Kronkosky Charitable Foundation

Research Brief

Elderly

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The population of Americans aged 65 and older numbered 49.2 million in 2016 (U.S. Census Bureau, 2017a) and is projected to more than double to 98 million in 2060. By 2040, there will be about 82.3 million older persons, over twice their number in 2000 (U.S. Administration on Aging [AOA], 2016b, p.3).

The older population itself is increasingly older as well. Persons reaching age 65 have an average life expectancy of an additional 19.3 years; a child born in 2015 could expect to live 78.8 years, approximately 30 years longer than a child born in 1900. The 85+ population is projected to triple from 6.3 million in 2015 to 14.6 million in 2040. These significant changes are not only relevant to those that are 65 years of age and older, but also to the remainder of society (AOA, 2016b, pp.2-4).

People 65 years and older make up 15.2% of the United States population, or one in every seven people; in Texas, they make up 12% of the population (U.S. Census Bureau, 2017c). The following table shows the percentage of persons per county in the San Antonio area that are 65 and older:

COUNTY	% OF POPULATION 65 AND OLDER IN 2016
Bandera	26.0%
Bexar	11.8%
Comal	18.1%
Kendall	19.7%
(U.S. Census Bureau, 2017c)	

This inevitable shift to an older population 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

With healthcare and technology in a constant state of advancement, the elderly population in the U.S. will continue to grow at high rates. "The older population in Texas grew at a faster rate than in the nation from 2000 to 2014. Among all states, Texas has the third largest elderly population" (Texas Demographic Center, 2016, p.1).

Additionally, the elder population itself is aging. In 2015 the 65-74 year old population was over 12 times larger than in 1900, the 75-84 range was 17 times larger and the 85 and older category was 51 times larger. There were also 76,974 persons aged 100 or older in 2015, more than twice the 32,194 from 1980 (AOA, 2016b).

THE AGING PROCESS

Aging is a process of gradual maturation. Senescence is the biological process by which the capacity for cell division and the capacity for growth and function are lost over time, ultimately leading to death (Goldsmith, 2014).

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 (National Institute on Aging [NIA], 2011). 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 the tendency to become shorter, typically 1 cm (0.4 inches) for every 10 years after age 40. After turning 70, height loss occurs faster and an individual may lose a total of 1 to 3 inches in height (National Institutes of Health [NIH], 2016a).

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 result is a proneness to skin injury, and more than 90% of the elderly population has some kind of skin disorder (NIH, 2016e).

Senses- Taste, smell, touch, hearing, and vision all degrade with age. "Nearly 25 percent of those aged 65 to 74 and 50 percent of those who are 75 and older have disabling hearing loss" (National Institute on Deafness and other Communication Disorders [NIDCD], 2016b).

While almost all adults over 60 experience some visual loss, 5.4% of adults age 65+ in the state of Texas reported blindness or severe difficulty seeing (CDC, 2015).

Problems with taste also increase with age. A recent study showed that more than one in four (27%) adults aged 80 and older reported having had a problem with their sense of taste, including changes in taste sensation over time (NIDCD, 2016a).

Taste bud decreases can result in a lack of interest in eating, while the diminishing sense of smell can lead to less awareness of personal hygiene. Touch sensation changes with age, which increases risk of frostbite, hypothermia, and burns. Reduced ability to perceive where the body is in relation to the floor increases the risk of falling (NIH, 2016d).

Nervous System- Normal changes include loss of nerve cells and weight in the brain and spinal cord as well as waste product build-up that causes abnormal structures to form. Normal decline of mental functions includes slowing of thought, memory and thinking (NIH, 2016c).

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 (arteriosclerosis) and intra-artery deposits (atherosclerosis) leads to a slower rate of healing, lower response to stress and increased risk of drug toxicity in addition to risk of hypertension, stroke, heart attack, or congestive heart failure (NIA, 2017).

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. Arthritis is the degenerative inflammation of the joints, and is the most common chronic condition within the elderly population. Osteoarthritis (joint cartilage wear) is the most common type of arthritis, and can inhibit mobility and daily activities (NIH, 2016b).

Muscular System- Loss of muscle tone and strength often manifests as a reduced ability to breathe deeply and/or reduced gastrointestinal activity, which can lead to constipation and bladder incontinence, particularly in women (Besdine, 2016).

