

The Future of Work

Small Business Panel

Occupational Safety and Health Administration

2 July 2009

John Howard, MD, MPH, JD

Public Health Law Program

Centers for Disease Control and Prevention

U.S. Department of Health and Human Services

Washington, D.C.

Changes to the Future of Work

- Workforce
 - Age
 - Gender
 - Culture
- Employment
 - Precarious
 - Benefits
 - Global & Virtual
- Hazards
 - New Technologies
 - Organization of Work
 - Stress



Occupational Safety and Health Act

- “Congress declares it to be its purpose and policy ...
 - To assure as far as possible every working man and woman in the Nation safe and healthful working conditions and
 - To preserve our human resources--”
 - By providing for research in the field of occupational safety and health, including the psychological factors involved, and by developing innovative methods, techniques, and approaches for dealing with occupational safety and health problems.”



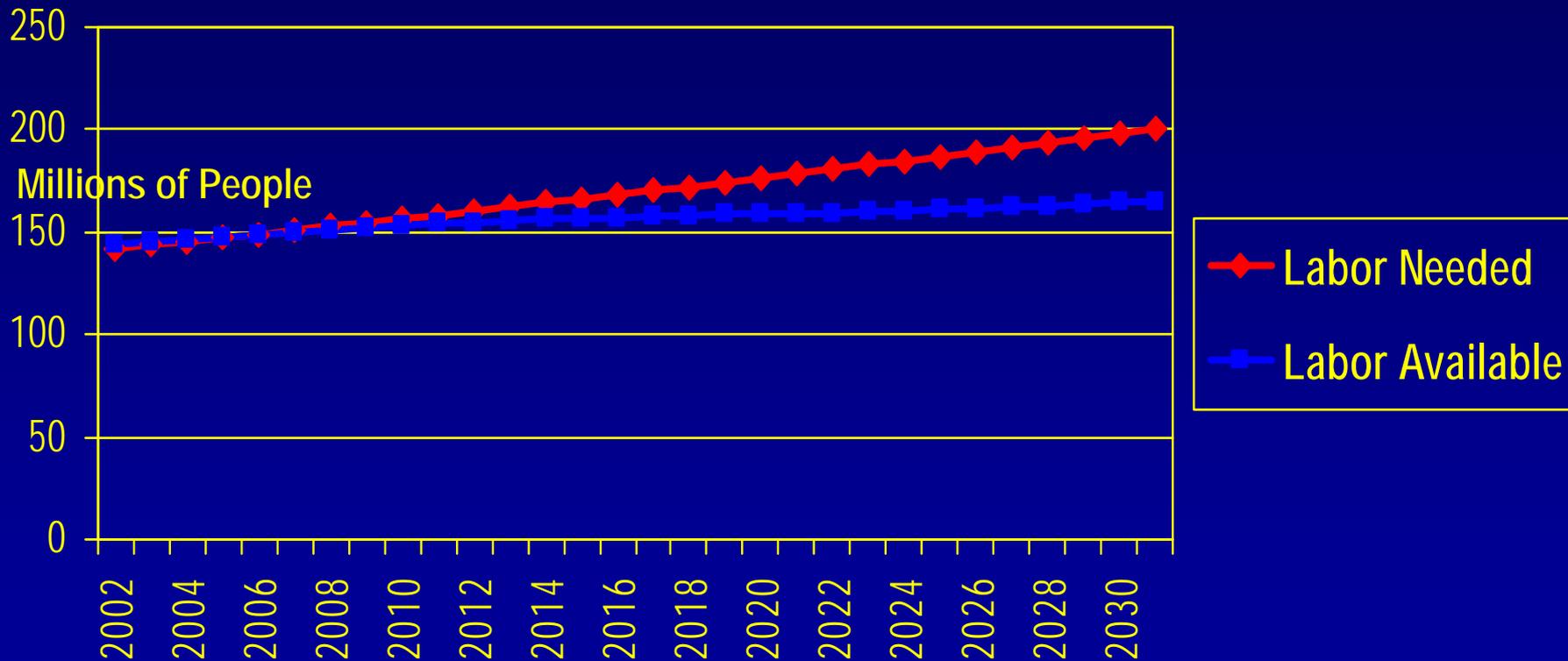
"What we are looking for is somebody about twenty five with forty years' experience."

Unknowns About 21st Century Workforce

Immigration	<ul style="list-style-type: none">• Will nations change policies to encourage or discourage immigration?
Outsourcing	<ul style="list-style-type: none">• How fast will it develop? Where?
Retirement	<ul style="list-style-type: none">• Will more retirees remain active and “recareer” in later life?• Will the average retirement age change because of social policy changes?

Growing Shortage of U.S. Workers

Expected Labor Force and Labor Force Demand



Source: Employment Policy Foundation analysis and projections of Census/BLS and BEA data.

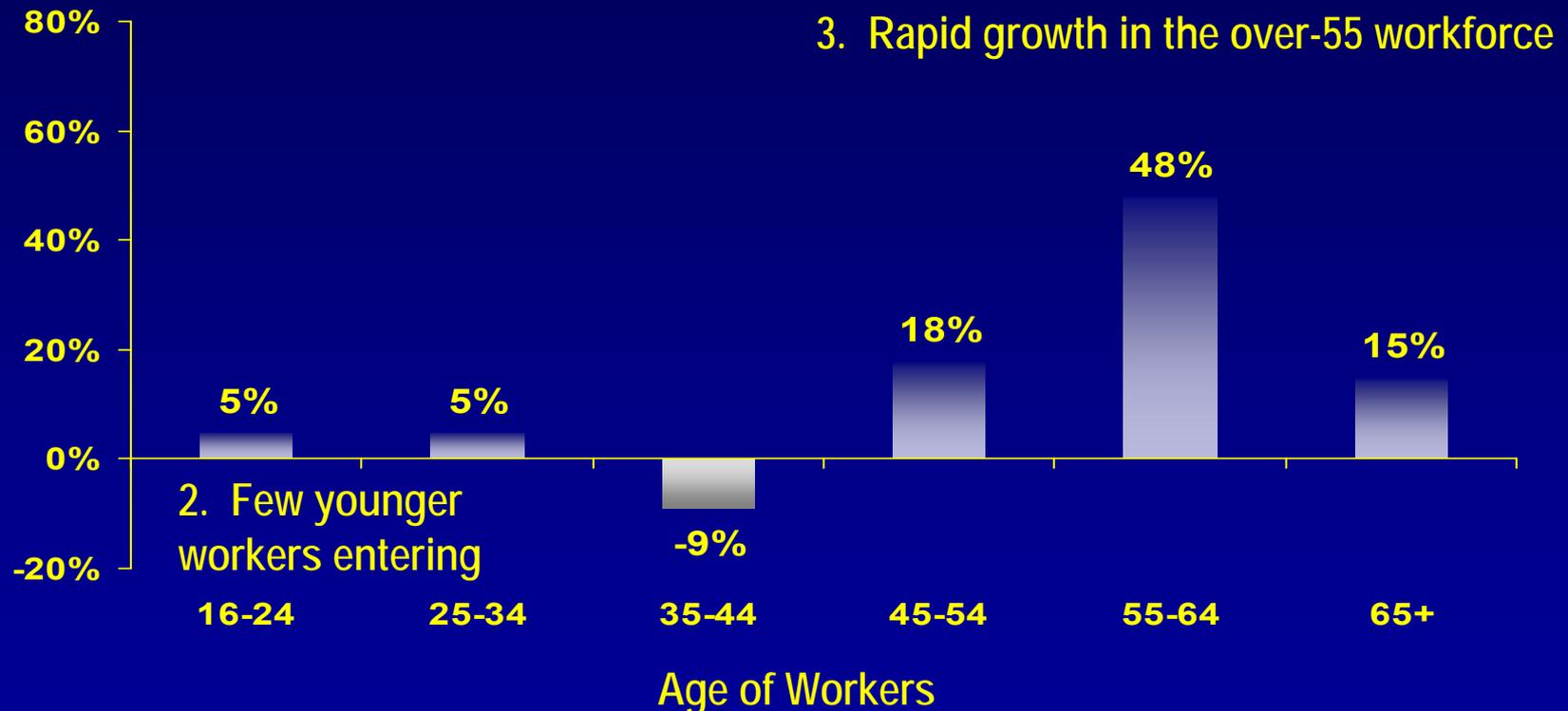
Screeching to a Halt: Growth in the Working-Age Population



Source: Deloitte Research/UN Population Division (<http://esa.un.org/unpp/>) It's 2008: Do You Know Where Your Talent Is? Why Acquisition and Retention Strategies Don't Work, p.6

