Overview

- Demographic Information
- Aging process
- Chronic Medical Conditions
- Polypharmacy
- Falls
- Pain
- Sleep
- Advanced Care Directives
- Caregiving
- Abuse, Neglect, Exploitation
- Poverty/Social Isolation

AMERICANS ARE LIVING LONGER
A TREND THAT IS EXPECTED TO CONTINUE

Life expectancy at birth

- White female
- Black female
- White male
- Black male

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The Number of Older Americans is Growing

THE PROPORTION OF OLDER AMERICANS IS GROWING

<table>
<thead>
<tr>
<th>Year</th>
<th>% of People 65 &amp; Older</th>
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<tbody>
<tr>
<td>1950</td>
<td>8.3</td>
</tr>
<tr>
<td>2000</td>
<td>12.4</td>
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<tr>
<td>2004</td>
<td>12.7</td>
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<td>2050</td>
<td>20.6</td>
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What do we know about today’s older Americans?

- Older adults are >12% of our population
  - 25% of physician office visits
  - 35% of all hospital stays
  - 34% of all prescriptions
  - 38% of all emergency medical service responses
  - 75% of home health services
  - 90% of all nursing home use
  - 80% of all deaths

- Have multiple chronic conditions and experience more mental health conditions
- Over 60% living in the community obtain LTC services (e.g., personal care, household chores)
- 70-80% of care to older adults receiving long term care services is provided by direct care workers

Institute of Medicine, Retooling for an Aging America: Building the Health Care Workforce, 2008, accessed at http://www.nap.edu/catalog/12089.html
Special Issues of Older People

- Older people are not just young people with more birthdays.
- Multiple chronic illnesses: 23% of Medicare beneficiaries with 5 or more chronic illnesses account for 68% of Medicare spending.
- Significant proportion have disability
  - 50% of 85+ have ADL/IADL disability
  - 50% of 75+ have trouble hearing
  - 22% of 75+ have vision limitations
  - 29% of 75+ have lost all of their teeth
- 80% of all deaths are among people over age 65

Special Issues of Older People (cont.)

- Geriatric syndromes of
  - Functional impairment
  - Dementia
  - Confusion
  - Sleep disorders
  - Problems with eating or feeding
  - Incontinence
  - Osteoporosis
  - Pain
  - Falls
  - Decubitus ulcers and other skin breakdown

COMMON MISPERCEPTIONS ABOUT AGING

- OLD=SICK
- It is normal to become forgetful as you age
- Incontinence happens to everyone
- Depression sets in as you age
- There is nothing that can be done to help the “aches and pains” of old age
- Hearing loss is a “given”
General Principles of Aging: Older People Are Different

- Atypical presentation of acute illness
- Multiple concurrent problems
- Non-specific symptoms
- Hidden illness
- Under-reporting
- Multiple "losses" condensed into a short time span
- Expected physiologic aging changes

FRAIL ELDERLY

Characteristics:
- Poor mental and physical health
- Low socioeconomic status
- Predominantly female
- Possibly isolated living conditions
- More and longer hospital stays, and
- More money spent on health care and drugs

Normal Effects of Aging on the Body
EYES AND VISION CONT.

- Lens becomes less transparent
- Can actually become clouded
- Results in cataracts

EYES AND VISION CONT.

- Predisposed to glaucoma
- Increased pressure in eye
- Decreased absorption of intraocular fluid
- Can result in blindness

EYES AND VISION CONT.

- Macular degeneration becoming more frequent
- This is the patch of retina where lens focuses light
- Ultimately results in blindness
- Reason for current increase in this condition unknown
EARS AND HEARING LOSS

- Irreversible, sensorineural loss with age
- Men more affected than women
- Called presbycusis
- Loss occurs in higher range of sound
- By 60 years, most adults have trouble hearing above 4000Hz
- Normal speech 500-2000Hz

Other “Normal” Changes Associated with Age

- Respiratory System
- Cardiovascular System
- Gastrointestinal System
- Renal System
- Reproductive System
- Neurological System
- Musculoskeletal System
- Immune System
- Endocrine System

Most Feared Conditions in Later-life

1. Alzheimer’s Disease - Dementia
2. Stroke/Cancer
3. Physical disability that prevents independence and autonomy of “normal” life (e.g., Parkinson’s Disease)
4. Heart Disease/Chronic Pulmonary Disorder
5. Deafness/Blindness
Common Diseases in Elderly