Digestive System- While less affected by aging than other organ systems, certain digestive problems are more likely to develop in older adults, including conditions related to a decrease in muscular strength and elasticity: gastroesophageal reflux (GERD); difficulty swallowing; and constipation. Lactose intolerance results from decrease in enzyme levels and excessive growth of bacteria leads to pain, bloating, and weight loss as well as decreased absorption of vitamin B12, iron, and calcium (Ruiz, n.d.).

Endocrine System- Hormone levels and activity decrease leading to decreased muscle mass and increased risk of dehydration and type 2 diabetes (Besdine, 2016).

Physical Health

In its annual report on aging and health, the Centers for Disease Control and Prevention (CDC) (2016a) 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. Approximately two thirds of older adults have multiple chronic conditions. Although the mortality rates from heart disease, stroke, and cancer have been declining for several years, the incidence of those diseases is directly proportionate to age. The following table shows the percentage of selected chronic diseases for various age groups (most recent data available):

Percent of Population with Chronic Disease (2015)			
Chronic Disease	**Age 18-64**	**Age 65-74**	**Age 75+**
Hypertension	43.3%	54.8%	62.0%
Arthritis	36.0%	48.6%	53.4%
Hearing Trouble	22.0%	30.2%	46.5%
Heart Disease	16.2%	26.0%	34.6%
Cancer	10.5%	21.2%	31.8%
Diabetes	15.2%	22.8%	21.8%
Vision Trouble	17.2%	11.9%	19.1%
Stroke	3.2%	5.6%	11.2%
Kidney Disease	2.6%	4.1%	7.1%
Emphysema	1.9%	3.9%	4.6%
(CDC, 2017b)			

The difference between the 18-64 age group and the elderly age groups signifies the higher prevalence of chronic disease that occurs within older people.

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 living in a Metropolitan Statistical Area. Among adults aged 65 and over, 50.3% of those who had Medicare and Medicaid had fair or poor health compared with 23.4% of those with only Medicare and 16% of those with private health insurance (CDC, 2017b).

Nutrition

As people age, food insecurity and hunger increase health risks. Research has demonstrated that seniors with low food security experienced more depression, lower quality of life, and reduced physical performance. In fact, the higher the level of food insecurity, the more issues with general health/functioning, pain, and mental health. Seniors are also more likely to have nutrient deficiencies and obesity (National Council on Aging [NCOA], n.d.).

Reports show that the food insecurity rate for all senior households was 8.3% in 2015, up from 5.5% in 2001. "At the same time, the percentage of seniors facing the threat of hunger has more than doubled" (NCOA, n.d.).

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). Vitamin D deficiency is the highest in the elderly, especially in those who have limited sun exposure (Denio, 2012).

Mental Health

For at least the last decade, mental health has been recognized to be as important as physical health to the well-being of older Americans. It has been estimated that "over 20% of adults aged 60 and over suffer from a mental or neurological disorder" and "6.6% of all disability among over 60s is attributed to neurological and mental disorders" (World Health Organization [WHO], 2016).

Social Isolation

People need people. "Adequate social and emotional support is associated with reduced risk of mental illness, physical illness, and mortality" (CDC, 2008, p. 3). Additionally, "various factors, such as disability and major life events (e.g., loss of spouse) can put older adults at risk of experiencing social isolation" (Menec, 2016).

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 2015, 27% of all households in the United States consisted of one or more individuals aged 65 or older. 38% of senior households consisted of individuals aged 65 and over living alone (U.S. Census Bureau, 2017b).

According to America's Health rankings for 2013-2014, 20.6% of seniors aged 65 and older did not receive sufficient social and emotional support (America's Health Rankings, 2017).

The table at the end of this brief shows the most recently available Household Characteristics of seniors 65 and over in the U.S., Texas, and KCF counties of interest.

Depression

Late-onset depression is common in the elderly but only about 10% of depressed elderly receive treatment. Symptoms of depression 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. Unfortunately, "depression in the elderly is also frequently confused with the effects of multiple illnesses and the medicines used to treat them" (Goldberg, 2016).

