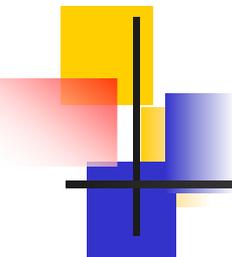


The Health Workforce: Who Do We Have Now? Who Will We Need in the Future?

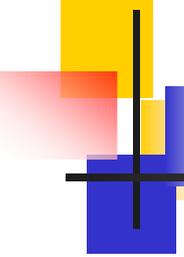
**Region II 27TH ANNUAL HEALTHCARE CONFERENCE
San Juan, Puerto Rico
June 15-18, 2004**

Jean Moore, Director
Center for Health Workforce Studies
School of Public Health, SUNY at Albany
<http://chws.albany.edu>



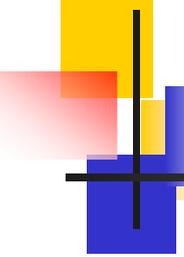
The Center for Health Workforce Studies at the University at Albany

- Conducts studies of the supply, demand, use and education of the health workforce
- Committed to collecting and analyzing data to understand workforce dynamics and trends
- Goal to inform public policies, the health and education sectors and the public
- One of six regional centers with a cooperative agreement with HRSA/Bureau of Health Professions



Overview of Presentation

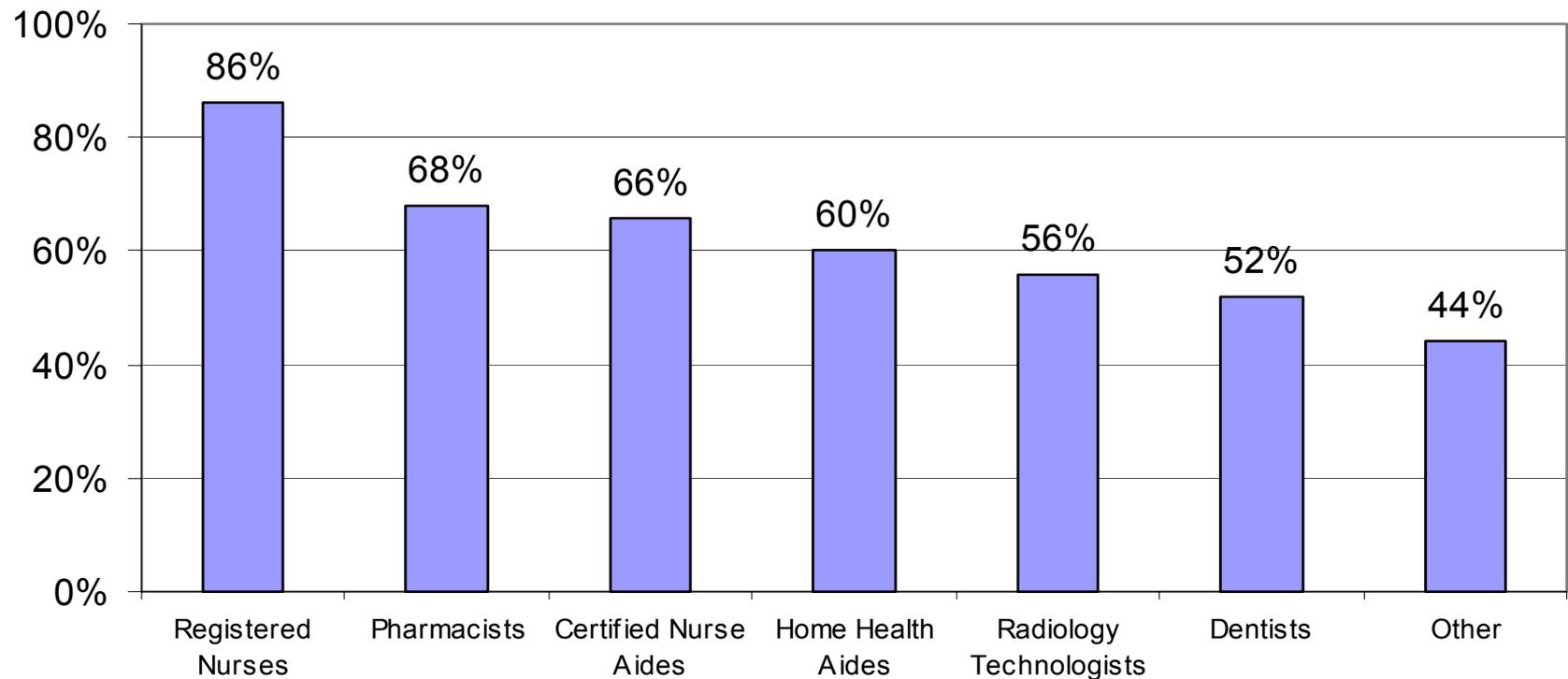
- Background on the health workforce
- Health care and the health workforce in Region II
- Implications of the aging of America on the health workforce
- Strategies to assure an adequately prepared health workforce for the future



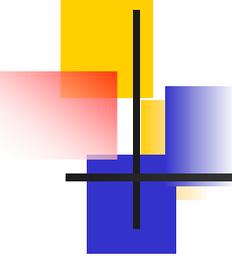
Current Health Workforce Issues

- Health worker shortages
- The squeeze---few new dollars and the high cost of more workers---limit response options
- Concerns with medical errors and quality
- Worker and management dissatisfaction
- Frustration with paperwork and regulation
- Racial and ethnic imbalances in professions
- Lack of systematic data on supply and demand for health workers

Percent of States Indicating a Shortage in Selected Health Professions, 2002



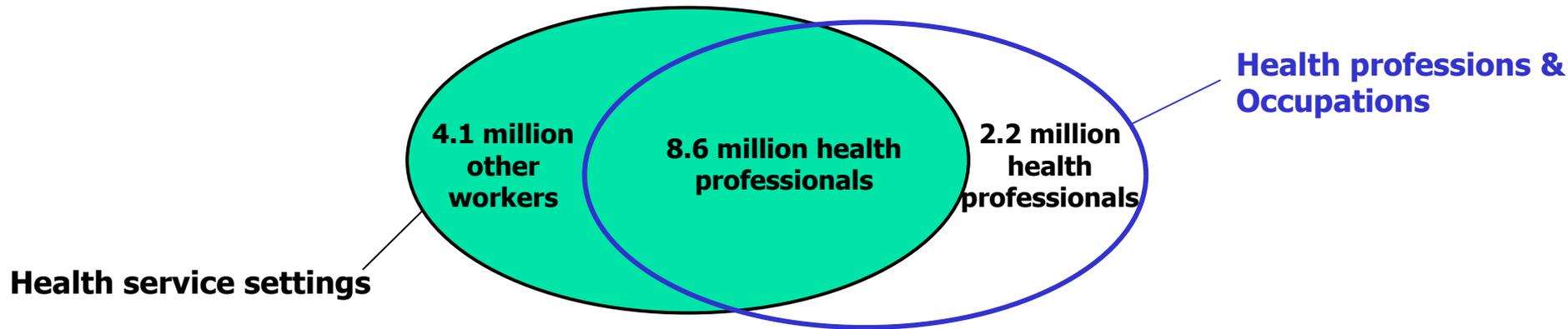
Source: Center for Health Workforce Studies, 2002



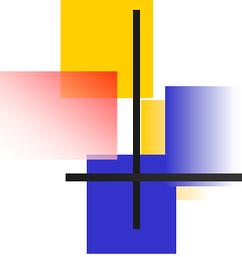
The Health Workforce: The Basic Premise

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

In 2001, More Than 1 in 10 Americans Worked in Health Care or Was a Health Professional



Health professionals working in health service settings	8,642,749	6.1%
Health professionals working in other settings	2,167,418	1.5%
Other workers in health service settings	4,098,498	2.9%
US health workforce	14,908,665	10.5%
US civilian labor force	141,558,183	100.0%



Most of the Region Was Below the National Per Capita Rate for Health Services Employment

	New York	New Jersey	Puerto Rico (1)	Virgin Islands	United States
Health services employment (total), 2000	887,447	345,306	65,926	2,460	11,372,981
Health services employment per 100,000, 2000	4,671	4,095	1,449	2,264	4,030
Percent of total employment, 2000	10.5%	8.9%	6.6%	4.0%	10.0%

(1) 1999 data

Sources: US Census; Bureau of Labor Statistics, Covered Employment and Wages; 2001 Quarterly Census of Employment and Wages

Health care spending accounts for nearly 15 percent of the nation's economy

On January 9, 2004, the NY Times reported:

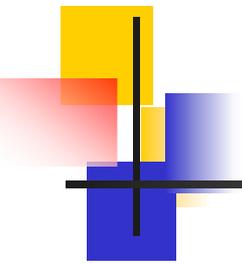
The Department of Health and Human Services said that health care spending shot up 9.3 percent in 2002, the largest increase in 11 years, to a total of \$1.55 trillion. That represents an average of \$5,440 for each person in the United States.

Hospital care and prescription drugs accounted for much of the overall increase, which outstripped the growth in the economy for the fourth year in a row.

National health spending as a share of G.D.P.



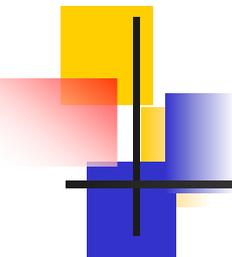
Source: Department of Health and Human Services



Factors Contributing to Health Workforce Shortages

■ Short term factors

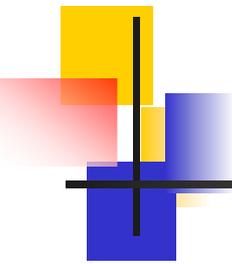
- Competition for workers and the economy
- Growing demand
- Increased intensity and complexity of services
- Educational system cycles and response lags



Factors Contributing to Health Workforce Shortages, continued

■ Workplace factors

- Physically and emotionally demanding work
- Non-competitive wages and benefits
- Job design and working conditions
- Paperwork and lack of information systems
- Poorly trained managers