Dramatically Different Patterns of Growth by Age

Percent Growth in U.S. Population by Age: 2000-2010

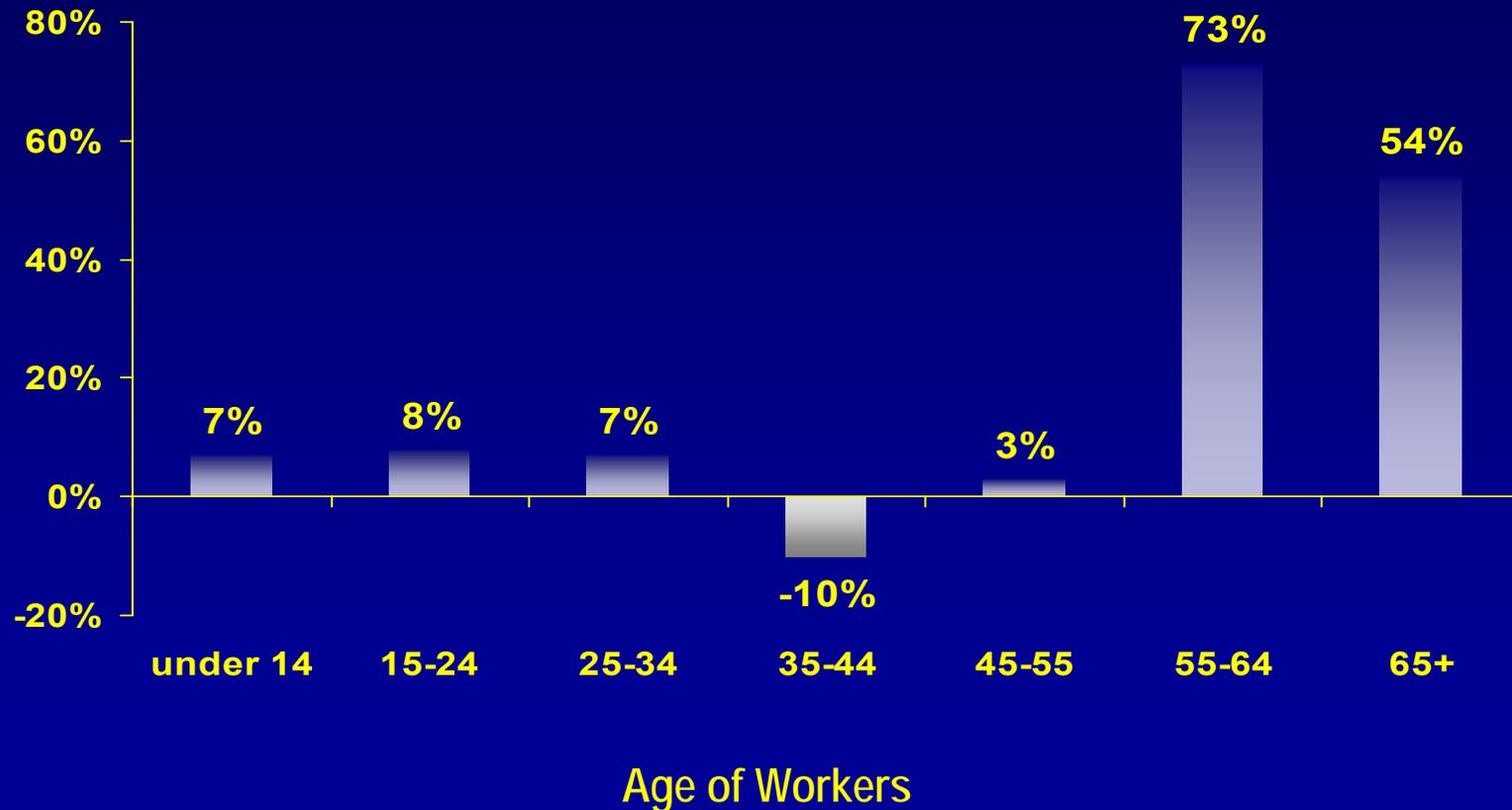


1. Declining number of mid-career workers

Source: U.S. Census Bureau

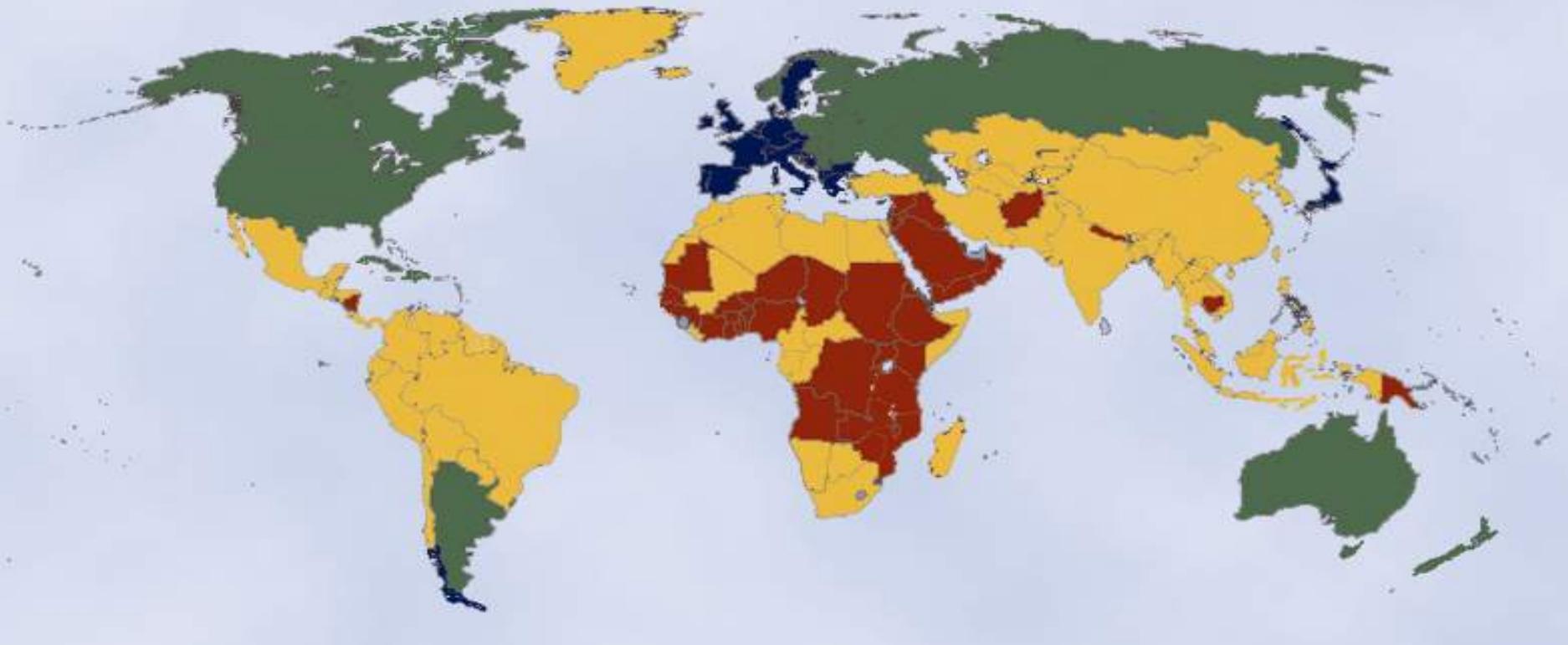
... Continuing Into the Future

Percent Growth in U.S. Workforce by Age: 2000-2020



Source: U.S. Census Bureau

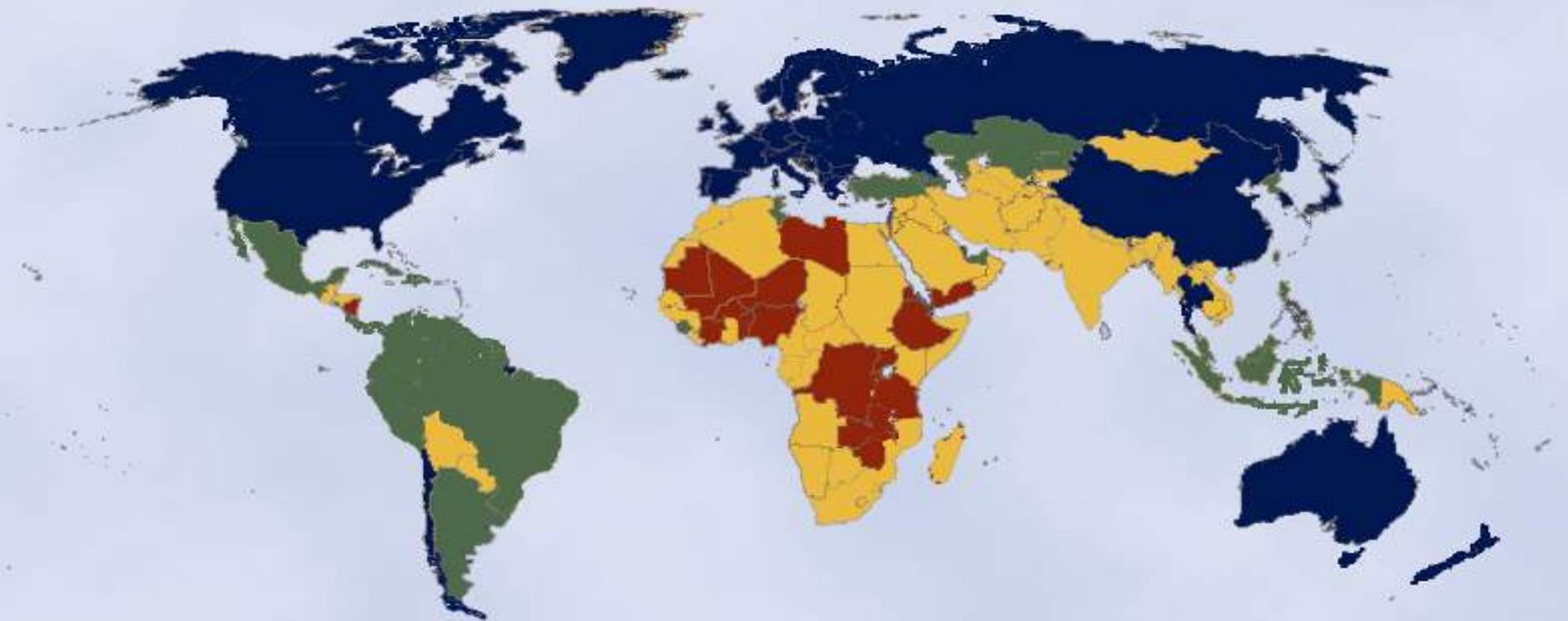
In 2000, A Fairly “Young” World . . .



Percent of Population Age 60+ in 2000

Source: U.S. Census Bureau

... Rapidly Aging by 2025

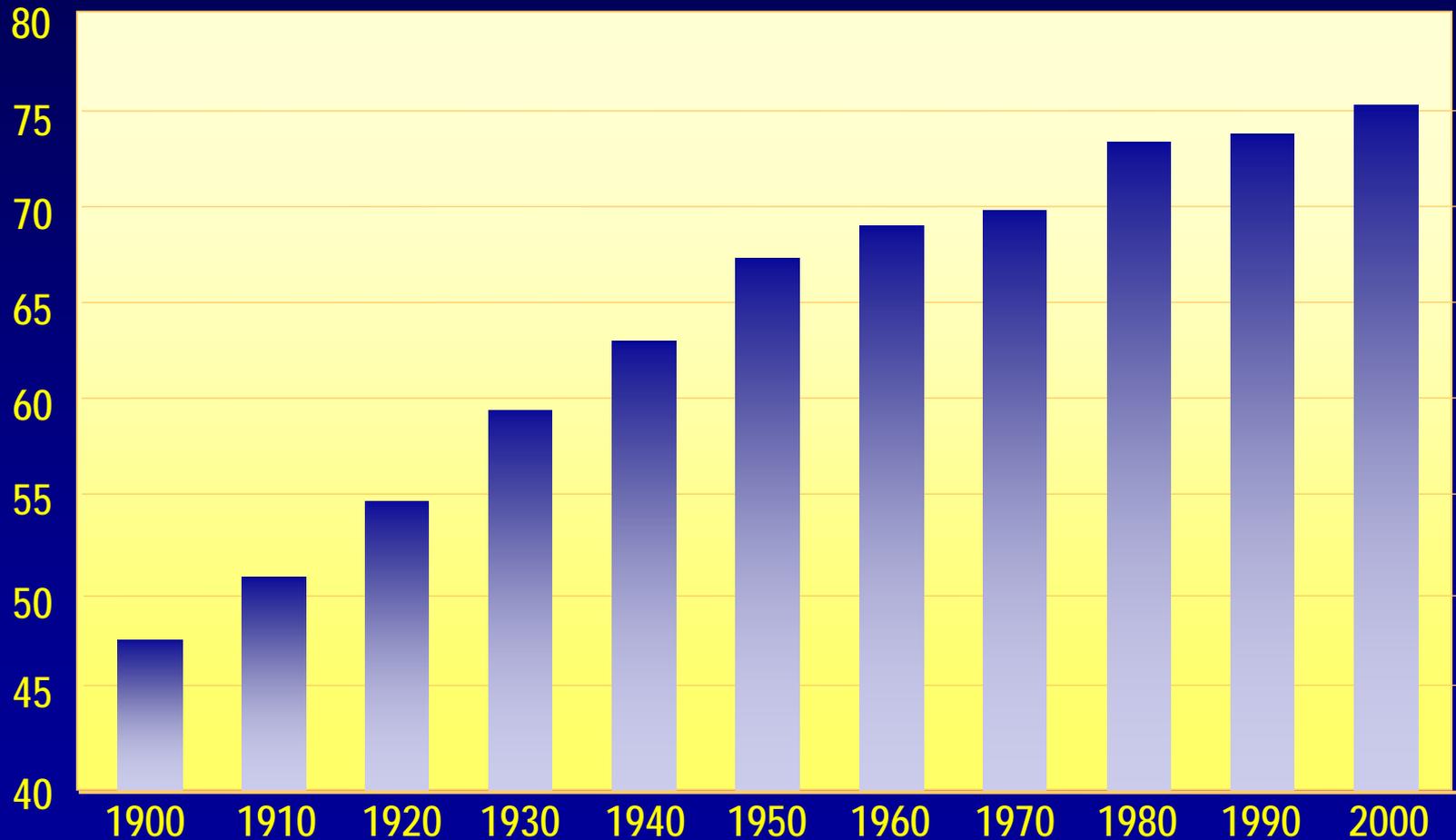


Percent of Population Age 60+ in 2025

Source: U.S. Census Bureau

Why? Dramatic Increase in Life Expectancy

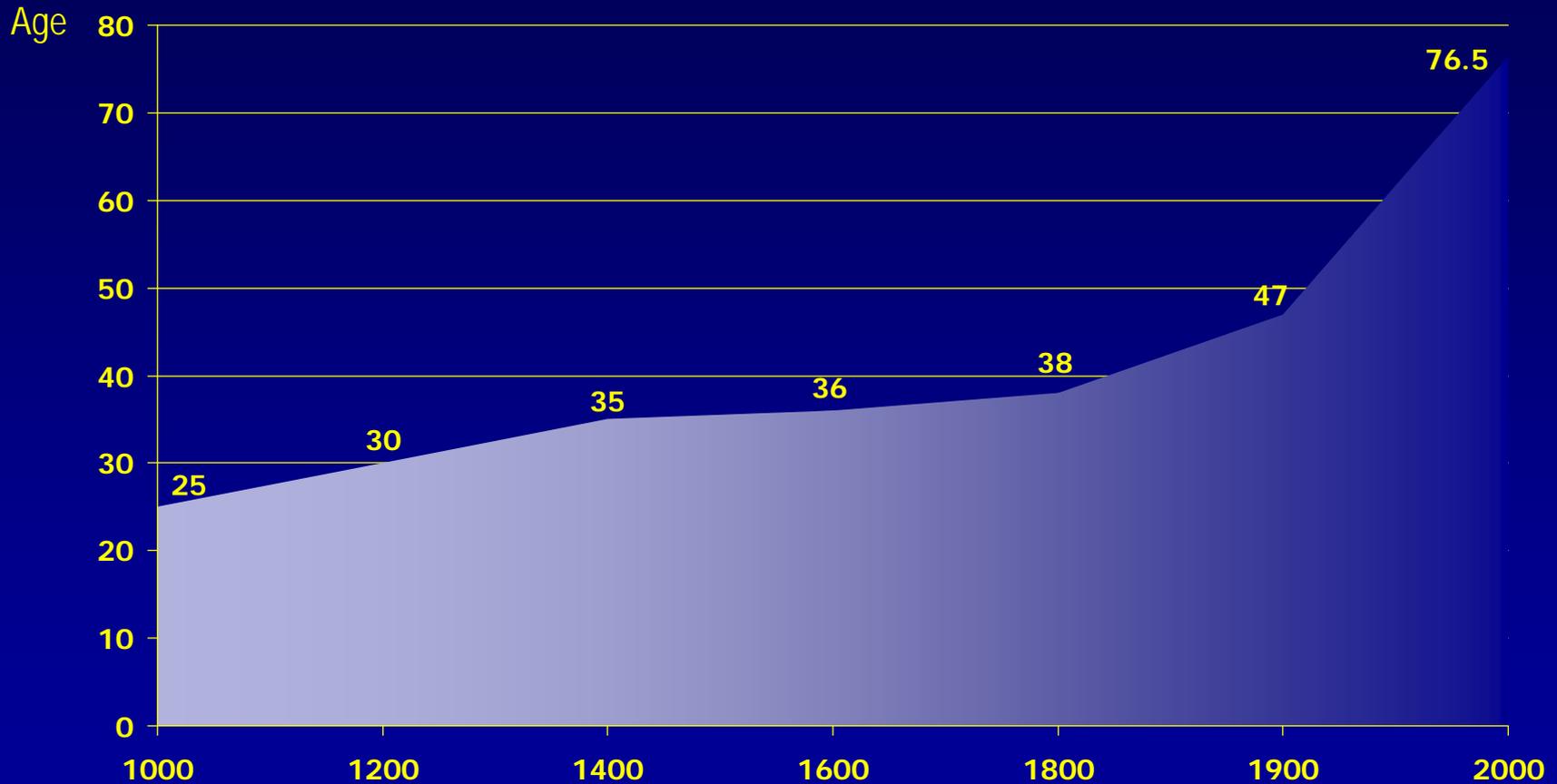
Average Life Expectancy at Birth in the U.S.



