

Demographic and Health Workforce Trends: Implications for Cancer Care in the Future



Tomorrow's Doctors, Tomorrow's Cures

Learn

Serve

Lead

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Association of
American Medical Colleges

Presentation Overview

- ∅ Rising Need for Health Services
- ∅ Overview of the Health Workforce
- ∅ Physician Workforce Shortages
- ∅ The Oncology Workforce
- ∅ The Growing Need for Oncology Services
- ∅ Some Possible Strategies to Assure Access

Rising Demand and Need for Health Services

Drivers of Future Demand for Health Services

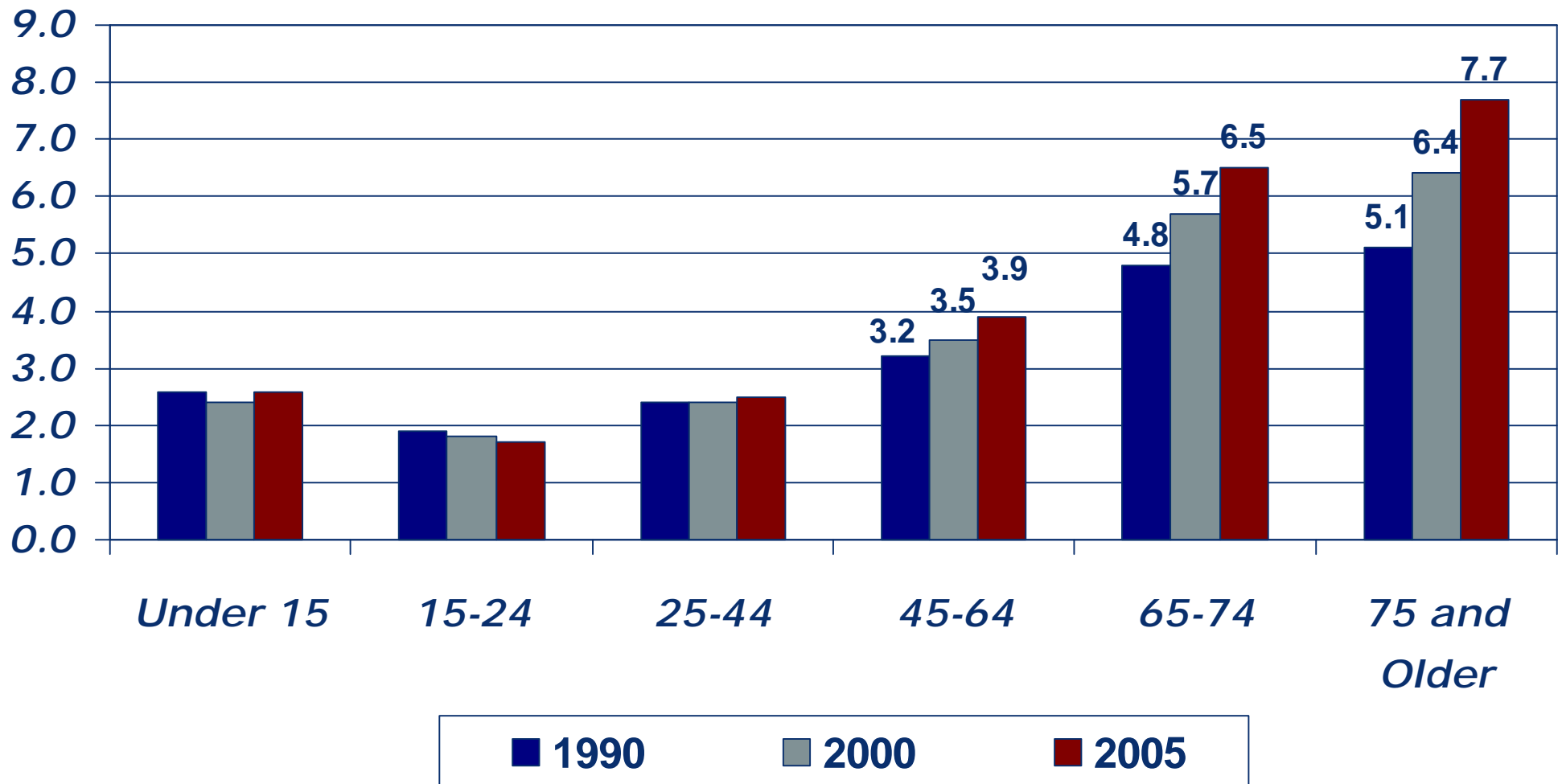
- **Population growth**

- § US Pop Growing by 25 million/decade

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- **Aging of the population**
 - § Over 65 will double 2000-2030
 - § Major illness/chronic illness far more prevalent among the elderly
 - § Over 65 make twice as many physician visits as under 65

Average Visits to Physicians by People Over Age 45 Have Risen Significantly Over the Past 15 Years



Source: 1990, 2000, and 2005 NAMCS

Recent IOM Report Highlights Chronic Disease Needs of the Elderly

	18 -64	65-74	75+
Prevalence of Chronic Disease			
Hypertension	22.9	52.9	53.8
Chronic Joint Systems	25.2	42.7	44.2
Heart Disease	10.9	26.2	36.6
Any Cancer	7.1	17.2	25.7
Diabetes	7.7	18.6	18.3
Stroke	2.6	7.6	11.2
Chronic Bronchitis	4.2	5.6	6.7
Overall Health Status			
Self-assessed health status as fair or poor	12.1	22.5	27.5

Source: Retooling for an Aging America: Building the Health Care Workforce (IOM)

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- Life style factors
 - § Rates of obesity, diabetes, etc. rising rapidly

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- **Medical advances**

Medical Advances are Likely to Lead to Increased Demand and Use of Services

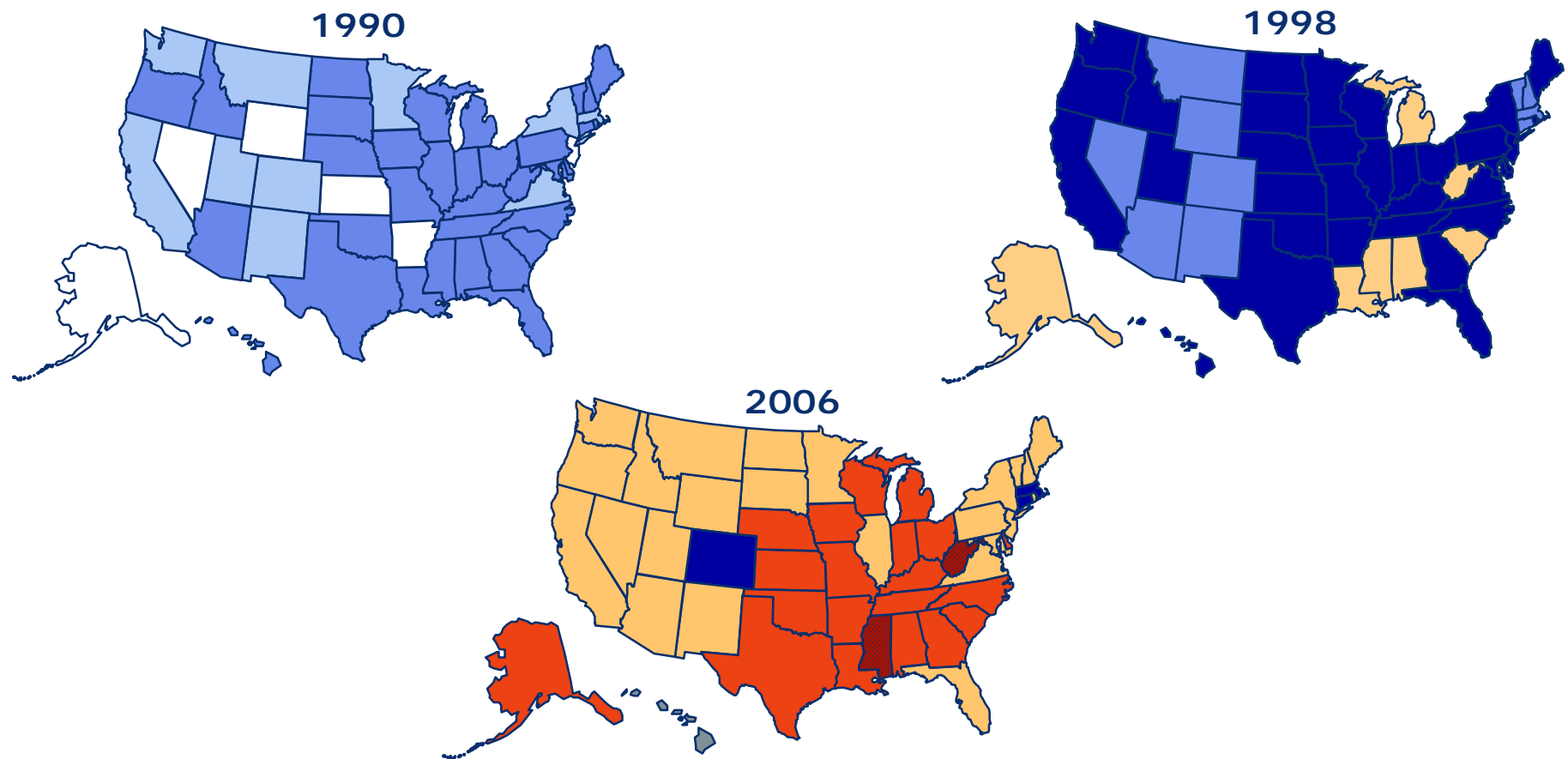
- “Medical innovations will result in better health and longer life, but they will likely increase, not decrease, Medicare spending.
- Eliminating any one disease will not save Medicare money.
- Obesity may be an important exception to the rule.”