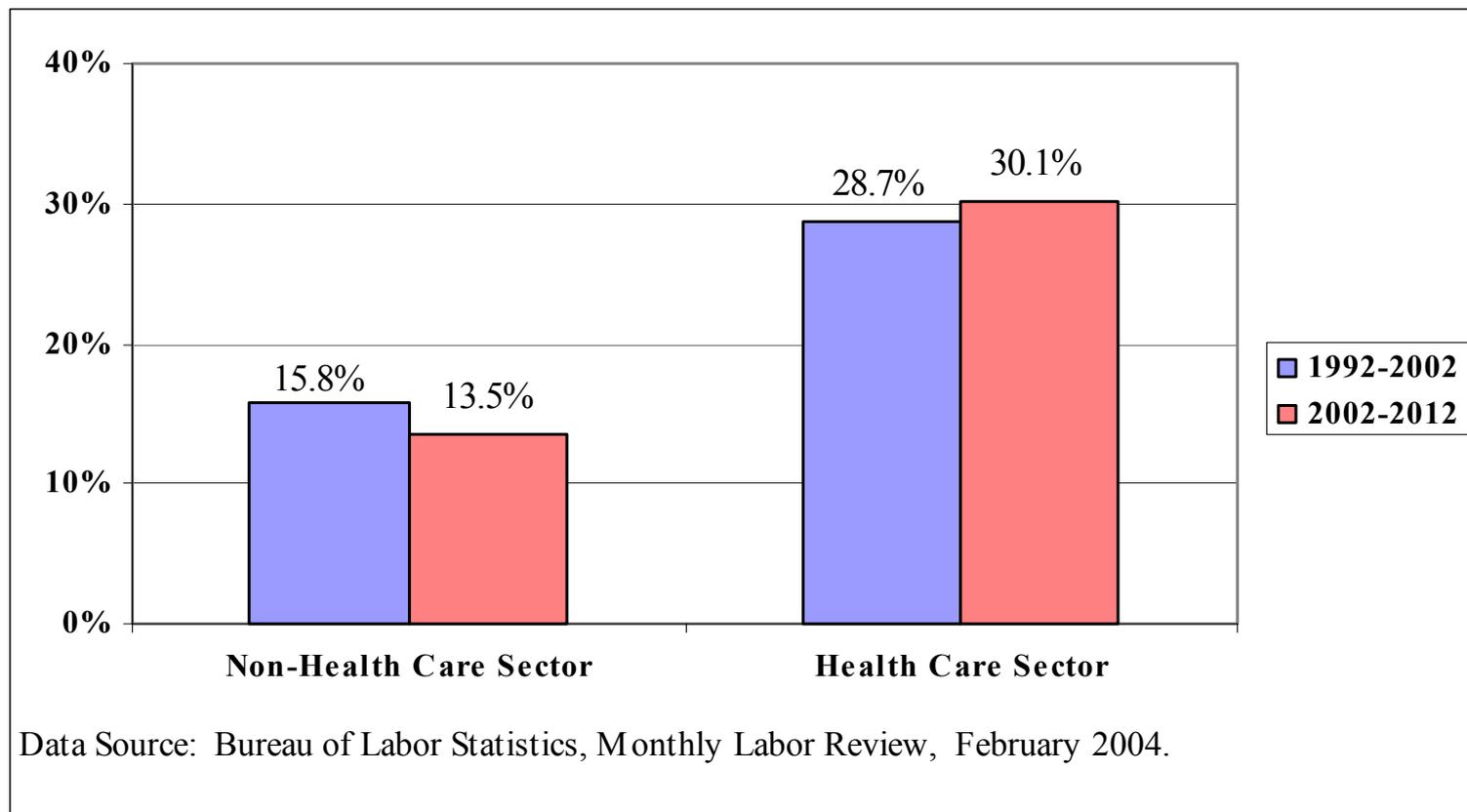
Factors Contributing to Health Workforce Shortages, continued

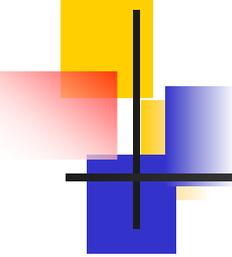
■ Long term factors

- Changing racial/ethnic mix in the US
- Expanded career choices for women
- The economy and public expectations
- Increases in credential requirements
- The aging of America: increase in demand
- The aging of America: decrease in supply of workers

Health Sector Employment Continues to Be the Fastest Growing Employment Sector in the Country

Industry Output and Employment Projections to 2012

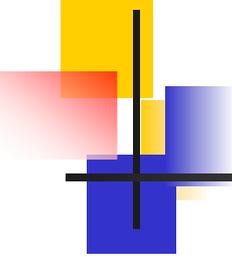




Between 2002 to 2012, half of the fastest growing occupations in the US are projected to be health occupations

- **Medical assistants (59%)**
- **Physician assistants (49%)**
- **Home health aides (48%)**
- **Medical records and health information technicians (47%)**
- **Physical therapy assistants (45%)**
- **Dental hygienists (43%)**
- **Dental assistants (42%)**
- **Occupational therapy assistants (39%)**
- **Physical therapists (35%)**
- **Occupational therapists (35%)**
- **Respiratory therapists (35%)**

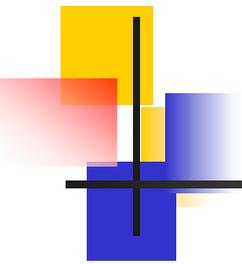
*What Do We Know About
Health Care and the
Health Workforce in Region II?*



Residents of PR and VI Were Younger and Poorer Than Residents of NY & NJ

	New York	New Jersey	Puerto Rico	Virgin Islands	United States
Population (in Thousands), 2000	18,999	8,433	3,816	109	282,422
Pct of female population child bearing age (15 to 44), 2000	51.9%	52.0%	52.5%	41.1%	43.0%
Pct of Population 65 and over, 2000	12.9%	13.2%	11.4%	8.4%	12.4%
Pct of Population living at or below poverty level, 1999	13.8%	7.9%	47.7%	32.5%	12.4%
Pct Unemployed, 2000	4.9%	4.2%	5.8%	5.6%	3.7%
Median household income, 1999	41,504	51,320	14,412	24,704	41,994

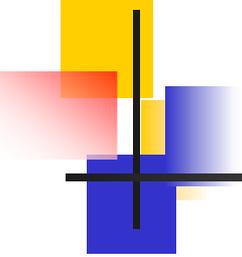
Sources: Bureau of the Census; CIA World Factbook



NY & NJ Had Better Birth Outcomes Than PR and VI

	New York	New Jersey	Puerto Rico	Virgin Islands	United States
Pct of mothers receiving prenatal care during first trimester, 1999-2001	80.8	80.6	71.5	64.0	83.2
Infant mortality rate per 1,000 live births, 1998- 2000	6.6	6.3	10.6	8.0	7.0
Pct of low birth weight babies, 1999 - 2001	7.8	7.9	11.4	11.8	7.6

Source: Henry J. Kaiser Family Foundation: State Health Facts On-Line



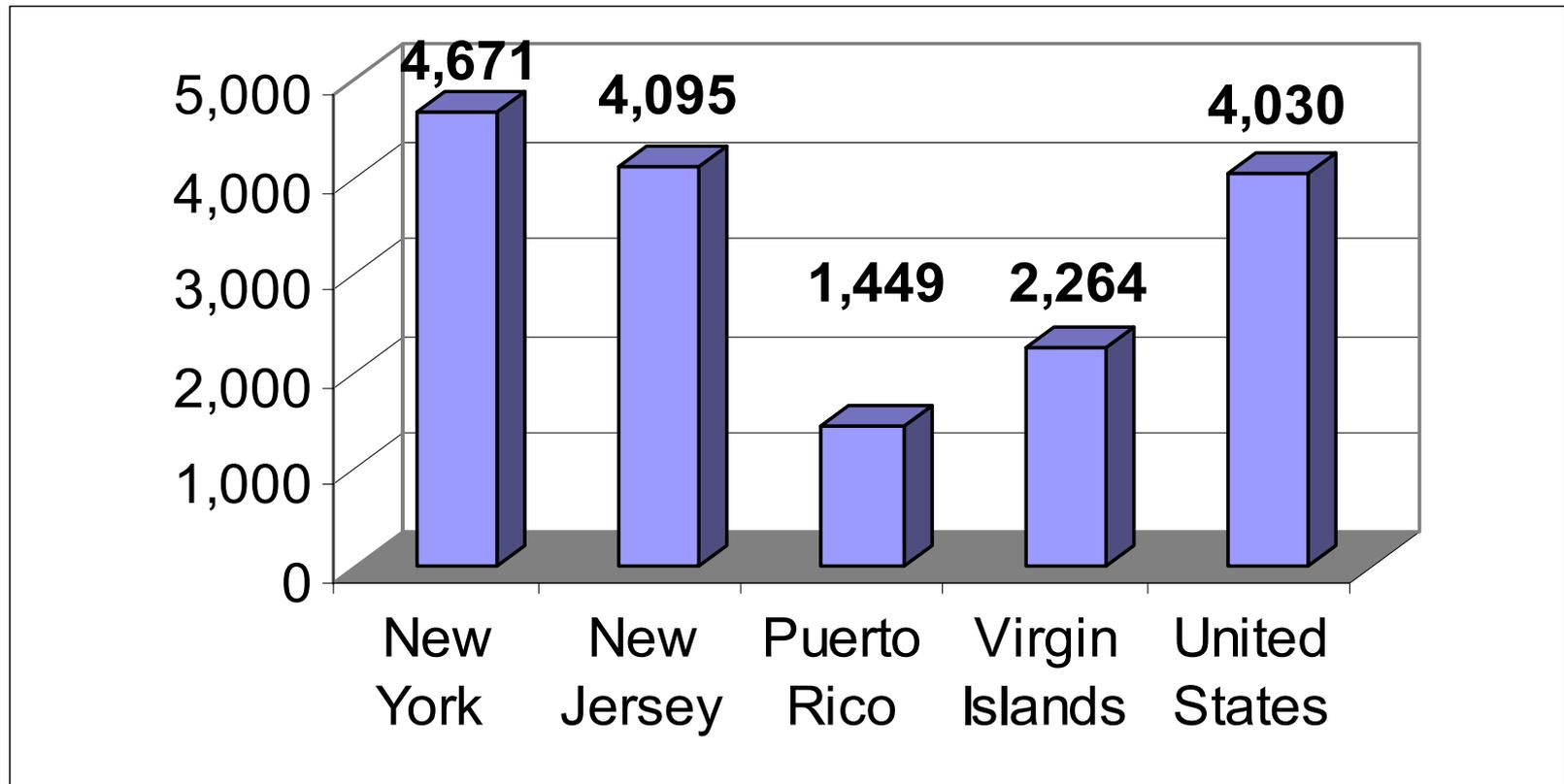
PR and VI Had Higher Rates of Firearms Deaths & AIDS Cases Than NY and NJ

	New York	New Jersey	Puerto Rico	Virgin Islands	United States
Cancer deaths per 100,000, 1999	197.8	210.6	120.1	147.9	202.5
Heart disease deaths per 100,000, 1999	305.6	217.0	157.9	235.4	266.1
Firearm deaths per 100,000, 1999	5.6	4.5	15.8	18.2	10.6
Reported AIDS cases per 100,000 population, 2000-01	28.1	22.1	35.3	47.0	13.9

Sources: National Center for Health Statistics; Henry J. Kaiser Family Foundation: State Health Facts On-Line

