

## Aging America: The Big Show is About to Begin

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### Objectives:

- Summarize the demographic characteristics of older adults
- Examine challenges society has it ages
- Examine opportunities for society as it ages
- Explore some important, neglected health issues for older adults

### TIPs or PITs

- Trend: Broad, general movements, courses, directions, or tendencies in the society.
- Issue: Matters under discussion, points in question.
- Problems: Circumstances that involve uncertainty.

### Challenge 1: Defining the Aged

- 40 - Age discrimination
- 50 - AARP discounts
- 60 - Older Americans Act
- 65-67 - Medicare and Social Security
- 75 - frailty marker
- 85 - the old-old
- 100 – anti-aging promise

### Changing Markers

- How old is old?
- Old age is a moving target.
  - Unhinge from 65
  - retirement 'decade'
  - age discrimination - meaningful employment
  - Linear to cyclic lifestyle

### Generations

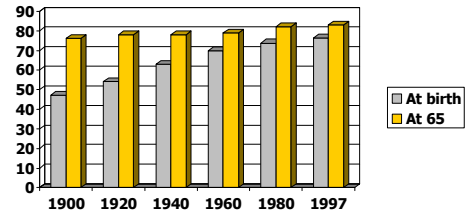
Cohort	Birth Era	Age -2000	Age -2020
Swing	1900-30	75-100	95-120
Silent	1931-45	55-75	75-95
Baby Boom	1946-64	34-54	54-74
Baby Busters	1965-79	21-35	41-55
Baby Boomlet	1980-2000	0-20	20-40

## Challenge 2: Redefining Aging

- 84% of all Americans say they would be happy to live to be 90
  - What defines old age
    - decline in physical ability - 41%
    - decline in mental functioning - 32%
    - reaching a specific age - 14%
- National Council on Aging survey, 2001

## Life Expectancy

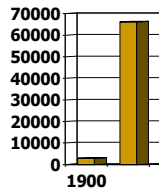
National Vital Statistics Report, Vol. 47, No. 28, December 13, 1999  
National Research Council, 1988



## Number of Centenarians

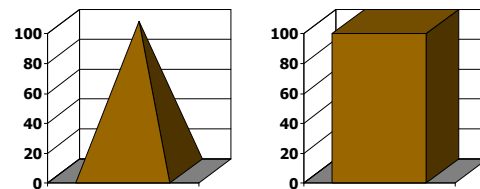
Jeanne Calment, died in 1997 at the age of 122.

A 65 year old must live 57 more years to catch her record.

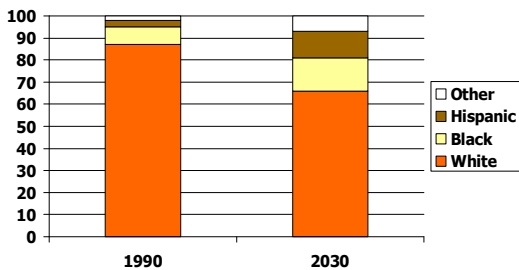


## Changing structure of society

- Traditional aging pyramid
- New aging pyramid



## Growing diversity

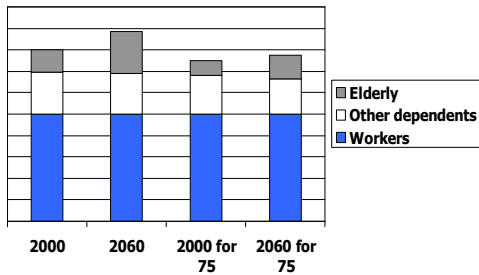


## Elements of Diversity

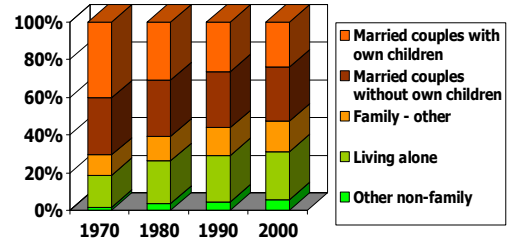
- Age
- Ethnicity/Race
- Gender
- Physical abilities
- Sexual orientation
- Family structure/ Marital status
- Religious beliefs
- Education
- Income/Wealth
- Work/ Employment

