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The population of Americans age 65 and older, which numbered 38.9 million in 2008, has increased 13.0% or 4.5 million people within the last decade. Over the next 10 years this number will increase by 31%. The older population itself is increasingly older as well. Persons reaching age 65 have an average life expectancy of an additional 18.6 years, a child born in 2007 could expect to live 77.9 years, approximately 30 years longer than a child born in 1900 (U.S. Administration on Aging [AOA], 2010).

This inevitable shift has a number of implications, and indicates a wider spectrum of change already ongoing in American culture such as:

- changes in the perception of aging
- the overall quality of life for the elderly
- the practice of elder care
- the role of medicine for the elderly

These significant changes are not only relevant to those that are 65 years of age and older, but also to the remainder of society.

People 65 years and older make up 12.8% of the United States population; in Texas, they make up over 10% of the population. Bandera, Bexar, Comal, and Kendall counties all have percentages of elderly residents that surpass the state average of 10%. The following chart illustrates the percentage of persons per county in the San Antonio area that are 65 and older:

County	Percentage of 65 and older
Bandera	17.4%
Bexar	10.2%
Comal	13.8%
Kendall	15.7%

(U.S. Census Bureau, 2009)

With healthcare and technology in a constant state of advancement, the elderly population will continue

growing at high rates. In 2008 the 65-74 year old population was over 9 times larger than in 1900, the 75-84 range was 17 times larger, and the 85 and older category was 47 times larger. There were also 92,127 persons aged 100 or older in 2008, a 147% increase from 1990 (AOA, 2010).

**The Aging Process**

“Aging is a process of gradual maturation. Senescence is the process by which the capacity for cell division and the capacity for growth and function are lost over time, ultimately leading to death” (Merck Manual of Geriatrics, 2006). Changes that occur during aging can affect individuals differently – some may develop diseases and impairments commonly associated with aging and others may not.

During the aging process a number of physiological changes begin to take place that not only affect appearance but also how the body functions and responds to daily living. Overall, the changes in most elderly involve a slowing down of all organ systems due to a decline in cellular activity. While approximately 85% of older adults experience chronic conditions, only about 20% experience significant impairment. Normal physiological changes include:

*Body Shape.* Body fat increases up to 30% toward the center of the body (including the abdominal organs) as muscle and bone mass decreases. Changes in bones, muscles, and joints result in tendency to become shorter, typically 1 cm (0.4 inches) for every 10 years after age 40 (NIH, 2008a).

*Skin.* Among the most visible signs of aging are wrinkles, sagging skin and graying hair. The skin gets thinner and more fragile and the layer of fat beneath the skin also thins. The elderly become more susceptible to heat and cold injuries as well as skin tears and pressure sores (NIH, 2008b).

*Senses.* Taste, smell, touch, hearing, and vision all degrade with age. It is estimated that 30% of adults over 65 have significant hearing loss. While almost all adults over 55 have some visual loss, only 15% to 20% have vision bad enough to impair driving ability and only 5% become unable to read (NIH, 2009b).

*Nervous System.* Normal changes include loss of nerve cells and weight in the brain and spinal cord as well as waste product build-up. These can result in lost reflexes or sensation leading to difficulty with movement and increased risk of falls. Normal decline of mental functions includes slowing of thought, memory and thinking (NIH, 2009a).

*Cardiovascular System.* Reduced blood flow through the body due to normal atrophy of the heart muscle, calcification of the heart valves, loss of elasticity in artery walls and intra-artery deposits results in slower rate of healing, lower response to stress and increased risk of drug toxicity (Utah State University [USU], n.d.).

*Skeletal System.* Loss of bone calcium in both men and women starts at about age 35 and can result in osteoporosis with increased risk of fracture. Joint changes include osteoarthritis (joint cartilage wear) and rheumatoid arthritis (connective tissue inflammation) (USU, n.d.).