Research Highlights: Future Health and Medical Care Spending of the Elderly; Rand 2005

Obesity Trends* Among U.S. Adults

BRFSS, 1990, 1998, 2006

(*BMI ≥ 30 , or about 30 lbs. overweight for 5'4" person)

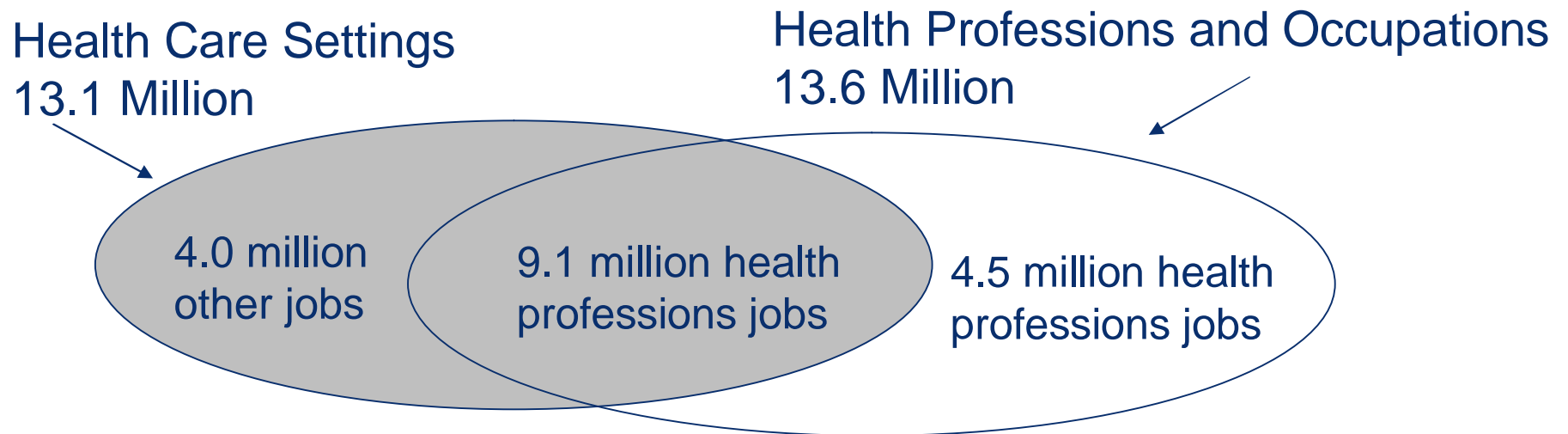


Drivers of Future Demand for Health Services

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- Medical advances
- Economic growth of the nation
- Public expectations
 - § Baby boom generation: high resources and expectations

