

**Understanding the Aging Process:
General Information, Risk Factors and
Approaches to Care**

Understanding the Aging Process

In 2004, the life expectancy for the United States population reached a record high of 77.8 years, up from 75.4 years in 1990¹. Over the 20th century, the older population grew from three million to 35 million. The oldest-old population (those aged 85 and over) grew from just over 100,000 in 1900 to 4.2 million in 2000. The U.S. Census Bureau projects that the population aged 85 and over could grow from 4.2 million in 2000 to nearly 21 million by 2050².

The increase in the aging population brings challenges to members of society—including government, families, businesses, health care providers and others—as to how to meet the needs of this elderly population. These needs are related to those associated with chronic disease as well as those related to the normal aging process.

Chronic disease is a long-term illness that is rarely cured. A significant number of the elderly population experience a chronic illness, with the most common being heart disease, cancer, stroke, and diabetes. These diseases may contribute to a decline in the individual's ability to function and perform everyday activities.

Physical changes may also occur over time as part of the normal aging process. These changes may include hearing loss, a decrease in visual acuity and sense of smell and taste, drier and thinner and more fragile skin, instability with balance and difficulty walking, and cognitive changes that may cause confusion and behavior problems.

Changes in the environment and/or changes in routines may also contribute to physical and mental changes in the elderly. Identifying these changes may help you understand the risks and assist you in making good healthcare decisions.

Even though *The Pines at Davidson* is committed to protecting the physical, mental, and emotional well-being of all its residents, there are some risks such as the risk of falling that are unavoidable due to the residents' chronic disease process and/or normal aging process. It is important to remember that the same risks the resident may have had at home continue to be risks in the nursing facility. The nursing facility may place systems or processes in place to *minimize* these risks, however, they cannot totally prevent them.

¹ *Trends in Aging 2006*, U.S Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, page 7.

² *Older Americans 2004: Key Indicators of Well-Being*, Federal Interagency Forum on Aging Related Statistics, Indicator 1, Number of Older Americans.

Skin Tears, Bruising and Ulcers

General Information

- As people age, their skin becomes thinner, less elastic, drier, and finely wrinkled. This contributes to the skin becoming more easily torn and bruised
- The number of nerve endings in the skin decreases causing changes in sensations to heat, cold, and pain. A decrease in sweat glands and blood vessels contributes to decreased blood flow to the deeper layers of the skin, slowing the healing process
- Skin ulcers may result from the blockage of an artery due to the underlying circulatory disease associated with diabetes, diminished function of a vein, or unrelieved pressure causing damage to underlying skin (pressure sore)
- The development of pressure sores may lie in the natural history of disease progression. In the debilitated resident, a pressure sore may be a sign of physical decline and mortality just like signs of heart, lung, and kidney disease¹
- Sometimes pressure sores develop despite caregivers' preventative efforts²
- Pressure sores that are stubborn and will not heal may indicate that the resident has a terminal condition that could qualify the resident for Hospice care
- A resident may choose not to eat or drink, or refuse to get out of bed, or allow staff to turn or reposition him, increasing the likelihood for skin breakdown and pressure ulcer development
- Skin breakdown and the development of pressure sores may lead to infections that could result in death
- The nursing facility can attempt to implement an appropriate plan of care to minimize the probability of developing skin tears, bruises and pressure sores, but cannot prevent all such conditions from occurring.

Risk Factors

- Age
- Pre-existing conditions such as diabetes, fractures, swelling, infections, cancer, and kidney and circulatory diseases
- Increased mobility may cause bruises and skin tears
- Decreased food and fluid intake
- Immobility, confinement to bed or wheelchair
- Use of prosthetic devices
- Confusion or inappropriate behaviors
- Bowel and bladder incontinence
- Pain

¹ Joseph A. Witowski and Lawrence Charles Parish: All pressure sores are neither curable nor preventable. Quest Commentary.