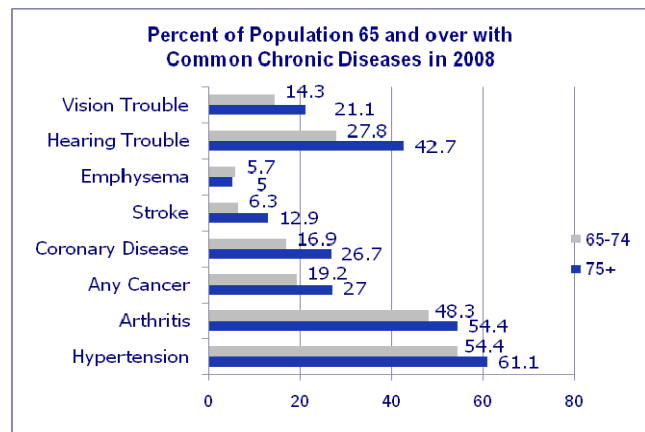
*Muscular System.* Loss of muscle tone and strength often manifests as a reduced ability to breathe deeply, reduced gastrointestinal activity which can lead to constipation and bladder incontinence, particularly in women (USU, n.d.).

*Gastrointestinal System.* Gastrointestinal distress, impaired swallowing and delayed emptying of the stomach can result from reduction of digestive enzymes, stomach acids, and saliva (USU, n.d.).

*Endocrine System.* Metabolic rate decreases an average of 1% per year resulting in reduced stamina, greater susceptibility to drug toxicity and weight gain (USU, n.d.).

### Physical Health

In its 33<sup>rd</sup> annual report on the health status of the Nation, the CDC (2010) noted that while Americans could expect a longer life, they could also expect to develop any one of a number of chronic diseases and conditions associated with aging. Although the mortality rate from heart disease, stroke, and cancer has been declining for several years, the incidence of those diseases is directly proportionate to age. The following chart shows the incidence of selected diseases for the elderly in 2008:



(CDC, 2009)

In general, the percentage of adults with good health declined with age. Those with higher education reported better health as did married adults and those not living in a Metropolitan Statistical Area.

“Among adults age 65 and over, 52% of those who had Medicaid and Medicare health care coverage had fair or poor health compared with 27% of those with only Medicare health care coverage and 20% of those with private health insurance” (CDC, 2009, p10).

### Nutrition

As people age, food insecurity and hunger increase health risks. Research has demonstrated that seniors with low food security experienced more depression, lowered quality of life, and reduced physical performance. In fact, the higher the level of food insecurity, the more issues with pain, general health/functioning, and mental health. In addition, seniors are more likely to have nutrient deficiencies and obesity (Ziliak, Gunderson, & Haist, 2008). One study found that a large portion of older adults do not get adequate amounts of nutrition from their diet and even 20% to 50% of those who use nutritional supplements still fell significantly short of the recommended amounts of folate, vitamin E, and magnesium (Sebastian, Cleveland, Goldman, Moshfegh, 2007).

### Mental Health

For at least the last decade, mental health has been recognized to be as important as physical health to the wellbeing of older Americans. It has been estimated that 20% of people age 55 or older have some type of mental health concern (CDC, 2008).

### Social Isolation

People need people. “Adequate social and emotional support is associated with reduced risk of mental illness, physical illness, and mortality” (CDC, 2008, p3). Social support includes emotional support such as sharing problems or venting emotions as well as soliciting advice and guidance. Other aspects include

physical assistance such as transportation for shopping or doctor visits or even help with household chores. Seniors who live alone are more likely to succumb to depression as a result of social isolation. In 2008, 23.8% of all households in the United States included one or more individuals aged 65 or older. 28.6% of the total 65 and over population lived alone (U.S. Census Bureau, n.d.). 12.2% of adults age 65 and over reported that they *rarely* or *never* received the social and emotional support they needed (CDC, 2008). The chart at the end of this brief shows the Household Characteristics of seniors 65 and over in the U.S., Texas, Bexar and Comal counties.