Source: U.S. Social Security Administration

“Sudden” Boom in Life Expectancy

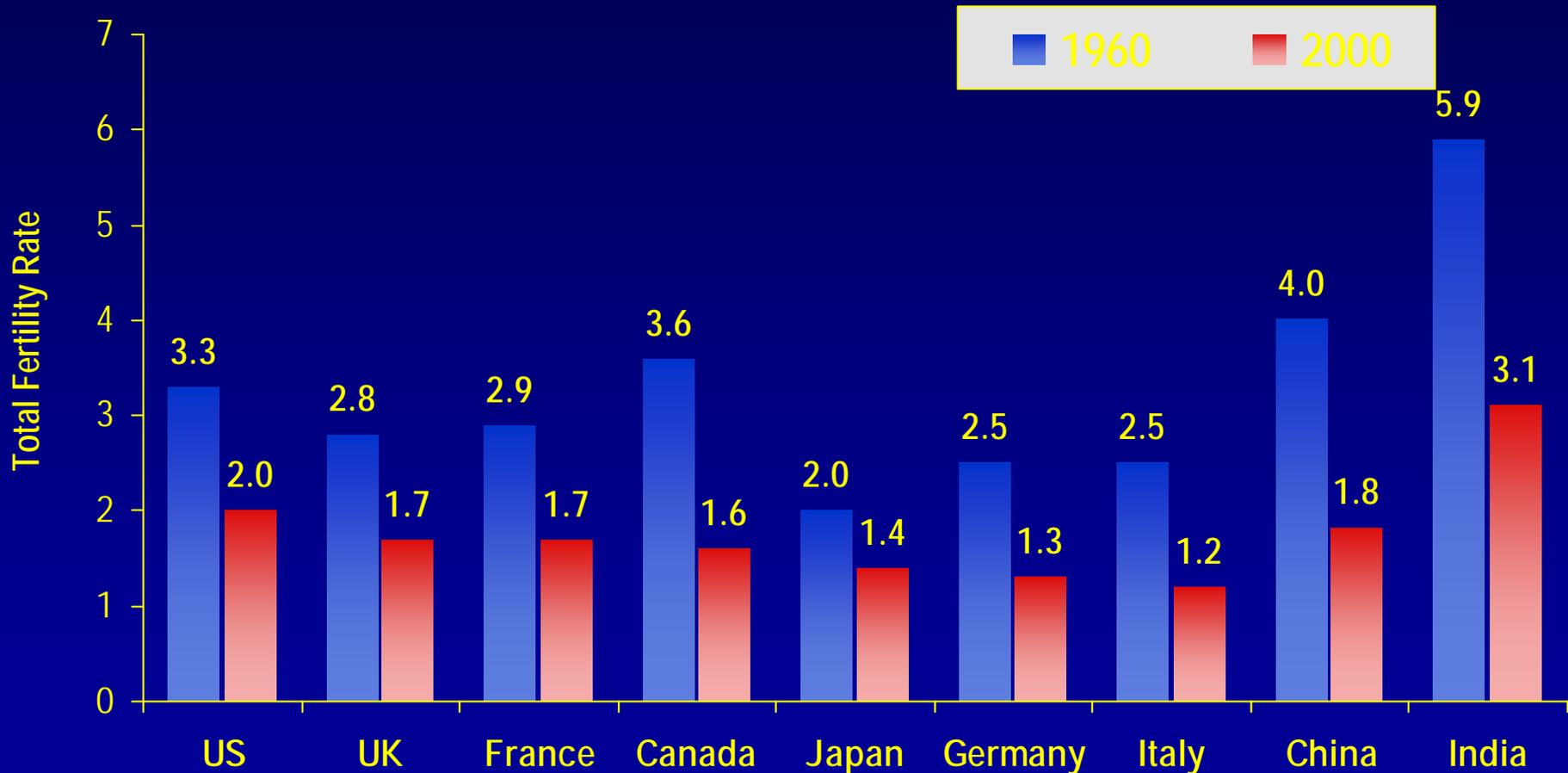
Life Expectancy at Birth: 1000 - 2000



Source: U.S. Census Bureau, 2000

And a Dramatic Drop in Birth Rates

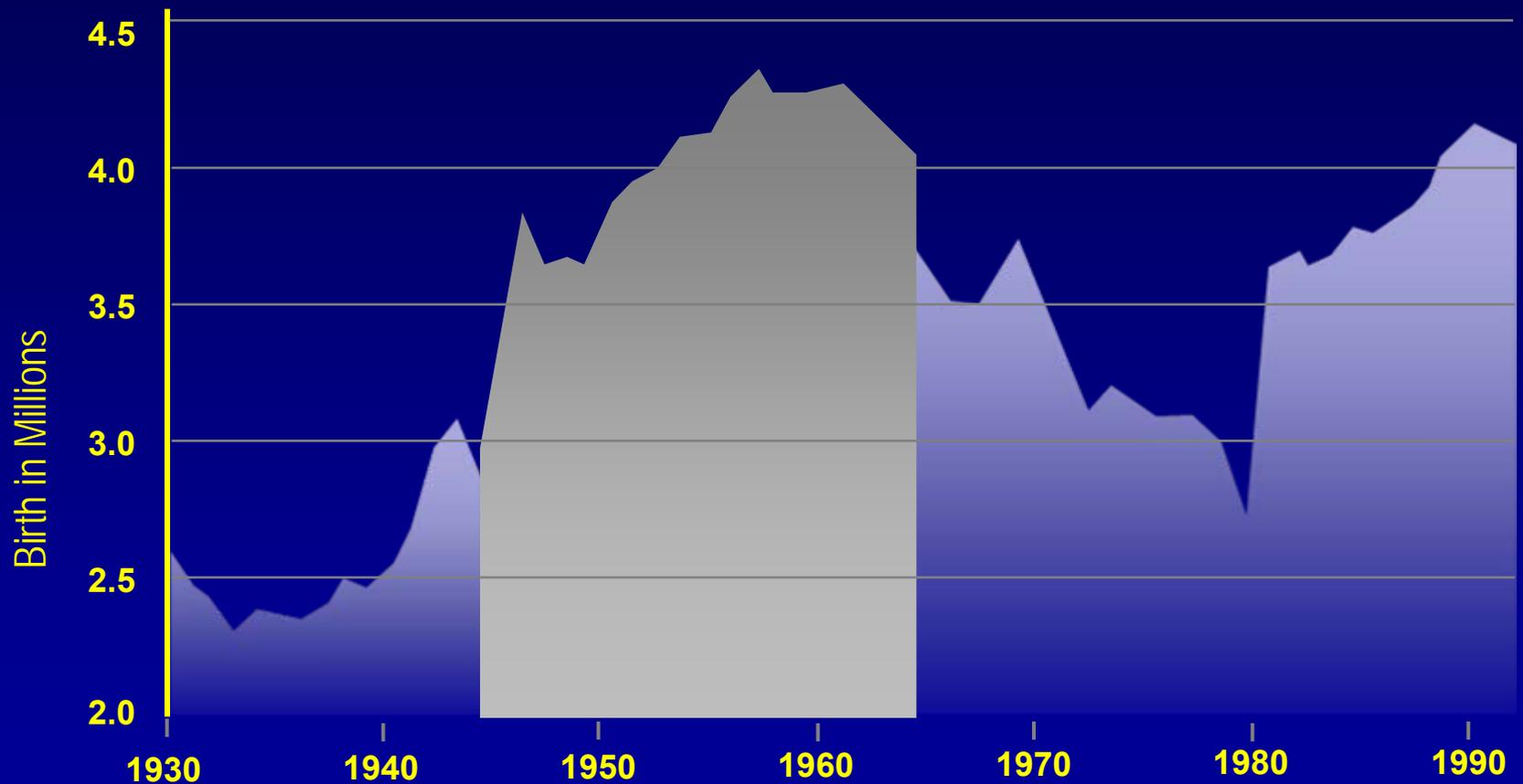
Total Fertility Rate: 1960 and 2000



Source: Age Wave

Why? The Baby Boom Pattern

The Boom Years: 1946-1964



Source: U.S. Census Bureau International Data Base

Skill Mismatch Ahead in the U.S.

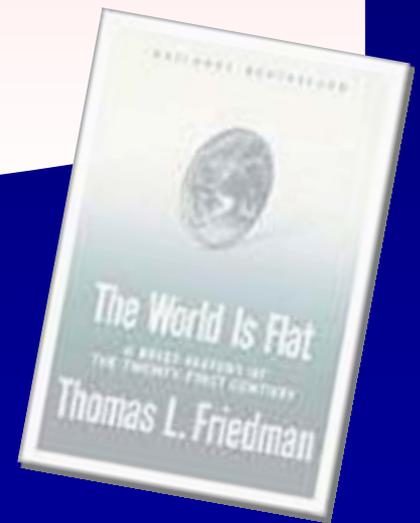
- Over the next decade, only 30% of US 20 year/olds will obtain a college degree, but 2/3's of new jobs will require a college degree
- Key skill sets will be in critically short supply:
 - # students that declared their major in computer science has declined for past 4 years—now 39% lower than in 2000
 - Other shortages: engineering, physical & biological sciences
- A growing number of high school dropouts
- Fewer high school graduates with vocational training
- Labor “imports” decreasing due to security restrictions and opportunities in rapidly developing countries

Source: In part, The Seventh-Annual Workplace Report, Challenges Facing the American Workplace, Summary of Findings,“ Employment Policy Foundation, 2002; India Daily, October 12, 2005, citing McKinsey & Co. Research; Computing Research Association, March 2005; Information Week, August 16, 2004; Holding on to Global Talent: Foreign-born stars are heading home. How to keep them working for you” by Anne Fisher, *Fortune Magazine*, October 19, 2005. Organization for Economic Co-operation and Development

When I was growing up, my parents used to say to me, "Tom, finish your dinner. People in China and India are starving."

Today I tell my girls, "Finish your homework. People in China and India are starving for your jobs."

—Thomas
Friedman, *The
World is Flat*



Source: "The New York Times' Thomas Friedman on Globalization," CIO Magazine, March 25, 2005

U.S. 21st Century Workforce Challenges

Chronologically older

Limited availability

Key skills lacking

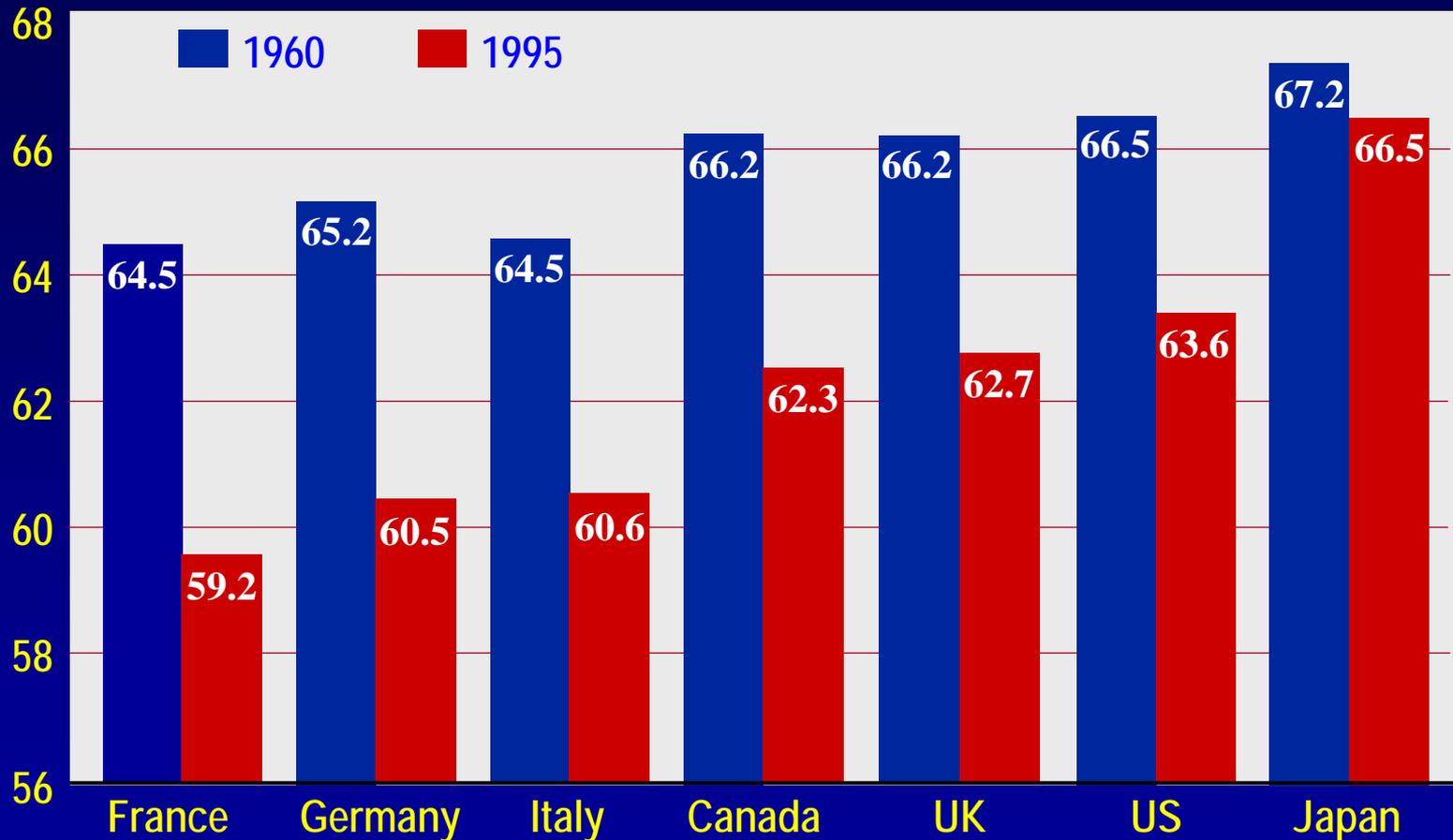
Global & Virtual

Diverse

- **Race**
- **Gender**
- **Age Generations**
- **Culture**

Source: Testimony by Tamara J. Erickson to the U.S. Senate Committee on Health, Education, Labor and Pensions, May 2005

Average Retirement Age of Males



Source: Center for Strategic and International Studies

“Multi-Generational” Workforce

Traditionalist



Born: 1928-1945

Boomer



Born: 1946-1964

Generation X



Born: 1965-1980

Generation Y

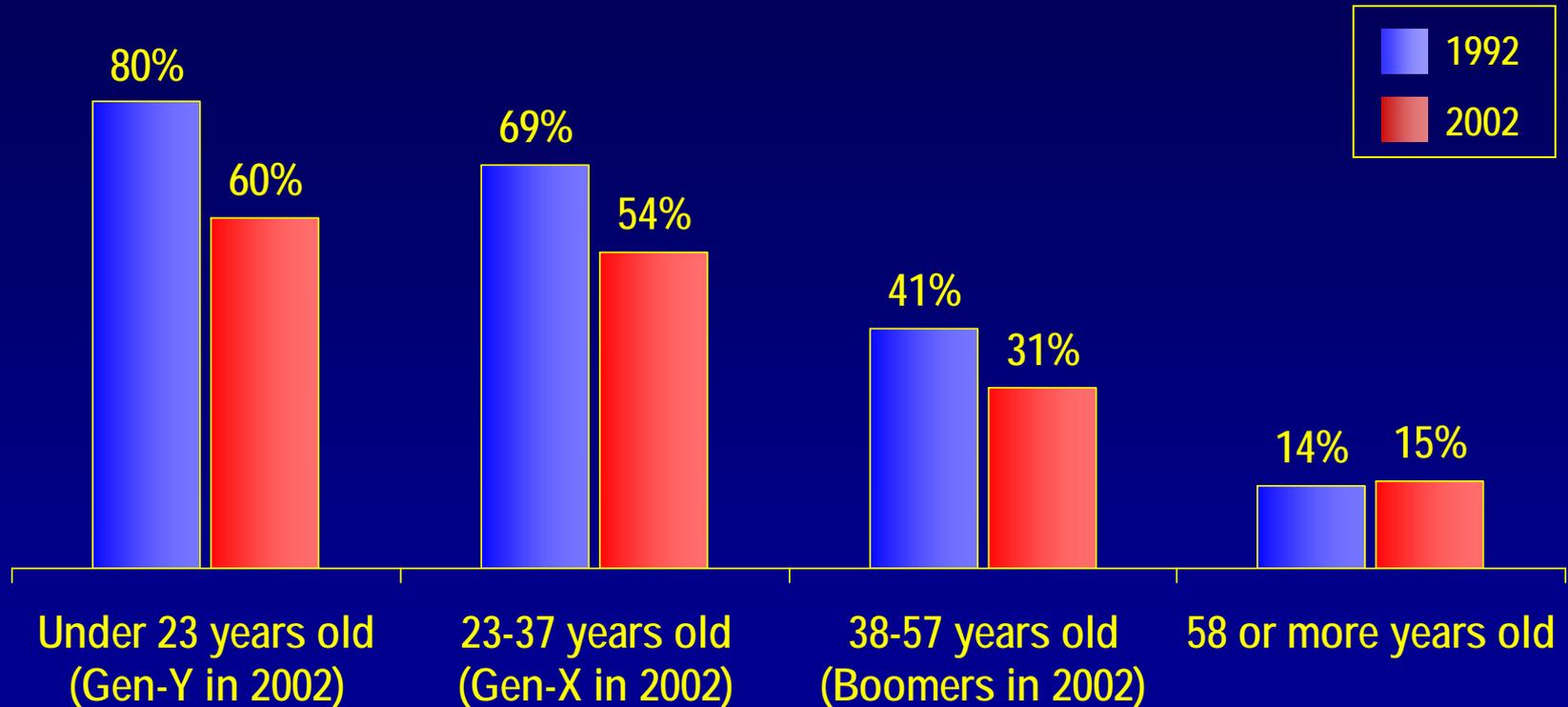


Born: 1980-2000

Four generations (cultures) are being asked to coexist in the early 21st century workplace