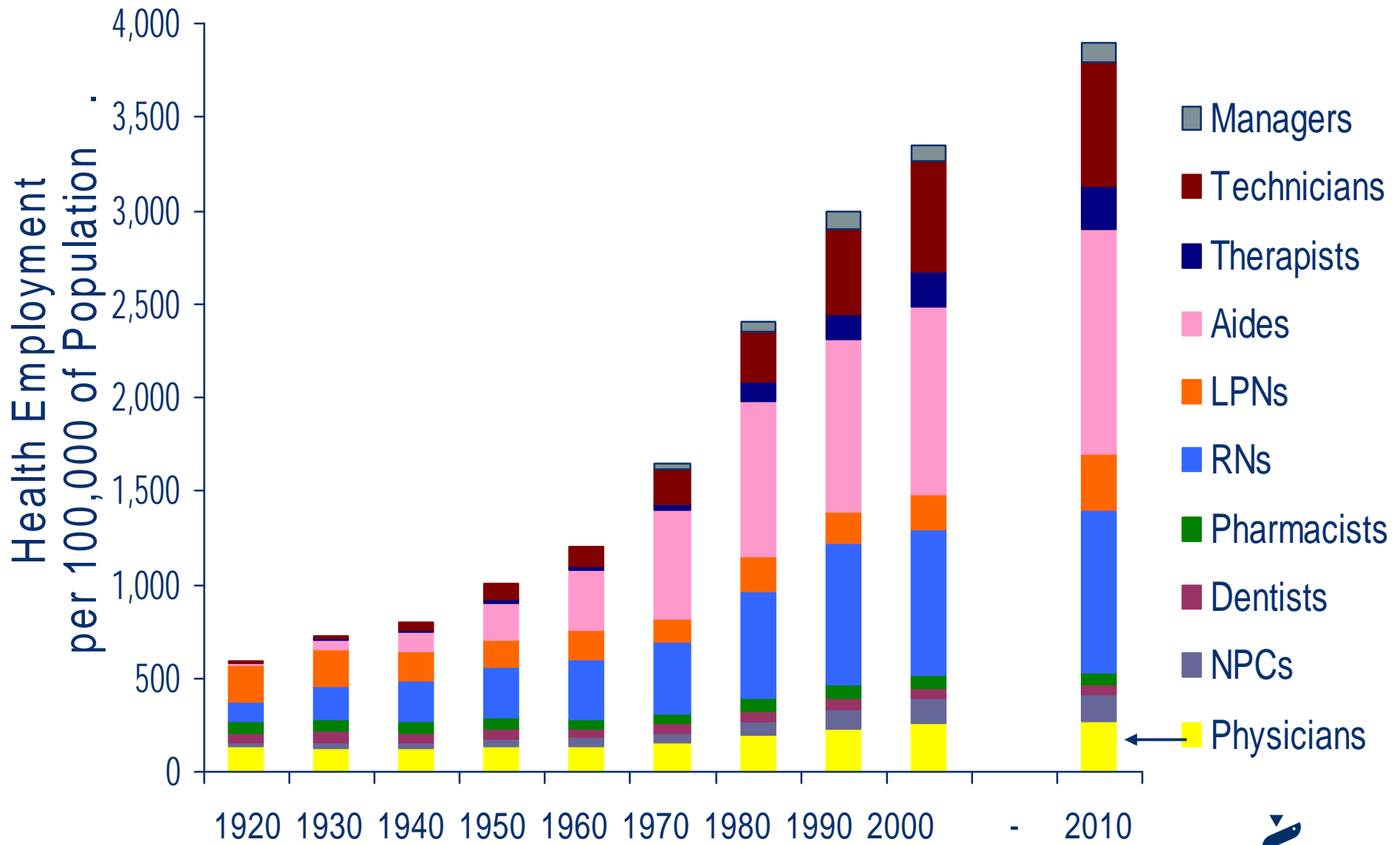
Overview of the Health Workforce

The U.S. Health Workforce 2006: 17.6 Million and Growing

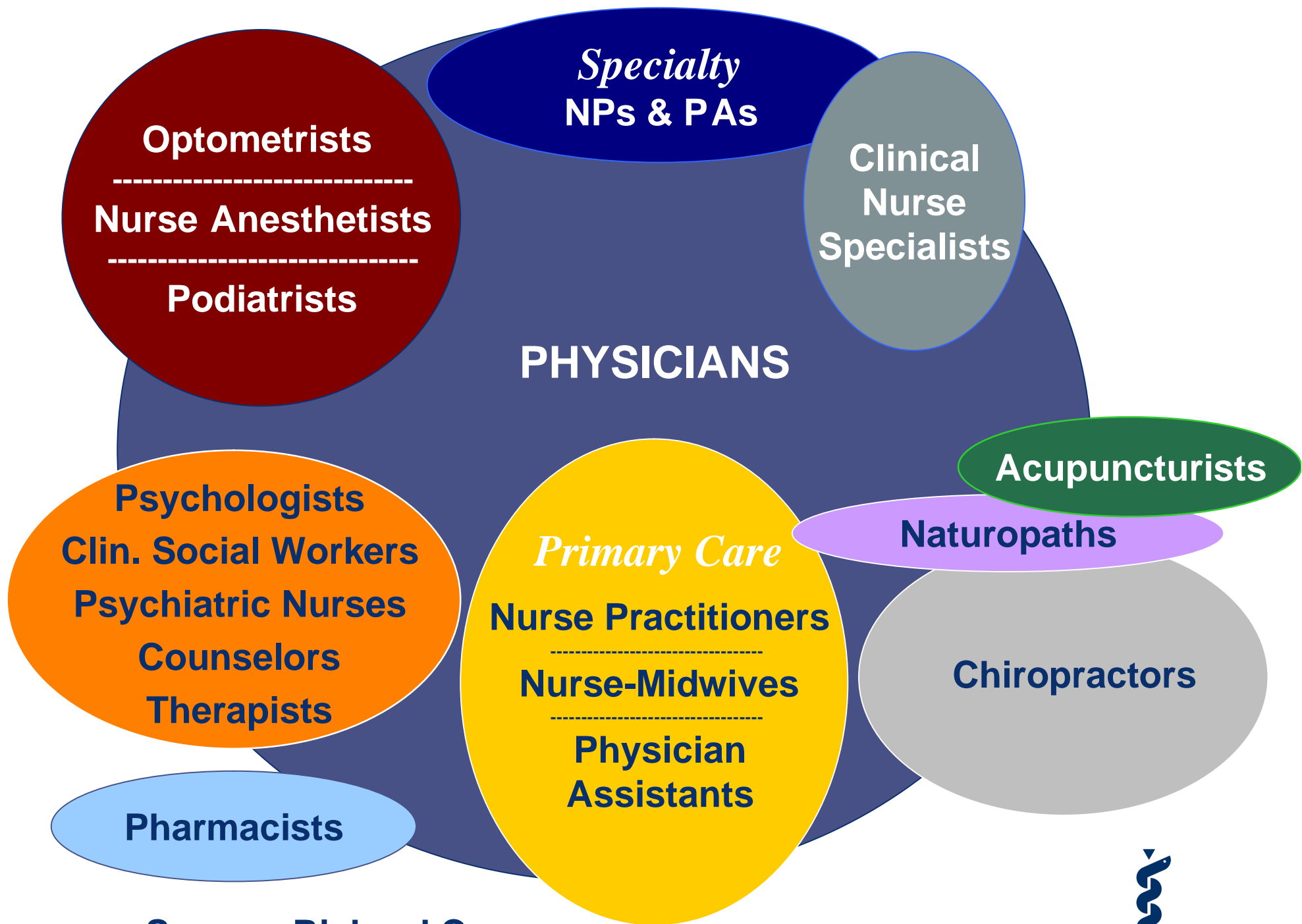


Source: Health Care Employment Projections: An Analysis of Bureau of Labor Statistics Occupational Projections, 2006-2016. Center for Health Workforce Studies, University at Albany

Physicians Represent a Decreasing Share of the Health Workforce

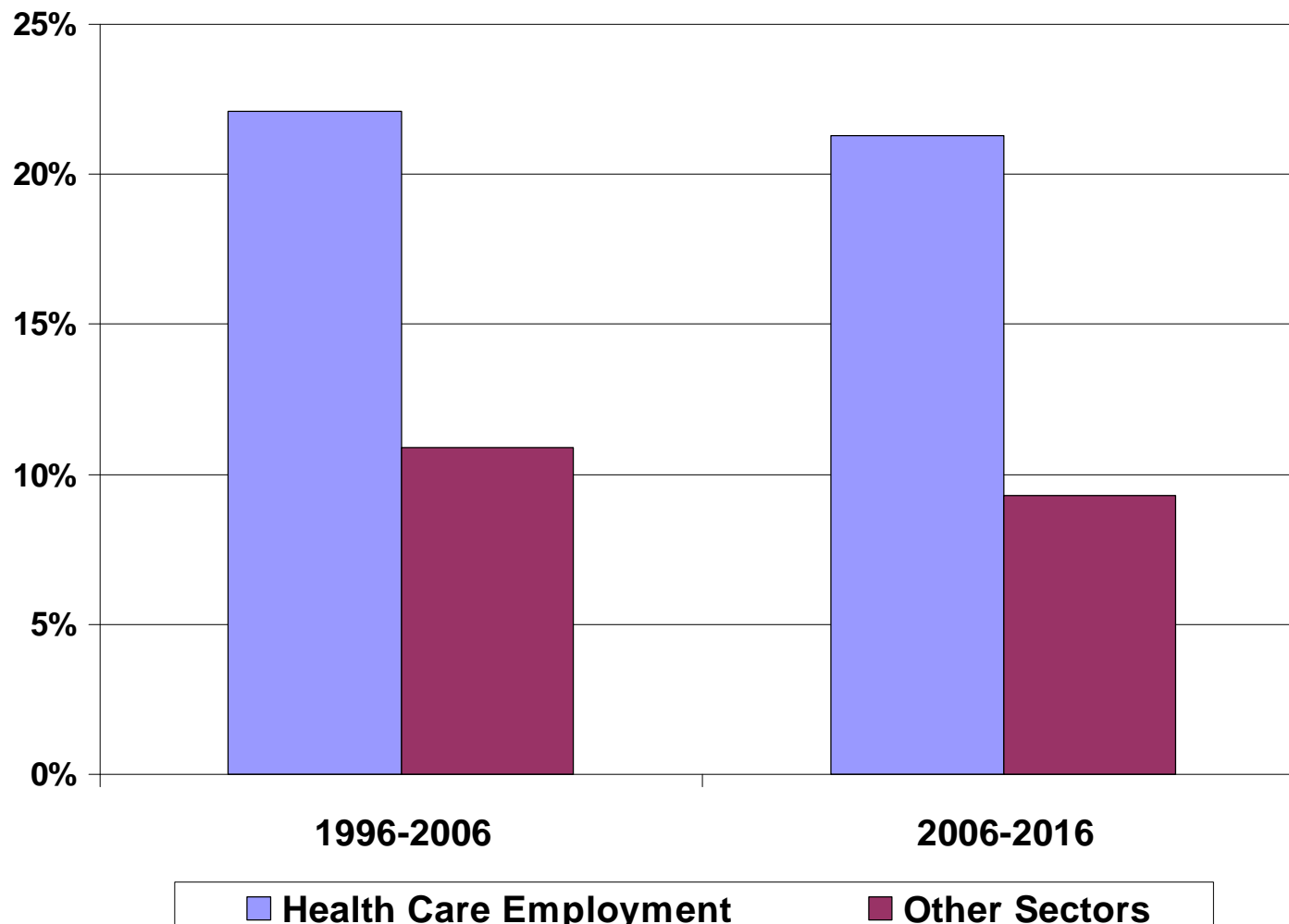


Adapted from Kendix and Getzen and the Bureau of Labor Statistics,
Source: Richard Cooper