Based on Griggs, 1995

### Challenge 3: Dependency and Support



### Changing Family Structure



Source: US Census, 2000

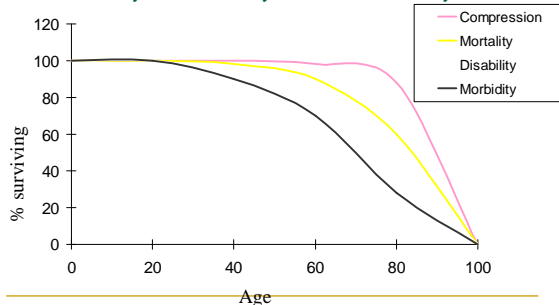
### Changing Family Size

- **One out of five:** In 1939, *Science News Letter* reported studies had concluded that U.S. "Childless marriages have increased to one out of every five marriages."
- **In the U.S., it is as common now for a woman to have no child or one child, as it was to have four or five children 30 years ago.**
- **17.9 percent** of U.S. women ages 40 to 44 in 2002 had never had a child. Another 17.4 percent had had one child.
- **10 percent – down from 36 percent:** 10 percent of U.S. families with children have four or more children – down from 36 percent of families with children in 1976

### Healthier Older Population ? Theories

- Fries (1984), Compression of morbidity
- Palmore (1986), relative health of elderly has improved
- Rogers (1990), living longer and healthier
- Manton (1995), significant decreases in prevalence of 16 medical conditions
- Cassel (2000), declining or postponing disease

### Prevention: Mortality, Disability and Morbidity

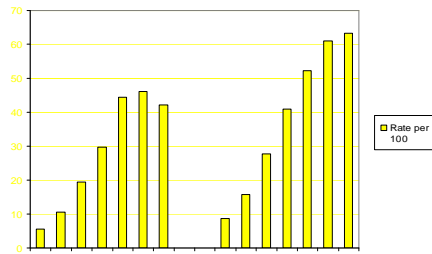


### Improving chronic conditions

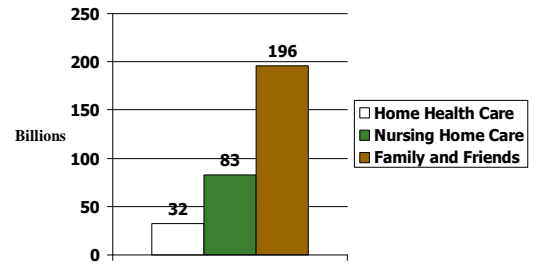
- Counseling/ Tx on smoking cessation
- Counseling/ Tx on diet
- Counseling/ Tx on exercise

## Self-reported arthritis prevalence

per CDC MMWR May 04, 2001 / 50(17):334-6

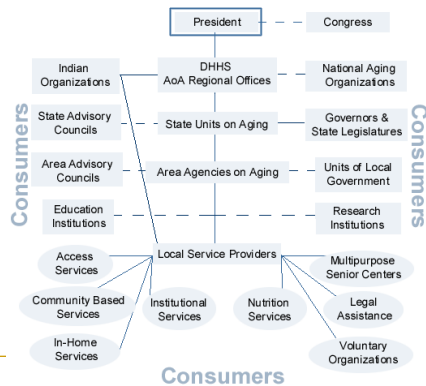


## Economic Value of Long-Term Care



Source: Arno, Levine, Memmot (1999) Health Affairs

## National Aging Services Network



## Issue: Older Persons and the Economy

- Earn almost \$2 trillion in annual income
- Control more than \$7 trillion in wealth - 70% of the total
- Own 77% of all financial assets
- Represent 50% of all discretionary spending power
- Today's 50-plus adults represent 41% of all new cars and 48% of all luxury cars

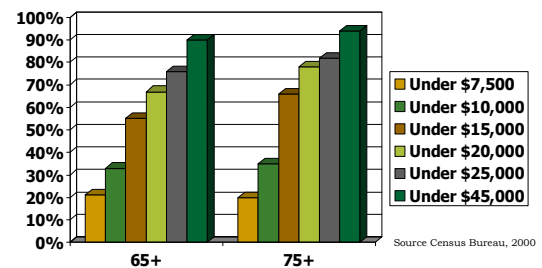
Source: <http://www.agewave.com/research.shtml>

## Issue: Older Persons and the Health Care System

- The 50-plus consume 74% of all prescription drugs
- Purchase more than 90% of long-term care insurance - \$800 million in annual premiums
- Represent 65% of all hospital beds, 45% of all physician's office visits, 1.5 million residents in nursing homes and 1.5 million in continuing care and assisted living residences