- Neurologic (Parkinson’s, stroke, TIA)
- Rheumatologic (RA, PMR, vasculitis)
- Genitourinary (BPH, sexual dysfunction)
- Cardiovascular (afib, CAD, CHF, HTN)
- Endocrine (hypothyroid, diabetes type II, Paget’s)
- Renal (HTN, fluid/lyte abnormalities)
- Infections (pneumonia, UTI, TB)
- Gastrointestinal (dysphagia, constipation, ‘tics)
- Oncologic (colon, breast, prostate, hematologic)
- Psychiatric (depression, psychosis)
Chronic Disease
People With Chronic Illnesses and Activity Limitations Have More Physician Visits

Function: Activities of Daily Living

Basic
- Dressing
- Bathing
- Feeding
- Toileting
- Transferring
- Ambulating

Intermediate
- Money
- Medication
- Transportation
- Telephone
- Shopping
- Housekeeping

Advanced:
- Employment
- Social Networking

Function with Aging
Chronic Disease

The Number of People with Chronic Conditions is Rapidly Increasing

Chronic Health Conditions

Challenges In Geriatric Care

- 88% of all older adults have at least one chronic illness
- 50% of persons > age 85 have dementia
- 50% of persons > age 65 are malnourished
- 30% of persons > age 65 have urine control issues
- 50% of persons > age 65 suffer from chronic pain
- 3-6% of persons > age 65 are victims of elder mistreatment
- 33% of persons > age 65 fall annually
- Consume 4-6 medications daily
THE CARE OF OLDER AMERICANS WILL REQUIRE . . .

- An increasing proportion of health care resources
- Clinicians who are alert to the specific health needs of the geriatric patient
SMALL IMPROVEMENTS CAN MAKE A BIG DIFFERENCE

• For older patients, major changes in health or function may not be realistic
• “Small” changes can transform quality of life:
  ➢ Regaining transfer ability can mean difference between going home or to a nursing home
  ➢ Regaining ability to oppose thumb and fingers can mean difference between eating independently and being fed

Drug Therapy in the Elderly

• Prescription drug expenses make up ~ 7% of total health care spending in elderly
• 65% of Americans age 65+ use at least one prescription medication
• Elderly (65+) use 30% of Rx drugs and 40% of OTC drugs
• Elderly with drug coverage average 18 prescriptions per year
• Elderly in nursing homes receive an average of 7 different medications

Polypharmacy in the Elderly

By definition……

• Polypharmacy means “many drugs”.

• The use of more medication than is clinically indicated or warranted.
  - 5 or more drugs
  - 7 or more drugs

• The elderly use more drugs because illness is more common in older persons.
  - Cardiovascular disease
  - Arthritis
  - Gastrointestinal disorders
  - Bladder dysfunction
Polypharmacy in the Elderly  
How Bad Can It Be?

- Elderly = 12% of population but 32% of prescriptions
- Average use for persons >65
  - 2 to 6 prescription drugs +
  - 1 to 3.4 over-the-counter medicine
- Average American senior spends $670/year for pharmaceuticals.

Polypharmacy

Drugs most frequently associated with adverse reactions in the elderly:
- psychotropic drugs-benzodiazepines
- anti-hypertensive agents
- diuretics
- digoxin
- NSAIDS
- corticosteroids
- warfarin
- theophylline

Contributors to Noncompliance in Older Adults

- Complex treatment regimens and dosing schedules
- Medication side effects
- Physical disability (dysphagia, arthritis)
- Cognitive impairment
- Poor communication
- Inadequate understanding of therapy
- High cost of medications
### Polypharmacy Effects

Drug reactions in the elderly often produce effects that simulate the conventional image of growing old:

- Unsteadiness
- Drowsiness
- Dizziness
- Falls
- Confusion
- Depression
- Nervousness
- Incontinence
- Fatigue
- Malaise
- Insomnia

### Fall Risk Factors

- Medications (sedatives, hypotensives, multiple)
- History of fall
- Cognitive or visual impairment
- Multiple co-morbidities
- Lower extremity weakness
- Balance or gait abnormality
- ADL impairment
- Depression/Anxiety
- Neurological conditions
- Orthostatic hypotension
- Arthritis
- Age >80
- Female Sex
- Physical inactivity
- Incontinence
- Environmental Hazards
- Use of assistive device
- Acute illness, such as UI, Pneumonia, etc.

