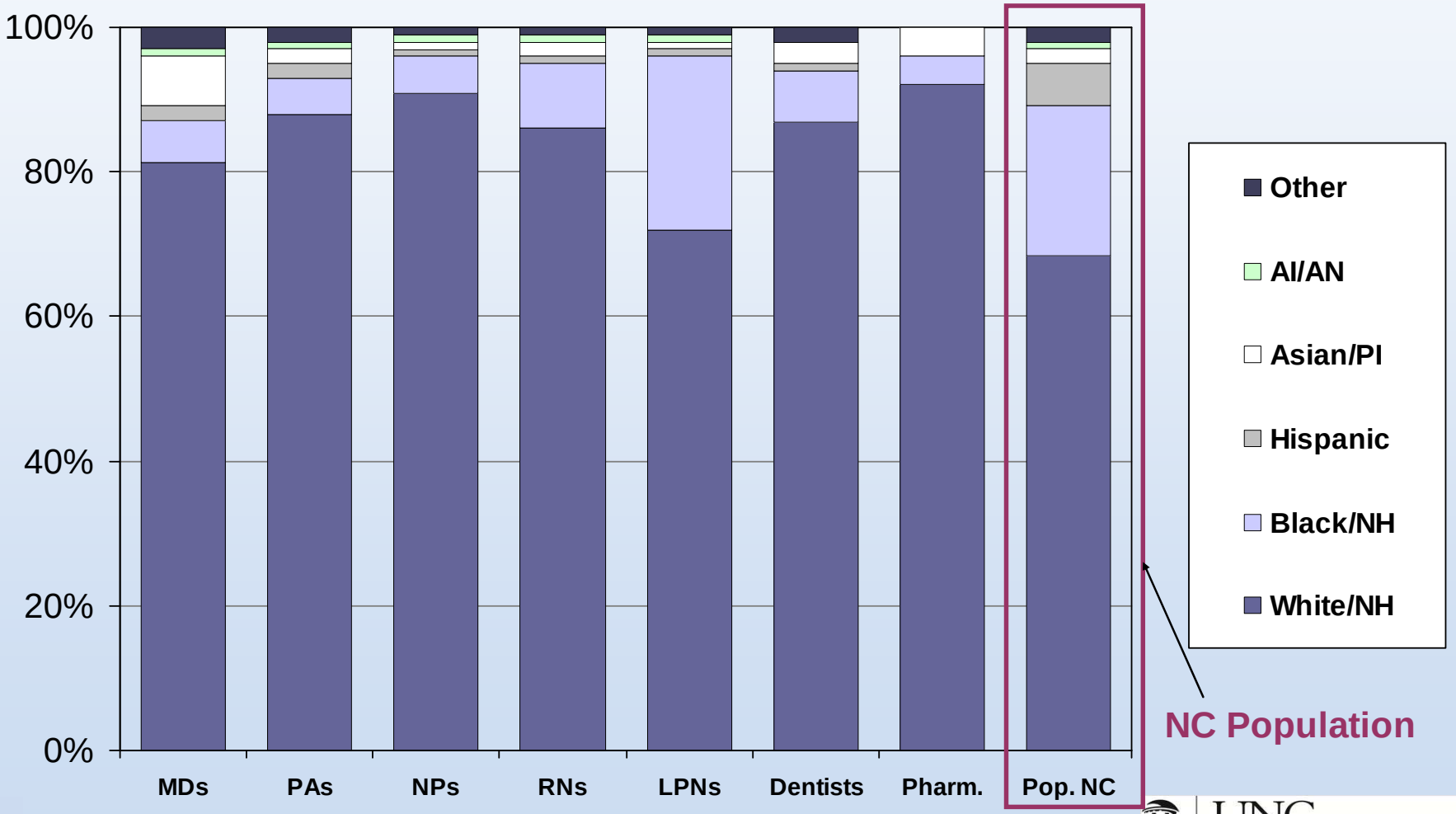
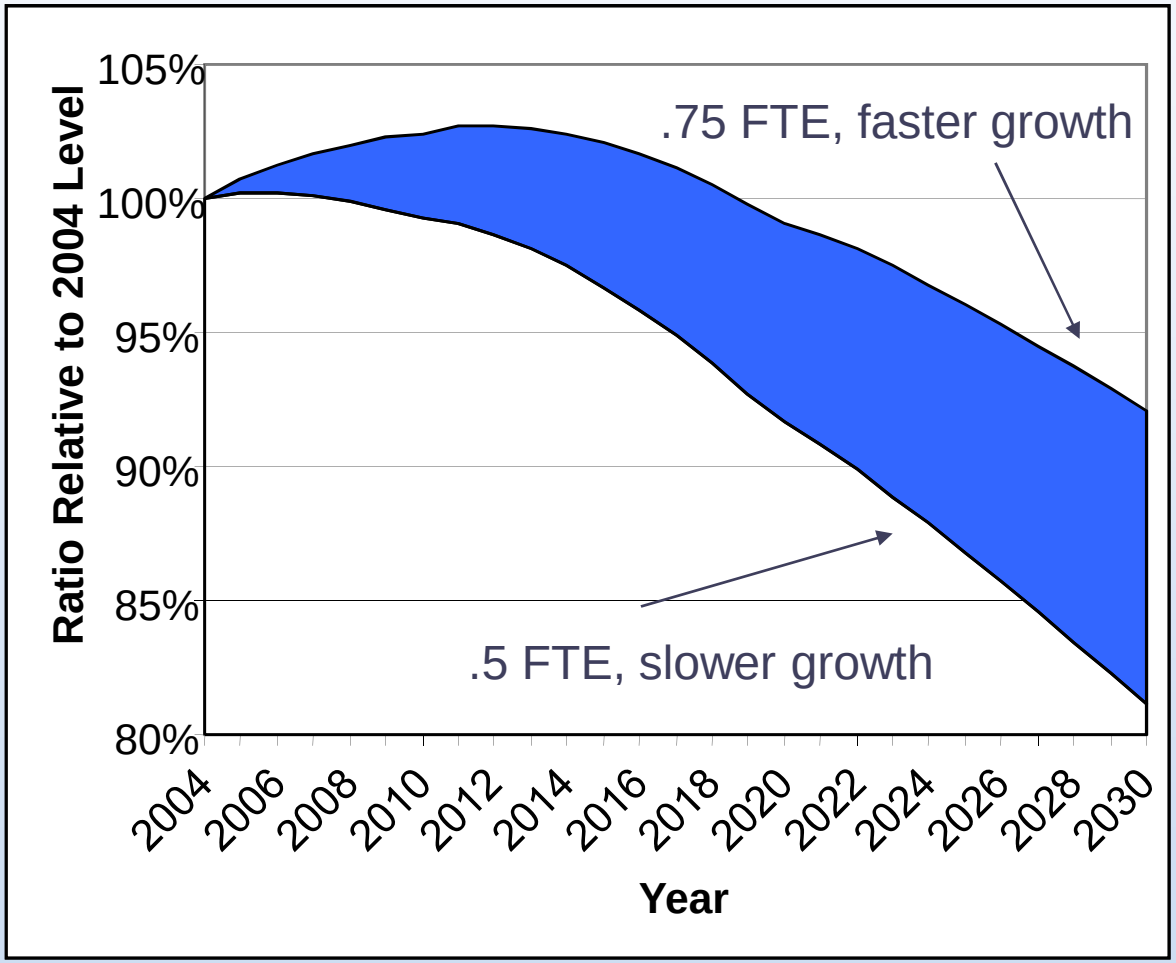
The Uncomfortable Truth: Lack of Diversity in Most Health Professions in North Carolina, 2005