Source: Based in part on “Meeting the Challenges of Tomorrow's Workplace,” CEO Magazine, 2005

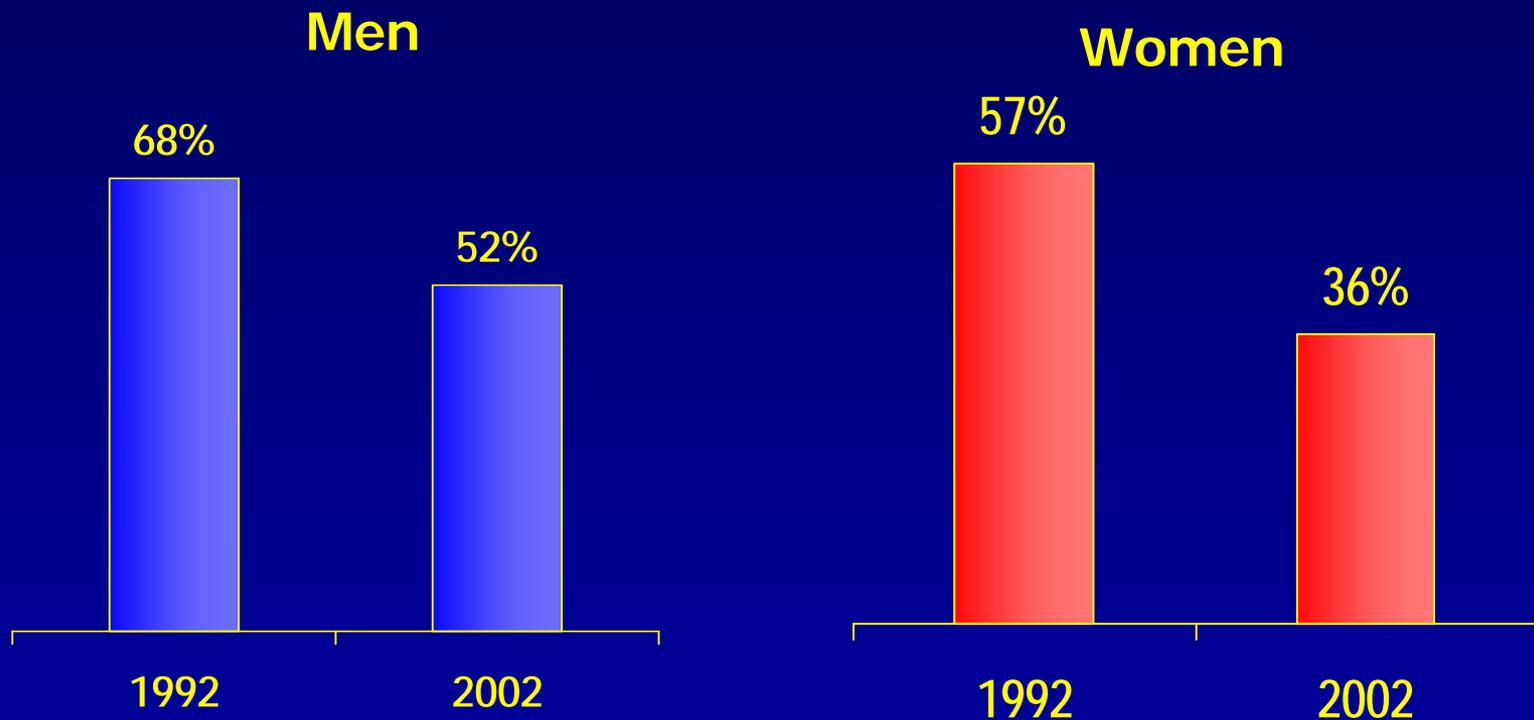
Falling Desire for Jobs with Greater Responsibility



Source: *Generation & Gender in the Workplace*, An Issue Brief by Families and Work Institute

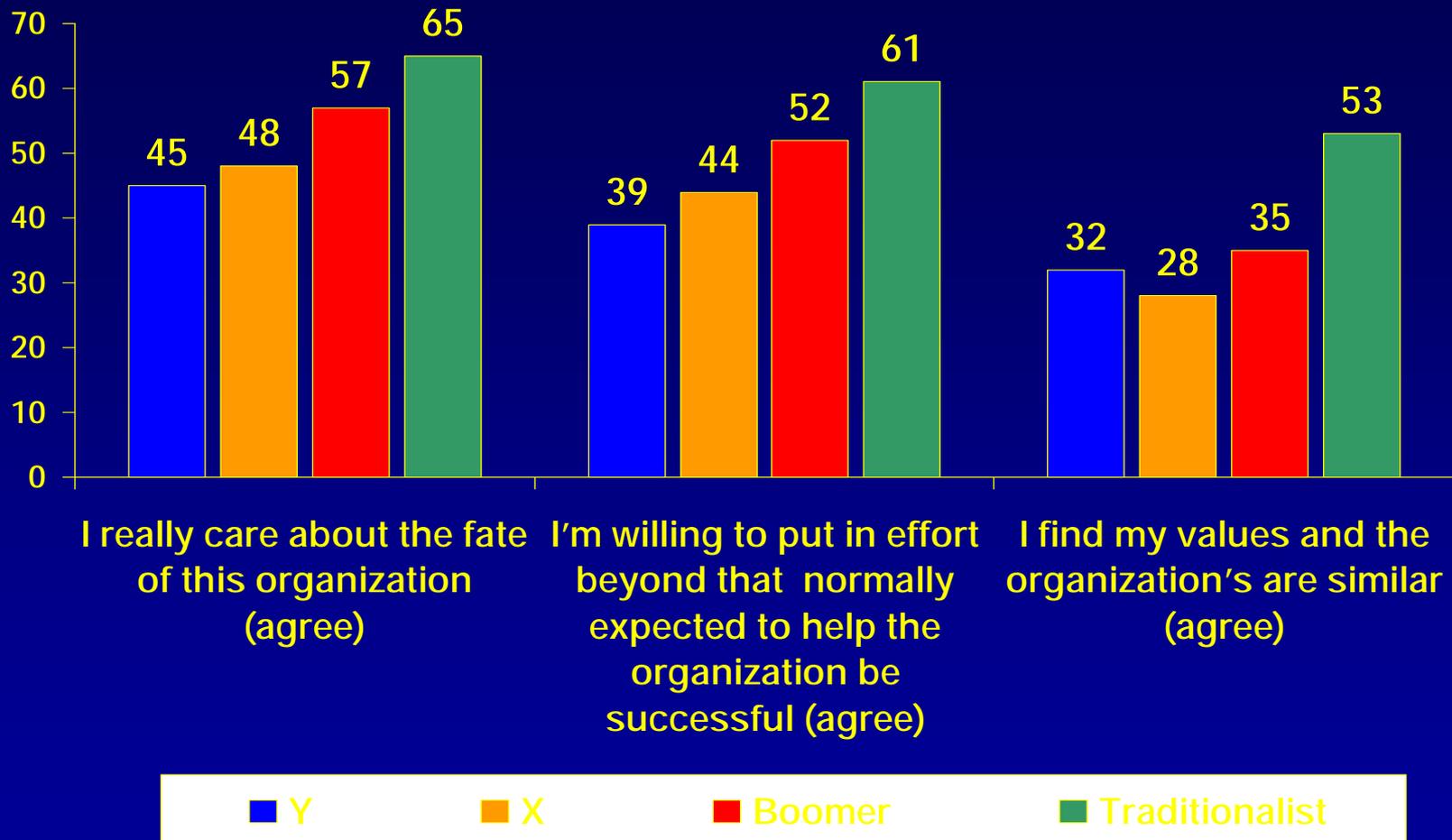
Declining Desire for Jobs with Greater Responsibility By Gender

Employees Wanting Jobs with Greater Responsibility



Source: *Generation & Gender in the Workplace*, An Issue Brief by Families and Work Institute

Lower Alignment with the Organization



Source: *The New Employee/Employer Equation*, The Concours Group and Age Wave, 2004

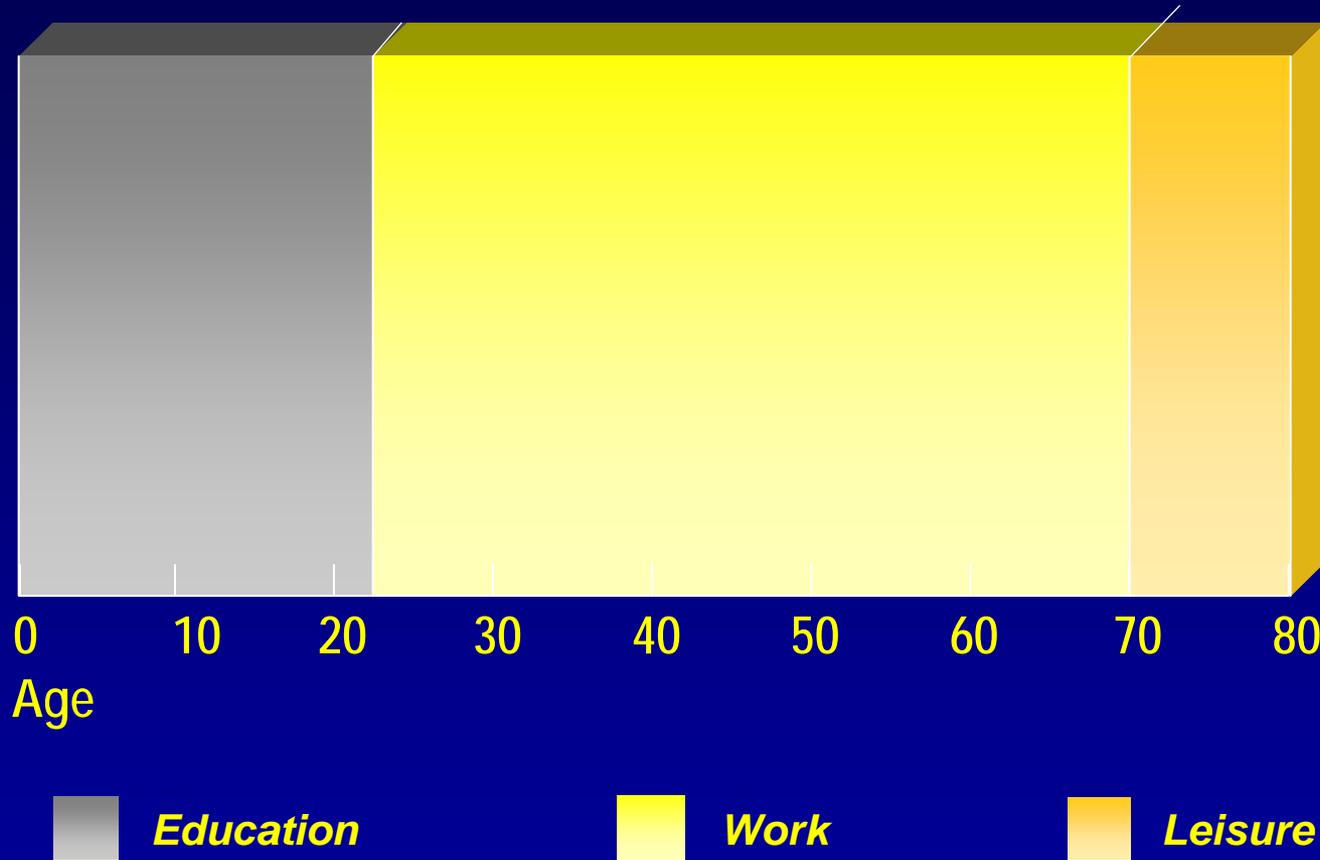
Webster's Definition of Retirement

- *to disappear*
- *to go away*
- *to withdraw*



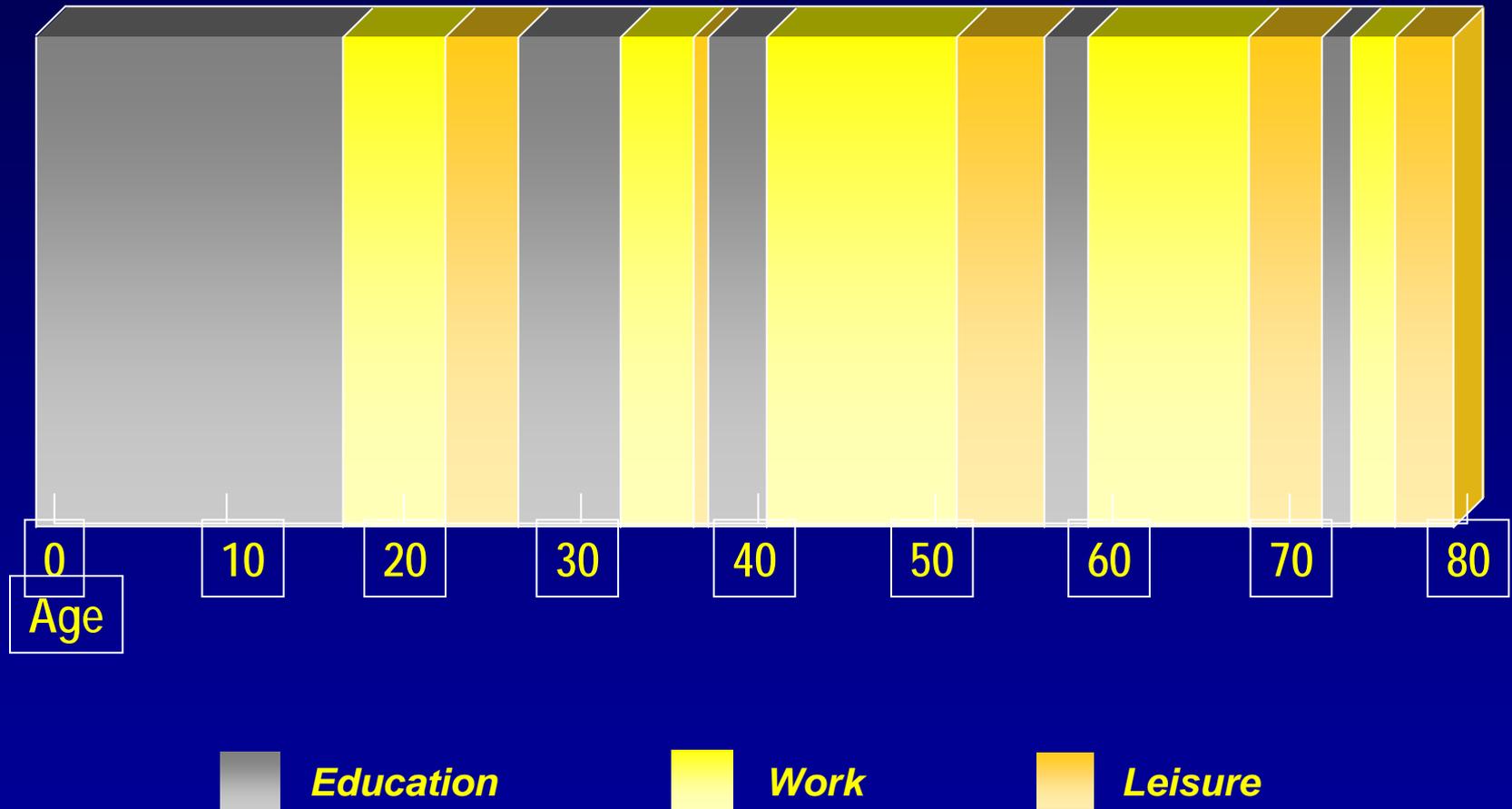
Source: Webster's New Twentieth Century Dictionary

Shifting the Old Work/Life Paradigm . . .