PR & VI Were Well Below the National Rate of Health Services Workers Per Capita

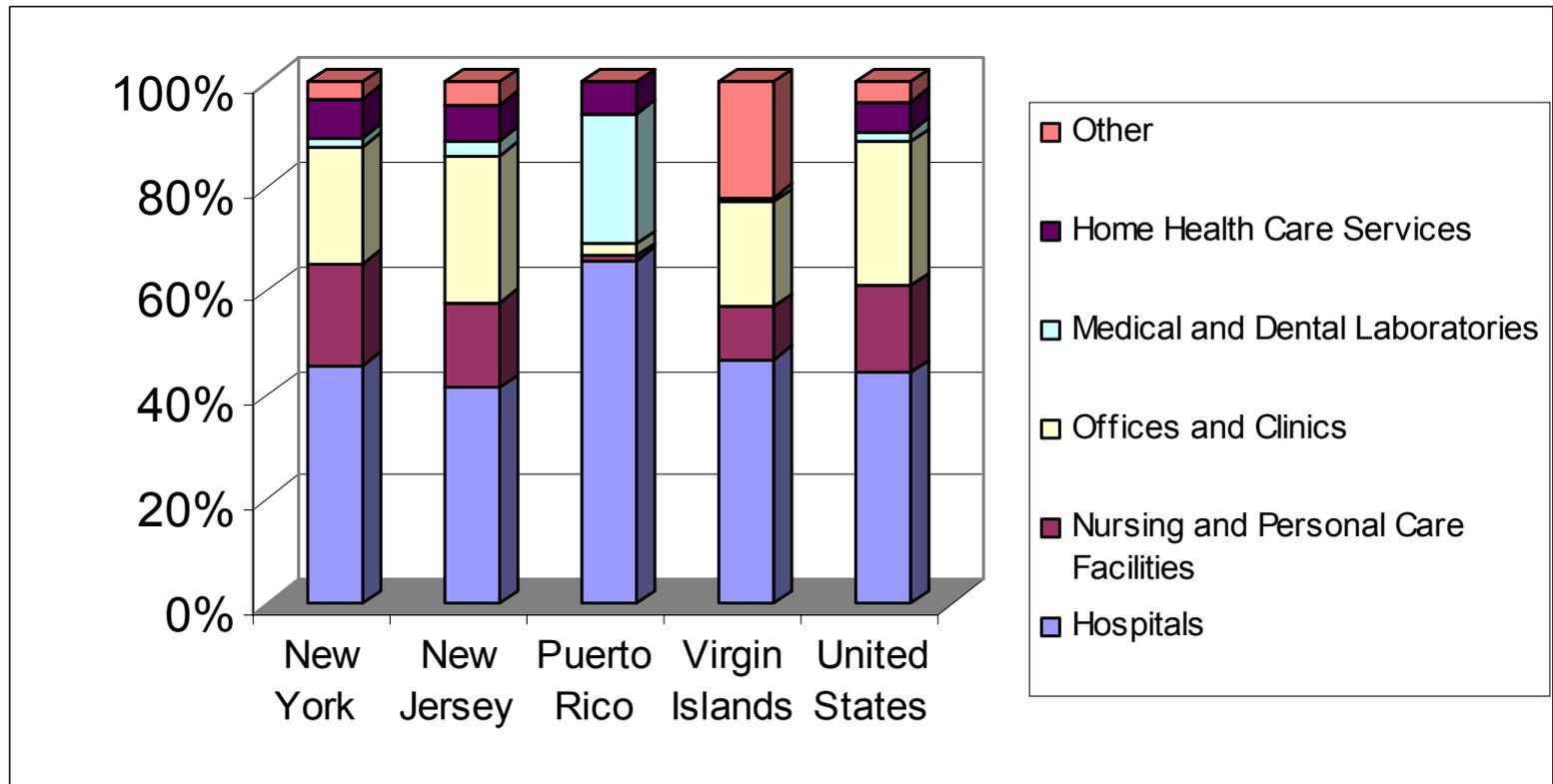
Health Services Workers Per 100,000 Population, 2000



Sources: US Census; Bureau of Labor Statistics, Covered Employment and Wages;

Hospitals Employed the Largest % of Health Workers Across the Region

Health Services Workers by Setting, 2000



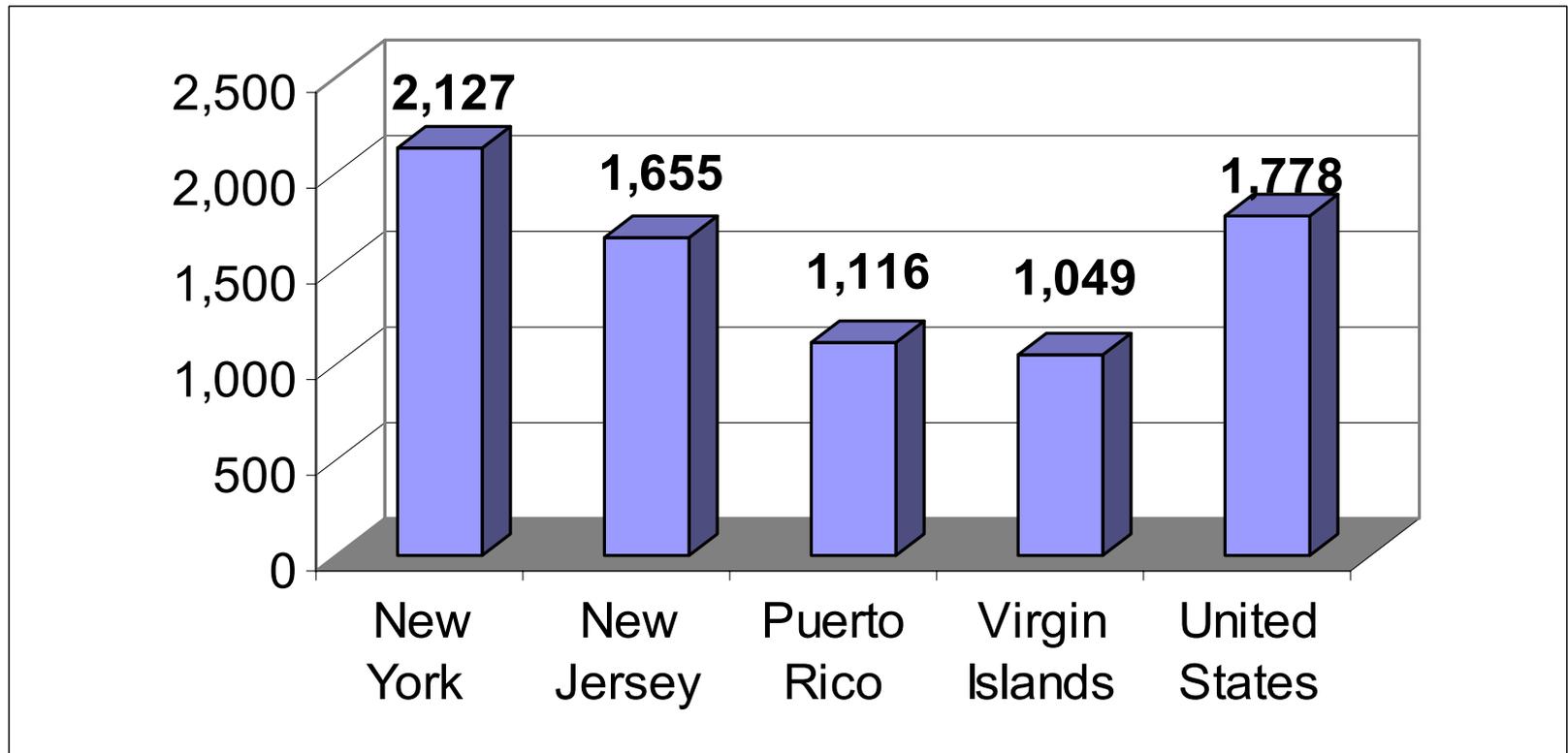
Sources: US Census; Bureau of Labor Statistics, Covered Employment and Wages;

Center for Health Workforce Studies

School of Public Health – University at Albany, SUNY, June 2004

NY Was Higher Than the National Rate of Hospital Employment per Capita

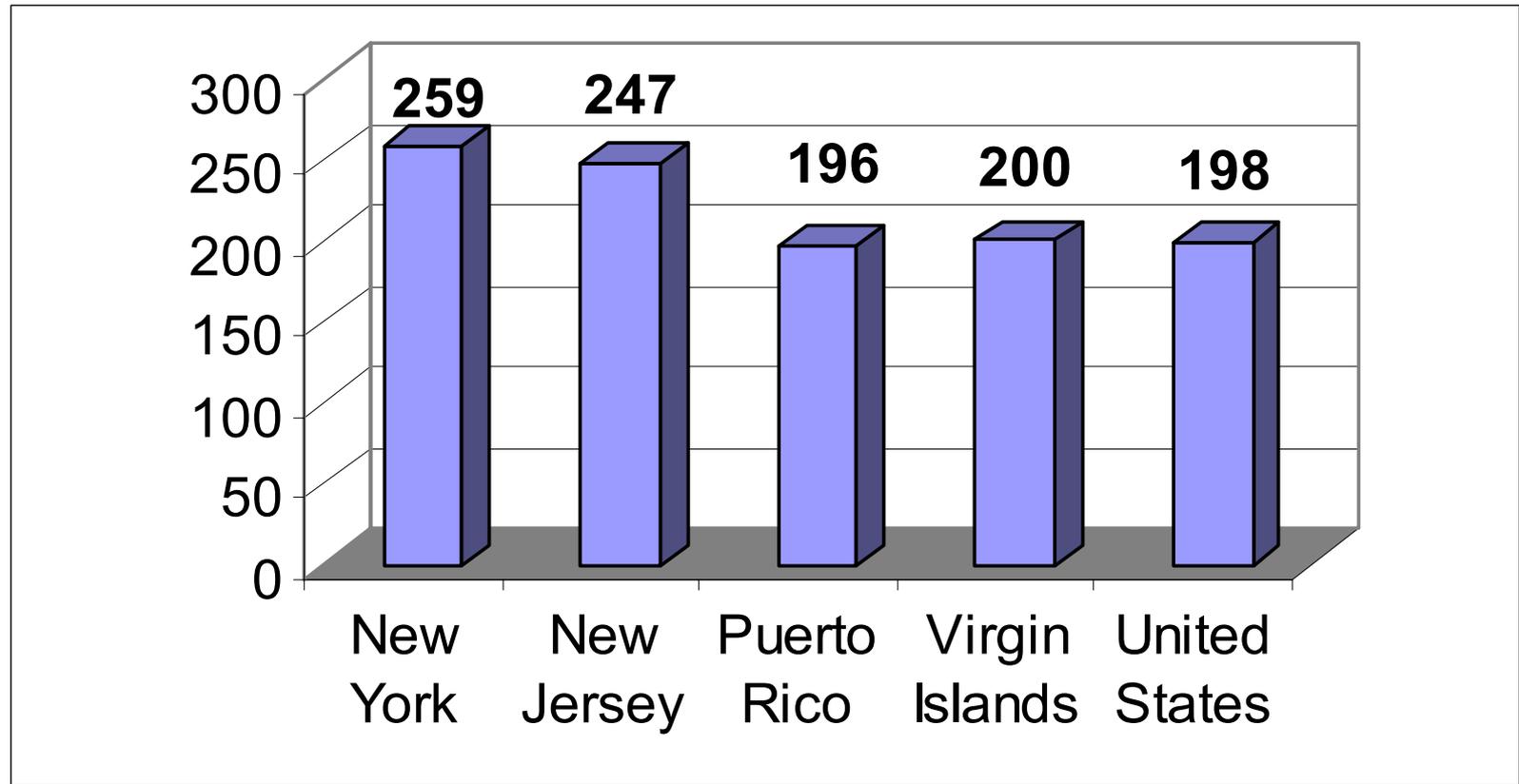
Hospital Employment Per 100,000 Population, 2000