Source: Richard Cooper

Job Growth in the Health Sector Compared to All Other Employment Sectors 1996-2006 and Projected 2006-2016



Source: Health Care Employment Projections: An Analysis of Bureau of Labor Statistics Occupational Projections, 2006-2016. The Center for Health Workforce Studies, University at Albany

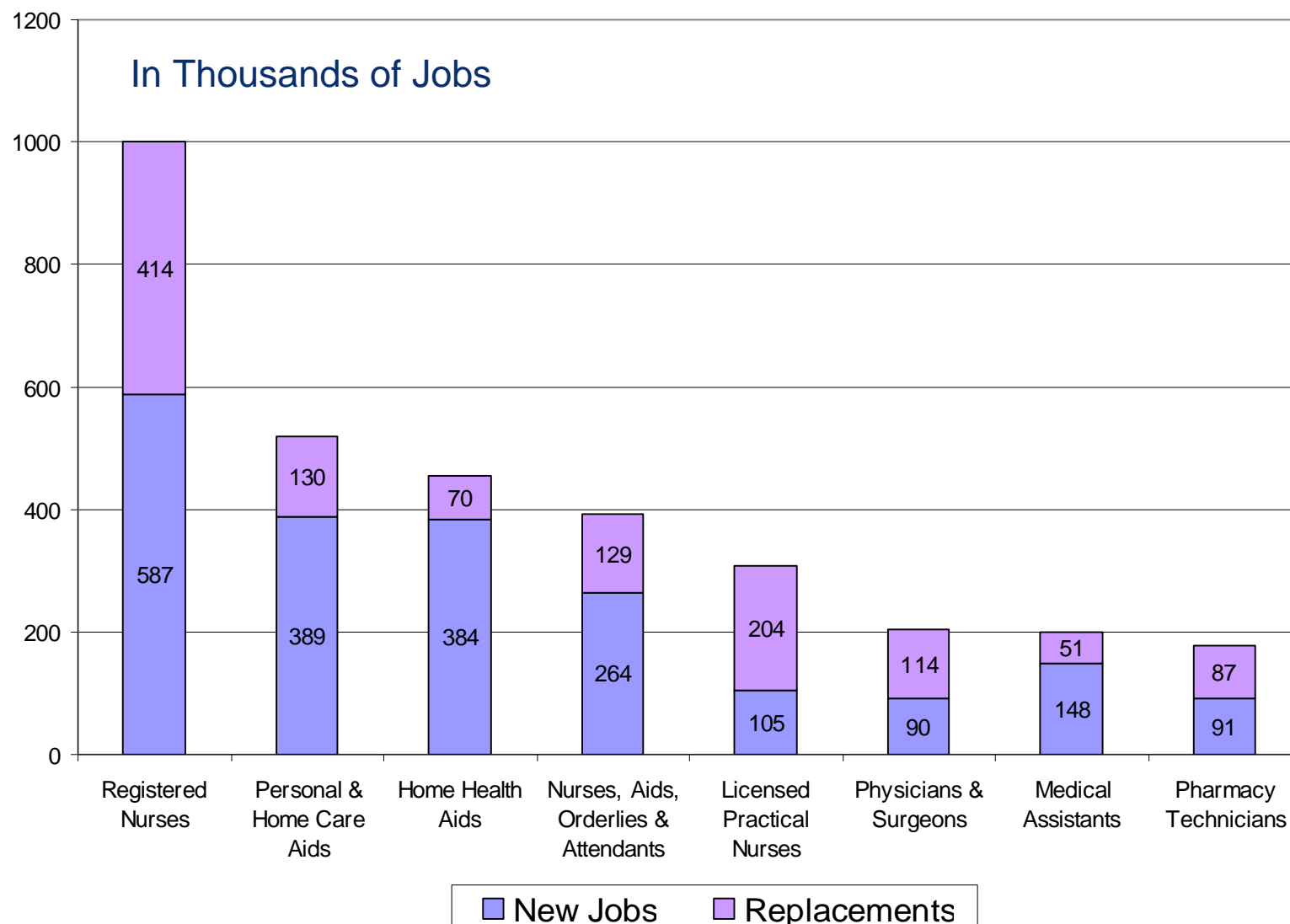
Between 2006 and 2016 . . .

- Ø The fastest growth in the health sector is projected for home health care. Hospital employment is projected to grow at a much slower rate.
- Ø Nearly 5.5 million health workers will be needed to fill new jobs and to replace workers who leave their jobs across all employment sectors
- Ø More than half of the top 30 occupations projected to grow the fastest in the U.S. are health occupations.

Source: Health Care Employment Projections: An Analysis of Bureau of Labor Statistics Occupational Projections, 2006-2016. The Center for Health Workforce Studies, University at Albany



Selected Health Occupations With the Largest Projected Need between 2006 and 2016



Source: Health Care Employment Projections: An Analysis of Bureau of Labor Statistics Occupational Projections, 2006-2016. The Center for Health Workforce Studies, University at Albany

The Education/Training Supply Pipeline Can be Very Long; This is Particularly True in Medicine

Ø 3 to 5 years to add med education capacity

Ø 4 years of medical school

Ø 3 to 7 years of training

Total: 10 to 16 years before a small marginal
increase in numbers of US graduates

Physician Workforce Shortages

Recent Reports of Physician Shortages: Specialty Studies

- Allergy & Immunology (2000)
- Anesthesia (2003)
- Cardiology (2004)
- Child Psychiatry (2006)
- Critical Care Workforce (2006)
- Dermatology (2004)
- Emergency Medicine (2006)
- Endocrinology (2003)
- Family Medicine (2006)
- Geriatric Medicine (2008)
- General Surgery (2007)
- Medical Genetics (2004)
- Neurosurgery (2005)
- Oncology (2007)
- Pediatric Subspecialty (2008)
- Primary care (2008)
- Psychiatry (2003)
- Public Health (2007)
- Rheumatology (2007)

Recent Reports of Physician Shortages: State Reports

- Alaska (2006)
- Arizona (2005)
- California (2004)
- Florida (2005)
- Georgia (2006)
- Hawaii (2008)
- Idaho (2007)
- Iowa (2007)
- Kentucky (2005)
- Maryland (2008)
- Massachusetts (2007)
- Michigan (2005)
- Mississippi (2003)
- Nevada (2006)
- New York (regional) (2007)
- New Mexico (2007)
- North Carolina (2007)
- Oregon (2004)
- Texas (2002)
- Utah (2006)
- Virginia (2007)
- Wisconsin (2004)

Key Factors Influencing Future Supply

- ∅ Medical and osteopathic enrollment
- ∅ International migration and IMG policies
- ∅ GME positions
- ∅ Aging of physician workforce & retirement
- ∅ Gender and generational differences/Lifestyle choices of physicians
- ∅ Productivity and organizational changes