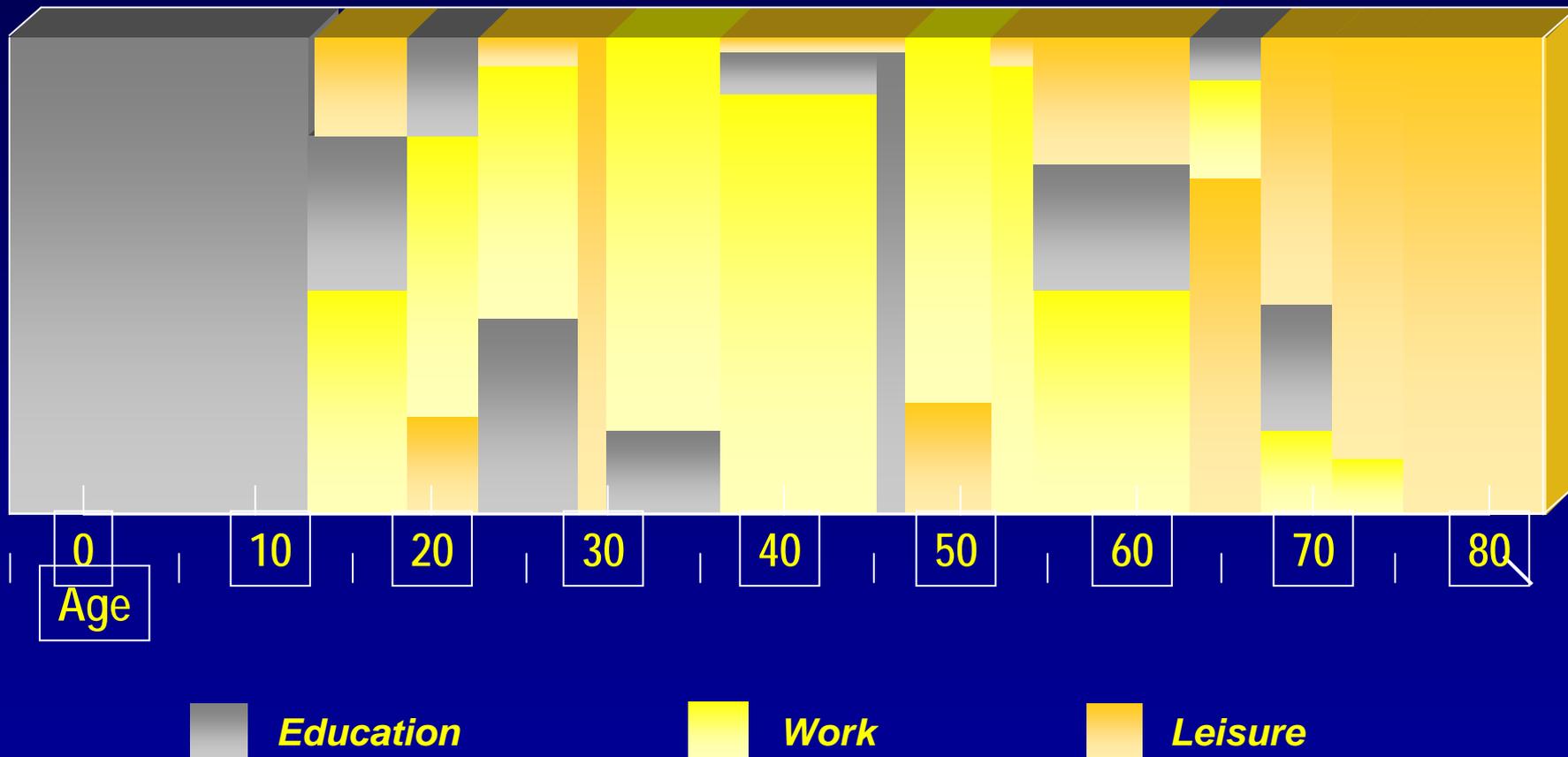
Source: *Demography is De\$tiny*,
The Concours Group and Age Wave, 2003

... To a "Cyclic" Life Paradigm



Source: *Demography is De\$tiny*,
The Concours Group and Age Wave, 2003

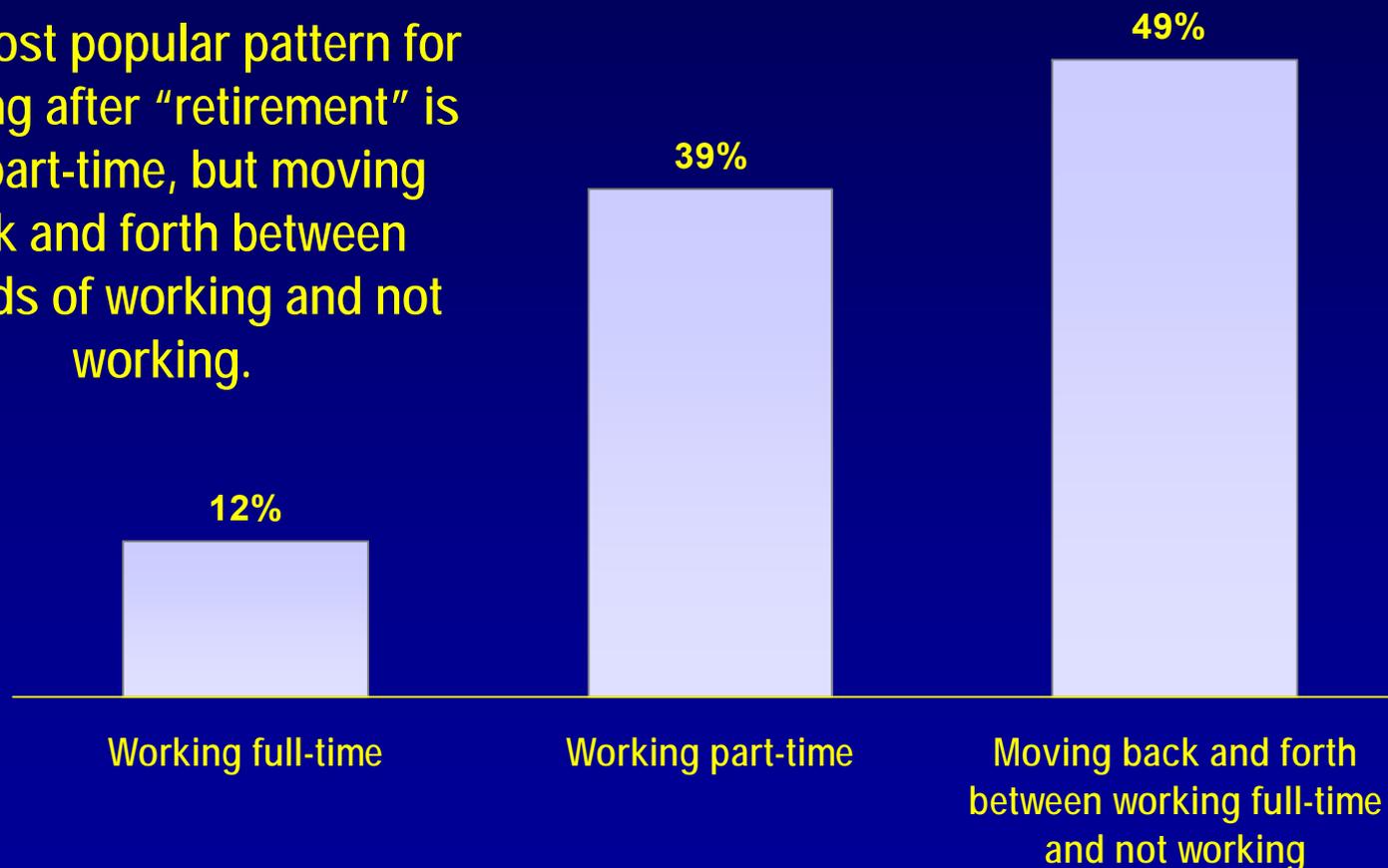
... Evolving to a "Blended Lifestyle"



Source: *Demography is De\$tiny*,
The Concours Group and Age Wave, 2003

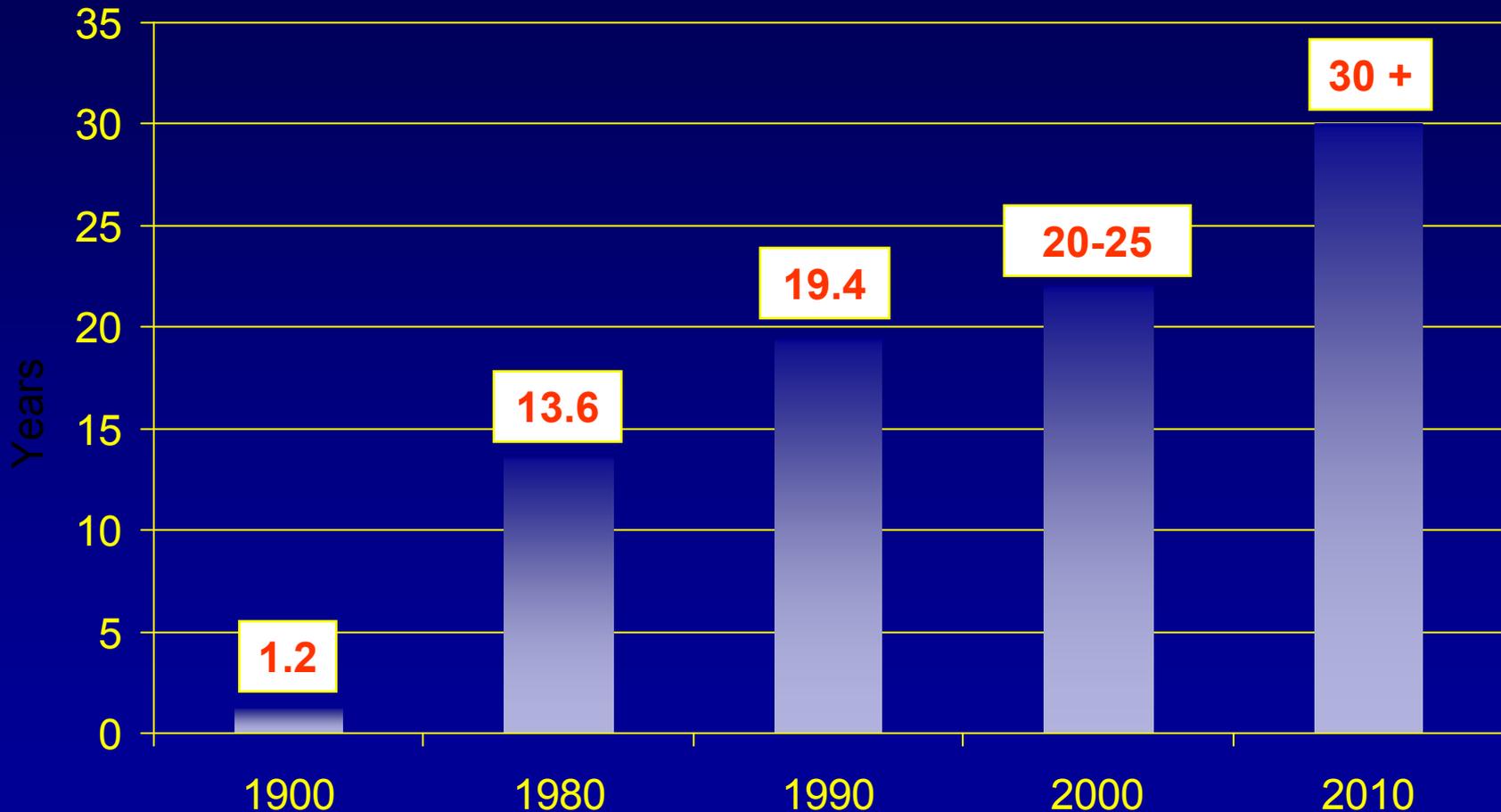
Cutting Back Has New Meaning: Cyclic Work

The most popular pattern for working after “retirement” is not part-time, but moving back and forth between periods of working and not working.



Source: *The New Employee/Employer Equation*, The Concours Group and Age Wave, 2004

More Years Spent in “Retirement” After Your First Corporate Career



Source: Age Wave, based on U.S. data, and The
Concours Group

Aging Productively

“Older Workers on the Move: Recareering in Later Life,” by R. Johnson, J Kawachi & E. Lewis of the Urban Institute for the AARP Public Policy Institute



Impact on Occupational Safety and Health



The changing demographics in the workforce mean that we all need to be thoughtful about how to age and work productively

National Research Council Study (2004)