### Complications of Falls

- Medical
  - Fractures
  - Subdural hematoma
  - Sprains, bruises, hematomas, lacerations
- Psychological
  - Fear of further falling
  - Decreased confidence
  - Isolation and withdrawal
  - Depression
  - Reluctance to go outdoors
- Social
  - Loss of independence
  - Risk of nursing home placement
- Increased immobilization
  - Further loss of muscle tone and strength
  - DVT/pulmonary embolism
  - Hypothermia
  - Dehydration
  - Osteoporosis
  - Pulmonary infections
Medications that Can Contribute to Falls

- “Psychoactive” Medications
  - Anti-anxiety
  - Anti-depressants
  - Antipsychotics
- Sedating Medications
  - Sleeping pills (hypnotics)
  - Anticholinergic medications (benadryl, muscle relaxants, incontinence medications)
- Cardiovascular Medications
  - Digoxin
  - Class I Antiarrhythmics
  - Anything that can cause orthostasis or bradycardia
- Pain medications

Pain

- 50 million Americans suffer from chronic pain
- Chronic pain disables more people and adds more to health care costs than does heart disease and cancer combined
- 25-50% of community-dwelling older adults suffer pain problems; 45-80% of NH patients suffer pain problems
- 50% of adults older than 60 suffer from some form of LBP
- Incidence of OA - increases with age: affects 21M of USA population; 80% of patients older than 65 (knee/hip/hand)

International Association for the Study of Pain (IASP), 2004.

Acute vs Chronic Pain States

<table>
<thead>
<tr>
<th>Acute</th>
<th>vs</th>
<th>Chronic</th>
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<tbody>
<tr>
<td>Associated with tissue damage</td>
<td>Extends beyond expected period of healing</td>
<td></td>
</tr>
<tr>
<td>Increased autonomic nervous activity</td>
<td>No protective function</td>
<td></td>
</tr>
<tr>
<td>Resolves with healing of injury</td>
<td>Degrades health and functioning</td>
<td></td>
</tr>
<tr>
<td>Serves protective function</td>
<td>Contributes to depressed mood</td>
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**Effects of Chronic Pain on the Patient**

- Physical Functioning/Quality of Life:
  - ability to perform ADLs
  - sleep disturbances

- Psychosocial Morbidity:
  - depression
  - anxiety
  - anger
  - loss of self esteem

- Social Consequences:
  - relationship with family & friends
  - intimacy/sexual activity
  - social isolation

- Societal Consequences:
  - healthcare costs
  - disability
  - lost workdays

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**Myths about Pain in the Elderly**

1. Normal part of aging
2. Have higher pain tolerance
3. They complain a lot about pain

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**Truths about Pain in the Elderly**

1. Contributes to depression, anxiety, decreased socialization, and decreased functional ability.
2. Those with dementia/cognitive impairment may not be able to express pain.
3. Smaller doses of opiates may be needed due to decreased drug clearance/metabolism.
4. Elderly are at risk of undertreatment of pain.
5. Pain treatment is a major element in improving QOL.
Normal Sleep and Normal Aging:
Less Deep Sleep

Normal Sleep and Normal Aging:
Sleep Efficiency

Sleep Disturbances in the Elderly

Prevalence of Insomnia by age group

- Age 18-34 – 14%
- Age 35-49 – 15%
- Age 50-64 – 20%
- Age 65-79 – 25%

Examples of ‘Legal’ Drugs That Cause Insomnia

- Alcohol
- Decongestants
- CNS stimulants
- Stimulating antidepressants
- Beta-blockers
- Diuretics
- Thyroid hormones
- Bronchodilators
- Nicotine
- Calcium channel blockers
- Caffeine
- Corticosteroids
- CNS Depressants
- Quinidine
- Anticonvulsants
- Antiparkinsonian agents

Evaluating Causes of Insomnia

- Situational factors that are major stressors such as a life trauma or an upcoming important event
- Environmental factors such as too much noise, temperature that are too hot or too cold, or working a night shift
- Factors related to medications, both prescription and nonprescription (i.e. CNS stimulants/activating antidepressants)
- Medical conditions (pain disorders, endocrine disorders, menopause, BPH, incontinence, nocturia, CHF, GERD, pulmonary disorders such as COPD, renal failure, etc.)
- Evaluate for sleep disorders
Consequences of Poor Sleep in older adults