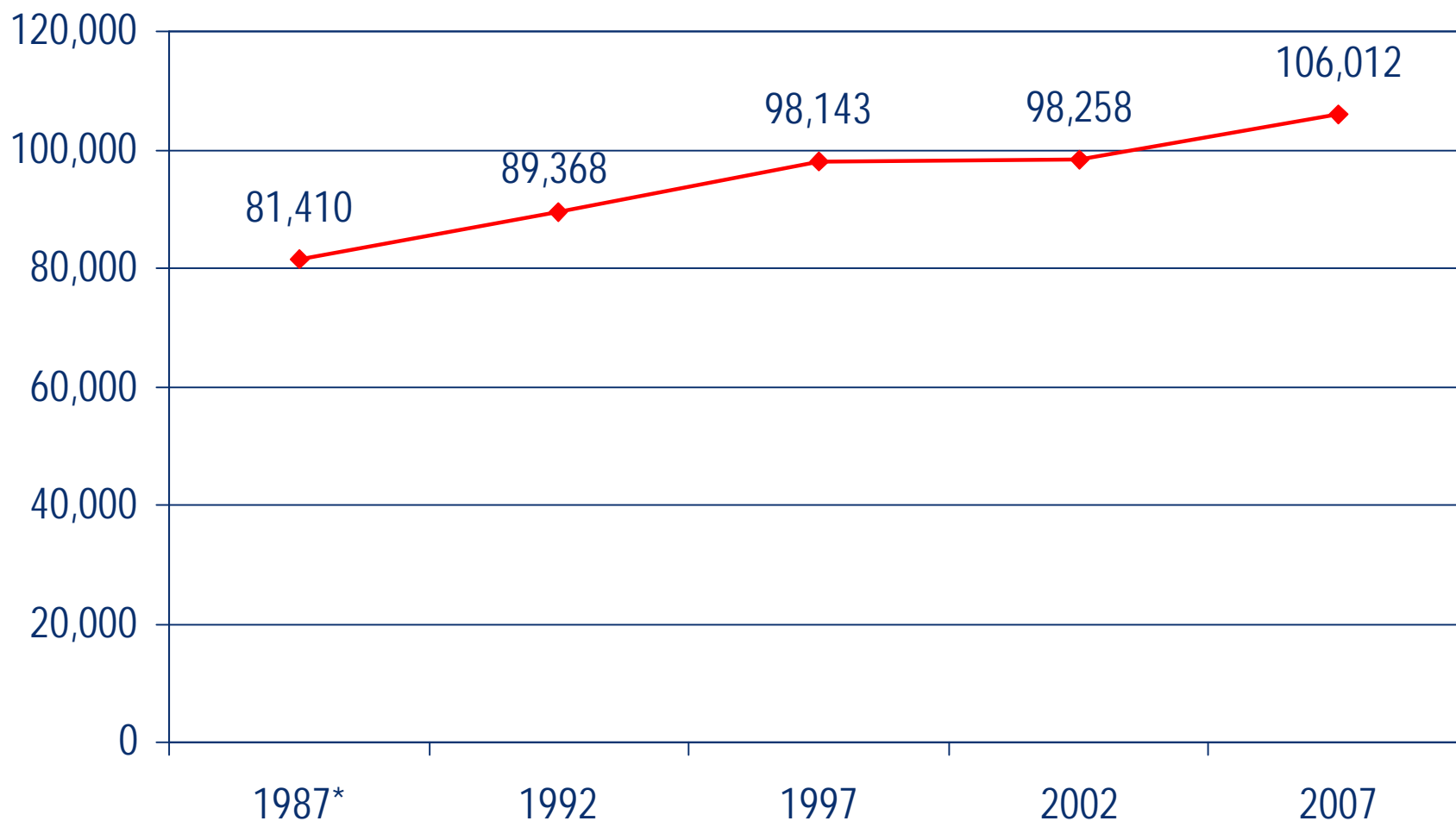
*First Year MD and DO Enrollment
in 2012 is Likely to be more than 5,500
(28%) Higher than in 2002*

	<u>2002</u>	<u>2012</u>	<u># and % Increase</u>	
MD	16,488	19,909	3,421	21.0%
DO	3,079	5,227+	2,148	69.8%
<hr/>				
Combined	19,567	25,136	5,569	28%

Source: 2007 AAMC Dean's Enrollment Survey
2007 AACOM Enrollment Survey



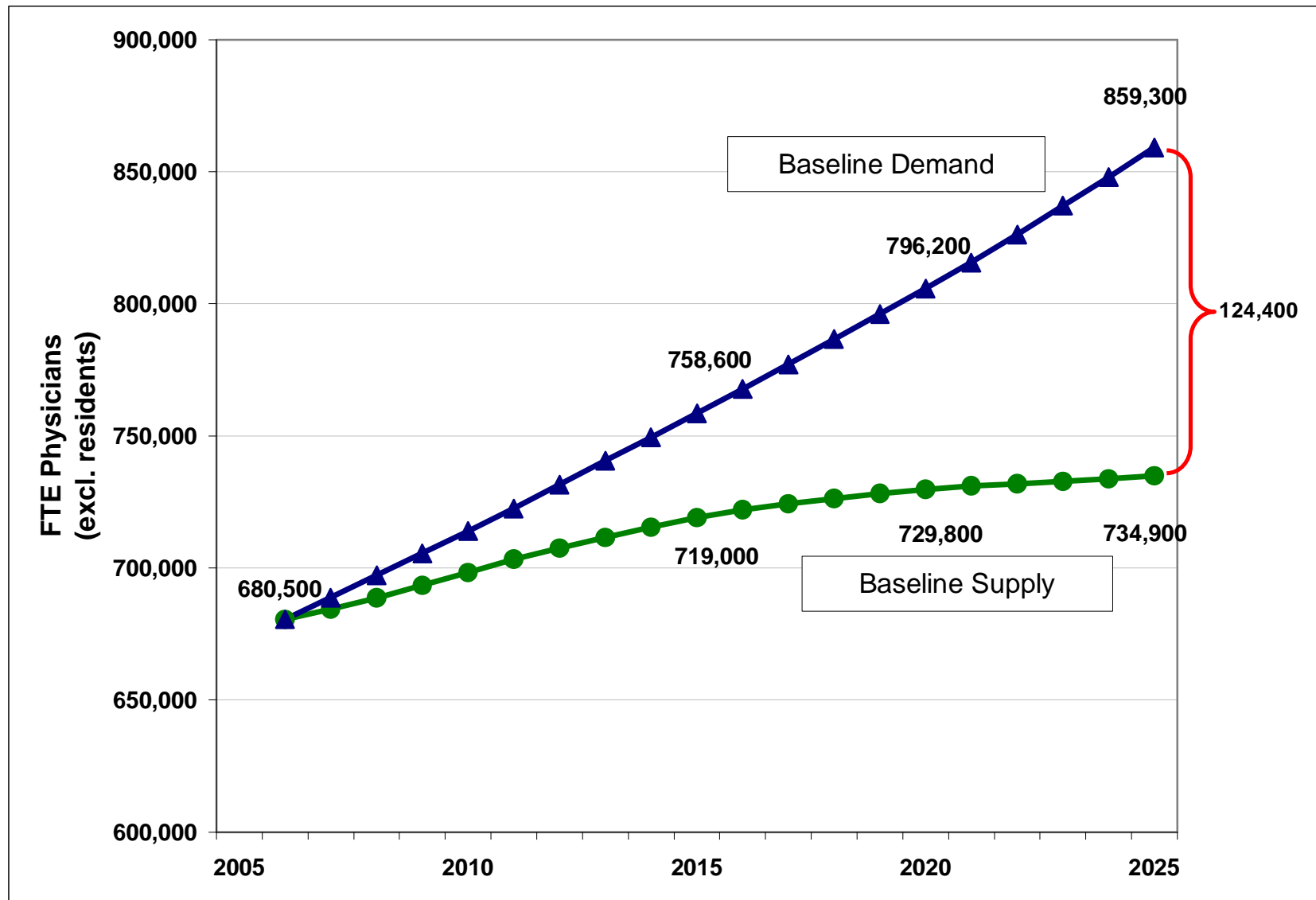
GME Growth 1987-2007: Residents and Fellows in ACGME Accredited Training Programs