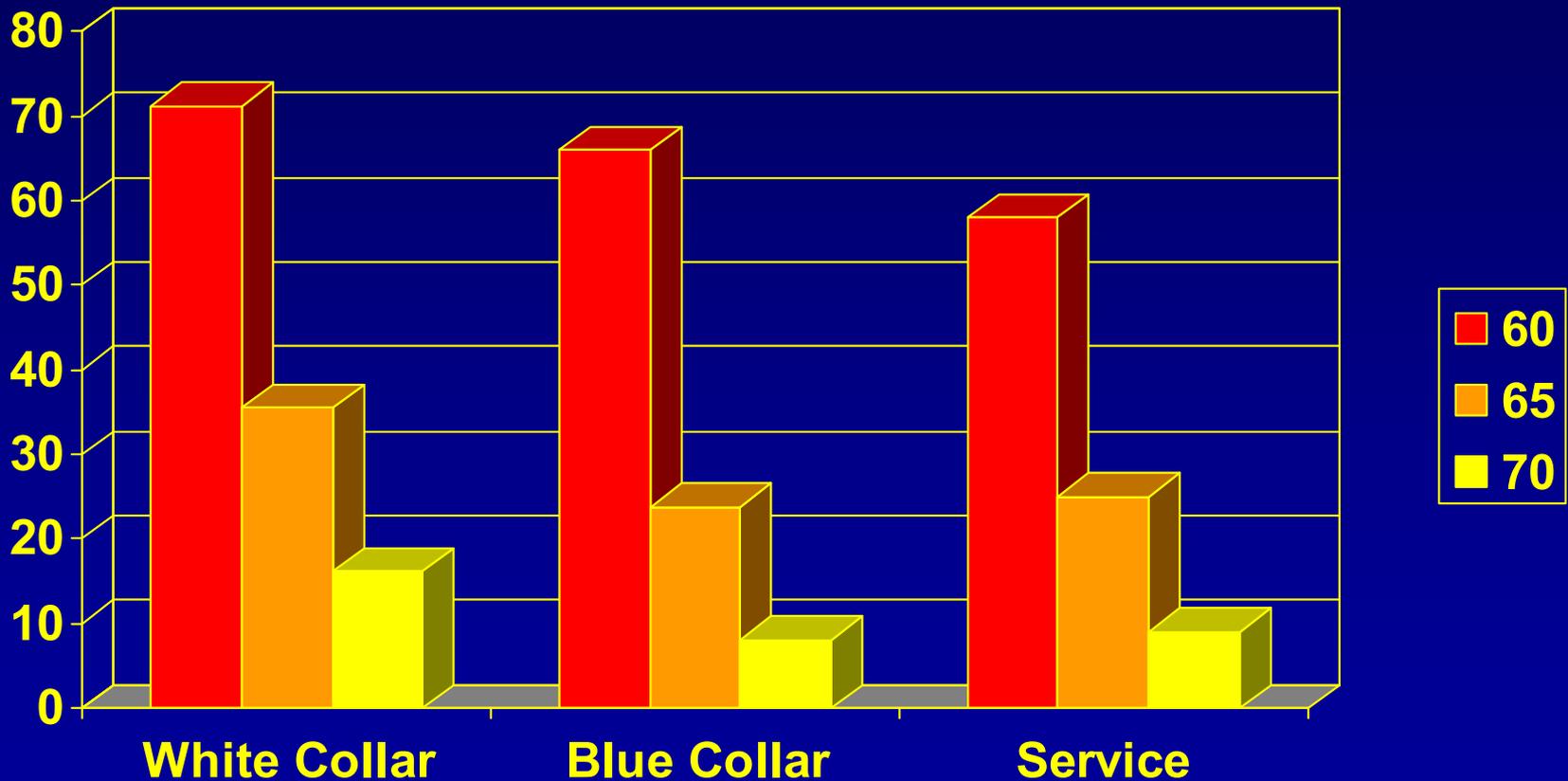
Commissioned by NIOSH

- Characterize the older adult workforce over next 20-30 years
- Identify the key policy and research issues
- Address retirement patterns and characteristics of the older adult workforce and their jobs
- Conduct workshop on differential effects of environmental hazards

National Research Study (2004)

- Life course perspective emphasizes aging productively versus age
- Beginning clearly to detect age-related changes
- Can address disease risk factors to extend years of healthy living
- Promote research to capture precursors of age-related changes

Proportion of 50 yr-olds Still Employed at Subsequent Ages by Age Attained and Class (U.S.)



Aging: A Balance of Factors

- Possible Limitations
 - Mental Capacity
 - Chronic Conditions
 - Physical Capacity
- Compensating Factors?
 - Attitude
 - Judgment
 - Flexibility
 - Interest in learning new things

Mental Capacity



Does long work experience advantage older workers in thinking through problems in comparison to new workers?



Can older workers be trained in new technologies?



Is the modern workplace too complex or too technical for the older workers?



Do older workers bring more experiential intelligence to the job?

Mental Capacity

- **Laboratory Tests**
 - **Cognition speed**
 - **Information retrieval slower, unless material is familiar**
 - **Learning and recall slower, but equally successful in the end**
 - **Greater retention, higher learning achievement and more likely to complete a new field of study than younger workers**

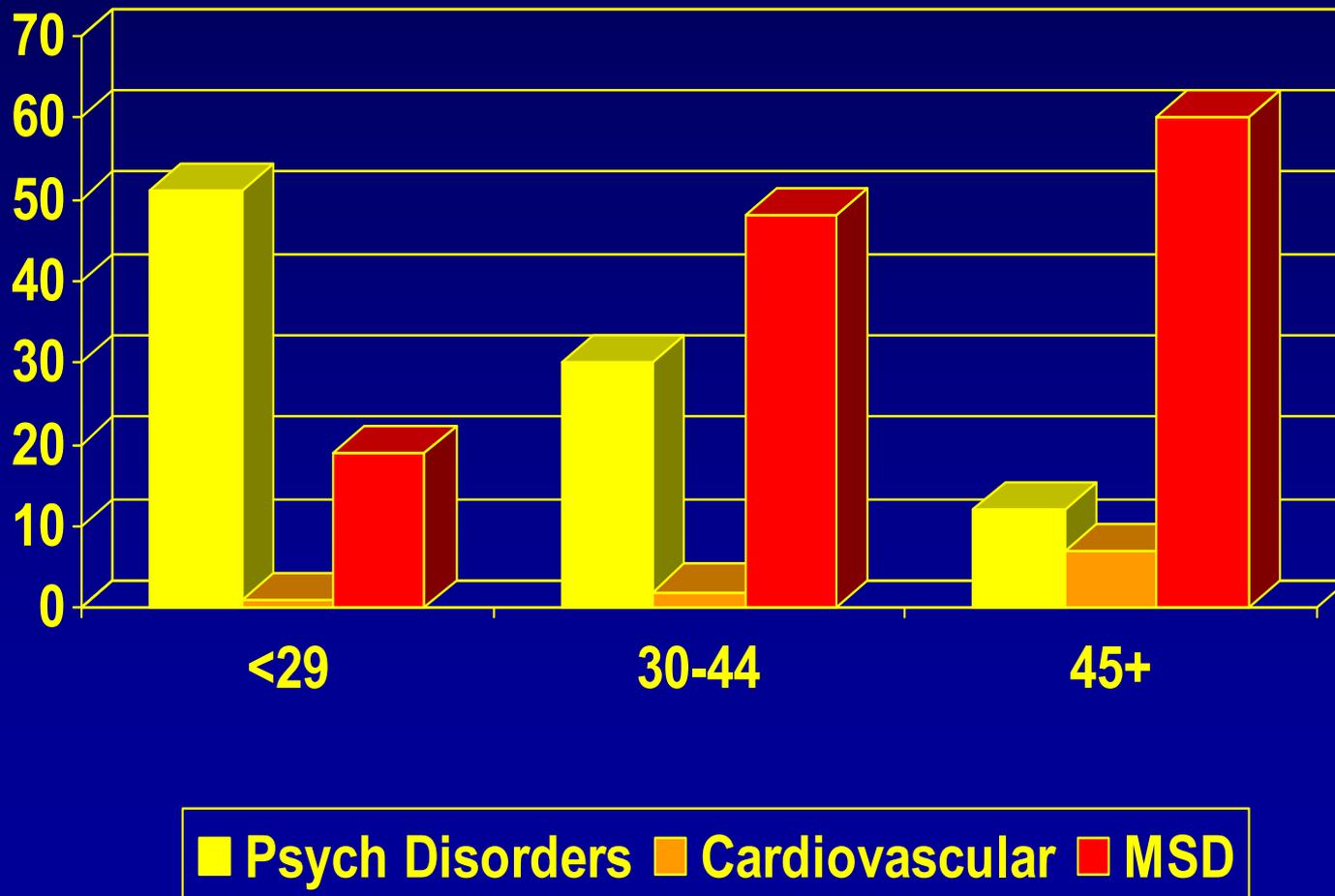
Mental Capacity: Relevance to On-the-Job Performance

- Lab tests do not translate well to actual work settings
- Factors other than *psychometric* cognitive abilities appear important to perform well at work
 - How well worker gets along with co-workers
 - Desire to perform well
- Individual measures are quite sensitive to occupational class

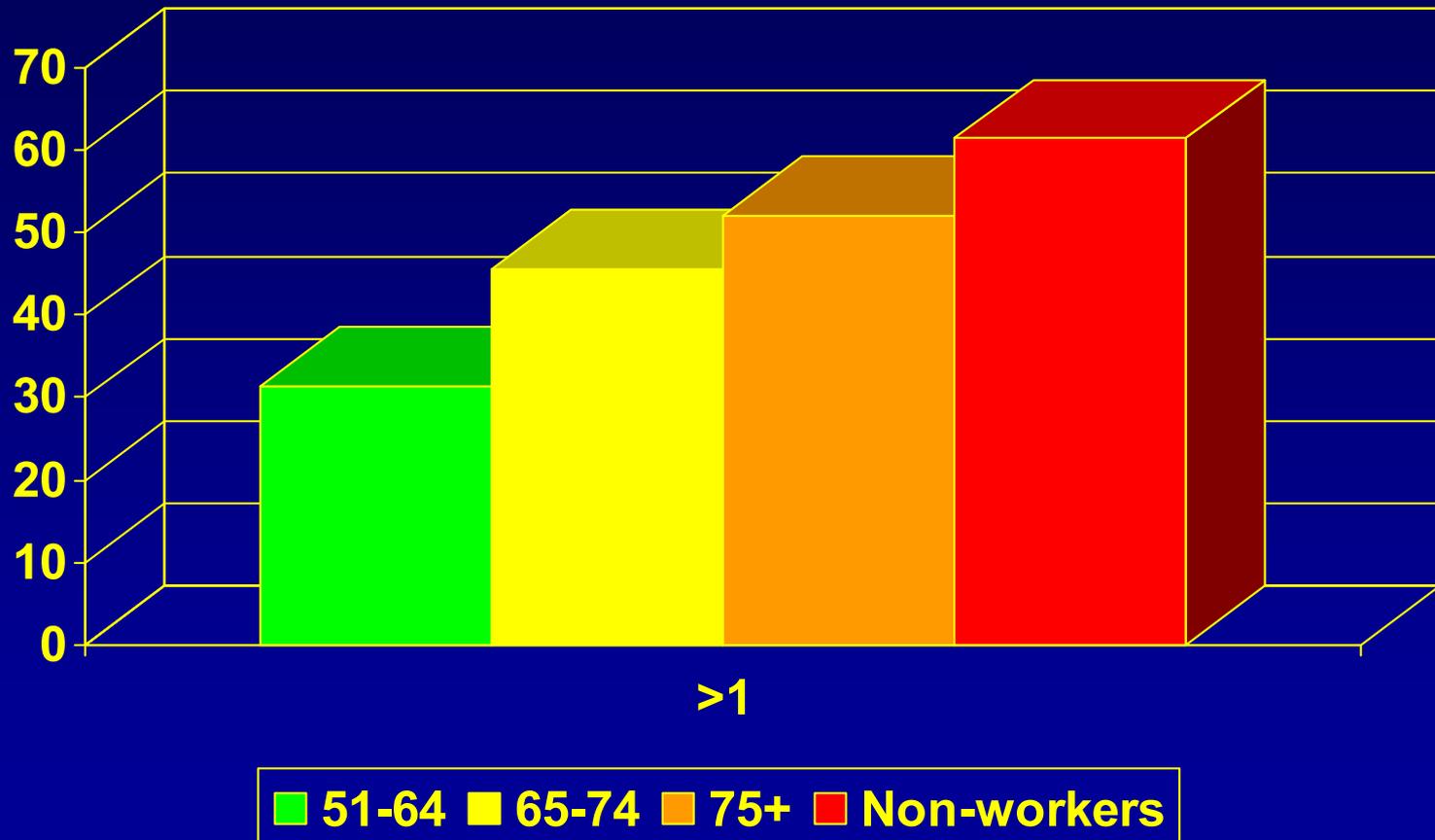
Age and Chronic Conditions: How healthy are older workers?



Diagnoses Among Disability Female Pensioners by Age (Sweden 1990-1993)



Workers with >1 Chronic Condition by Age (U.S.)



Physical Capacity: Can Older Workers Keep Up?

- **Physiology**
 - Maximal strength at 20-30 years
 - O₂ uptake reduced to 70% (max) by 65 years
 - Older adults work closer to capacity
- **Match Ability to Job Requirements**
 - Change in industry from manufacturing to services
 - Change in job duties from physical to mental

Work Settings: Employing Older Workers

- **Decreased performance**
 - For physically demanding work only
- **Work *uncommonly* demands maximal effort**
- **Non-physical advantages that older workers bring to a job are rarely measured**
- **Workers abilities matched to the job results in less morbidity**
 - **Accommodation thinking rare in industry¹**
 - May change with ADA Amendments Act of 2008
 - Workers are changing (aging) and jobs are changing

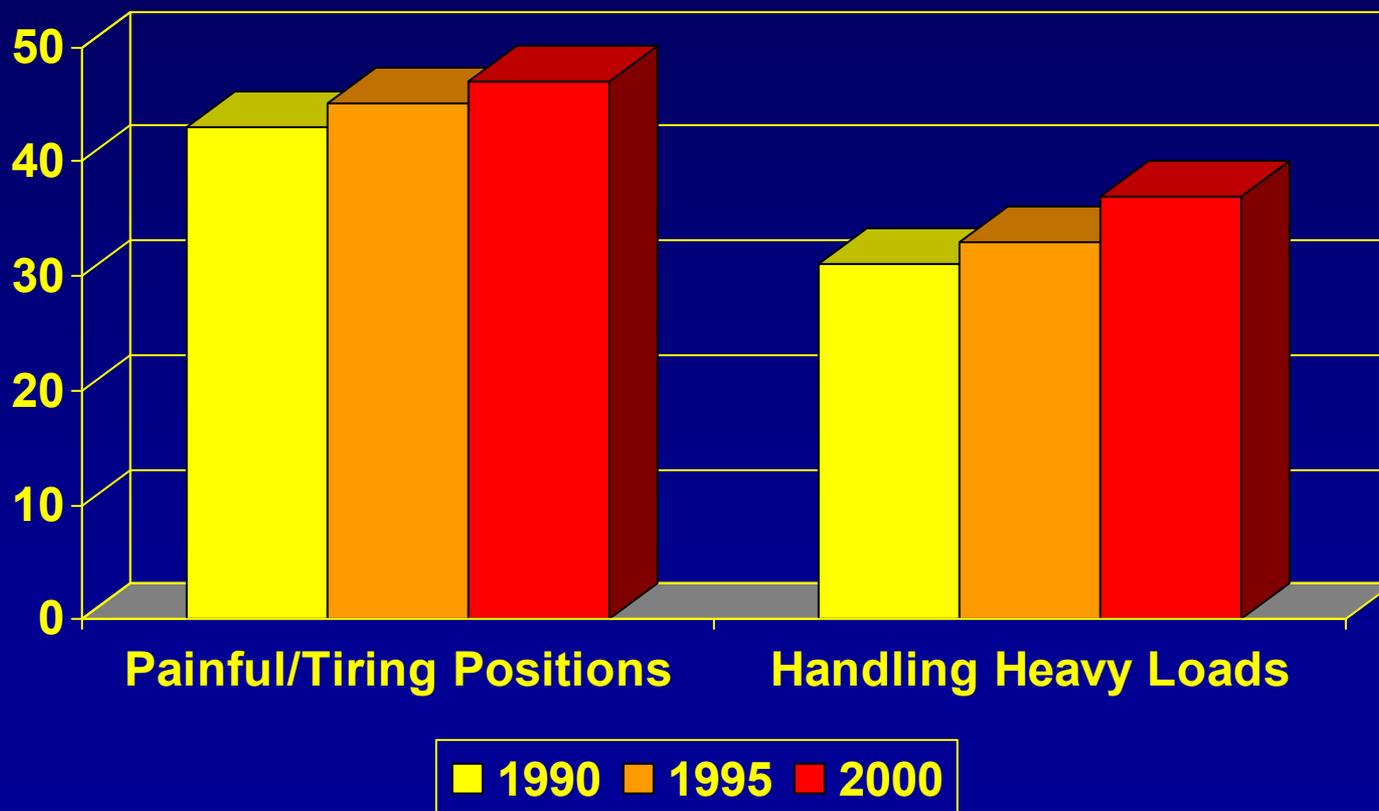
¹ Eur J App Phys 2003 89:536

Trends in Workplace Physical Stressors

As the U.S. service sector increases and manufacturing jobs decrease, are physical stressors decreasing in US jobs?