### Depression

Late-onset depression is a “disorder of the brain that arises in the context of the medical illnesses and psychosocial stressors that accompany aging” (Halverson & Walaszek, 2010, p1). Symptoms include depressed mood, diminished interest or pleasure in activities, significant weight loss or gain, change in sleep patterns, fatigue or loss of energy, diminished ability to think or concentrate, or indecisiveness. Many risk factors for depression exist at all age levels but some appear to be unique to aging, such as:

- Biological risk factors
  - Endocrine changes – decreased levels of estrogen in post-menopausal women and low testosterone in older men; decreased metabolism
  - Vascular system – higher incidence of depression after a stroke, vascular dementia, coronary artery disease
  - Medical illnesses – Alzheimer’s disease, Parkinson’s disease, cancer, and chronic pain
- Psychosocial risk factors
  - Loneliness
  - Impaired social supports
  - Bereavement
  - Negative life events

(Halverson & Walaszek, 2010)

In addition to the obvious decline in lifestyle, if left untreated, depression can adversely affect the course of treatment for other chronic diseases. Depressed older adults “visit the doctor and emergency room more often, use more medication, incur higher outpatient charges, and stay longer in the hospital” (CDC, 2008). There is also a significantly higher risk of suicide in the elderly. While women are twice as likely to become depressed, men are 2-7 times more likely to commit suicide (Halverson &

Walaszek, 2010). “Men aged 85 years or older have a suicide rate of 45.23 per 100,000, compared to an overall rate of 11.01 per 100,000 for all ages” (CDC, 2008). The following chart highlights the most recent Behavioral Risk Factor Surveillance System data related to mental health:

Adults over 65 who:	U.S. %	Texas %
Lacked adequate social support	12.2	14.7
Were dissatisfied with their lives	33.5	2.9
Experienced frequent mental distress	6.5	5.8
Had current depression	5.0	4.6
Were ever diagnosed with depression	10.5	10.8
Were ever diagnosed with anxiety disorder	7.6	7.2
(CDC, 2008)		

### Other Issues Affecting the Elderly

#### Elder Abuse

Elder abuse is defined as any knowing, intentional, or negligent act by a caregiver or any other person that causes harm to a vulnerable adult (National Center on Elder Abuse [NCEA], 2007a). Elder abuse laws vary from state to state, but most abuse cases fall under the following categories:

- Physical abuse
- Emotional abuse (mental, psychological or verbal)
- Neglect or abandonment by caregivers
- Self-neglect by elders
- Sexual abuse
- Financial exploitation (NCEA, 2007b)

Many factors contribute to elder abuse including:

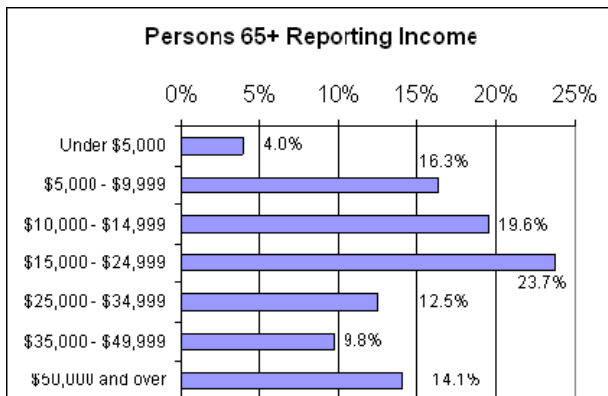
- Alcohol and drug dependency
- Unemployment
- History of violence in family relationships
- Inadequate access to health care and costly medications
- Lack of community support/services
- Denial of benefits

(Texas Department of Family Protective Services [DFPS], n.d.)

In 2009, Texas Adult Protective Services completed 72,265 investigations of abuse, neglect, or exploitation involving adults living at home. Of these, more than 50,936 were confirmed. While there was no distinction made as to the ages of the abused, it was noted that in the last decade, the number of in-home cases investigated has more than doubled (DFPS, n.d.). Investigated reports of financial exploitation comprised 21% of all elder abuse investigations in 2004 (NCEA, 2006).

### Financial Independence

With a longer lifespan comes the challenge of maintaining financial independence. Many elders struggle to make ends meet. The average income in 2008 for males over 65 was \$25,503 and for females was \$14,559. Most of the major sources of income for older persons were reported as social security (87%), income from assets (52%), private pensions (28%), government employee pensions (13%), and earnings (25%). Social security benefits constituted 90% or more of the income received by 35% of beneficiaries. A significant portion (20.3%) of elders over 65 reported income of less than \$10,000 in 2008. The highest levels of poverty were experienced by Hispanic and Black Women living alone (77.8%) (AOA, 2010). The following chart represents income reported by seniors in 2008:



(AOA, 2010)

### Living Arrangements

The majority of persons aged 65 and older (54.6%) lived with their spouse in 2008. About 30.5% lived alone. Only 4.1% of the 65+ population lived in institutional settings such as nursing homes and 2.4% lived in senior housing with at least one supportive service available to their residents (AOA, 2010).