Sources: US Census; Bureau of Labor Statistics, Covered Employment and Wages;

NY and NJ Were Well Above the National Rate of Physicians Per Capita

Physicians per 100,000 Population, 2000



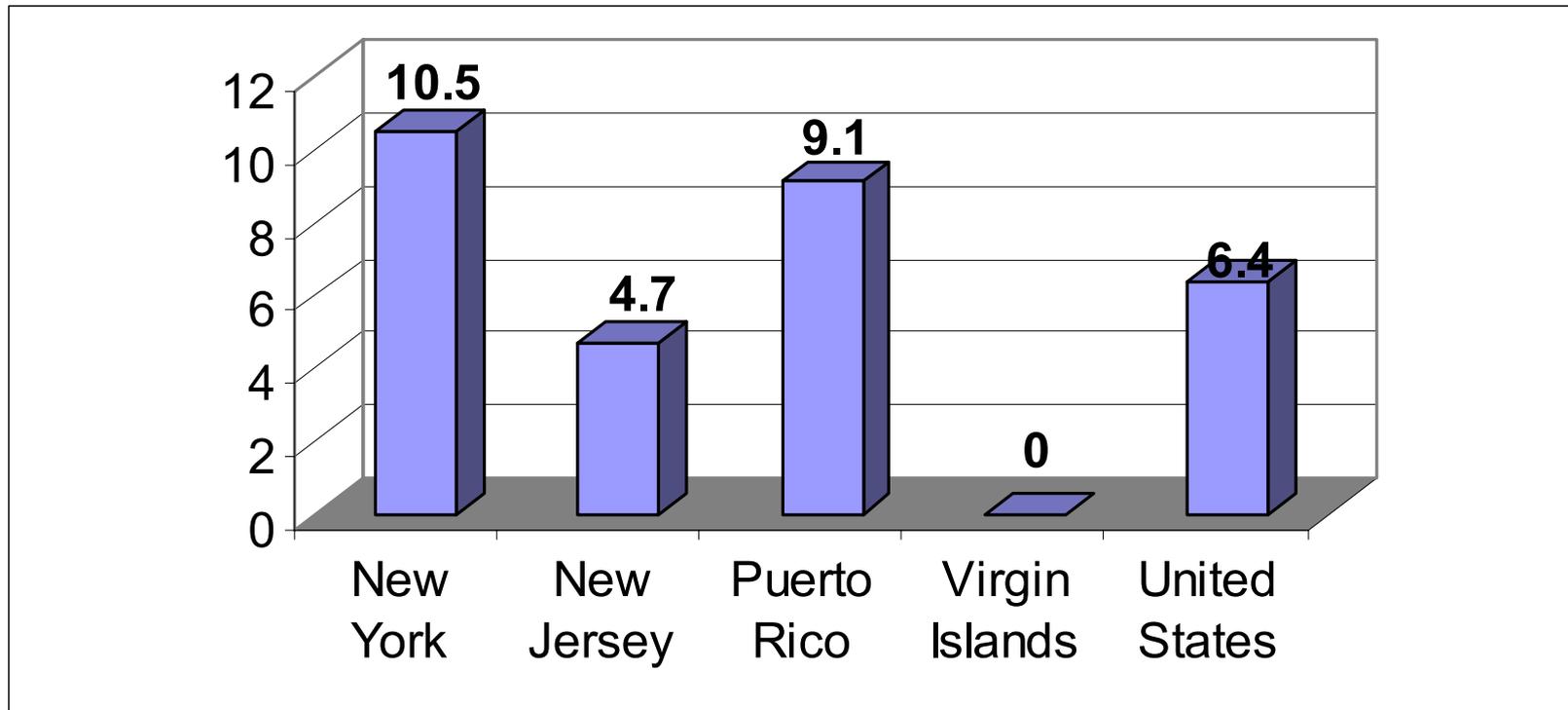
Sources: US Census; Bureau of Labor Statistics, Covered Employment and Wages;

Center for Health Workforce Studies

School of Public Health – University at Albany, SUNY, June 2004

NY and PR Had High Rates of Medical School Graduates Per Capita

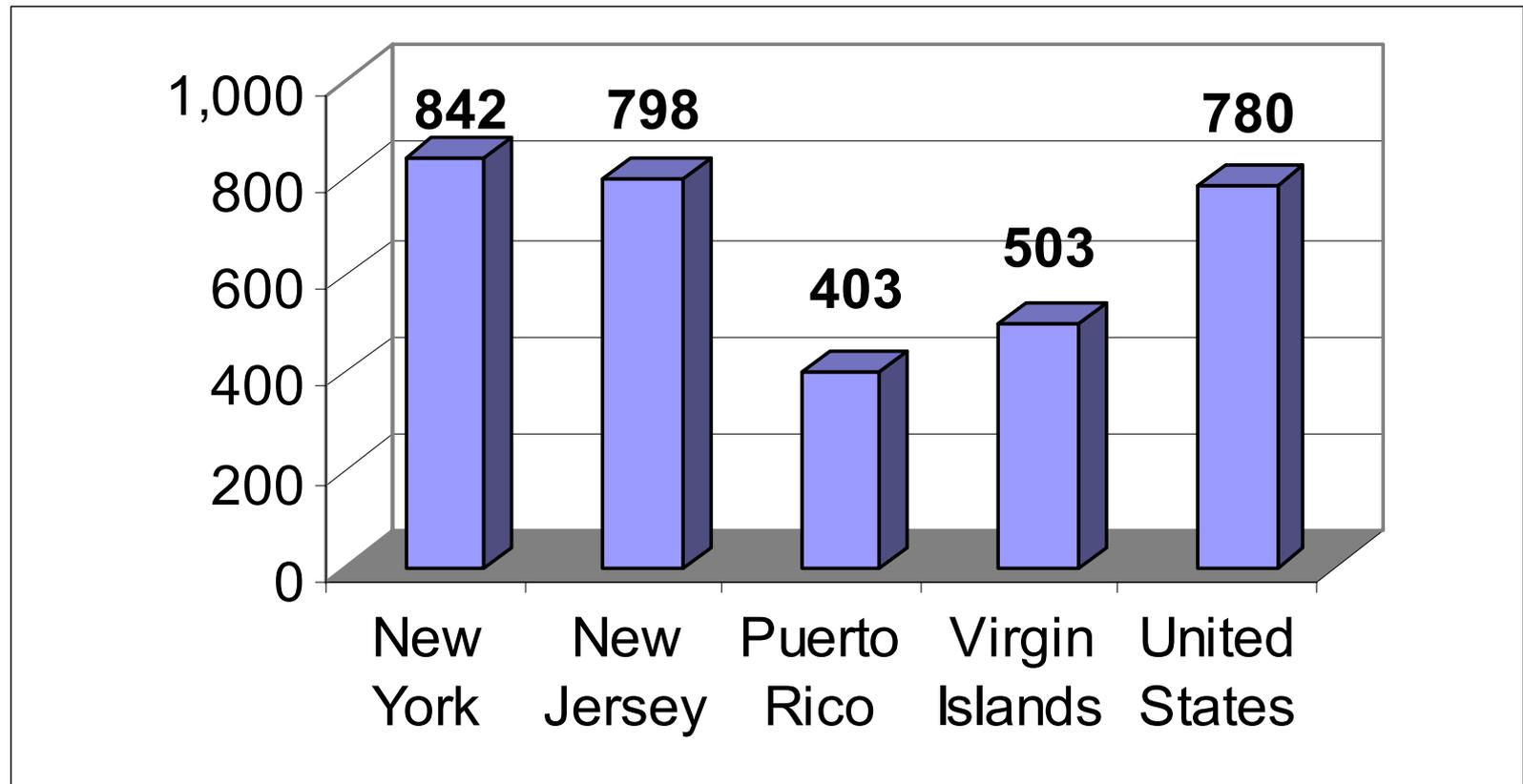
Medical School Graduates Per 100,000 Population, 1999-00



Source: American Medical Association; American Osteopathic Association; National Center for Education Statistics