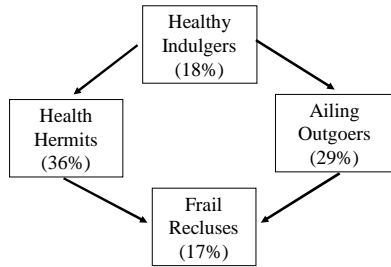
Source: <http://www.agewave.com/research.shtml>

## Percentage of Older Persons by Income



Source: Census Bureau, 2000

## Gerontographics Life-stage Model



Moschis, *American Demographics*, 1996

## Demise of Senior Discounts? (WSJ 8/31/01)

- 1955 Retired Teachers Association - discounted health insurance
- to combat frugality of Depression era elders, now more money, living longer
- "They reneged on us." 76 yr old former skier re loss of discount at Vail and Aspen

*Why do you think this has occurred?*

## In Search of the Secrets of Aging More theories ("Ponce De Leon")

- |                   |                       |
|-------------------|-----------------------|
| ■ Longevity genes | ■ Caloric restriction |
| ■ Cell senescence | ■ Syndrome X          |
| ■ Oxygen radicals | ■ Heat Shock Proteins |
| ■ Glycation       | ■ Hormones            |
| ■ DNA Repair      | ■ Immune system       |

## Future: Older People of the 21st Century

- |   |   |
|---|---|
| ■ General                                 | ■ Health                                      |
| □ smaller families, reconfigured families | □ prevention is key                           |
| □ suburbs                                 | □ disability ≠ dependence                     |
| □ women in the work force                 | □ influence of lifestyle                      |
| □ social movements                        | □ influence of lifetime access to health care |

Silverstone, *Gerontologist*, 1996

## Institute for the Future: Health Care Paradigm Shift

- |                    |                         |
|--------------------|-------------------------|
| FROM:              | TO:                     |
| ■ Biomedical model | ▸ Multi-factor approach |
| ■ Acute episodes   | ▸ Chronic illness       |
| ■ Individual       | ▸ Communities           |
| ■ Cure             | ▸ Adaptation            |
| ■ Disease          | ▸ Person /disease       |

## Current Political Issues

- Medicare (Rx) – Part D
- Social Security (Privatization)
- Generational tensions (Private)
- Longevity (Financing)
- Health care financing and delivery reorganization (HMOs; personal expenditures)
- Long-term care (Tax Credit)
- Housing (Assisted Living)

JJC

## Health Care Financing

- "Soaring" prescription drug costs will likely soon lead to "large increases" in workers' health insurance premiums and to "changes or cutbacks" in prescription drug benefits.
  - Hartford Courant, 4/24/01 (has anything changed?)
- HMOs
- Personal responsibility

## Tracking Health Care Costs:

Source: [Center for Studying Health System Change](#)

## "Workers Pay More for Care" (USA Today, 4/5/01)

- % of Rx price rather than flat co-payment
- Varying percents based on type of condition - chronic, acute, lifestyle
- Two-tier health plans - limited benefits
- Varying co-payments Increase share of premiums > 33%

## Policy Dilemmas

- How do we involve older persons?
- How can we break the needy/greedy image cycle?
- How do we balance public and private responsibility?
- Where does federal control end and state control begin?
- How can we prepare young for aging?

JJC

## Paths to Reform

Blumenthal, NEJM, 2001

- Defined contribution plans
- Medical savings accounts
- Long-term Care Insurance
- Increased co-payments
- Increased deductibles
- Government price controls

## Changing work force - Geriatrics

- Two decades of studies and concern by policy leaders, educators and health care providers
- "The goal of mainstreaming geriatrics into American medicine remains elusive."
- Not have enough teachers in medical schools in geriatrics
- Not enough medical students choosing to deal with older people

Source: Alliance for Aging Research, 1996

Ronald Klatz, M.D.

founding physician of the [anti-aging medicine](#) movement

- Today's boomers will live, on average, to see age 100. Some boomers will celebrate their 130th birthdays healthy, happy, with full mental and physical faculties intact.
- New method to collect organs from non-beating heart donors, expanding the bank of organs for transplants
- A genetically engineered "gene therapy" cure for male pattern baldness.
- At home 2-way telemedicine consultations between many elderly persons too frail, too weak, or just too busy to drive to their doctor appointment.
- Inhaled drug delivery systems e.g. Insulin