Although the majority of elderly persons do not require long-term assistance at any given time, most will require assistance at some point in their lives. Independent living programs are an alternative to nursing home placement for many elderly. They are designed to enable seniors to live and thrive in their own homes with the assistance of a network of supportive services (DADS, 2009a).

Assisted living facilities offer alternatives for seniors that may need help with dressing, bathing, eating, and toileting, but do not need intensive medical or nursing care. Most assisted living facilities offer the following activities: health care management and monitoring, security, housekeeping and laundry,

medication reminder, help with daily activities, and transportation (AOA, n.d.a).

Nursing homes are facilities that provide a wide range of long-term care services designed to assist people who have cognitive or functional limitations. Many also provide skilled nursing and therapy for short-term residents following a hospitalization (Houser, 2007).

In 2007, approximately 93% of non-institutionalized persons age 65+ were covered by Medicare, which covers mainly acute care services but requires beneficiaries to pay part of the cost. Among Medicare beneficiaries residing in nursing homes, approximately half (52%) were covered by Medicare (AOA, 2010).

Continuing Care Retirement Communities (CCRCs) are retirement communities that offer more than one kind of housing and different levels of care. In the same community, there may be individual homes or apartments for residents who still live on their own, an assisted living facility for people who need some help with daily care, and a nursing home for those who require higher levels of care (Medicare.gov, 2008).

### Caregivers for the elderly

Caregivers provide assistance to those who need aid in some way. There are between 5.8–7 million people providing everyday activity assistance to seniors age 65 and older. These include family, friends and neighbors, with an adult child being the person most likely to be providing care:

- 41% Child
- 23% Spouse
- 27% Other relative
- 8% Nonrelative

(Family Caregiver Alliance [FCA], 2005)

More women than men are caregivers (59%-75% women) and of those caring for a spouse, approximately 22% are over 65 themselves. Most caregivers are employed and work either full or part-time. Two thirds report having difficulties at work (decrease hours, rearrange schedule, take unpaid leave) in order to meet their caregiving obligations. Depression is the most common disorder affecting caregivers with 20%-50% reporting symptoms. 30%-40% of those caring for dementia patients suffer from depression and emotional stress. Physical health is also at risk with caregivers reporting increased blood pressure and insulin levels and impaired immune systems. Elderly spousal caregivers (aged 66-96) were found to have a 63%

higher mortality rate than noncaregivers of the same age (FCA, 2005).

Agencies that provide support to Texas caregivers include the National Family Caregiver Support Program, Texas Department of Aging and Disability Services (DADS), and Area Agencies on Aging. Working in partnership, these agencies provide five basic services for family caregivers:

- Information about available services
- Assistance in gaining access to supportive services
- Individual counseling, support groups, and caregiver training to assist caregivers in making decision and solving problems relating to their roles
- Respite services to temporarily relieve caregivers of their responsibilities
- Supplemental services, on a limited basis, to complement the care provided by caregivers (DADS, 2009b)

Several centralized sources exist to help seniors find the services that are available:

- *The Eldercare Locator* is a free national service administered by the U.S. Administration on Aging (AOA) and the National Association of Area Agencies on Aging that can help seniors and their families locate local agencies in every community within the U.S. (AOA, n.d.b)
- *Help for Texans* is a service of the Texas Department of Aging and Disability Services to locate services in Texas (DADS, 2009a)

**Conclusion**

Today’s elderly possess very different needs, values, and lifestyles than the elderly population of half-a-century ago. The keys to making long-lasting and positive changes for the elderly population are to acknowledge the shifts which have occurred, understand the shifts in order to predict future trends, and implement the necessary changes.