PR and VI Were Well Below the National Rate of RNs Per Capita

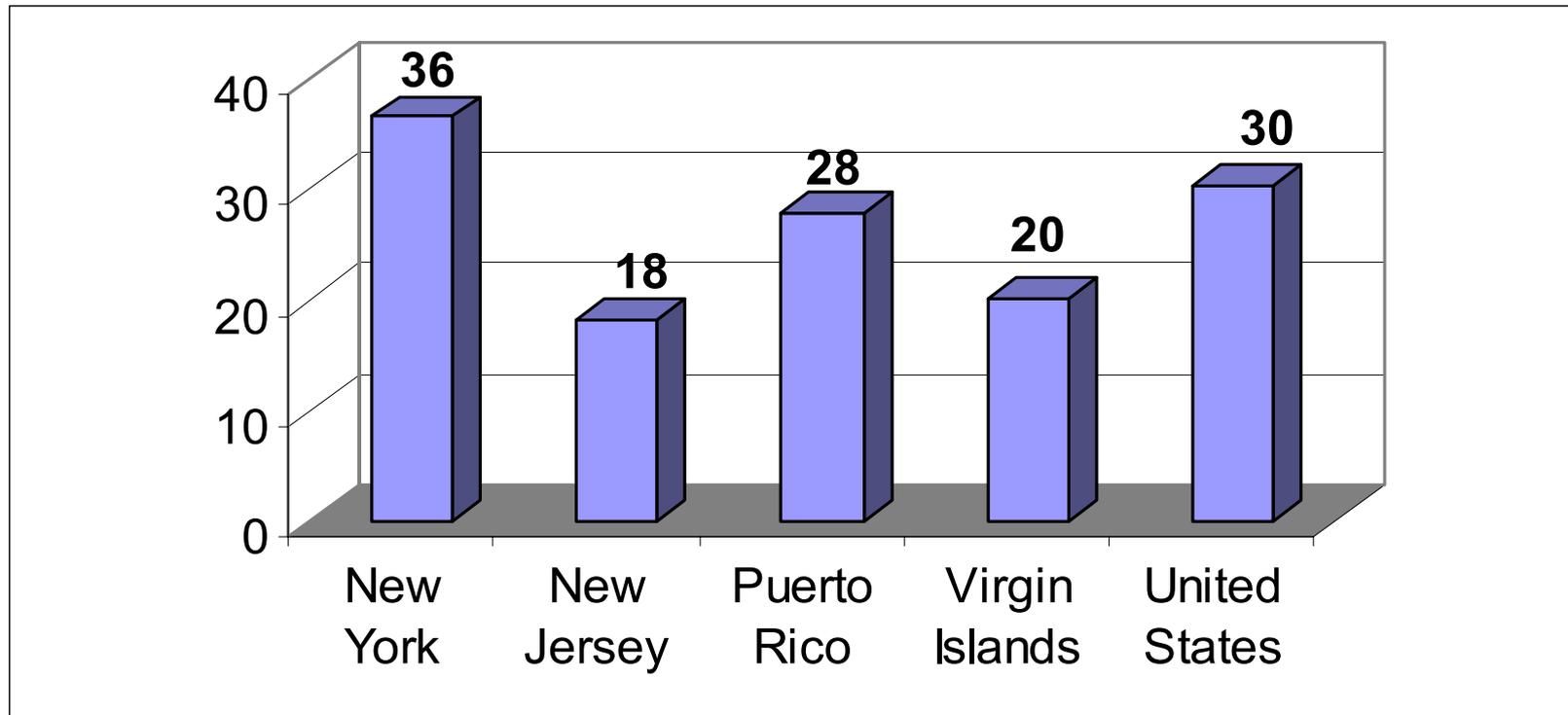
RNs Per 100,000 Population, 2000



Sources: Division of Nursing; Bureau of the Census; Puerto Rico DOH; Virgin Islands DOH

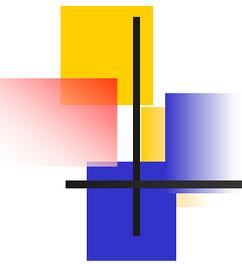
NY Was Above the National Rate of RN Graduations Per Capita

RN Graduations Per 100,000 Population, 1999-00



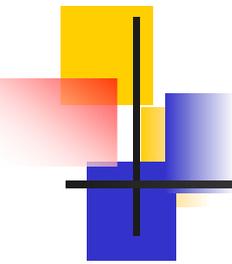
Sources: National Center for Education Statistics; Bureau of the Census;

*The Aging of America
and
Demand for Health Services*



A Study of the Impact of Aging on the Health Workforce in the US

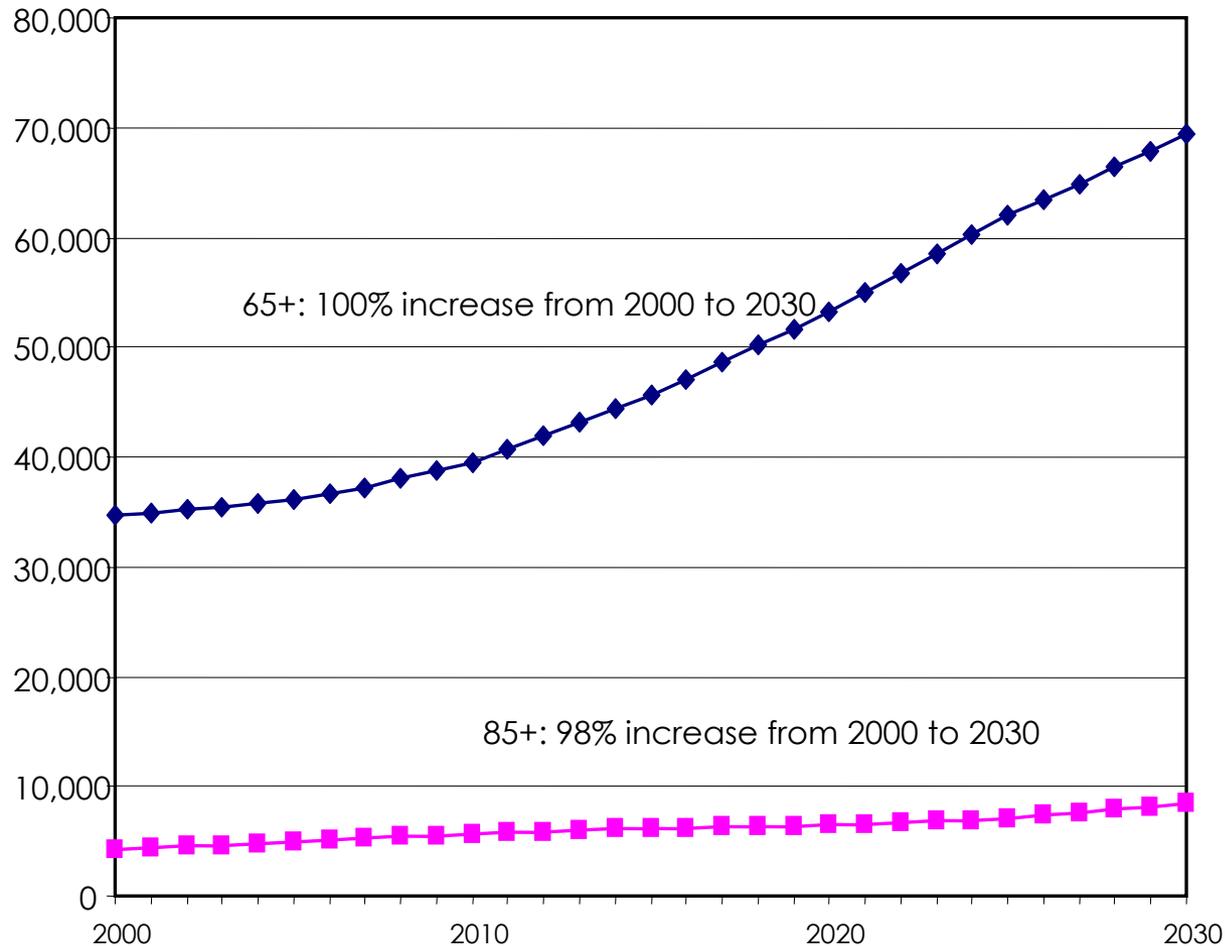
- HRSA funded study
 - Aging: Demographics, Models of Care, Family Caregivers, Technology, Reimbursement
 - Profile of the Current Workforce
 - Over 20 Health Professions
 - Services to the Elderly
 - Training, Education, Credentials Related to Aging
 - Supply Trends/Demand Projections & Gap
 - Profession-Specific Issues



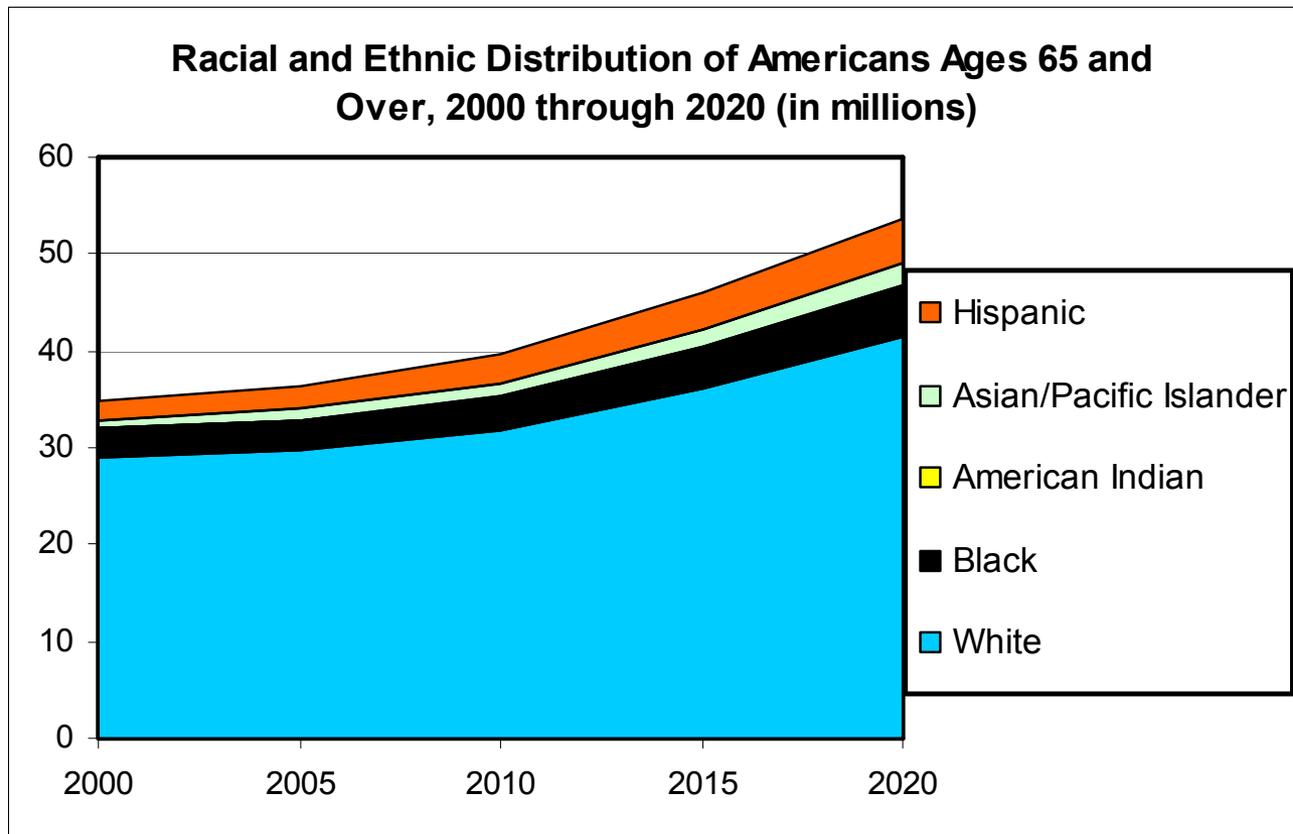
The Aging Report Studied a Wide Array of Health Professions/Occupations

- Physicians
- PAs and NPs
- Nursing
- Oral Health Providers
- Chiropractors
- Podiatrists
- Therapy Professions
- Pharmacists
- Registered Dietitians
- Clinical Psychologists
- Social Workers
- Nursing Home Administrators
- Optometrists

The Number of Americans Over 65 and Over 85 Is Projected to Increase Dramatically Between 2000 and 2030