² Duncan S. Maclean, MD, CMD: Preventing and Managing Pressure Sores.

Approaches to Care

- The Pines nursing staff strives to meet the goal of preventing skin breakdown and the development of pressure sores by using a validated risk assessment tool (the Braden Scale), implementing a preventative program for residents identified at risk, and conducting frequent skin assessments on admission and weekly for all residents. This may proactively identify skin concerns and allow initiation of appropriate treatments.
- An individualized plan of care is developed, taking into consideration the resident's medical and cognitive history, disease progression, expectations, and willingness to follow the plan of care. Turning and/or repositioning is generally done more frequently for less mobile residents. This prevents prolonged pressure on any one spot. Bony areas such as tailbones, hips and ankle bones are at high risk and residents are positioned to minimize any significant weight or pressure on these areas.
- We strive to provide timely communication to residents and families regarding skin care and changes in skin integrity and treatment.
- We encourage the resident and family to participate in adhering to good skin care practices.
- Monthly quality improvement monitoring tracks our pressure sore management.

Falls

General Information

- Sometimes restraints such as bedside rails or chair lap trays are used by nursing facilities to reduce the risk of falls. However, more than one-third of adults aged 65 years and older fall each year¹
- In 2003, more than 1.8 million seniors aged 65 and older were treated in emergency departments for fall-related injuries, and more than 421,000 were hospitalized²
- Falls are one of the leading causes of death in seniors³
- As a person ages, bones may become less dense and more porous, causing weakness and increasing the possibility of fractures; cartilage that lines the joints tends to thin, increasing susceptibility to injury and pain as in arthritis; ligaments become less elastic and tend to tear more easily
- The use of side rails and restraints does not prevent all falls. A restrained resident may still suffer serious injury from a fall
- A resident's right to choose to not participate in care recommendations can contribute to a fall and subsequent injury (not call for assistance, refuse to follow safety tips, not use recommended assistive devices, etc.)
- The nursing facility can attempt to implement interventions to minimize the probability of falls, but cannot prevent all falls by residents.

Risk Factors

- Age
- Declining physical condition
- History of falls
- Decreased vision
- Depression
- Lower body weakness
- Problems with walking and balance
- Pre-existing conditions (Parkinson's, cardiovascular disorders, bladder dysfunction, osteoporosis, dementias, arthritis)
- Medications (especially use of multiple medications or psychotropic medications)
- Pain
- Environmental hazards (poor lighting, loose rugs, slippery floor)

Approaches to Care

- The Pines' efforts at reducing falls by residents are followed and its effectiveness of those efforts is monitored through the Quality Improvement Process.

¹ The Center for Disease Control (CDC), Falls and Fractures Among Older Adults, (Hornbrook 1994; Halisdorff 2001).

² CDC, 2005.

³ CDC, Injury Media Relations. Media Release. 11/16/2006.

- The Pines prepares an individualized plan of care taking into consideration the resident's medical and cognitive history, disease progression, fall risk factors, expectations, and willingness to follow the plan of care.
- We provide timely communication to the resident and family regarding mobility status, fall risk status, and planned interventions. Some interventions include bed, chair and personal alarms, frequent monitoring of at risk residents, scheduled toileting programs (a major reason residents try to get up independently is to get to the bathroom). The Pines may use minimally restrictive restraints such as gerichairs with tables and wheelchair "lapbuddy" cushions to remind residents not to try to get up alone.
- We offer programs that promote physical activity and increased physical stamina such as exercise programs, walking, and restorative care programs. Physical therapy assessments are used to assess residents' current and potential abilities to maintain and/or maximize those abilities.
- Provide information to the resident and family regarding fall reduction tips.
- Encourage resident and family participation in fall reduction activities.