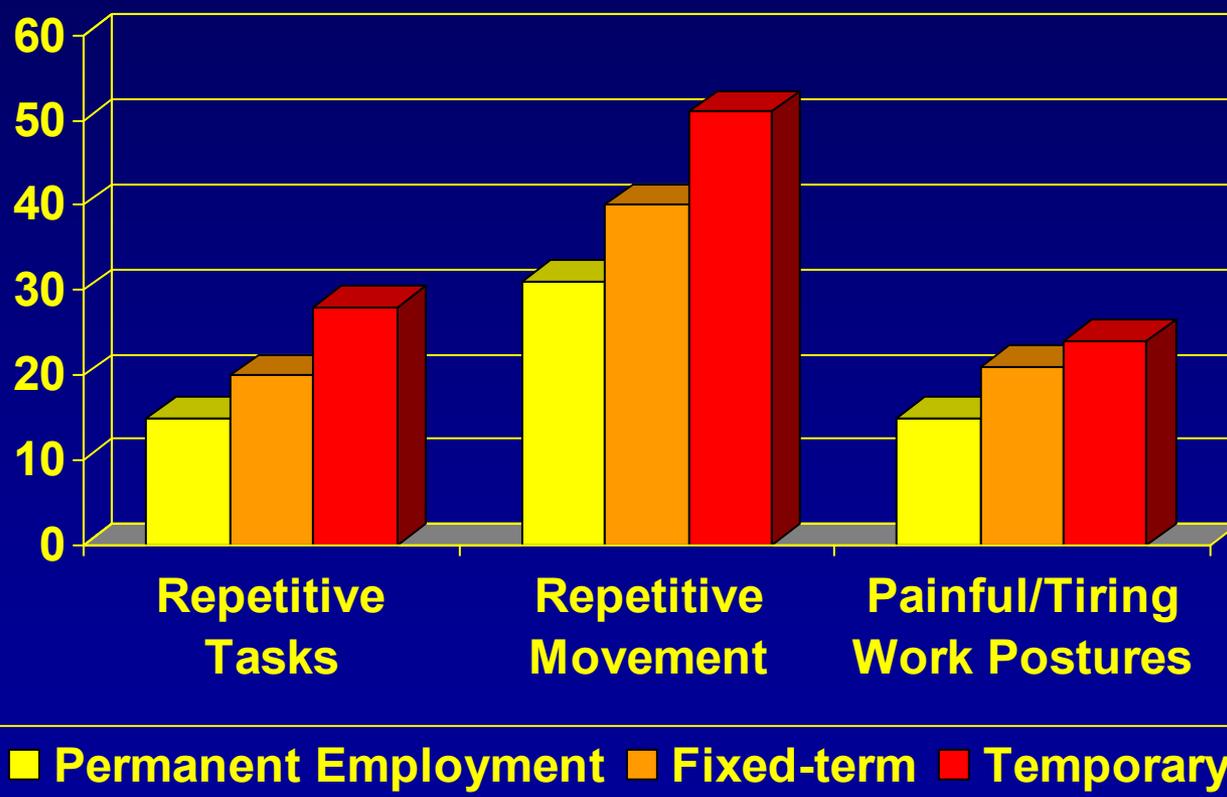
Exposure to Physical Stressors

EU - 1990-2000



Exposure to Physical Hazards (EU)

By Type of Work Contract (1995)



Aging Productivity

- Injury risk and its consequences differ in older workers
- Medical costs rise with age
 - Estimated 25% increase from age 40 to 50 to 35% from age 50 to 60
- BUT, age is less a factor in health care costs than the presence of such risk factors as smoking, obesity, lack of exercise, and diabetes!
- There is such a thing as “aging productively” or “healthy aging”!

Essentials

- **Do aging workers need special accommodations?**
 - A well-designed workplace benefits everyone
 - Work stations and job tasks need to be matched to the capacity of each worker
 - There should be no conflict between ergonomic principles vs. reasonable accommodations
- **Are there any specific health and safety concerns related to aging workers?**
 - Older workers have fewer injuries, but when one occurs, that injury tends to be more severe and it takes worker longer to get better.
 - Injuries differ in older workers—there are more musculoskeletal injuries (especially involving the low back)
 - No consistent relationship between aging and work performance!

Future Research Needs

- **Conduct Longitudinal Studies of Older Workers**
 - Impact of work risks on older workers
 - Interactions with chronic health conditions
 - **Socio-Economics Status relationships to:**
 - Hazardous employment
 - Retirement decisions and barriers to continued work
- **Surveys**
 - Update National Occupational Exposure Survey (NIOSH and OSHA)
 - Develop a new Quality of Employment Survey (NIOSH and OSHA)
- **Develop ability to measure rates by age, gender and ethnicity (BLS)**
- **Aging Productively Management Programs**

Older Workers: Some Best Practices and Strategies for Engaging and Retaining Older Workers

GAO-07-433T February 28, 2007

- **Key Obstacles**
 - Employer perceptions
 - Age discrimination
 - Strong financial incentives to retire
 - Jobs with inflexible schedule or unmodified physical demands
- **Best Practices**
 - Non-traditional recruiting techniques
 - Flexible work schedules
 - Adapt to “retirement” schedules
- **Strategies**
 - Make federal government model employer for older workers
 - Consider specific legislation

2009 Aging Worker Legislation

- Older Worker Opportunity Act of 2009
 - Would diminish barriers to part-time work for older workers such as loss of health coverage and decreased pension benefits by providing a tax credit to hire older workers
- S. 469/H.R. 1198
 - Would make it easier for feds to rehire fed retirees part-time without forcing worker to reduce their salary by their pension amount
- Phased Retirement Bill
 - Would allow phased retirement for feds
- Health Care & Training for Older Workers Act of 2009 (S.281)
 - Would extend COBRA from time of retirement until seniors become eligible for Medicare at age 65

***The reward for work well done is the
opportunity to do more.***

- Jonas Salk (1914 - 1995)

References

- National Research Council. Health and Safety Needs of Older Workers, National Academies Press (2004).
- Dychtwald K, Erickson T, Morison, B. It's Time to Retire Retirement, Harvard Business Review (March 2006).
- GAO. Older Workers: Enhanced Communication among Federal Agencies Could Improve Strategies for Hiring and Retaining Experienced Workers. GAO-09-206 (February 24, 2009).
- GAO. Older Workers: Some Best Practices and Strategies for Engaging and Retaining Older Workers. GAO-07-433T (February 28, 2007).
- Johnson, Richard et al. Older Workers on the Move: Recareering in Later Life (2009), AARP Public Policy Institute
- Tamara Erickson, The Concourse Group, tjerickson@concoursegroup.com

The image features the OSHA logo prominently in the center. The logo consists of a large, stylized letter 'O' with a blue outer ring and a grey inner circle, followed by the letters 'S', 'H', and 'A' in a white, serif font with a slight shadow effect. The background is a close-up, slightly blurred view of the American flag, showing the stars and stripes in shades of red, white, and blue.

OSHA

adds value to business,
work and life.



The Aging Workforce: Moving Forward in a New Age

OSHA Small Business Forum, July 2, 2009
Presented by Phyllis Cohn, Project Manager, AARP

Reinventing Retirement

- **Boomers much less likely to associate retirement with the traditional retirement age of 65.**
- **Nearly 70% of workers who have not retired report that they plan to work into their retirement years or never retire.**
- **Almost half of workers 45-70 indicate that they envision working into their 70s or beyond.**

Myths about older workers

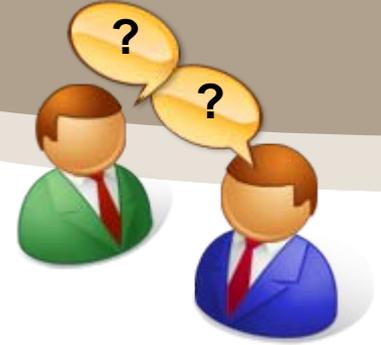
- **Can older workers adapt?**
- **Can they handle new technologies?**
- **Are their job skills up to date?**
- **Can they get along with younger bosses?**



Positive Perceptions of Older Workers

- > Loyalty and dedication to the company
- > Come to work on time; low absenteeism
- > Commitment to doing quality work
- > Someone you can count on in a crisis
- > Solid performance record
- > Solid experience in job/ industry
- > Basic skills in reading, writing, arithmetic
- > Getting along with co-workers

Are Employers Ready?



60% of CEOs indicate their companies do not account for workforce aging in their long-term business plans.

(Source: AARP, *Business Executives' Attitudes Toward the Aging Workforce: Aware But Not Prepared?* BusinessWeek Research Services, October 2006.)

Employers are anxious about the future

- > Lost knowledge can hurt financially
- > Harder to find qualified employees
- > Need to do more to retain workers
- > Need to establish formal programs to address retention and recruitment of 50+ workers



50+ Workers: AARP's Social Impact Plan and Resources

- > **AARP Workforce Assessment Tool**
- > **AARP Best Employers for Workers Over 50**
- > **Managing a Multi-generational Workforce**
- > **AARP Executive Insights**
- > **National Employer Team**
- > **Real Relief**
- > **Retirement Planning**
- > **Publications**

AARP Workforce Assessment Tool

<http://www.aarpworkforceassessment.org>

- > Employee Age Demographic and Skill Shortage Projections
- > Knowledge Retention
- > Flexible Work Arrangements
- > Training and Development Benefits
- > Workplace Accommodations
- > Positive Work Environment
- > Recruitment

AARP Workforce Assessment Tool

[Logout](#)

pcohn@aarp.org
Phyllis Cohn

Highlighted sections/tabs represent incomplete data

Registration

Capturing your Employee Age Demographics

Assessing for Potential Skill Shortages

Knowledge Retention

Flexible Work Arrangements

Training and Development Opportunities

Benefits: Health and Financial

Workplace Accommodations

Positive Work Environment

Recruitment

Submit

Workplace Accommodations

	Yes	No
Has your organization used any of the following sources of information to reduce job-related injuries, enhance productivity, and enable people to stay on the job longer?		
Workers' compensation claims	<input type="radio"/>	<input type="radio"/>
Formal/informal feedback from employees on their workplace accommodations needs (e.g. surveys, focus groups, or other methods)	<input type="radio"/>	<input type="radio"/>
Consultation from an ergonomics expert who has examined your workplace to assess workplace safety and ergonomics	<input type="radio"/>	<input type="radio"/>

	Yes	No
Has your organization made any of the following workplace modifications such as:		
Provided equipment or technology to assist workers with vision or hearing impairments	<input type="radio"/>	<input type="radio"/>
Redesigned jobs or adapted equipment to reduce physical strain	<input type="radio"/>	<input type="radio"/>
Installed access ramps and/or elevators	<input type="radio"/>	<input type="radio"/>
Made case-by-case workplace modifications to address individual needs or disabilities	<input type="radio"/>	<input type="radio"/>

At this time, how important is it to your organization to address workplace accommodations? (Check one.)

Top Priority Important Not Important at this time Don't Know - Need to

Workforce Assessment Report

The following report provides a summary of your aging workforce demographics, current workplace practices, potential challenges, and projected hiring needs. The information provided here can serve as the foundation for developing your short and long-term staffing strategies. This report should be an evolving document, constantly updated as more information is available and as your staffing strategies are developed and implemented.

Your first step is to create internal awareness of any current skill shortages and potential challenges as a result of aging workforce trends in your organization. Circulate this report and its recommendations among your leadership and management to initiate your workforce planning discussions and strategies. While these summaries and projections are approximations, you should focus on patterns versus exact numbers.

Table of Contents

- [Summary of Priority Concerns](#)
- [Understanding your Employee Age Demographics](#)
- [Skill Shortages](#)
- [Knowledge Retention](#)
- [Flexible Work Arrangements](#)
- [Training and Development Opportunities](#)
- [Benefits: Health and Financial](#)
- [Workplace Accommodations](#)
- [Positive Work Environment](#)
- [Recruitment](#)
- [Leveraging Your Organization's Strengths](#)
- [Workplace Strengths Inventory](#)
- [Resources](#)



AARP Best Employers for Workers Over 50

- > **Announced in 2001**
- > **Recognize companies with exemplary policies and practices for 50+ workers**
- > **Communicates best practices to employers facing similar challenges of an aging workforce**
- > **Over 400 employers recognized**
- > **2009 application closed in February**
- > **Next application period – 2011**

<http://www.aarp.org/bestemployers>

Who Can Apply?

Any employer with at least 50 employees based in the United States, including:

- For-profit companies
- Not-for-profit organizations
- Government employers at the state, local and federal levels

Best Practices – Workplace redesign

- **Baptist Health South Florida**

- Hydraulic beds

- **International Trucking**

- Supporting mechanics



- **Pinnacol Assurance**

- Ergonomics program reduced workman's compensation costs by 33%



Safe Patient Handling Program
Bon Secours Richmond Health System

Patient Mobility Teams & Injury Reduction

July 2, 2009



An opportunity existed to reduce the # of patient handling injuries occurring with hospital staff and retain experienced nurses leaving the profession due to the physical demands of the job.

In September 2007 we implemented the *Patient Mobility Team* program in three Bon Secours Richmond hospitals. A review of injury data for Bon Secours Richmond showed that patient handling was the highest risk activity for nurses getting injured on the job.



Mobility Teams Assist with:

- Patient repositions (2 hour turns)
- Vertical and Lateral Transfers (Bed to Stretcher, Bed to Chair)
- Patient Falls
- Demand lifts
- Staff training on safe patient handling techniques

Teams circulate every 2 hours throughout the units to perform these patient handling tasks. The teams utilize lift equipment and friction reducing devices.

Teams operate 7am-11pm Monday-Friday and 7am-5pm Saturday-Sunday. The Teams are performing the following/month:

36,178 repositions; 4,931 transfers; 1631 assists



Current Facts About Nurses

- There is a national shortage of nurses
- 12% of nurses leave the profession annually as the results of back injury
- Nursing injury rates rank higher than
 - ✓ Manufacturing
 - ✓ Mining
 - ✓ Construction
- Average nurse lifts more than 6,600 pounds/shift
- # 1 reason nurses leave the profession is due to physical demands of the job
- Average age of a nurse in Bon Secours Richmond is 48



Successful Outcomes for the PATIENT HANDLING PROGRAM

47% ↓ Patient Handling Injuries

49% ↓ Cost Of Pt Handling Injuries

>90% overall Nursing Satisfaction



Impact on Nursing Turnover & Retention

8% ↓ Nursing turnover on units with Teams

Survey Results

1. Have you considered leaving your job due to the physical demands of the job?
2. Has implementation of the Mobility Teams impacted your decision to leave your position?