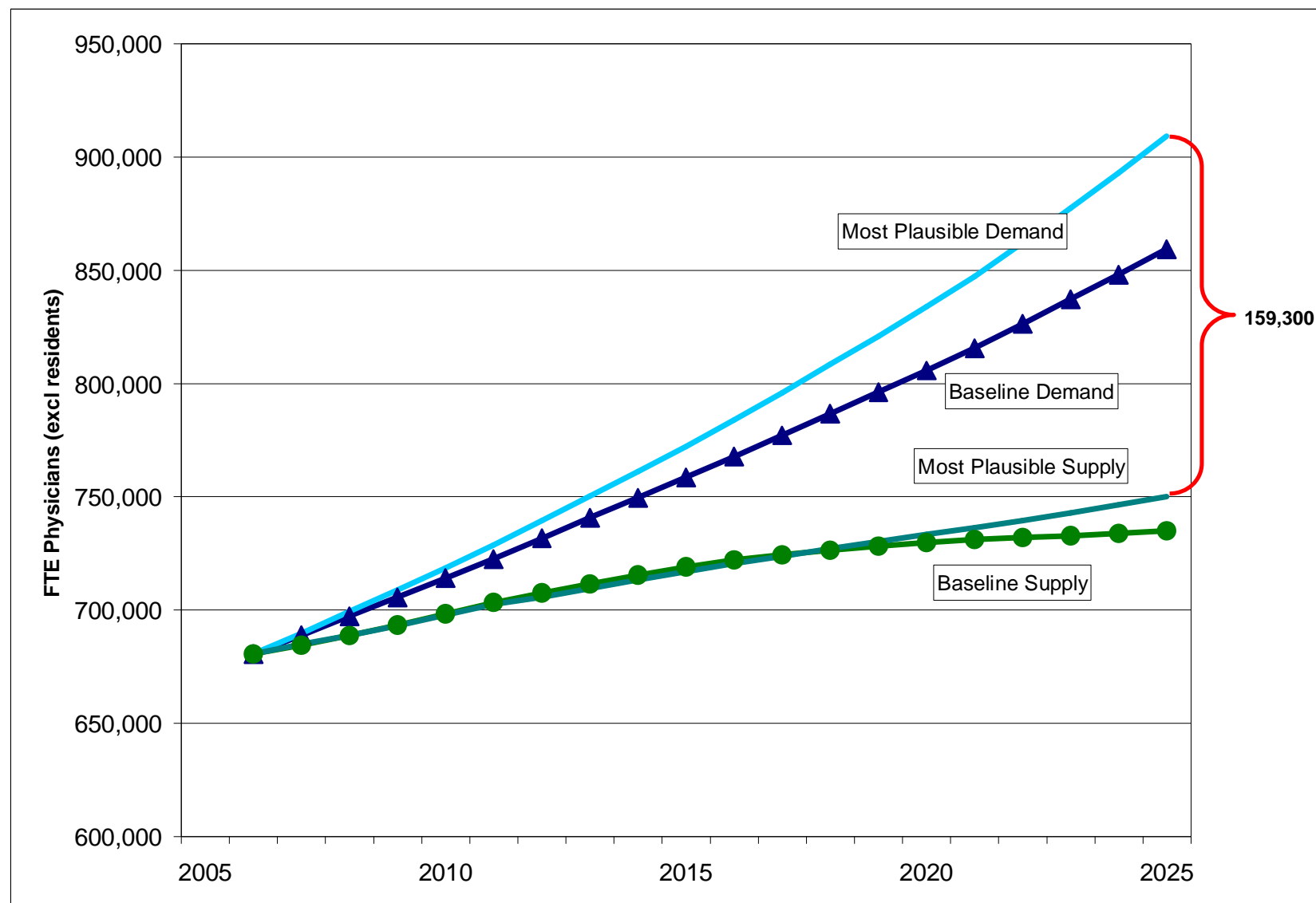
*Data for 1987 excludes residents in combined specialty programs.

Source: JAMA Medical Education issues

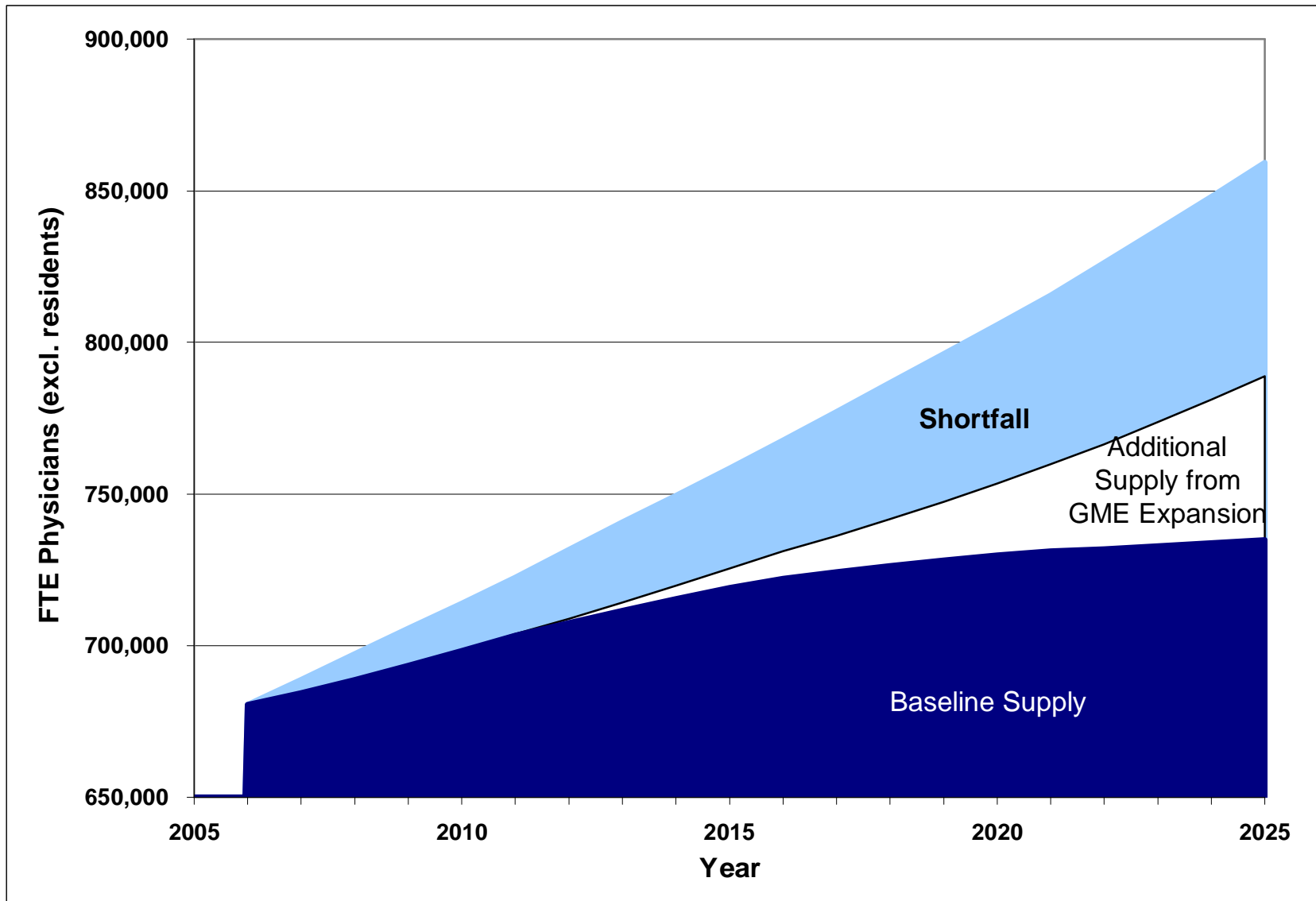
Baseline Physician FTE Supply and Demand Projections, 2006 - 2025



Projected FTE Physicians, Baseline & Most Plausible Scenarios, 2006-2025



Even with an Expansion of Training Positions, Demand will Exceed Supply



Slow GME Growth: Will Growth Continue?

- 1997 BBA caps number of residency positions Medicare will cover
- The total number of residents in ACGME flat from 1997 to 2002 but has increased 7.9% over the past 5 years
- Unknown how much – if at all - residency programs will continue to grow in the coming years. Federal funding cuts for GME would likely reduce growth
- The general fiscal health of hospitals may determine whether growth continues in the absence of new federal support for GME
- Without GME growth, US MDs and DOs are likely to displace IMGs and physicians per capita will peak about 2015

Sub-Specialization is Increasing Across a Wide Range of Specialties

	Percent of Residents Completing Program Who Sub-Specialize	
Specialty	A Y 2002	A Y 2007
Anesthesiology	9.5	15.5
Dermatology	14.3	23.7
Family medicine	2.6	4.9
Internal medicine *	47.2	54.9
Neurology	38.3	55.6
Orthopaedic surgery	34.1	52.4
Pathology	48.8	65.2
Pediatrics	26.9	39
Psychiatry	44.9	54.1
Radiology	30.7	40.6

* Internal medicine excludes the sub-sub-specialties of clinical cardiac electrophysiology and interventional cardiology .