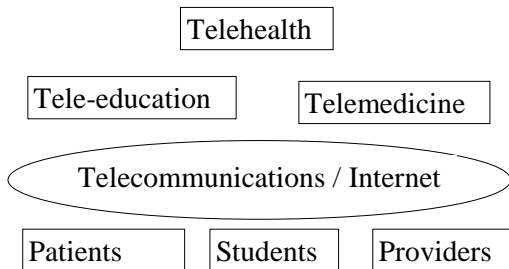
## Geriatric Medicine Update

"Loss of function from habitual inactivity, poor nutrition, disease"

- Exercise - improved walking, balance, ROM = decreased risk of morbidity, mortality, institutionalization
- Exercise, dietary restriction, sodium limit - 60% of older hypertensive patients weaned from medication
- Biophosphonates - decrease bone resorption
- NSAIDs, estrogen = possibly effective against cognitive decline

Applegate and Pahor, JAMA, 1997

## Model of Telehealth



## Smart Garments (WSJ, 8/10/01)

- Motorola - clothing that can 'talk' to washing machines; adjusting the color of the clothes
- tracking wandering persons
- Sense-Wear armband- monitor vital signs

## Electronic minders

- Infrared sensors can follow Shizue Ozasa's every move as she maneuvers around her room
- Chips in her shoes can trigger locks should she try to leave.
- A database can record everything she does.
- Big Brother at his most benevolent--and most lucrative.
- NAIS Care Owada, a nursing home in Osaka

Oldies Look Golden to Japan Inc. (WSJ)

## Kaiser Permanente Home Health Care

(n=212)

- Average [telehealth](#) video visits are 60% shorter (18 minutes vs. 45 minutes)
- No decrease in patient satisfaction.
- Total mean costs of care, excluding home health care costs, \$1948 \$2674
- Effective, well received by patients, capable of maintaining quality of care, and to have the potential for cost savings.
- Use of Partnerships – [A Model](#)

Johnston, B., Wheeler, L., Deuser, J., & Sousa, K.H. (2000). Outcomes of the Kaiser Permanente Tele-Home Health Research Project. *Arch Fam Med*, 9(1), 40-45.

## Technology in the home care

•Kaye & Davitt, Health and Social Work, 1995

- Miniaturization and portability
- Alarms, monitors, safety systems
- Self-care extenders e.g. computer
- Treatment: IV, chemo, dialysis
- Mechanical aids
- Advantages and Disadvantages

## Special Areas for Concern

- Sex and AIDS
- Depression and Suicide
- Alcohol and Substance Abuse
- End-of-life Care
- Alzheimer's Disease
- Complementary and Alternative Medicine

## Sex and aging

- 80% of people over the age of 60 are sexually active (at least 1x mo)

(National Council on Aging Roper Starch poll, 1998)

- 10.2% of AIDS cases diagnosed in 1995 over the age of 50; 3.5% over the age of 65
- Sexual history not part of the MD profile usually done on older persons (Gaeta et al, J Emer Med., 1995; Feldman, Arch Int Med.,1994)

## Depression

- In a study of 3,410 older persons in an HMO, primary care physicians miss 1/2 of depression (measured by the GDS) in older persons.
  - Garrard, Rolnick, Nitz et al, J Gerontology, April, 1998
- Suicide rate for older white men is double other groups (59/100,000).

## Substance Abuse and Aging

- 1/3 of alcoholics are over the age of 60
- Underdiagnosis - mimics other symptoms, ageism
- Questioning on the quantity and frequency of drinking + the CAGE increases the number of problem drinkers detected. (Adams, Barry, Fleming, JAMA,1996)
- Alcohol-related hospitalizations among elderly people are common; = rates for myocardial infarction (1%). (Adams, Yuan, Barboriak, Rimm, JAMA, 1993)
- Primary care physician and "Brief intervention" - the most cost-effective intervention for alcohol problems (Hodler et al, J Studies Alc., 1991)