Household Characteristics								
	United States		Texas		Bexar		Comal	
		% of total		% of total		% of total		% of total
<b>Total Population</b>	<b>298,574,528</b>		<b>23,827,328</b>		<b>1,583,454</b>		<b>108,023</b>	
<b>Population 65 years &amp; over</b>	<b>37,209,240</b>	<b>12.5%</b>	<b>2,359,755</b>	<b>9.9%</b>	<b>160,218</b>	<b>10.1%</b>	<b>14,075</b>	<b>13.0%</b>
65 + with a disability	14,179,780	38.1%	1,000,258	42.4%	69,901	43.6%	4,985	35.4%
<b>Total Households</b>	<b>113,101,329</b>		<b>8,422,249</b>		<b>552,156</b>		<b>39,286</b>	
With one or more 65 & older	26,963,020	23.8%	1,705,517	20.3%	115,086	20.8%	9,433	24.0%
Householder 65+ living alone	10,631,504	9.4%	624,558	7.4%	45,809	8.3%	3,673	9.3%
With an independent living difficulty	6,384,164	17.2%	461,964	19.6%	34,306	21.4%	2,542	18.1%

(U.S. Census Bureau, n.d.)

**REFERENCES**

Centers for Disease Control and Prevention (CDC). (2008). *The State of Mental Health and Aging in America*. Retrieved June 30, 2010, from <http://apps.nccd.cdc.gov/MAHA/CompareStates.aspx?State=441>

Centers for Disease Control and Prevention. (2010). *Health, United States, 2009*. Retrieved July 6, 2010 from <http://www.cdc.gov/nchs/data/hus/hus09.pdf#fig15>

Centers for Disease Control and Prevention. (2009). *Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2008*. Retrieved July 6, 2010 from [http://www.cdc.gov/nchs/data/series/sr\\_10/sr10\\_242.pdf](http://www.cdc.gov/nchs/data/series/sr_10/sr10_242.pdf)

Family Caregiver Alliance. (2005.). *Selected Caregiver Statistics*. Retrieved July 2, 2010, from [http://www.caregiver.org/caregiver/jsp/content\\_node.jsp?nodeid=439](http://www.caregiver.org/caregiver/jsp/content_node.jsp?nodeid=439)

Halverson, J. and Walaszek, A. (2010). Late-Onset Depression. Retrieved July 7, 2010, from <http://emedicine.medscape.com/article/1356106-overview>

Houser, A. (2007). Nursing Homes. Retrieved March 2, 2010, from Association for the Advancement of Retired Persons (AARP) website at <http://www.aarp.org/research/ppi/lrc/nurs-homes/>

Medicare.gov. (2008). *Guide to Choosing a Nursing Home*. Retrieved July 7, 2010, from <http://www.medicare.gov/NHCompare/Include/DataSection/Question/SearchCriteriaNEW.asp?version=default&browser=IE%7C8%7CW inXP&language=English&defaultstatus=0&pagelist=Home&Cookies EnabledStatus=True>

Merck Manual of Geriatrics. (2006). *Basics of Geriatric Care: Biology of Aging*. Retrieved July 2, 2010, from <http://www.merck.com/mkgr/mmg/sec1/ch1/ch1a.jsp>

National Center on Elder Abuse (NCEA). (2006). *The 2004 survey of state adult protective services: Abuse of adults 60 years of age and older*. Retrieved October 14, 2009, from, [http://www.ncea.aoa.gov/NCEAroot/Main\\_Site/pdf/2-14-06%20FINAL%2060+REPORT.pdf](http://www.ncea.aoa.gov/NCEAroot/Main_Site/pdf/2-14-06%20FINAL%2060+REPORT.pdf)