- Difficulty sustaining attention and slowed response time
- Decreased ability to accomplish daily tasks
- Impairments in memory and concentration
- Increased consumption of healthcare resources
- Higher incidence of symptoms related to depression and anxiety
- Increased risk of falls (even after controlling for medication use, age, difficulty walking, difficulty seeing and depression)
- Shorter survival/increased institutionalization rate
- Inability to enjoy social relationships/decreased QOL
- Increased incidence of cognitive decline
- Increased incidence of pain


Summary: Sleep Changes

- Sleep during the night changes with increasing age:
  - Less deep sleep and more lighter sleep
  - More difficulty maintaining sleep due to arousals and awakenings
  - Sleep is less efficient and more fragmented
- The internal biological clock shifts to earlier bed and wake times
- Older persons experience a higher prevalence of medical conditions and take meds that interrupt sleep and are associated with sleep problems/disorders
- Older persons experience a higher prevalence of sleep disorders

Advance Care Planning

- 281 elderly hospitalized male veterans
  - Only 44% had either a DPA or living will
Life-and-Death Decision Making

- The right to die: Some states legally allow certain life support techniques to be refused by competent patients.
  - Electrical or mechanical heart resuscitation
  - Mechanical respiration
  - Nasogastric feeding tube
  - Intravenous nutrition
  - Gastrostomy
  - Medication

Caregiving

- Number of caregivers is growing
- Many over 60 have living parents, most requiring care of some sort
- Women provide most of the care
- Average woman spends more years caring for elderly than children
- Caring for grandchildren is increasing

How Many Caregivers are there in the U.S.?

- 21% of the U.S. population age 18 and older provides unpaid care to friends or relatives 18 and older. This translates into 44,443,800 caregivers in the U.S.
- 16% of the population, or 33,861,900 adults, provide unpaid care to a recipient who is 50 or older.
- 21% of U.S. households contain at least one caregiver, reflecting approximately 22,901,800 households.
- 17%, or 18,539,500 households in the U.S. contain at least one caregiver who provides care to someone age 50 or older.
Impact of Caregiving on Work

% saying yes

Q: If working while a caregiver: In your experience as both a worker and a caregiver, did you ever

- Have to go in late, leave early, or take time off? 37%
- Have to take a leave of absence? 27%
- Have to go from working full-time to part-time? 10%
- Have to give up work entirely? 6%
- Lose any of your job benefits? 5%
- Have to turn down promotions? 5%
- Choose early retirement? 3%


Prevalence and Magnitude of Depression in Family Caregivers

• Studies report 30% to 55% of caregivers endorsing significant levels of depressive symptoms

• Diagnostic interview assessments also suggest increased psychiatric morbidity among caregivers.

Effects of Caregiving on Physical Morbidity

• Caregivers consistently rate their health as significantly worse than non-caregivers.

• Some evidence suggests poorer health care utilization and immune functioning in caregivers.

• Poor health status in caregivers appears related to: lower financial adequacy, higher psychological distress, low social support and severe cognitive impairment in patient.
Caregiver Needs

- Need to improve caregiver and family understanding
- The family is key in assisting provider
- Medication management issues
- Driving
- Fire arms
- Education and Support groups
- Access to specialty care
- Behavior management techniques
- Is it time for placement?

Important Tasks for Caregivers

- Enhance elder's continued interaction and roles
  - Avoid taking away things the elder can do and wishes to do
- Facilitate continued involvement and contributions
  - Family, church, community or other interests
- Assess elder's abilities and learn about help that can be provided to support involvement
- Allow independence and control
- Caregivers also need to maintain personal independence in the face of a dependent family member
  - Network of care
  - Maintain friendships and activities
  - Respite care

CAREGIVER STRESS

- The level of care required may exceed the caregiver's ability
- Assessment of caregiver stress may identify opportunities to prevent elder mistreatment
- Individuals with dementia who exhibit disturbing behaviors, such as hitting, spitting, or screaming, pose excessive caregiving demands
- Assess the caregiver's level of skill and understanding of the situation
RISK FACTORS FOR ABUSIVE OR INADEQUATE CAREGIVING