Many risk factors for depression exist at all age levels but some appear to be unique to aging, such as:

- Stroke, heart disease, diabetes, cancer, thyroid disorders, and chronic pain
- Parkinson's and Alzheimer's disease
- Side effects of medications
- Psychological risk factors such as loneliness, impaired social supports, bereavement, and loss of independence

(Berger, 2016; Goldberg, 2016)

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, p.2).

Despite the fact that depression is more often diagnosed in women, the highest suicide rate for the elderly is in men older than 75 years. Among men aged 75 years or older, the current suicide rate is 38.8 per 100,000, compared to the female suicide rate of 4.0 per 100,000 for all adults age 75 years and older (CDC, 2016b).

The following table highlights the most recent Behavioral Risk Factor Surveillance System data related to mental health:

ADULTS OVER 65 IN THE U.S. WHO:	2015
Lacked adequate social support	8.3%
Were dissatisfied with their lives	96.8%
Experienced frequent medical distress	7.4%
Were ever diagnosed with depression	15.0%
Were ever diagnosed with anxiety disorder	11.3%
(CDC, 2017a)	

OTHER ISSUES AFFECTING THE ELDERLY

Elder Abuse

Elder abuse generally refers to intentional actions that cause harm or create a serious risk of harm (whether or not harm is intended) to a vulnerable elder by a caregiver or other person who stands in a trust relationship to the elder whether in the home or an institutional setting (National Center on Elder Abuse [NCEA], n.d.). Elder abuse laws vary from state to state, but most abuse cases fall under the following categories:

- Physical abuse
- Emotional or psychological abuse
- Financial or material exploitation
- Neglect or abandonment by caregivers
- Sexual Abuse
- Self-neglect

(NCEA, n.d.)

Many factors contribute to elder abuse by the caregiver including:

- Alcohol and drug dependency
- Inadequate access to health care and/or costly medications
- Physical and mental stress of caregiving
- Unemployment
- Lack of affordable housing and high costs of utility bills
- History of violence in family relationships

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

In 2016, Texas Adult Protective Services completed 83,534 investigations of abuse, neglect, or exploitation involving adults living at home, 9,622 of which were in the San Antonio area. Of these, 51,608 were confirmed (376 in San Antonio) (DFPS, 2016).

Additionally, of 19,552 abuse investigations in senior living facilities, 1,243 were confirmed. The program investigates reports of abuse and arranges protective services as needed (DFPS, 2016).

Financial Independence

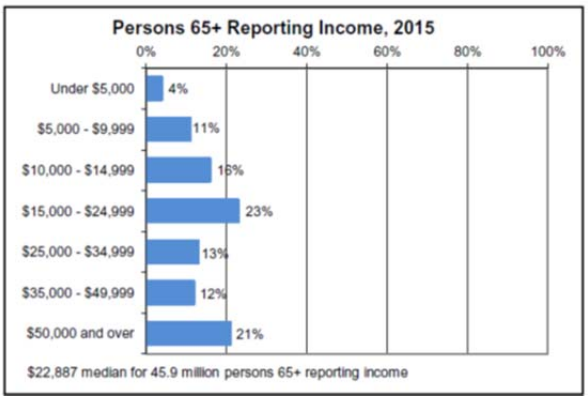
With a longer lifespan comes the challenge of maintaining financial independence. Many seniors struggle to make ends meet. The average income in 2015 for males (living alone) over 65 was $42,047 and for females (living alone) was $30,652 (U.S. Census Bureau, 2016a). Major sources of income for seniors in 2015 were reported as social security (85%), income from assets (65%), retirement income (39%) and earnings (24%) (U.S. Census Bureau, 2016b).

Social security benefits in 2015 extended to 65.1 million people (53% women, 47% men) from programs administered by the Social Security Administration (SSA). Most (57 million) received old-age, survivors, and disability insurance benefits only. 5.6 million received Supplemental Security Income (SSI) only, and 2.7 million received payments from both programs (SSA, 2016, p.32).

"Over 4.2 million people age 65 and over (8.8%) were below the poverty level in 2015" (AOA, 2016b, p.10). Another 2.4 million or 5% of older adults were classified as "near-poor" (income between the poverty level and 125% of this level). Using the U.S. Census Bureau's Supplemental Poverty Measure (SPM) the poverty level for persons 65 and older was 13.7%.