Source: JAMA September 10, 2008

Oncology Workforce

Percent Seeing an Oncologist Varies by Site and Stage

(Percent with at least one oncology visit within first 12 months of diagnosis)

	Prostate	Breast	Colorectal	Lung
N =	18,258	11,698	9,528	5,002
In Situ	0%	56%	12%	57%
Stage I	12%	76%	35%	48%
Stage II	12%	83%	62%	70%
State III	14%	85%	83%	76%
Stage IV	31%	92%	80%	79%
Unstaged	11%	64%	41%	51%

Source: NCI, May 2006

Physician Specialties Involved in Cancer Care

- Dermatologists
- Gastroenterologists
- General Surgeons
- Surgical specialists
 - Colorectal surgery
 - Otolaryngology
 - Neurosurgery
 - Plastic surgery
 - Urology
- Gynecologists
- Hematologists
- Medical oncologists
- Oncologists
- Palliative care
- Pathologists
- Primary care physicians??
- Pulmonologists
- Radiation oncologists
- Radiologists
- Surgical oncologists

And a Large Team Other Health Workers

- Care management team
- Oncology Nurse Specialist
- Physician assistant
- Registered Nurses
- Radiation and lab techs
- Clinical pharmacists
- Infusion technicians
- Dieticians
- Cancer Care Coordinator
- Social worker/Counselors
- Psychologists
- Spiritual counselors
- Hospice workers
- Researchers
- Financial counselors
- Genetic Counselors
- Occupational therapists
- Physical therapists
- Respiratory therapists
- Speech therapists
- Aides and assistants

The Need and Demand for Oncology Services

Oncology Visits Projected to increase by 50% from 2005 to 2020

Ø Number of cancer patients in the U.S. is projected to increase from 11.5 million in 2005 to 18.2 million in 2020 (55% increase)

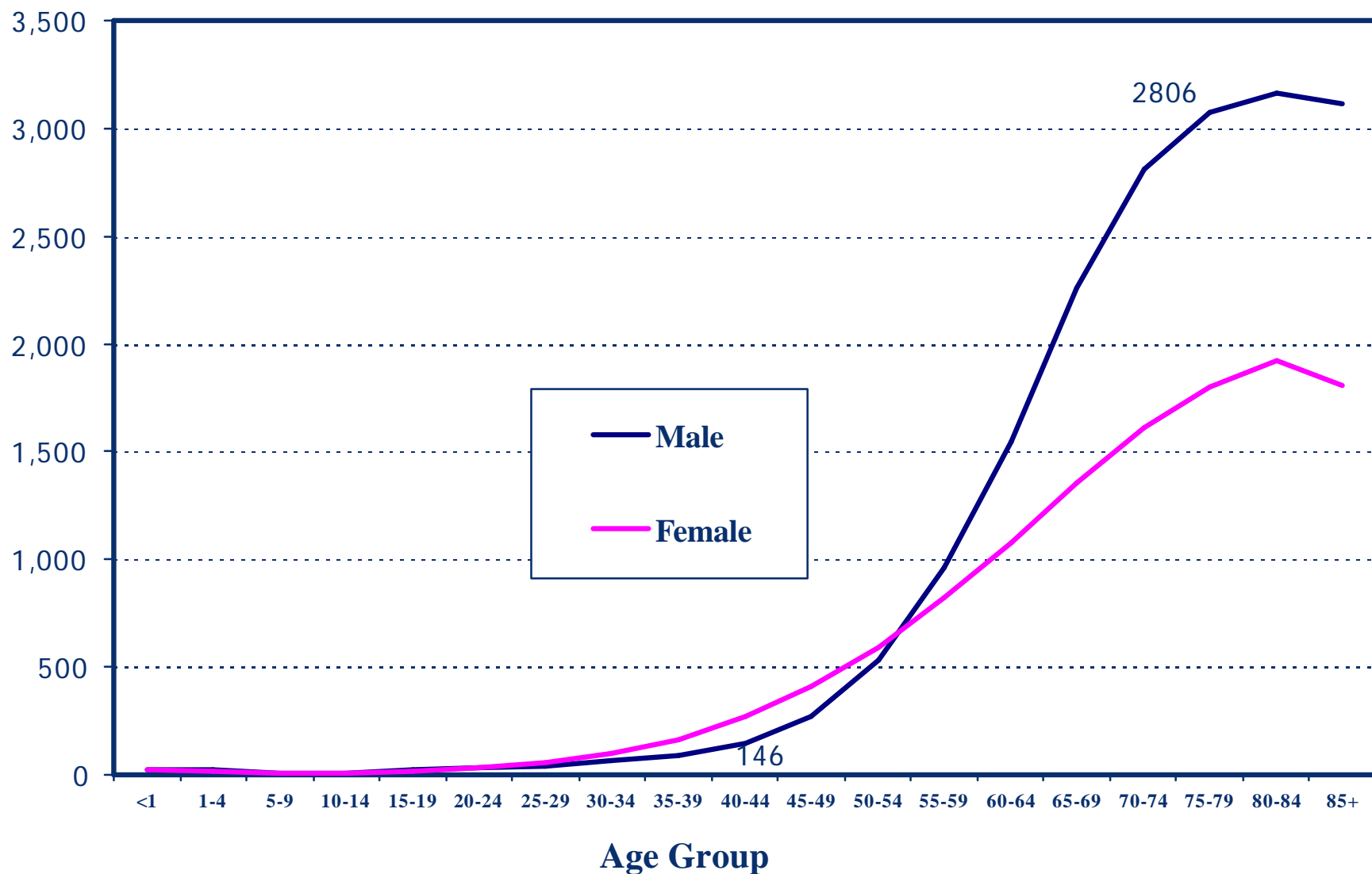
Ø Oncology visits are projected to increase from 38 million in 2005 to 57 million in 2020

Ø Increase in services due to an increase in survivorship and the aging of the population

Source: Warren, J.L., Mariotto, A.B., Meekins, A., Topor, M., and Brown, M.L. (2008) Current and Future Utilization of Services from Medical Oncologists. *Journal of Clinical Oncology* 26 (19): 3242-3247



Age-Specific Cancer Incidence Rates/100,000, 2000



Source: CDC, Age-Specific Invasive Cancer Incidence Rates by Primary Site and Race, United States (U.S. Cancer Statistics, 2000).

