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TX: Geriatric Care

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Contact hours: 2

Course price: $19

Instructions

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Beginning on January 1, 2014, the Texas Board of Nursing is requiring that any LVN, RN, or APRN whose practice includes older adult or geriatric populations shall complete at least a two-hour course on older adult or geriatric care in every licensure cycle [Board Rule 216.3(h)]. The content must include information on: elder abuse; age-related memory changes; age-related disease processes, including chronic conditions; and end of life issues. This course meets that requirement.

Course Summary

Our aging population is increasing in size as elders face age-related diseases and chronic conditions as well as memory changes and challenges. With some facing increasing dependence, older adults may become vulnerable to elder abuse, which Texas mandates reporting by healthcare professionals. Finally, end of life can be eased by palliative care and/or hospice.

COI Support

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No commercial support was received for this activity.

This course will be reviewed every two years. It will be updated or discontinued on April 1, 2020.

Criteria for Successful Completions

80% or higher on the post test, a completed evaluation form, and payment where required. No partial credit will be awarded.

Course Objectives

When you finish this course you will be able to:

1. Summarize the demographics of the older adult population in the United States. Review age-related effects on all body systems.
2. Differentiate among types of age-related memory changes, identifying their basic symptoms and challenges.
3. Define elder abuse and explain Texas requirements for reporting abuse. Identify important end-of-life issues for elders and caregivers.

Our Aging Population

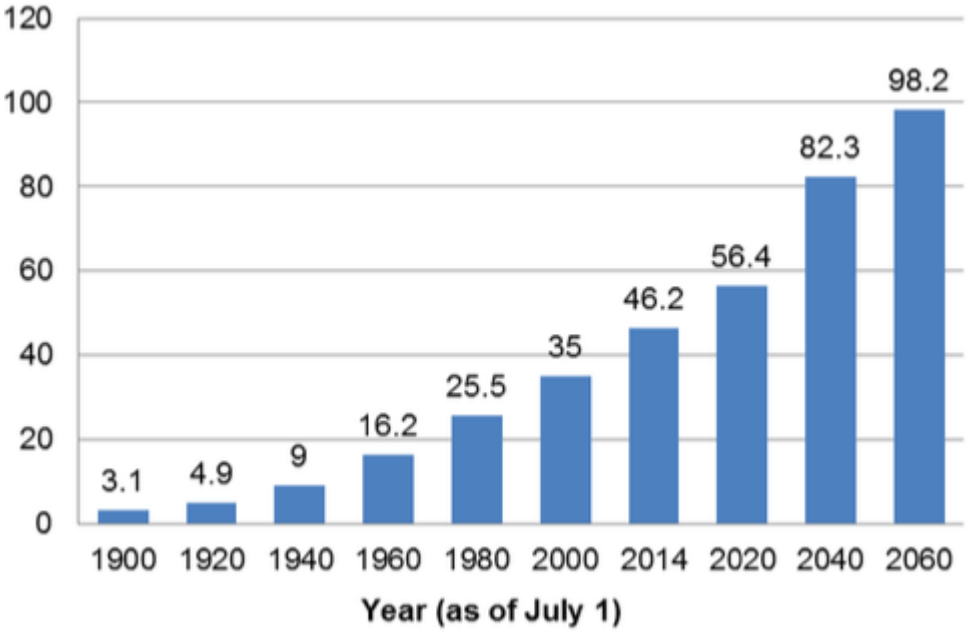
> Nurses provide front-line healthcare for older adults in a wide variety of settings, including preventive care in primary care offices and in the community, acute care in hospitals, and long-term care in nursing homes and assisted living facilities.
>
> Grady, 2011

As we grow older, our bodies and our minds can be affected by a variety of age-related changes and conditions. Medical conditions that were minor or relatively easy to deal with when we were in our thirties and forties may become progressively more challenging in our seventies, eighties, and beyond, necessitating changes in medical care, diet, and exercise, and often affecting our sleep.

Age-related changes cover a complex of issues—physical, mental, and social—occurring simultaneously and affecting one another. Many kinds of programs and organizations exist to support aging people and those who care for them at the federal, state, and local levels. As our elder population increases, these programs and organizations will be increasingly important, as will the role of innovation and research. Nursing science plays a critical role by building evidence to inform and improve both clinical care and quality of life for older adults (Grady, 2011).

According to the Administration on Aging (AOA) (part of the U.S. Department of Health and Human Services), the older population—those 65 and older—was 46.2 million in 2014. That’s 14.5% of the U.S. population, or 1 in 7 Americans. That population is expected to be 98 million by 2060, more than twice as many as today (see below).