Older women had a higher poverty rate (10.3%) than older men (7%). Older persons living alone were much more likely to be poor (15.4%) than were older persons living with families (5.7%). The highest poverty rates were experienced among older Hispanic women (40.7%) who lived alone (AOA, 2016c, p.10).

The following chart represents income reported by seniors in 2015 (AOA, 2016c, p.9):



Living Arrangements

The majority (59%) of persons aged 65 and older (15.5 million or 73% of older men, and 12 million or 47% of older women) lived with their spouse in 2016. Approximately 29% (4.3 million or 20% of older men, and 9.3 million or 35% of older women) lived alone (AOA, 2016c, p.5).

A relatively small number (1.5 million or 3.1%) of the 65+ population in 2015 lived in institutional settings. Among those who did, 1.2 million lived in nursing homes. However, the percentage increases dramatically with age, ranging (in 2015) from 1% for persons 65-74 years to 3% for persons 75-84 years and 9% for persons 85+ (AOA, 2016c, p.5).

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 seniors. They are designed to enable seniors to live and thrive in their own homes with the assistance of a network of supportive services. Often referred to as *Retirement Communities* or *Senior Apartments*, independent living communities are generally designed with housing that is friendlier to older adults (easier to access and navigate) and many include more support and recreational options than are readily available to seniors in regular communities (Robinson, Saisan & White, 2017).

Assisted living facilities offer alternatives for seniors that cannot live on their own, but do not need intensive medical or nursing care. While varying in services provided, meals,

housing, personal care/support, social activities, security, transportation, and health care management are usually present (Robinson, Saisan & White, 2017).

Nursing homes are the most recognized option of facilities that provide a wide range of long-term care services designed to assist the elderly. Meals, medical, and personal care are all provided, and many provide short-term stays following a hospitalization (Robinson, Saisan & White, 2017).

Continuing Care Retirement Communities (CCRCs) are facilities that offer more than one kind of housing and different levels of care all in the same place to meet the changing needs of the elderly. 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 (Seniors for Living, 2016).

In 2015, 93% of persons age 65+ were covered by Medicare, which covers mainly acute care services but requires beneficiaries to pay part of the cost, leaving about half of health spending to be covered by other sources (AOA, 2016c, p.13).

Caregivers for the elderly

There were approximately 34.2 million individuals caring for someone over the age of 50 in 2015. Caregivers include family, friends and neighbors, with an adult child being the person most likely to be providing care (National Alliance for Caregiving [NAC], 2015).

Caregivers provide assistance to those who need aid in some way. In 2016, "15.9 million family and friends provided 18.2 billion hours of unpaid care to those with Alzheimer's and other dementias" (Alzheimer's Association, 2017).

More women than men are caregivers (60% women) and the average age of a female caregiver is 50.3 years old. Most caregivers (59%) are employed and work either full or part-time. Many caregivers (60%) report having to decrease hours, rearrange their schedule, or take unpaid leave in order to meet their caregiving obligations. 17% of caregivers reported fair or poor heath as compared to 10% of the general population reporting the same conditions (NAC, 2015).

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 decisions 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

(Administration for Community Living [ACL], 2017; Texas Health and Human Services [HHS], n.d.)

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, 2016a)
- *Aging and Disability Resource Center* is a service of Texas Health and Human Services (HHS) to locate services in Texas (HHS, n.d.)

Household Characteristics, 2015												
	United States		Texas		Bexar		Bandera		Comal		Kendall	
		% of total		% of total		% of total		% of total		% of total		% of total
Total Population	321,418,820		27,469,114		1,897,753		21,269		129,048		40,384	
Population 65 years & over	47,760,852	14.8%	3,225,168	11.7%	218,139	11.5%	5,401	25.4%	22,890	17.7%	7,851	19.4%
Total Households	116,926,305		9,149,196		618,831		8,292		43,951		13,552	
With one or more 65 & older	31,226,497	26.7%	2,068,854	22.6%	140,901	22.8%	3,092	37.3%	13,719	31.2%	4,584	33.8%
Householder 65+ living alone	11,857,879	38%	713,367	34.5%	48,699	34.6%	957	31.0%	4,129	30.1%	1,565	34.1%
(U.S. Census Bureau, 2017a&b)												

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