Prepared by AAMC Center for Workforce Studies

Possible Solutions

Oncologists Views on Addressing Shortages

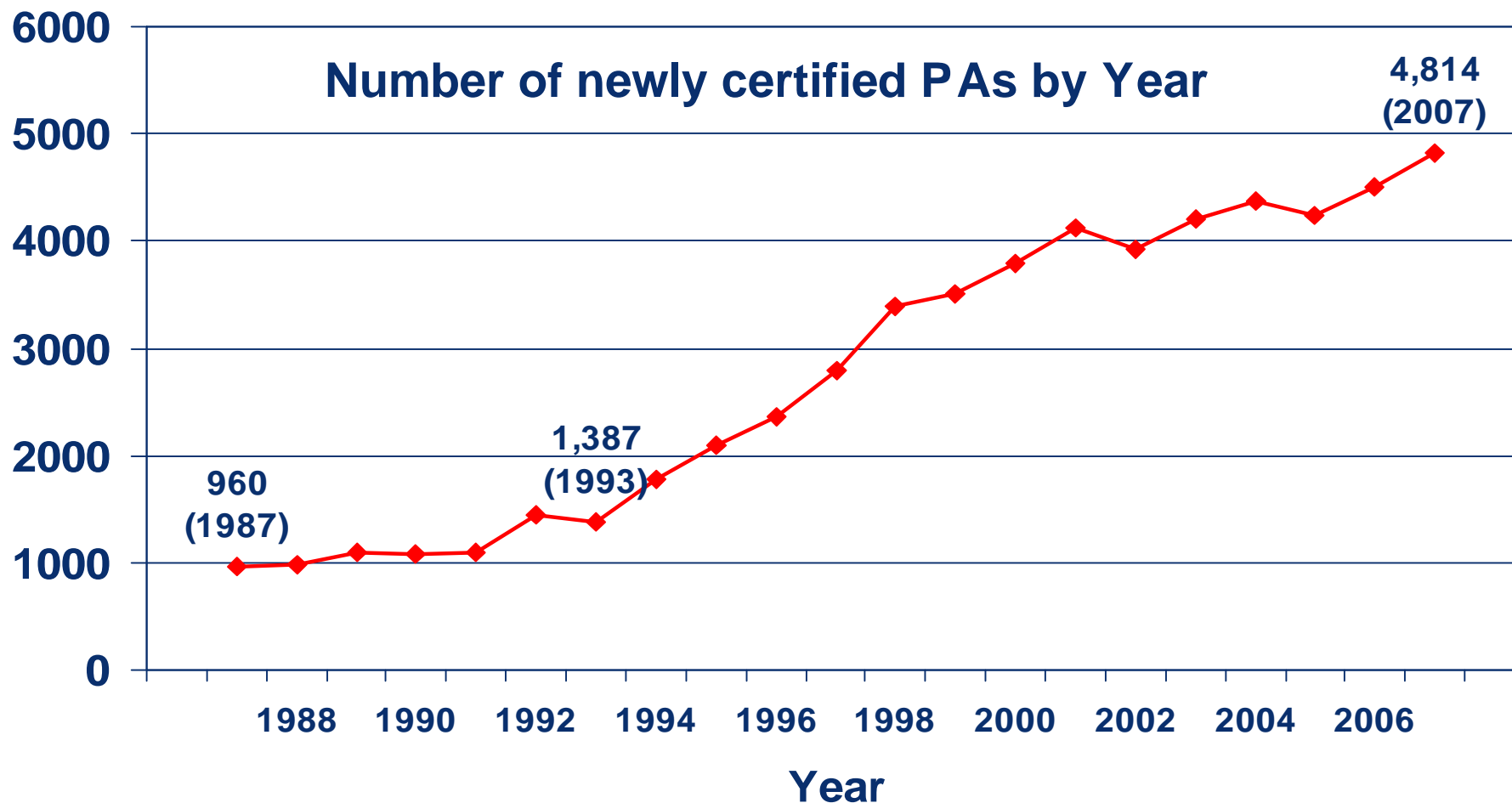
(Results of 2006 Practitioner Survey)

		<i>% Significant Potential</i>
Increase Efficiency	Reduction of paperwork and regulations	61%
	Improved IT such as electronic medical records	43%
Increase / extend oncology workforce	Increased use of NPs/PAs	36%
	Train more clinical oncologists	34%
	Increased use of oncology nurses and CNS	32%
	Create incentives to delay retirement	28%
Increase use of related care providers	Hospice and palliative care providers	26%
	Social workers, counselors and patient educators	24%
	Hospitalists	20%
	Pain and symptom management specialists	17%
	Primary care providers to care for patients in remission	15%

Some Potential Strategies to Help Assure Access to Cancer Care in the Future

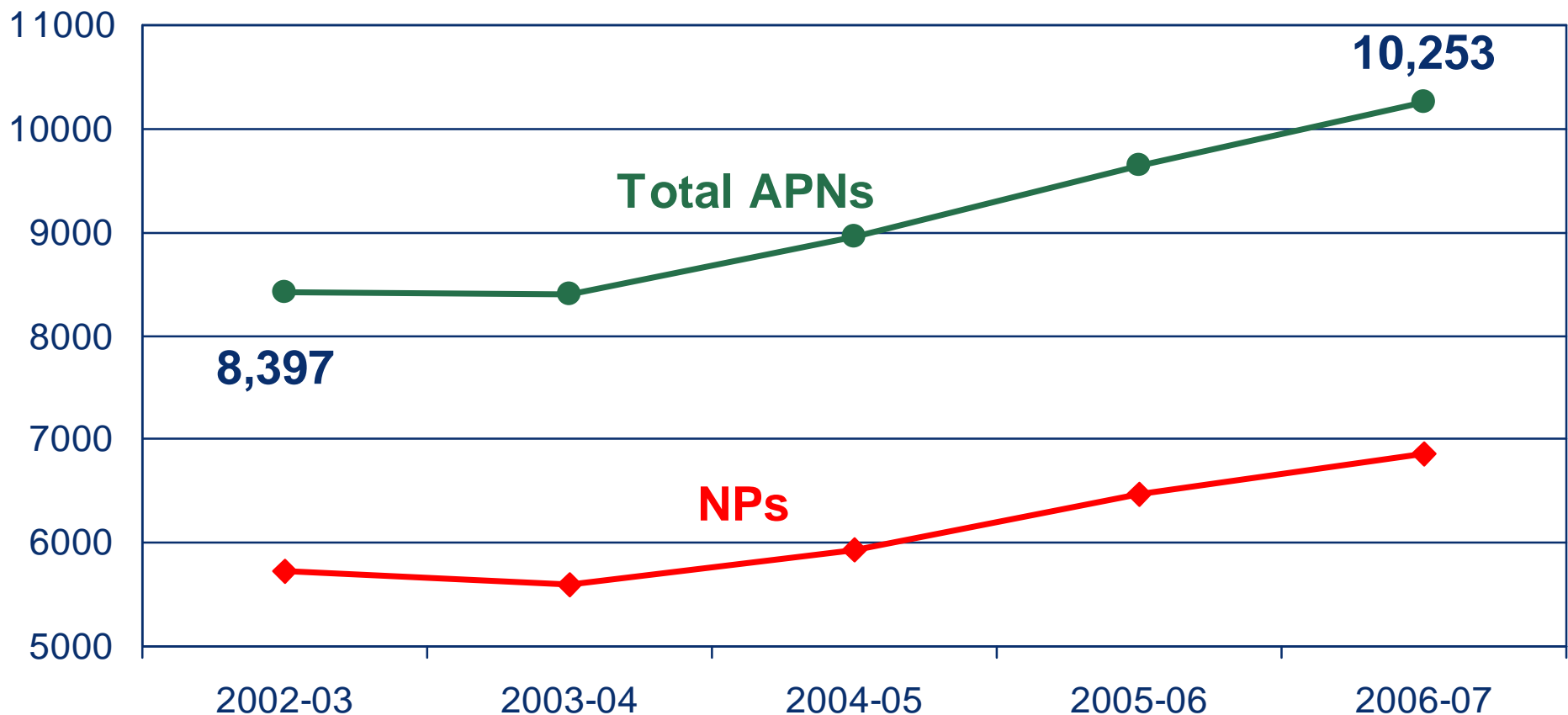
- Increase oncology training positions
- Increase inter-disciplinary education and team practice (especially for non-physician clinicians)
- Expanded use of non-physician health professionals (Scope of practice/Numbers/Systems of Care/Reimbursement)
- Redesign service delivery/Improve efficiency and effectiveness
- Involve and empower patients and their families
- Respond to needs of younger and older physicians, such as flexible scheduling and part time work

*The Number of PAs Will Continue to Grow Rapidly as the Number of **New PAs Entering Practice Each Year Has Grown 5 Fold in the Past 15 Years***



Source: National Commission on Certification of Physician Assistants, April 2008

The Number of New Advanced Practice Nurses is Also Growing Rapidly But Uncertain Impact of Increasing Educational Requirements



Source: American Association of Colleges of Nursing
Total APN includes: NP, CNS, Combined NP/CNS, Nurse Midwifery, Nurse Anesthesia, and Post-Master's NP

Some Potential Strategies to Help Assure Access to Cancer Care in the Future

Delivery system redesign to improve efficiency and effectiveness

- § Expanded use of non-physicians
- § Expanded use of teams
- § Expanded use of primary care physicians
- § Support demonstrations and evaluation
- § Improve IT + EMR
- § Payment System Reform
- § Promote evidence based medicine
- § Make wiser use of our limited supply of physicians



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