Wandering/Elopement

General Information

- A person who wanders is at risk for “elopement” (that is, the act of leaving a safe area unsupervised and unnoticed and entering into harm’s way)¹
- Elopement and wandering are behaviors usually associated with residents who have an altered mental status affecting thinking, communication, remembering, and reasoning (dementia)
- Wandering behaviors can also occur in a person without cognitive issues and may be an indicator of an undetected medical problem such as a urinary tract infection
- A nursing facility can attempt to implement interventions to minimize the probability of elopement, but cannot prevent all elopements.

Risk Factors

- Age
- History of wandering and/or elopement
- Confusion, disorientation
- Pre-existing diseases that affect mental function (dementias, Alzheimer’s disease)
- Pain
- Medication

Approaches to Care

- The Pines multidisciplinary team develops an individualized plan of care taking into consideration the resident’s medical and cognitive history, disease progression, wandering and elopement risk factors, expectations, and willingness to follow the plan of care.
- We strive to meet the resident’s needs through individualized exercise programs, medication reviews, environmental modifications, and communication.
- We provide staff and family educational with opportunities regarding the specialized needs of the cognitively impaired including activities, environmental modification, safety needs, and communication.
- The Pines staff follows the facility’s wandering and elopement prevention plan and missing resident procedures. In addition, The Pines is preparing to start a new program called “Project Lifesaver,” an electronic tracking system which may help minimize recovery time of any Health Center resident who is assessed to need such monitoring and who might wander away from the nursing unit.
- We monitor effectiveness of The Pines’ approaches to caring for residents who wander through the nursing facility’s Quality Improvement Process.

¹ L. Moishita, Wandering Behavior in Alzheimer’s Disease: Treatment and Long-Term Care Management, 157-176 (J.L. Cummings and BL Miller, eds.1990).

Infection

General Information

- An infection is the invasion of the body's natural barriers by microscopic organisms that can be bacterial, fungal, viral, or parasitic.
- As people age, the immune system becomes less effective. The immune system may be less able to distinguish the body's own cells from foreign substances that invade the body. Vaccines may be less protective in older people. This may help explain why some infections, such as pneumonia and influenza, are more common in older people and may result in death more often¹
- The elderly can have a variety of medical conditions that predispose them to infection. Examples include thinning of the skin, decreased gastric acid, urinary retention, and decreased ability to clear airways of mucus (ineffective cough)²
- Each year nearly two million patients who receive care in hospitals get an infection, and more than 1.5 million infections occur annually in nursing homes³
- The most common infections in the elderly are pneumonia, urinary tract and skin.
- A resident has a right to choose to not drink or eat adequately, and to not follow good hygiene practices despite efforts by the nursing facility to encourage them to do so. Such resident choices increase the risk of acquiring an infection.
- The nursing facility can attempt to implement processes and interventions to minimize the probability of an infection, but cannot prevent all infections.

Risk Factor

- Pre-existing debilitating disease (cancer, diabetes)
- Depression
- Cognitive impairment
- Medications
- Bowel and/or bladder incontinence
- Decreased food and fluid intake
- Confusion

Approaches to Care

- The staff follows the facility's infection control program and effectiveness is monitored through the Quality Improvement Committee.
- Each resident's individualized plan of care takes into consideration the resident's medical and cognitive history, disease progression, immune status, risk of infection, expectations, and willingness to follow the plan of care.
- We make every effort to provide timely communication to the resident and family regarding possible infections, ordered treatments and response to that treatment.
- Information is provided to the resident and family regarding infection control practices, such as hand washing. Occasionally residents may be requested to stay in their rooms if diagnosed with a particularly severe and/or contagious infection.

¹ The Merck Manual of Health and Aging, Merck Research Laboratories, 2004.

² Smith PW, Roccaforte JS, Daly PB. Infection and Immune Response in the Elderly, *Annals of Epidemiology* 1992;2:813-822.

³ Antimicrobial Resistance: A Growing Threat to Public Health, *Issues in Healthcare Settings*, Division of Healthcare Quality Promotion, DHQP. Centers for Disease Control.