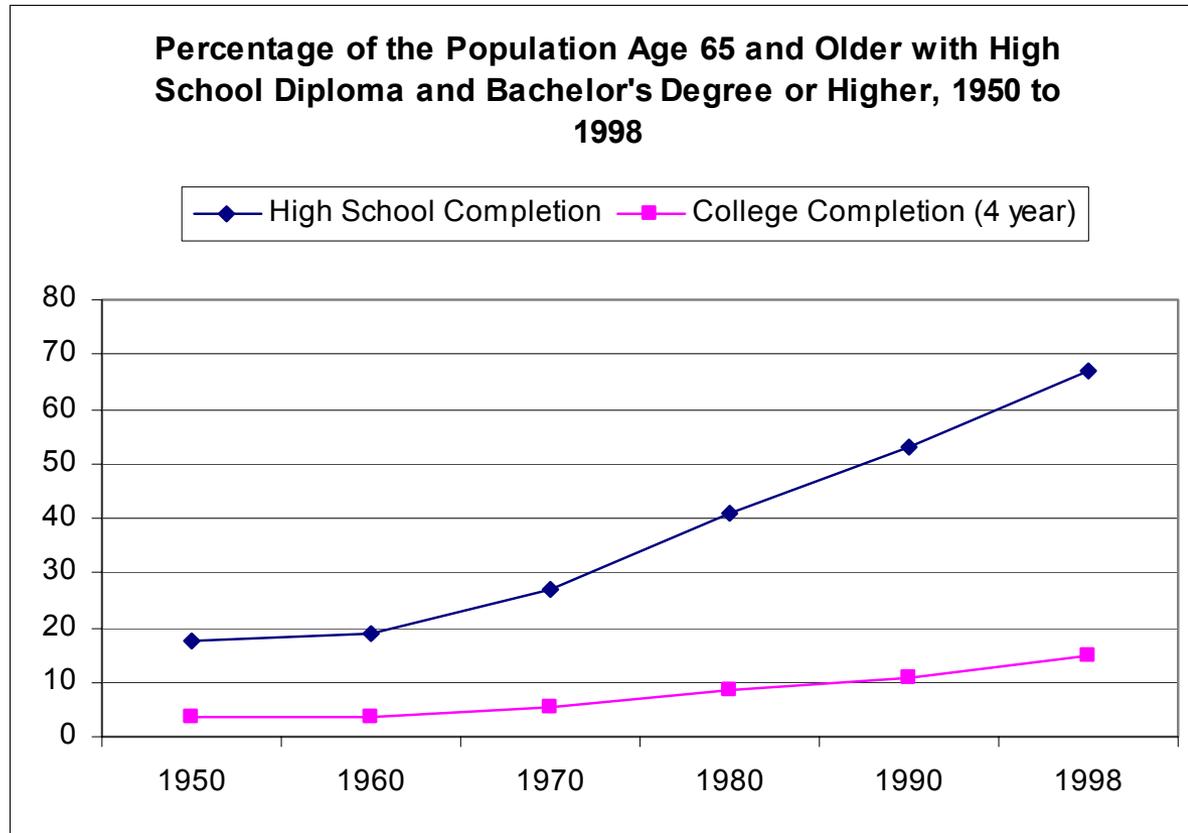


The Elderly Population in the US Will Grow Increasingly Diverse Over the Next 20 Years



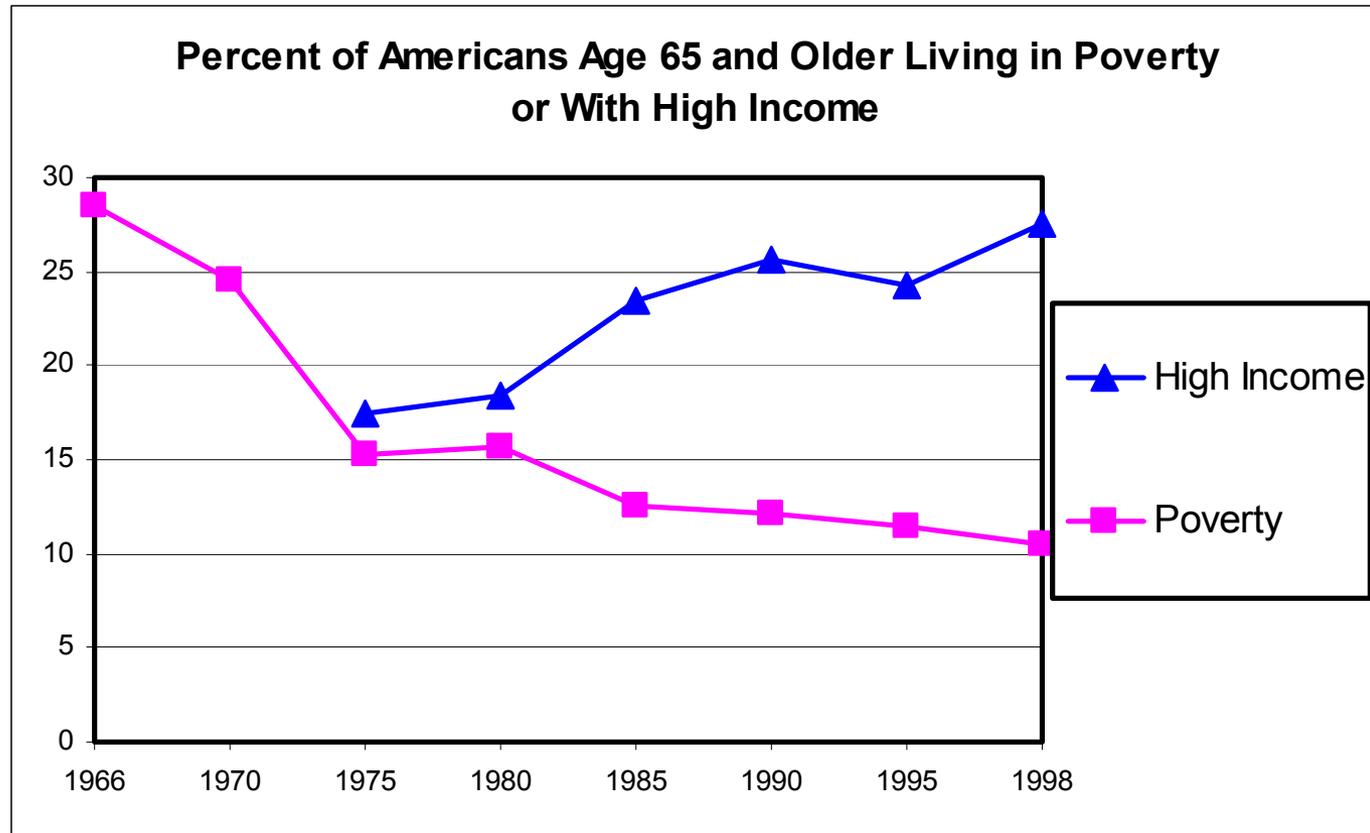
Source: U.S. Census

The Elderly Are Better Educated Than in the Past

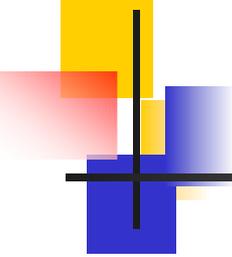


Source: Federal Interagency Forum on Aging Related Statistics, 2000

The Elderly Are Less Likely to be Poor Than in the Past

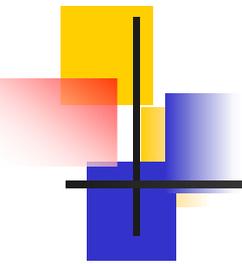


Source: Federal Interagency Forum on Aging Related Statistics, 2000



The Growing Elderly Population Will Have a Small Pool of Potential Family Caregivers

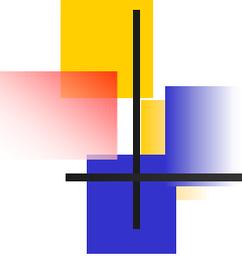
- Compared to the current elderly, the growing cohort of aging Americans:
 - have had fewer children than their parents
 - are more likely to be divorced
 - are more likely to live alone as they enter old age.



Impact on Health Services Delivery System

- The elderly consume more health care services than younger age groups
- The elderly have different health care needs than younger age groups
- The elderly will have a greater range of health care models to choose from than in the past
- Access to care will be a greater issue for the elderly

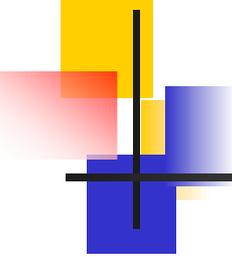
Profession-Specific Findings
Oral Health Providers
Physician Assistants



Oral Health Providers

Three oral health professions provide a variety of important services to elderly Americans and the public at large

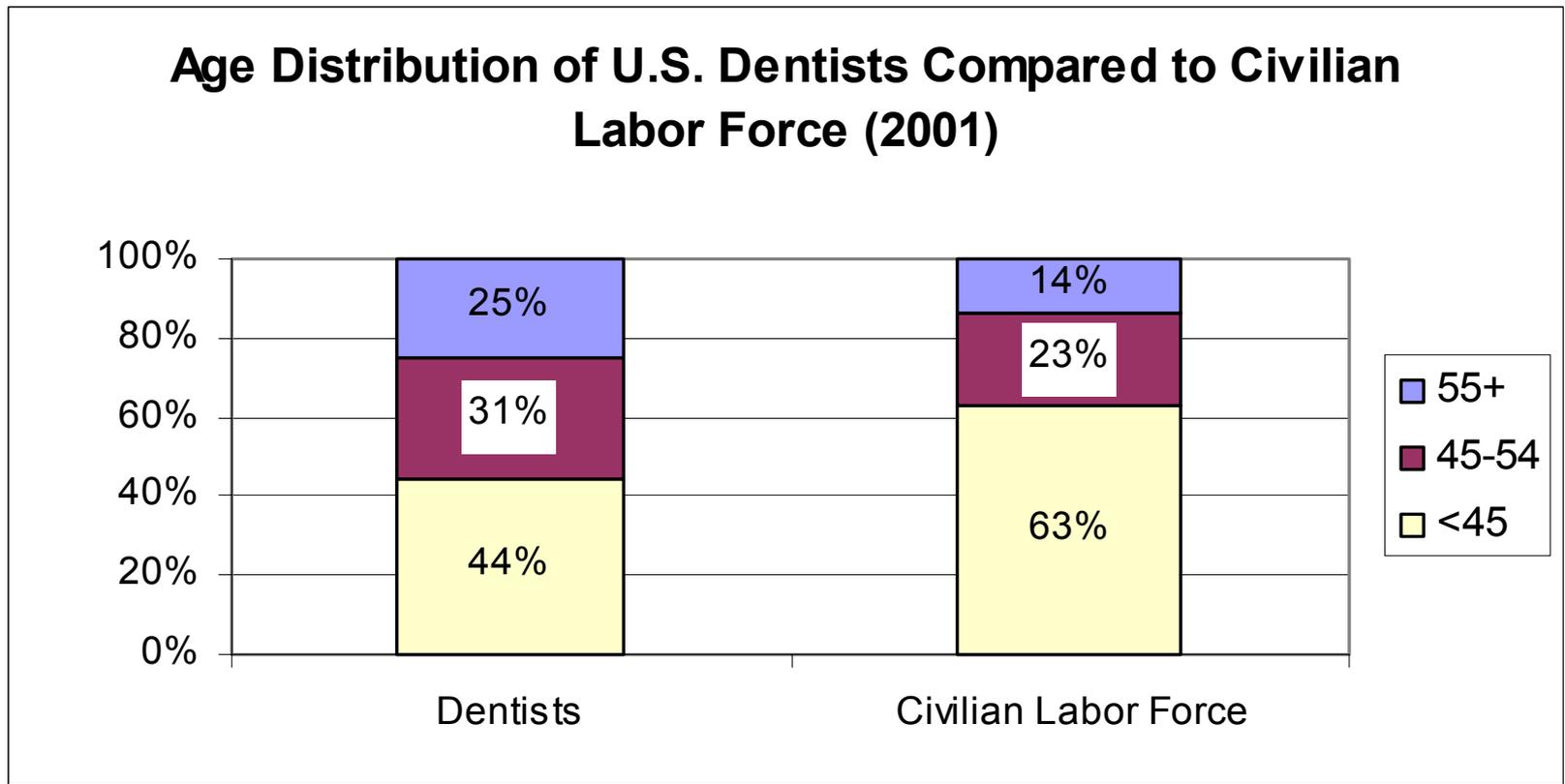
- **Dentists** diagnose, prevent, and treat teeth and tissue problems and diseases.
- **Dental hygienists** provide a variety of preventive and restorative services.
- **Dental assistants** primarily provide instrumental assistance to dentists and dental hygienists.

