Strategies To Maintain Independence In The Elderly

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“And in the end, it’s not the years in your life that count, it’s the life in your years.”
ABRAHAM LINCOLN

“Pearls of Wisdom”
THE AGING POPULATION: DEMOGRAPHICS

- In 2006, there were approximately 500 million people age 65 and older worldwide. This number is expected to increase to 1 billion within 25 years (National Institute on Aging, 2007).
- In the United States alone, the number of individuals over 65 years of age is expected to double within the next 25 years to approximately 72 million, or 1 out of every 5 people (National Institute on Aging, 2006).

THE AGING POPULATION: DEMOGRAPHICS

ISSUES FACING THE AGING POPULATION

Although increased longevity is desired and should be celebrated, aging is associated with multiple physical and emotional changes that create unique challenges, related to maintaining:

- Independence
- Functionality
- Quality of life
LOSS OF INDEPENDENCE IN THE ELDERLY: WHY?

- Visual and Sensory deficits
- Mobility issues/Fall risk
- Poor nutrition
- Depression
- Cognitive impairment/Dementia
- Lack of adherence to treatment

VISUAL CHANGES

- Decreased visual acuity
- Sensitivity to glare
- Decreased depth perception
- Less light reaches retina
- Decreased peripheral vision
- Pupil adapts less readily to light and darkness
- Poor night vision
- Glaucoma
- Cataract formation

VISION IMPAIRMENT EXERTS A WIDE-RANGING IMPACT ON FUNCTIONAL STATUS, AND IS ASSOCIATED WITH:

- Increased physical disability
- Social withdrawal and isolation
- Depression
- Decreased ability to perform ADLs and IADLs
- Cognitive impairment
- Increased risk of falls
AUDITORY CHANGES ASSOCIATED WITH AGING:
- Decreased hearing acuity
- Unable to filter out ambient noise
- Unable to hear high and middle frequency sounds (f,s,k,sh)
- Auditory reaction time increases

HEARING LOSS HAS A MAJOR CONTRIBUTION TO COMMUNICATION AND QUALITY-OF-LIFE ISSUES, AND CAN RESULT IN:
- Social withdrawal and isolation
- Depression
- Irritability
- Cognitive impairment
- Compromised physical mobility
- Impaired communication ability
MOBILITY ISSUES

MOBILITY CHANGES ASSOCIATED WITH AGING:
- Decreased muscle strength
- Diminished joint flexibility
- Decreased exercise tolerance
- Visual-spatial perceptual difficulties
- Difficulties with balance

Falls and near-falls occur annually in more than 30% of people aged 65 years or older. Falls are a leading cause of morbidity and mortality in the elderly, and can lead to:
- Fractures
- Traumatic brain injury
- Pulmonary embolism
- Hypo/hyperthermia
- Non-adherence to treatment, which can produce catastrophic results
Factors leading to poor nutrition in the elderly include poor dentition, decreased taste and smell sensation, and functional limitations that interfere with securing food.

NUTRITIONAL CHANGES ASSOCIATED WITH AGING:

- Decreased calorie intake
- Diminished vitamin and mineral intake/absorption
- Dehydration
- Inadequate protein and nutrient uptake
POOR NUTRITION

- Impaired immunity/increased vulnerability to infection
- Impaired wound healing
- Anemia
- Diabetes
- Osteoporosis
- Increased skin fragility

LOSS OF INDEPENDENCE IN THE ELDERLY: DEPRESSION

Depression is the most common mood disorder in the geriatric population. Untreated depression leads to an individual's disability and functional decline, and interferes with quality of life.

DEPRESSION

DEPRESSION IS OFTEN UNRECOGNIZED OR UNTREATED IN THE ELDERLY BECAUSE:

- Symptoms are attributed to comorbid medical conditions
- Symptoms are attributed to cognitive issues
- Mood symptoms may be minimized by the individual
- The depressed elderly tend to present with more somatic symptoms
- Depression is seen as a "natural consequence" of aging
DEPRESSION

THE PREVALENCE OF LATE-LIFE DEPRESSION VARIES BY SETTING:

• 12% – 18% in the general community
• 25% - 35% in medical inpatients and outpatients
• 40% – 55% among nursing home residents

UNTREATED DEPRESSION HAS PROFOUND EFFECTS ON FUNCTIONING IN THE ELDERLY, INCLUDING:

• Increased disability
• Increased caregiver burden
• Increased medical comorbidity
• Increased mortality
• Poor compliance with medical treatment
• Increased risk of institutionalization
• Increased risk of suicide

LOSS OF INDEPENDENCE IN THE ELDERLY: COGNITIVE IMPAIRMENT
COGNITIVE IMPAIRMENT

COGNITIVE CHANGES ASSOCIATED WITH AGING:

- Decreased ability to process information
- Greater tendency to be distracted
- Reduced working memory
- Decreased ability to perceive relationships
- Decline in executive functioning
- Short-term memory loss
- Emergence of dementia

Cognitive impairment and dementia has a profound negative impact on functional status and quality of life. Consequences of dementia include:

- Functional decline and loss of independence
- Social impairment
- Depression
- Behavioral disturbances, including agitation and aggression
- Caregiver burnout
- Institutionalization
**MEDICATION NONADHERENCE:**
51% of all prescription medication in the U.S. is taken incorrectly, causing:

- 125,000 deaths per year
- 1,000,000 hospitalizations
- Among the elderly, non-adherence accounts for 30-40% of all hospital admissions

**LOSS OF INDEPENDENCE IN THE ELDERLY:**

**LACK OF ADHERENCE TO TREATMENT**

- Less than 50% of patients take medications as prescribed
- 33% of prescriptions go unfilled
- 15%-30% of every US healthcare dollar is attributed to the consequences of medication non-adherence

**MEDICATION NONADHERENCE IS ASSOCIATED WITH:**

- Increased rates of hospitalization
- Increased mortality
- Almost twice the annual health cost compared with people who adhere to their medication regimen
MEDICATION ADHHERENCE ISSUES:

- Not obtaining medication
- Discontinuing medication on own
- Forgetting doses
- Mixing medications inappropriately, causing adverse events

LACK OF ADHERENCE LEADS TO:

- 1/3 to 2/3 of all medication-related hospitalizations
- 2/3 of all nursing home admissions
- Unnecessary medication changes and unexplained treatment failures
- Increased use of expensive, specialized medical resources
HEALTHCARE CONTINUUM

- Acute Care Hospitals
- Subacute Hospitals (LTAC)
- Skilled Nursing Facilities (SNF)
- Assisted Living Communities
- Independent Living Communities
- Adult Day Care
- Independent Seniors in the Community

LOSS OF INDEPENDENCE IN THE ELDERLY: SENSORY DEFICITS

STRATEGIES TO MANAGE SENSORY DEFICITS:

- Techniques to augment auditory input
- Assistive listening devices
- Hearing aids
- Eyeglasses
- Magnifying glasses
- Low vision accessories
- Large-print material and devices (e.g.; telephone with large numbers)
- Books on audiotape / e Readers

ADDITIONAL TECHNOLOGIES

- Computer access: Voice recognition
- Environmental: Smart Houses
- Hearing: Cochlear implants
LOSS OF INDEPENDENCE IN THE ELDERLY: FALL RISK

PREVENTIVE STRATEGIES TO MANAGE MOBILITY ISSUES/RISK OF FALL:

- Fall Risk Assessment
- Visual assessment
- Balance assessment
- Identify all medications and medical conditions
- Environmental assessment
- Ensure adequate lighting
- Ambulatory aids (walkers, wheelchairs)
- Occupational Therapy

LOSS OF INDEPENDENCE IN THE ELDERLY: FALL RISK

MANAGEMENT OF PATIENTS AFTER A FALL

- Patients who sustain a fall can often wait for extended periods of time before appropriate medical attention arrives, leading to increased mortality and death.
- A Personal Emergency Response System is a safeguard against such an occurrence.

THE GUARDIAN MEDICAL ALARM

Guardian provides a supervised emergency response system designed for medical alert applications. The system can be triggered by the large help button on top of the console or with a waterproof, wireless transmitter worn as a necklace or wristband.

System features include:
- Activity timer
- 1 loud, volume controlled speaker
- High sensitivity microphones
- Reminder messages
- Walk to speakerphone
- Back-up audio backup battery
- Remote access programming
- Can be used with or without a landline
- Fall detection available
- 24/7 care coordinators
LOSS OF INDEPENDENCE IN THE ELDERLY: MALNUTRITION

STRATEGIES TO MANAGE MALNUTRITION:

- Consultation with a nutritionist
- Dietary supplements
- Address untreated depression
- Correct dental problems
- Provide transportation for grocery shopping
- Food assistance programs, such as “Meals on Wheels”

LOSS OF INDEPENDENCE IN THE ELDERLY: DEPRESSION

STRATEGIES TO MANAGE DEPRESSION:

- Utilization of a screening tool (e.g.; Geriatric Depression Scale)
- Clinical assessment of depression
- Initiate treatment
- Monitor and reassess response to treatment

EFFECTIVE TREATMENT OF DEPRESSION RESULTS IN:

- Improved quality of life
- Improved functional ability
- Improved health status
- Reduced health care costs
- Reduced risk of relapse/recurrence of depressive episode
STRATEGIES TO MANAGE COGNITIVE IMPAIRMENT:

- Address comorbid conditions that may adversely affect cognition (e.g.; sensory deficits, inadequately treated medical conditions, depression, medications that compromise cognition)
- Participate in cognitively stimulating activities
- Participate in regular exercise
- Promote social interaction and communication

STRATEGIES TO MANAGE DEMENTIA:

- Family and caregiver education
- Behavioral techniques
- Environmental modification
- Provide structured routine
- Respite for caregivers to prevent burnout

STRATEGIES TO IMPROVE MEDICATION ADHERENCE:

- Reminding
- Organizing
- Dispensing
THE GUARDIAN SOLUTION

GUARDIAN TABLESAFE

- Personal medication management system that securely stores medications to be dispensed on a specific time schedule
- Medications can be filled by pharmacies, by users, their family members or home care companies
- Sends visual and auditory reminders for medication adherence with verification of completion
- 3 follow-up calls to prevent noncompliance
- Reminders for daily living activities and for medications not stored in Guardian Tabsafe

“A Parent’s Wish”