- Cognitive impairment in patient and/or caregiver
- Excessive dependency of the caregiver on the elder or of the elder on the caregiver
- Family conflict or family history of:
  - Abusive behavior
  - Alcohol or drug misuse
  - Mental illness
  - Mental retardation
- Financial stress or lack of funds to meet new healthcare demands
- Isolation of the patient and/or caregiver
- Living arrangements inadequate for the needs of the patient
- Stressful events in the family, such as:
  - Death of a loved one
  - Loss of employment

Elder Abuse, Neglect and Exploitation

- Types of elder abuse: physical abuse, sexual abuse, emotional/psychological abuse, financial exploitation/victimization/undue influence, neglect, abandonment and self-neglect
- Most common type of elder abuse: neglect - depriving an elder of something needed for daily living
- Second most common type of elder abuse: physical abuse
- Third most common type of elder abuse: financial exploitation

Risk Factors for Abuse

- Older age (>75)
- Female
- Unmarried/widowed/divorced
- Lack of access to resources
- Low income
- Social isolation
- Minority status
- Low level of education
- Functional debility/taking multiple medications
- Substance abuse by caregiver or elder person
- Psychologic disorders (depression, anxiety) and character pathology
- Previous history of family violence
- Caregiver burnout and frustration
- Cognitive impairment
- Fear of change of living situation (homeÆALF/NH)
Self-Neglect

- A spectrum of behaviors defined as the failure to (a) engage in self-care acts that adequately regulate independent living or (b) take actions to prevent conditions or situations that adversely affect the health and safety of oneself or others (Clark, Mankikar, & Gray, 1975; Lauder, 2001; Pavlou & Lachs, 2006).

- Self-neglect is the most common reason for referral to Adult Protective Services (APS), the governmental organization mandated to investigate cases of elder abuse and neglect in most jurisdictions (Goyer & Branch, 2005; Lauder, Williams, Ellmore, Huse, & Kavand, 1999).

- The prevalence of self-neglect is 50.3% and is 37.2% of all elder abuse and neglect cases reported to APS (National Center on Elder Abuse, 1998; Teaster et al., 2006).

- Self-neglect is an increasingly common and resource-intensive public health problem, with a 44% increase in reported cases over a 4-year period (2000 to 2004) requiring an average state appropriation of $6.5 million to fund APS programs (Teaster et al.). These expenditures translate to a national public health burden of just under a half-billion dollars, before one considers the first dollar for medical care.

Living Arrangements of Americans Age 65 and Older

- 42% Living with spouse
- 19% Living alone
- 9% Other

- 40% Women
- 72% Men

Shrinking Environment with Loss

- Protect from loss and associated changes in body image
- Later [through decreasing physical abilities]
- Later [lost loved one]
- Young adulthood
Poverty Rates – All Older People and African Americans

<table>
<thead>
<tr>
<th>All Older Persons</th>
<th>Older African Americans</th>
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<tbody>
<tr>
<td>Below poverty = 10.4%</td>
<td>Below poverty = 23.9%</td>
</tr>
<tr>
<td>125% of poverty = 17.0%</td>
<td>125% of poverty = 33.5%</td>
</tr>
<tr>
<td>150% of poverty = 24.8%</td>
<td>150% of poverty = 43.1%</td>
</tr>
<tr>
<td>Without Soc Sec = 23.9%</td>
<td>Without Soc Sec = 58.2%</td>
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Increasing complexity in any of these areas increase the older adult’s risk for illness, new disease, progressive disability, serious psychosocial decline, institutionalization and death.

Areas of Assessment

- Functional assessment
  - Activities of Daily Living (ADL): Feeding, dressing, ambulating, toileting, bathing, transfer, continence, grooming, communication
  - Instrumental ADL (IADL): Cooking, cleaning, shopping, meal prep, telephone use, laundry, managing money, managing medications, ability to travel
- Mobility, gait and balance
- Sensory and Language impairments
- Continence
- Nutrition
- Cognitive/Behavior problems
- Depression
- Caregivers
- Environmental
References


• National Center for Chronic Disease Prevention and Health Promotion 2004, The Burden of Chronic Diseases and Their Risk Factors.


• Older Americans 2010: Key Indicators of Well-Being. available online at www.agingstats.gov