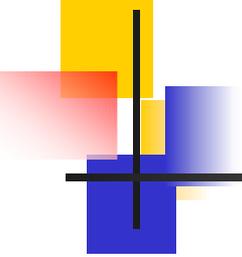


Oral Health Needs of the Elderly Are Different Than the Needs of Younger Populations

- The elderly are at great risk for dental caries
- About 40% of ambulatory older adults have gingivitis
- As many as 60% may suffer from some level of periodontal disease
- Complete or partial edentulism (tooth loss) remains a serious problem for the elderly
- Over half of oral cancer deaths are among the elderly

Dentists Are Older Than the Overall Civilian Labor Force



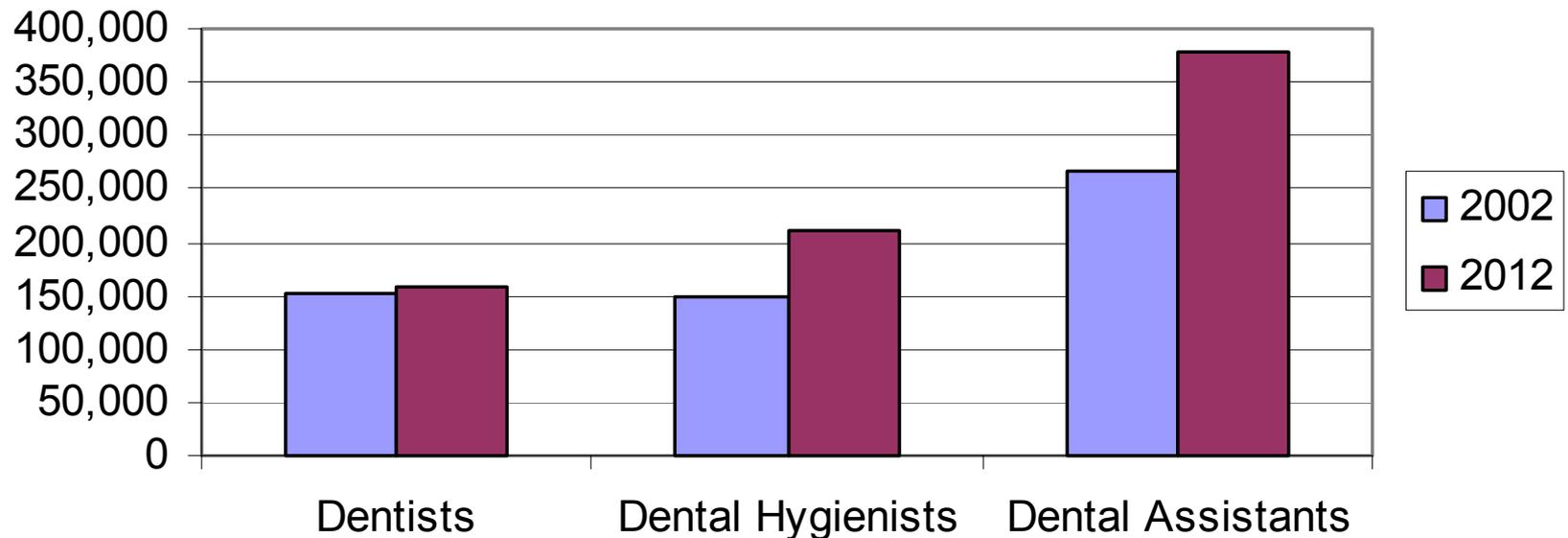


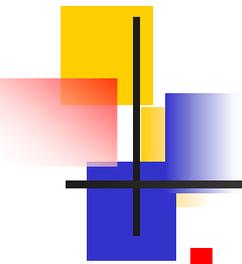
Oral Health Training Issues

- Dental and dental hygiene programs graduates are required to be competent in providing general dental care to geriatric patients
- The credentialing examination for dental hygienists includes case-based items focusing on a geriatric patient
- Some dental schools offer certificate programs in geriatric dentistry, advanced geriatric dentistry fellowships or masters' level training programs

Between 2002 and 2012, Jobs for Dental Hygienists and Assistants Will Increase More than Jobs for Dentists

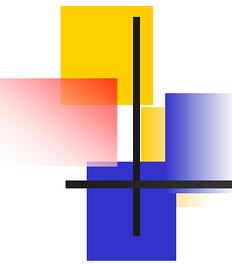
BLS Employment Projections for Dentists, Dental Hygienists, and Dental Assistants





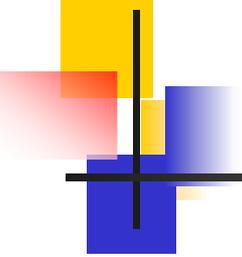
Will the Supply of Oral Health Providers Meet Future Demand for Them?

- Access to oral health services is a problem for people living in rural areas currently
- There may be a general shortage of dentists in the future
- Expanding scope of practice for dental hygienists may increase access to care, but could result in shortages
- Currently, unmet need for oral health care among the elderly is a greater concern than an inadequate supply of oral health providers.



Factors Affecting Supply and Demand for Oral Health Providers

- Increasing demand for oral health services among the elderly
 - they are more likely to retain their teeth than in the past
- Expanded scope of practice for dental hygienists
- Medicare and Medicaid reimbursement for oral health care



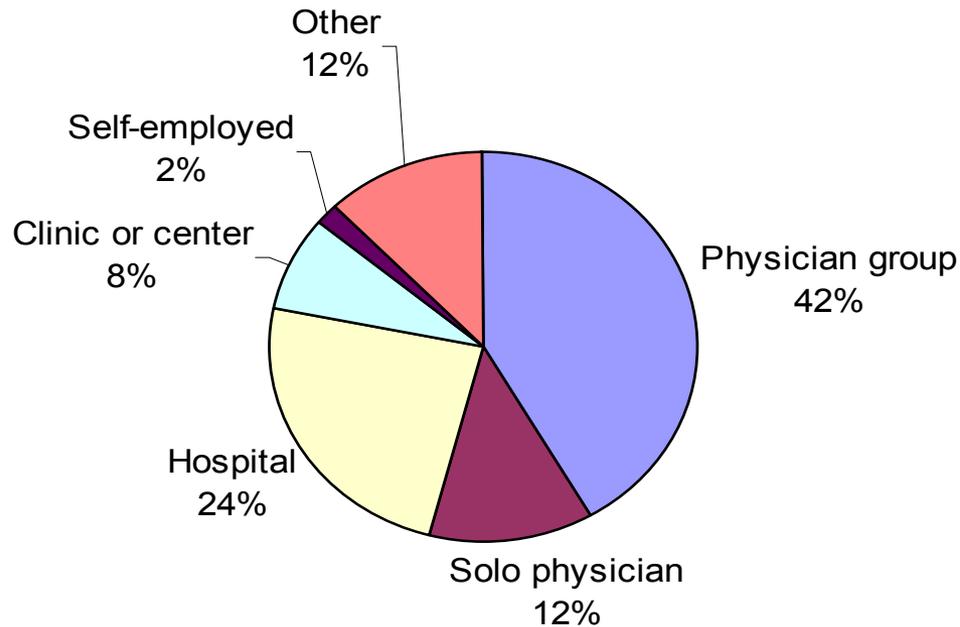
Physician Assistants (PAs)

- 4 out of 10 PAs work in either general/family practice or internal medicine
- PAs provide primary care in underserved areas
- 12% of office-based visits to PAs were made by people over 65
- Almost 78% of PAs reported seeing at least some patients aged 85 and older
- Only 1% of PAs reported geriatrics as their primary specialty