43 nurses changed their decision to leave!



Financial Impact of Nurse Retention



Cost of replacing a nurse = 1-3x salary

Average salary of RN = \$54,000

Replacement costs of 43 RN's

\$2,322,000 - \$6,966,000



Next Steps

- Continue to train staff on best practices for Safe Patient Handling (SPH) skills
- Implement Teams on night shifts
- Evaluate future equipment needs - Ceiling lifts
- Initiate SPH initiatives in Ancillary departments
- 5 Year Plan



Fitness is GOOD for Business

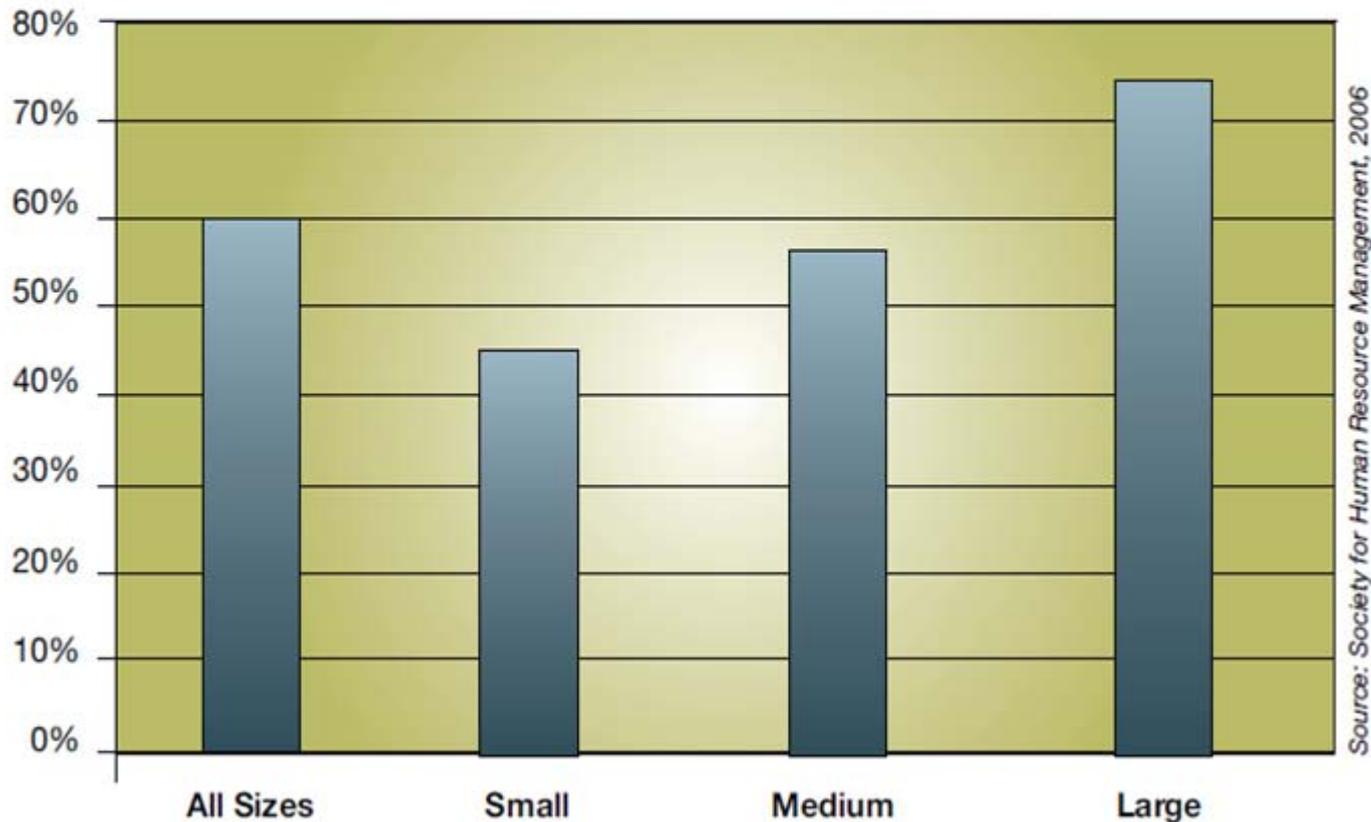
- **Productivity losses cost U.S. employers \$1,685 per employee per year, or \$225.8 billion annually**
- **28% reduction in sick leave absenteeism**
- **26% reduction in health costs**
- **30% reduction in workers' compensation and disability management claim costs**
- **\$5.93-to-\$1 savings-to-costs**

**Partnership for Prevention (www.prevent.org)*



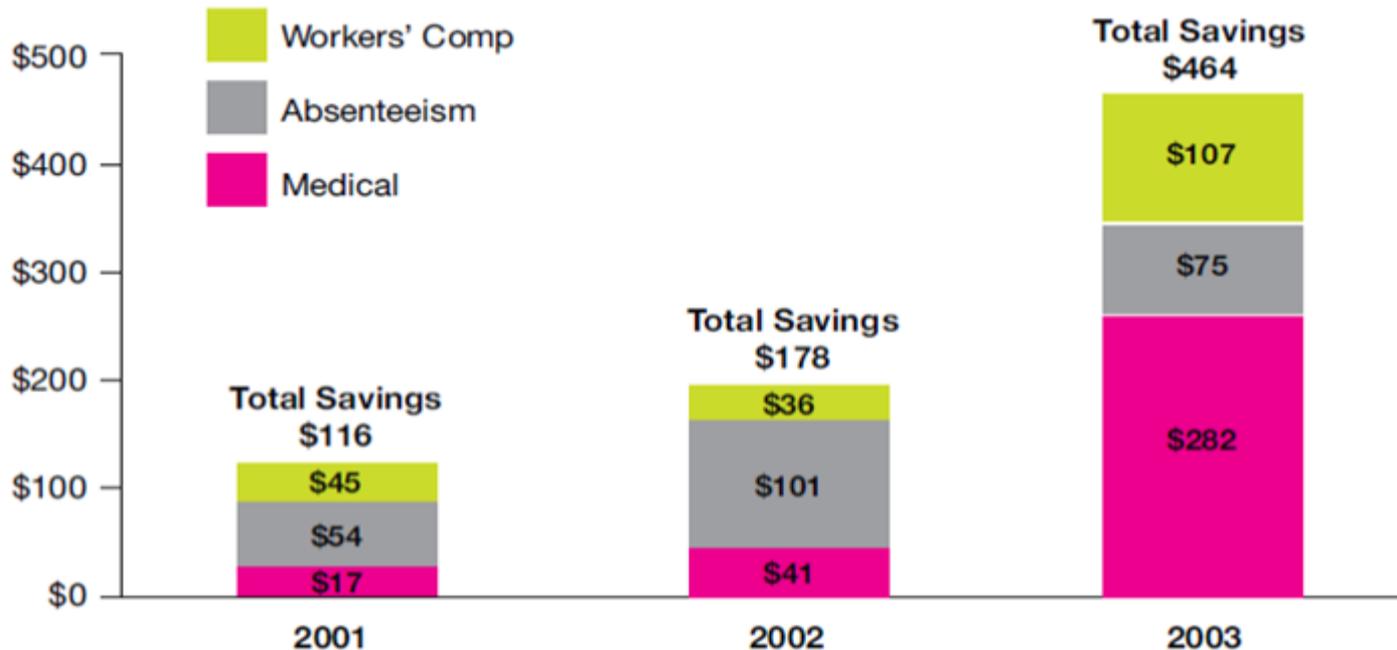
Percentage of Employers Offering Wellness Programs

Companies of all sizes implement wellness programs with the larger ones showing a slightly higher percentage. On average, 62% of all companies offer a wellness program.



Wellness Program Savings

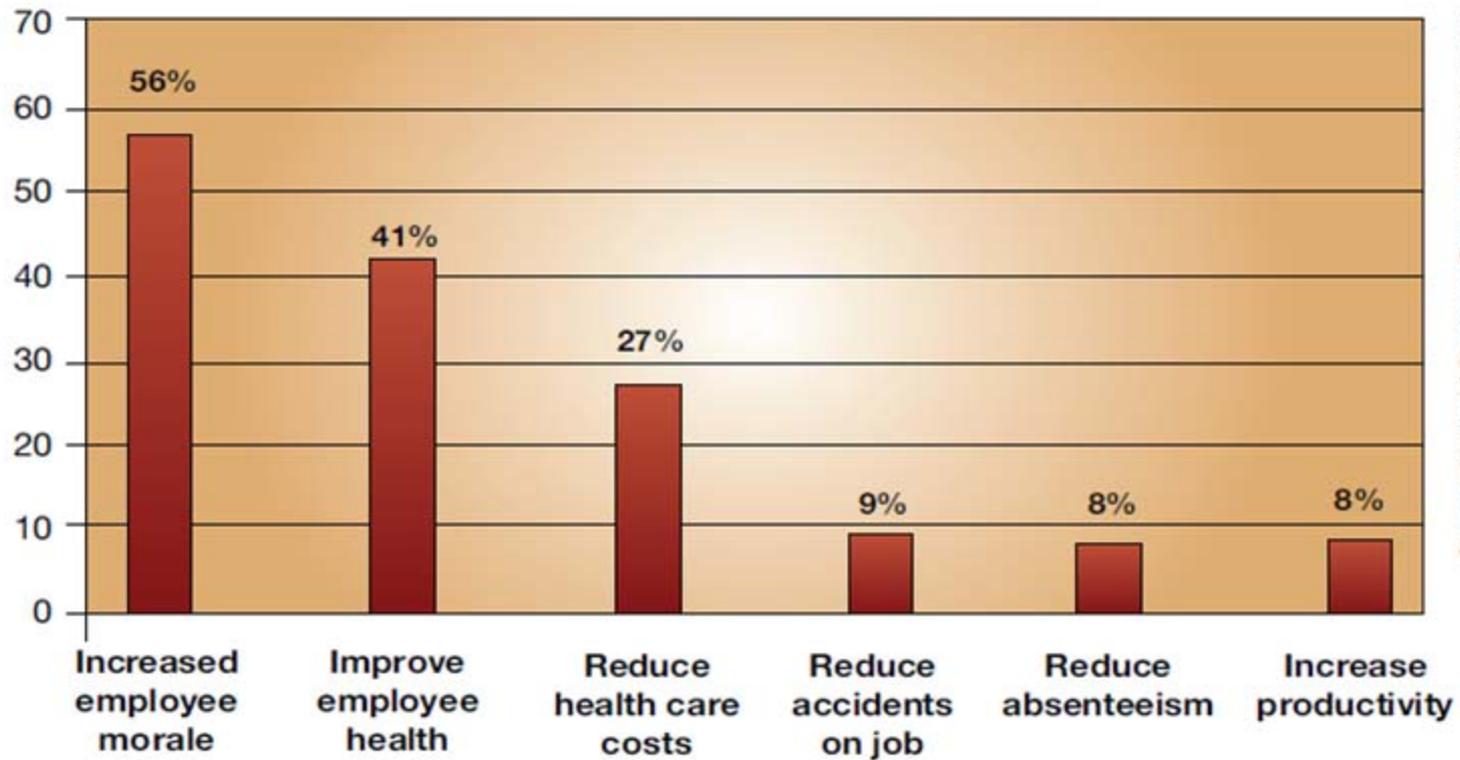
A three year study conducted at a health system in Minneapolis found that health risks decreased after the implementation of a comprehensive worksite wellness program. This led to increased savings due to reduced health care costs, absenteeism, and workers' compensation claims each year of the program.



Source: Fairview Alive Program Evaluation (StayWell, 2004)

Benefits of Worksite Wellness Programs

Companies receive many benefits after implementing a worksite wellness program in addition to reducing costs. They include increases in employee morale, improved employee health, reduction in workers compensation claims, reductions in absenteeism, and increases in productivity.



Source: National Business Group on Health, 2005

Looking at a Multigenerational Workforce



- > **Boomers will remain in the workplace longer**
- > **Four generations in the workplace for the first time**
- > **Need for meeting the needs of different generations**

Four Generational Cohorts

Common Experience + Shared Values = Your Generation

- Each generational group has different needs shaped by their collective experience.
- Each generational group has different expectations for their managers.
- Challenge: Build management capability and culture to respond to expectations of age cohorts

“Generations at Work” , Zemke, Raines and Filipczak, 2000.

Four Generational Cohorts

CE + SV = YG

		Size - in Millions	Born	Ages
1.	Veterans or Traditionalists or Silent Generation:	75	1922-1942	(86-66)
2.	Boomers:	80	1943-1960	(65-48)
3.	Generation X:	46	1961-1981	(47-27)
4.	Millennials or Generation Y:	76	1982-2000	(26-)

“Generations at Work” , Zemke, Raines and Filipczak, 2000.

Root Causes of Conflict

- > Work ethic
- > Technology
- > Perspective
- > View of Authority
- > Relationships
- > Outlook
- > Leadership



Communication

- > WWII Generation

 - > Logical, linear, conservative

- > Baby Boom Generation

 - > Personable; Information = Reward

- > Generation X

 - > Direct, straightforward, results-oriented

- > Millennial Generation

 - > Positive, motivational, personal goal-oriented

Turn-Offs

WWII Generation

- > Profanity, slang, poor grammar, disrespect

Baby Boom Generation

- > Brusqueness, one-upmanship

Generation X

- > Using time poorly, corporate-speak

Millennial Generation

- > Cynicism, sarcasm, condescension



AARP Resources for Employers

Employer Resource Center

<http://www.aarp.org/employerresourcecenter/>

Workforce Assessment Tool

<http://www.aarpworkforceassessment.org>

AARP SmartBrief

Bi-weekly E-newsletter/Clipping Service

<http://www.smartbrief.com/aarp>

AARP Website

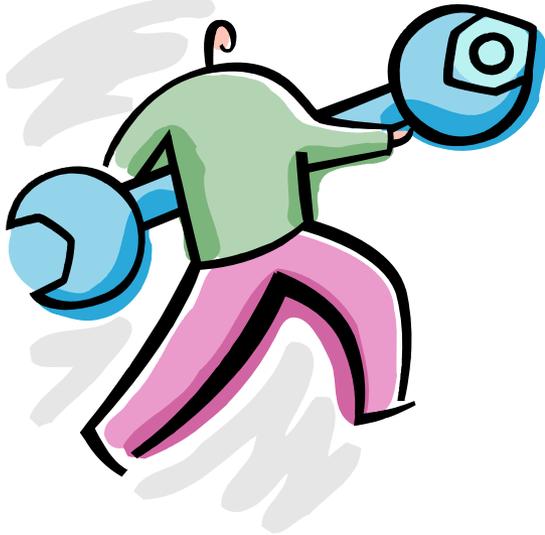
<http://www.aarp.org>



AARP Resources for Employers

“Prepare to Care Guide”

www.aarp.org/foundation/preparetocare



“Healthy Behaviors”

www.aarp.org/health

Phyllis Cohn, Project Manager, AARP

pcohn@aarp.org



THANK YOU!