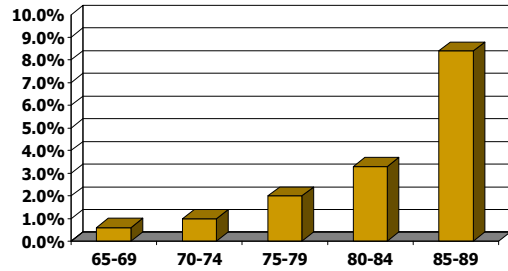
## End-of-life care

- Oregon Health Sciences University study (P. Bascom, MD)
  - 67% of medical students had some EOL exposure but only in early stages of terminal illness
  - 60% had never participated in notifying families of patient death
  - pilot hospice option added to community medicine rotation
- Advanced directives not being followed

## Alzheimer's Disease

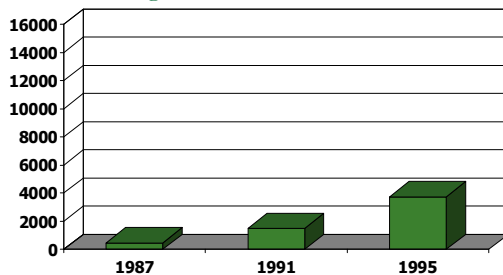
- 4 million people affected; 14 million in 2030
- Caregivers' 36 hour day
- Pharmacologic tx - cholinesterase inhibitors for early stages, anti-psychotics in later stages for behavior
- Non-pharmacologic tx for behavior - SCUs

## Incidence of Alzheimer's Disease in East Boston



Hebert et al., JAMA, 1995

## Number of Special Care Units in nursing homes



## Bioterrorism and Older Persons

- Slower to register for assistance, and may not follow through.
- May be at higher physical risk in the aftermath
- Are often targeted by fraudulent contractors and "con men".
- May be susceptible to physical and mental abuse as family stresses increase.

## Complementary and Alternative Medicine (CAM)

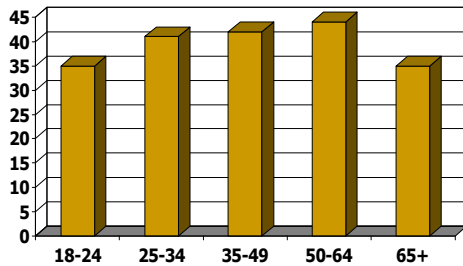
- "wide range of medical approaches, therapies, and philosophies that can either be used in conjunction with (complementary), or instead of (alternative) more conventional treatments."

(AARP, IB#46)

## CAM Treatments

- Acupuncture
- Homeopathy
- Naturopathy
- Herbal therapies
- yoga
- Christian Science
- Nutritional supplements
- Chiropractic services
- Massage therapy
- Biofeedback
- Exercise programs
- And So Forth

## CAM Users as a % of group (AARP 2000)



## CAM (AARP, 2000)

- 42% surveyed used CAM in 1997
- About \$1 for every \$10 conventional Tx
- Conditions
  - Anxiety
  - back problems
  - chronic pain
  - urinary tract disorders

## Issues in CAM

- Federal Research
- Medical Education
- CAM use by physicians
- Patient-provider communication
- Insurance coverage

## Ken Dychtwald Predictions

- Elevated life expectancies
- Ages
  - Middlescence - 40-60
  - Late adulthood - 60-80
  - Old Age - 80-100
- Gray Power
- Replacement of Social Security
- Education, Work, Leisure
- Matrix families

## 21st century

- Economics
  - diminished and elusive security,
  - competition,
  - skills still needed,
  - flexible work arrangements
  - lifetime of poverty
- Social support - Multiple scenarios of reconfigured families and peer support networks

## 21st Century Aging

- Health
  - prevention is key,
  - disability ≠ dependence
  - influence of lifestyle
  - influence of lifetime access to health care

## Future

- It's the Boomers, not the economy
- Diversity - immigration
- The haves have more
- Dependency ratio
- Compression of morbidity
- "Players" and/or "marginalized"

## Public Health Agents of Change (after Torres-Gil)

- Understand the social and demographic trends affecting an aging society
- Reexamine the underlying principles of the present system
- Consider the influence of longevity and diversity on current system
- Reformulate a social contract between individuals, society and government
- Assisting communities, organizations and older persons to adapt to multiple challenges

## Conclusion

Almost 1/2 of all humans  
over the age of 65 are alive today.

Klein & Bloom, Successful Aging, 1997  
W.A. Santariano, Epidemiology of Aging  
2005

- Chapter 1 Aging & Epidemiology
- Chapter 2 An Ecological Model
- Chapter 11 Healthy Aging-Implication for Public Health