Aging America: The Big Show is About to Begin

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

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

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

Elements of Diversity

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

Based on Gregg, 1995

Jeanne Calment, died in 1997 at the age of 122.
A 65 year old must live 57 more years to catch her record.
Challenge 3: Dependency and Support

<table>
<thead>
<tr>
<th>Elderly</th>
<th>Other dependents</th>
<th>Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>2060</td>
<td>2000 for 75</td>
</tr>
</tbody>
</table>

Changing Family Structure

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

Jason A. Rachel, M.S., Dept of Gerontology, VCU
Self-reported arthritis prevalence

by CDC MMWR May 04, 2001 / 50(17);334-6

Economic Value of Long-Term Care

Home Health Care
Nursing Home Care
Family and Friends

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

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 - $600 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

Healthy Indulgers (18%)

Health Hermits (36%)

Ailing Outgoers (29%)

Frail Recluses (17%)

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

Silverstone, Gerontologist, 1996

Future: Older People of the 21st Century

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

Silverstone, Gerontologist, 1996

Institute for the Future:
Health Care Paradigm Shift

FROM:
- Biomedical model
- Acute episodes
- Individual
- Cure
- Disease

TO:
- Multi-factor approach
- Chronic illness
- Communities
- Adaptation
- 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?

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.
founder 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

Telehealth

Tele-education Telemedicine

Telecommunications / Internet

Patients Students Providers

Smart Garments

- 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

- 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.

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

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, Bartoriak, Rimm, JAMA, 1993)
- Primary care physician and “Brief intervention” - the most cost-effective intervention for alcohol problems (Hostler 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

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.”

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)

- 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