



Medical Physics Workforce Study: Overview

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The Center for Health Workforce Studies

- Based at the School of Public Health at SUNY Albany
- Not-for-profit academic research center
- Our mission is to provide timely, accurate data, and conduct policy-relevant research about the health workforce
- Our goal is to inform public policies, the health and education sectors and the public



Goal of the Study

- To determine whether the supply of medical physicists will be sufficient to meet future demand for their services
- To identify potential strategies to avert future shortages in the profession



What Are the Study Objectives?

- To compile or collect data needed to understand the roles, responsibilities, education, and career paths of medical physicists
- To learn from key stakeholders about barriers to and facilitators of expanding accredited residency programs/slots
- To develop projections of the supply of and demand for medical physicists (radiation oncology and diagnostic radiology)
- To understand the workforce implications of shortages of medical physicists
- To recommend potential strategies that AAPM and other stakeholders may want to consider to assure a sufficient supply of medical physicists to meet demand for them.



Study Components

- Literature Review/Preliminary Report
- Stakeholder and Key Informant Interviews
- Survey of Medical Physicists in the AAPM Membership
- Development of Supply and Demand Forecast Models for Medical Physicists in Two Disciplines: Radiation Oncology and Diagnostic Radiology



Medical Physics Workforce Study: Conclusions and Next Steps

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The Health Workforce: The Basic Premise

- A health care system is only as good as its workforce
- The workforce directly impacts on:
 - Quality
 - Cost
 - Access

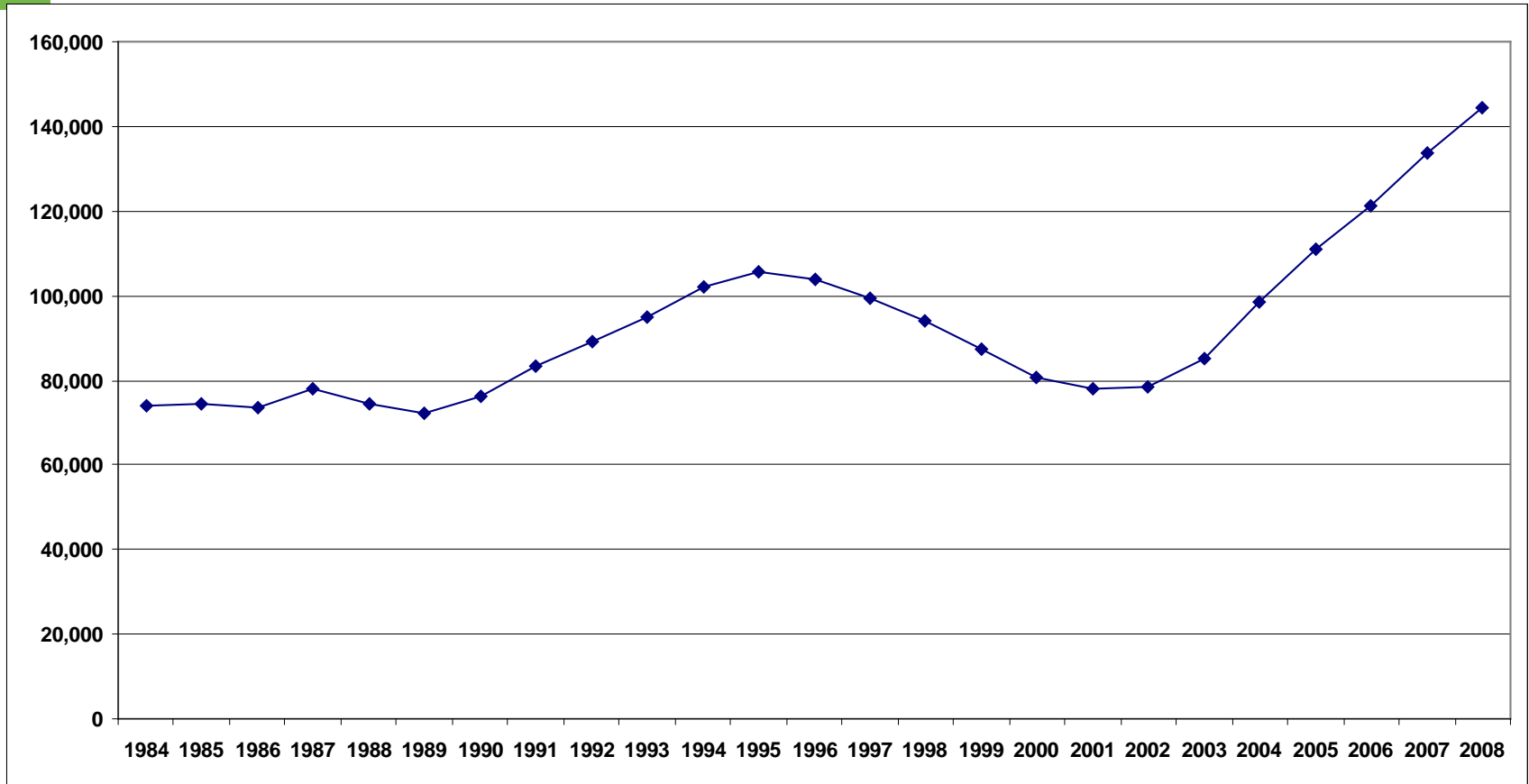


Health Workforce Supply and Demand Imbalances

*Fluctuations in health workforce labor markets can lead to widespread workforce imbalances, referred to as **shortages** or **surpluses***

Nursing Cycles of Overproduction and Shortage

Registered Nursing Graduations in the US, 1984-2008




Source: IPEDS



Imbalances Can Take Many Forms.....

- Profession or specialty imbalances, (e.g., registered nurses, primary care physicians, general surgeons)
- Geographic imbalances, (e.g., differences in supply of health workers between rural and urban areas)
- Institutional and service imbalances, i.e., differences in the supply of health workers in different settings, (e.g., acute care compared to long-term care)
- Public and private imbalances, differences in the supply of health workers between publicly- and privately-sponsored providers
- Gender or racial/ethnic imbalances in a health profession



The Medical Physicist Training Pipeline Will Shortly Be Constricted

- There are many graduates from medical physics education programs (masters and doctoral)
- There is great competition for the relatively small number of medical physicist residency slots
- Like medicine, the production of new board eligible medical physicists will be limited by the number of residency slots



Context of Future Supply/Demand Gaps in Medical Physics

- Aging of the U.S. population
- Health reform
 - Expanded access to health insurance
 - Focus on primary and preventive care
 - Support for innovation
- Technological evolution and advances
- Concerns about health care quality, patient safety and medical errors
- Economic conditions



Response Options to an Emerging Shortage

- Postpone implementation of the new certification requirements
 - Produce more medical physicists
 - A rapid expansion of residency slots
 - Expand the # of DMP programs
- Extend work hours and/or clinical careers of currently practicing medical physicists
- Use current supply more efficiently
 - More delegation
 - Create new levels within the profession



Consequences of Failure to Respond

- If a serious shortage of medical physicists occurs in the future, it will affect access to and cost of health care services
- Others may respond:
 - Health care providers
 - Other professions
 - States
- Examples, endoscopy in the U.K. and dental therapists in Alaska



Next Steps

- Critical need to monitor the medical physicist workforce going forward
 - Pipeline: student and resident exit survey
 - Supply of medical physicists
 - Demand for medical physicists
- Engage in a long-term workforce planning effort
 - Update model parameters
 - Inform strategies that can assure an adequate supply of well-trained medical physicists for the future