Source: AAPA

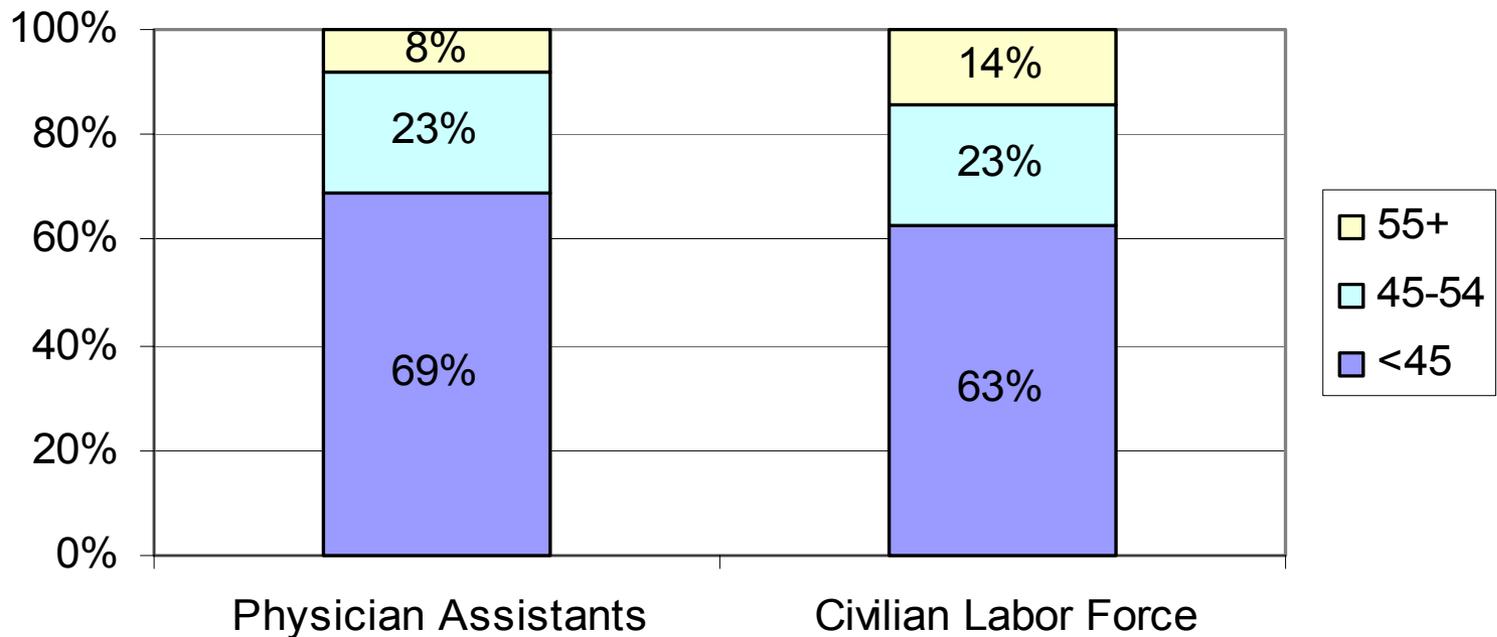
The Majority of PAs Worked in Physician Offices and Clinics in 2001

Distribution of Full-Time Physician Assistants, by Setting (2001)



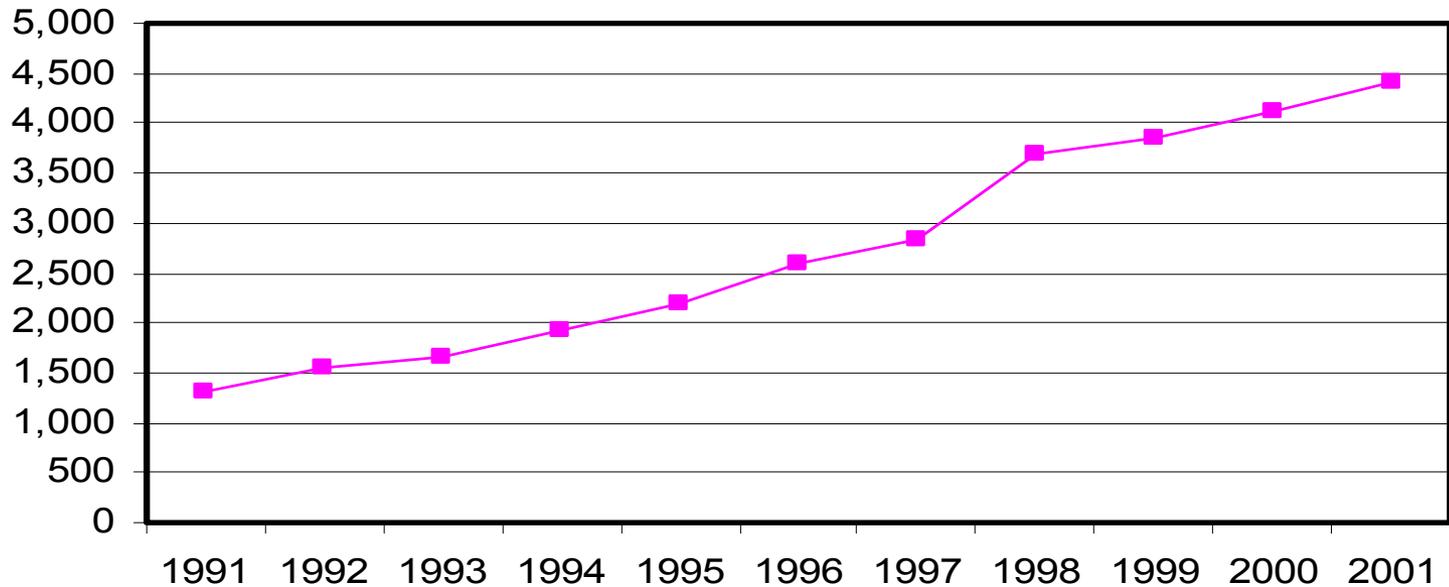
PAs Are Younger Than the Overall Civilian Labor Force

Figure 2. Age Distribution of U.S. Physician Assistants Compared to Civilian Labor Force (2001)

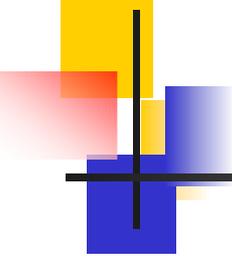


The Number of PA Program Graduates Increased Dramatically Between 1991 and 2001

Graduates of PA Educational Programs, U.S. , 1991 to 2001

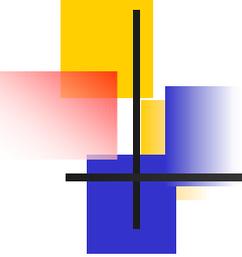


Source: AAPA



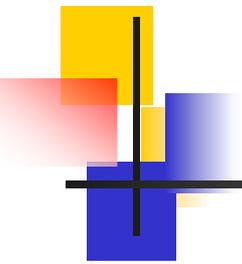
PA Training Issues

- PAs must complete a two year accredited education program and pass a certifying exam
- Students receive moderate levels of training in geriatric care as part of the formal education process
- Clinical experiences in geriatrics are required
- There is no specific geriatric educational track available



*Between 2000 and 2010, PA Jobs Are
Projected to Grow by 54%*

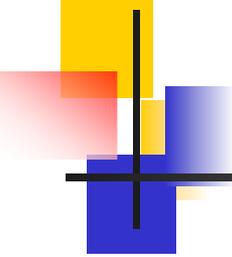
- BLS projects that total employment of PAs will increase from 58,000 in 2002 to 89,000 by 2010
- About 31,000 of 43,000 projected job openings will result from growth in the field



Will the Supply of PAs Meet the Future Demand for Them?

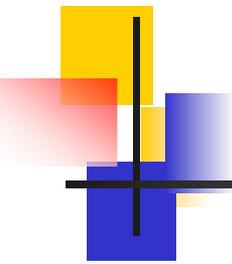
- While shortages are not anticipated, PAs have yet to meet their full potential in caring for the elderly
- Use of PAs in new models of care could affect demand trajectories:
 - PAs could provide more services in long-term care delivery systems, providing primary care and serving as clinical leaders of interdisciplinary teams
- Given the growing number of elderly patients who will be served by PAs, a special education track or post-graduate certificate might be a worthwhile credential to introduce

*General Findings:
Impact of the Aging of the US
Population
on the Health Workforce*



General Findings

- Many health professions and occupations do not offer formal credentials focused on the needs of the elderly
- When such a credential is offered, the number of workers with the credential is typically very small
- A majority of health care workers in most settings deal with substantial numbers of elderly people whether or not they are specialists.

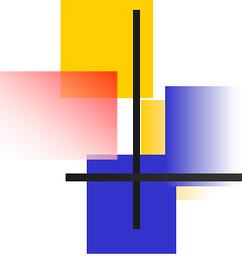


General Finding

Many Health Professions Are Aging Rapidly

Median age	1989	1999	Change 1989- 1999
Dentists	40.7	44.0	+ 3.3
Dietitians	38.3	40.0	+ 1.7
Health records technologists and technicians	35.3	40.3	+ 5.0
Radiologic technicians	34.3	38.0	+ 3.7
Registered nurses	37.3	42.7	+ 5.4
Respiratory therapists	32.3	38.0	+ 5.7
Social workers	38.7	40.3	+ 1.7
Speech therapists	35.7	40.7	+ 5.0
Pharmacists	36.7	41.3	+ 4.6
Total civilian labor force	35.7	38.7	+ 3.0

Source: Bureau of Labor Statistics, Current Population Survey - Annual Demographic Supplement, 1988-2000.

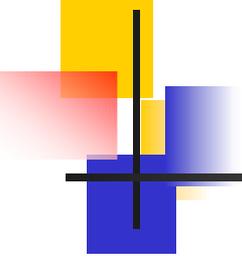


General Findings

Demand for health care professionals to serve the elderly will be affected by:

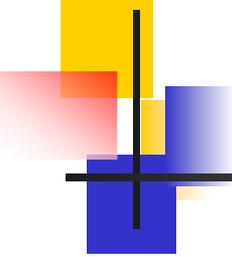
- Medicare reimbursement policies
- New technologies
- New models of care
- Changes in profession-specific scope of practice

*What Can We Do to Assure a
Well-trained and Adequate
Health Workforce to Care for the
Growing Elderly Population?*



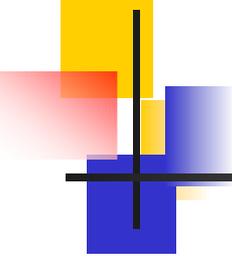
Key Stakeholders

- Health facilities and associations
- Government (U.S., states and local)
- Health professions education programs
- Professional associations
- Unions representing health workers
- Consumers/patients



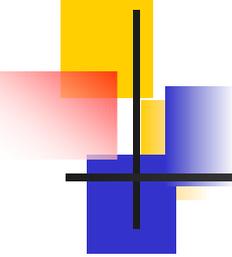
Possible Responses

- Provide better training on geriatric issues to health professionals
 - Increase geriatric content in required curricula
 - Increase geriatric content on licensure examinations
 - Increase the availability of continuing education in geriatrics
 - Develop geriatric specialists within the profession



Possible Responses

- Help prepare health care workers for new roles in different settings
 - More care will likely be delivered in homes and in assisted living settings
 - Health care may be delivered by interdisciplinary teams of health care workers
 - Scope of practice may change for some professions in response to greater demand by elderly patients

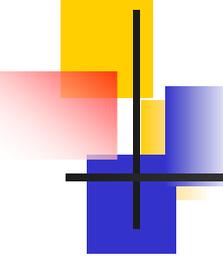


Possible Responses

Assure an adequate pipeline of new health care workers as many retire or leave the field

- Some professions are at greater risk for depletion than others:
 - Professions with long educational trajectories tend to be older (e.g., physicians, clinical psychologists)
 - Professions that attract older or second career students (e.g., registered nursing)

Strategies include scholarships, health careers awareness, career ladders in health professions



Planning for the Future

- Assure an adequate supply of workers
- Increase knowledge and awareness of the needs of elderly patients
- Promote the development of a more culturally diverse workforce
- Support the development of a more accessible, cost-effective delivery system designed to better meet the needs of the growing elderly population in the US