- National Center on Elder Abuse (NCEA). (2007a). *Elder Abuse/Mistreatment Defined*. Retrieved July 6, 2010, from [http://www.ncea.aoa.gov/NCEARoot/Main\\_Site/FAQ/Basics/Definition.aspx](http://www.ncea.aoa.gov/NCEARoot/Main_Site/FAQ/Basics/Definition.aspx)
- National Center on Elder Abuse (NCEA). (2007b). *Major types of Elder Abuse*. Retrieved July 6, 2010, from [http://www.ncea.aoa.gov/NCEARoot/Main\\_Site/FAQ/Basics/Types\\_Of\\_Abuse.aspx](http://www.ncea.aoa.gov/NCEARoot/Main_Site/FAQ/Basics/Types_Of_Abuse.aspx)
- NCEA. (2007c). *Who are the abusers?* Retrieved July 6, 2010, from [http://www.ncea.aoa.gov/NCEARoot/Main\\_Site/FAQ/Basics/Abusers.aspx](http://www.ncea.aoa.gov/NCEARoot/Main_Site/FAQ/Basics/Abusers.aspx)
- National Institutes of Health MedlinePlus. (2008b). *Aging changes in skin*. Retrieved July 2, 2010, from <http://www.nlm.nih.gov/medlineplus/ency/article/004014.htm>
- National Institutes of Health MedlinePlus. (2008a). *Aging changes in body shape*. Retrieved July 2, 2010, from <http://www.nlm.nih.gov/medlineplus/ency/article/003998.htm>
- National Institutes of Health MedlinePlus. (2009a). *Aging changes in the nervous system*. Retrieved July 2, 2010, from <http://www.nlm.nih.gov/medlineplus/ency/article/004023.htm>
- National Institutes of Health MedlinePlus. (2009b). *Aging changes in the senses*. Retrieved July 2, 2010, from <http://www.nlm.nih.gov/medlineplus/ency/article/004013.htm>
- Sebastian, R., Cleveland, L., Goldman, J., Moshfegh, A. (2007). *Older Adults Who Use Vitamin/Mineral Supplements Differ from Nonusers in Nutrient Intake Adequacy and Dietary Attitudes*. Retrieved July 6, 2010, from <http://hdl.handle.net/10113/23063>
- Texas Department of Aging and Disability Services (DADS). (2009b). *Informal Care in Texas: Aging Family Caregivers and Their Need for Services and Support*. Retrieved June 29, 2010, from <http://www.dads.state.tx.us/services/agingtexaswell/publications/informalcare-11-09.pdf>
- Texas Department of Aging and Disability Services (DADS). (2009a). *Help for Texans*. Retrieved June 29, 2010, from <http://www.dads.state.tx.us/services/listofservices.html>
- Texas Department of Family Protective Services (DFPS). (n.d.). *Facts About Abuse*. Retrieved June 29, 2010, from <http://www.dfps.state.tx.us/everyonesbusiness/Facts.asp#top>
- U.S. Administration on Aging (AOA). (2010). *A Profile of Older Americans 2009*. Retrieved July 7, 2010, from [http://www.aoa.gov/AoARoot/Aging\\_Statistics/Profile/index.aspx](http://www.aoa.gov/AoARoot/Aging_Statistics/Profile/index.aspx)
- U.S. Administration on Aging (AOA). (n.d.b). *Eldercare Locator*. Retrieved July 7, 2010, from <http://www.eldercare.gov/Eldercare.NET/Public/About/About.aspx>
- U.S. Administration on Aging (AOA). (n.d.a). *Assisted Living*. Retrieved July 7, 2010, from [http://www.aoa.gov/aoaroot/Press\\_Room/Products\\_Materials/fact/pdf/Assisted\\_Living.pdf](http://www.aoa.gov/aoaroot/Press_Room/Products_Materials/fact/pdf/Assisted_Living.pdf)
- U.S. Census Bureau. (2009). *State and County QuickFacts*. Retrieved July 6, 2010, from <http://quickfacts.census.gov/qfd/states/48000.html>
- U.S. Census Bureau. (n.d.). *2008 American Community Survey 1-Year Estimates*. Retrieved June 9, 2010, from [http://factfinder.census.gov/servlet/DatasetMainPageServlet?lang=en&ts=295550327295&ds\\_name=ACS\\_2008\\_1YR\\_G00\\_&program=ACS](http://factfinder.census.gov/servlet/DatasetMainPageServlet?lang=en&ts=295550327295&ds_name=ACS_2008_1YR_G00_&program=ACS)
- Utah State University (USU). (n.d.). *Physiology of Aging*. Retrieved July 2, 2010, from <http://www.aginginplace.org/traits/physiology/>
- Ziliak, J. P., Gunderson, C., & Haist, M. (2008). *The causes, consequences, and future of senior hunger in America*. Retrieved June 26, 2010, from <http://216.235.203.153/Document.Doc?id=13>