NC AHEC, Sheps, NC IOM: The Primary Care and Specialty Physician Taskforce

- HPDS data revealed in 2003 that rate of growth of physicians/10 K population slowed
- At same time, supply of primary care physicians did not keep pace with population in many rural counties
- With funding from Kate B. Reynolds, NC IOM convened taskforce to examine issue
- Nurse practitioners, physician assistants and certified nurse midwives included

The Primary Care and Specialty Physician Taskforce: Supply Projections



Projections courtesy of Mark Holmes, NC IOM

Key Findings:

- Despite rapid growth of NPs and PAs, NC provider supply will not keep pace with population
- NC IOM made 32 recommendations to the legislature to address supply, diversity and maldistribution
- Draft report available at **http://www.nciom.org**
- Final report currently in production: expected release May 2007

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Lessons Learned

- Data driven workforce analyses necessary to:
  - Monitor longitudinal trends in supply and distribution—establish benchmarks. Are we worse or better off?
  - Identify emerging workforce issues
  - Challenge anecdotal evidence
  - Be perceived as objective in politically charged policy debates
  - Justify funding requests
- Tackle discrete policy-relevant and manageable size projects
- Disseminate results in short policy briefs with lots of pictures (maps are good…)

AHECs and Health Workforce Planning: The Future

- Workforce issues are not going away
- Federal workforce research funds have been cut and there are limited national data
- Responsibility falls on individuals states—most policy levers are at state-level
- AHECs well-positioned: congruent with mandate, multi-disciplinary, experienced pulling stakeholder groups together
- Focus for future: data-driven analyses to evaluate AHEC impact

Moving Forward: Technical Assistance

- We can provide technical assistance to AHECs as they develop data systems
- Already have had contact with Hawaii, Colorado, Massachusetts, South Carolina, Massachusetts, and others…
- We have developed materials to assist state-level efforts to build health workforce data systems
- Please visit our website

www.shepscenter.unc.edu/hp