Number of Persons 65+, 1900–2060 (numbers in millions)



Source: AOA, 2015.

Those people who reach age 65 have an additional life expectancy of 19.3 years (20.5 years for females and 18 years for males). Older women outnumber older men at 25.9 million to 20.4 million. The number of very old is also increasing, and in 2014 there were 72,197 people aged 100 or more (0.2% of the total older population) (AOA, 2015).

In 2014, 22% of the older population were members of racial or ethnic minority populations. People of Hispanic origin (who may be of any race) represented 8% of the older population, and non-Hispanic minorities an additional 14%, including African-Americans (9%), Asian or Pacific Islander (4%), Native American (0.5%), and Native Hawaiian/Pacific Islander (0.1%). In addition, 0.7% of people 65 and older identified themselves as being of two or more races. (AOA, 2015).

The proportion of older people in the population varies considerably by state, with some states experiencing much greater growth in their older populations. In 2014 almost two-thirds (63%) of people 65 and older lived in just 14 states, and Texas is number 3 with 3.1 million, behind only California at 5 million and Florida at 3.8 million (AOA, 2015).

Age-Related Disease Processes and Chronic Conditions

Even elders who are in relatively good health still experience changes as they age. This module describes these changes briefly by body system.

Metabolic Changes

As we age, our metabolism slows and our lean body mass decreases; the proportion of the body that is made up of fat typically doubles between the ages of 25 and 75. Because of the slowing metabolism, the body is less able to tolerate changes in temperature.

Metabolism—the rate at which calories are burned—ultimately determines how easily weight is gained or lost. Metabolism is influenced by age, gender (men have a higher resting metabolic rate than women), heredity, and the proportion of lean muscle a person has (more lean muscle usually means a higher metabolic rate) (Steinbaum, 2017).

Each decade after age 30 there is a 2% decrease in metabolism, which makes it more difficult to maintain a desirable weight and body composition. To match this decreased energy metabolism, there must either be a 2% decrease in food intake or a 2% increase in energy expenditure (Morris, 2016).

Musculoskeletal Changes

Sarcopenia and osteoporosis are two of the most common musculoskeletal changes that occur with age. Osteoporosis is a disease of the bones that occurs when the body fails to form enough new bone, when too much old bone is reabsorbed by the body, or both. Bone mineral is lost and replaced throughout life, but loss begins to outstrip replacement around age 35. Women can lose up to 20% of their bone density in the first 5 to 7 years after menopause.

Half of all women and 1 in 4 men over the age of 50 will break a bone due to osteoporosis. Most will break a bone in the hip, spine, or wrist. If diagnosed early, the fractures associated with osteoporosis can often be prevented. Unfortunately, osteoporosis frequently remains undiagnosed until a fracture occurs (NIH, 2015; NOF, n.d.).

Many factors, including body structure, ancestry, diet, and lifestyle, as well as advanced age and prolonged use of certain medications can increase the risk for osteoporosis and fractures. The U.S. Preventive Services Task Force recommends that all women age 65 and older be screened for osteoporosis. There are several tests available for diagnosis and medications that may be effective for treatment (NIH, 2016).

Sarcopenia is the age-related decrease in muscle mass and is to muscles what osteoporosis is to bone. It is estimated that muscle mass declines 22% for women and 23% for men between the ages of 30 and 70, with a decline of muscle strength of up to 30%. As muscles lose strength, coordination and balance deteriorate and joint capsules tighten and lose flexibility. Lean muscle mass is lost and is replaced with adipose tissue (Winkler, 2016).

Sarcopenia is a major public health problem that affects about 25% of people younger than 70 years and 40% of those 80 years and older. Healthcare costs related to sarcopenia totaled about $18.5 billion in the United States in the year 2000 (NIH, 2011).

Regardless of a person's level of activity, there is a decrease in muscle mass and muscle fiber size with age. By the age of 60, degenerative changes in weight-bearing joints are essentially a universal occurrence (Winkler, 2011). The consequences of muscle loss include decreased strength and endurance, loss of bone strength, increased fall and fracture risk, and a decreased ability to perform activities of daily living (ADLs). Men tend to have greater muscle mass than women, particularly in the upper body; however, rates of loss appear to be uniform between genders (NIH, 2011).

Resistance training is primary for the prevention, treatment, and even reversal of sarcopenia. It has been shown to influence hormone levels, the neuromuscular system, and protein synthesis. A program of progressive resistance training can have positive effects in as little as 2 weeks (WebMD, 2016).

Strengthening exercises are both safe and effective for women and men of all ages, including those who are not in perfect health. In fact, people with health concerns—including heart disease and arthritis—often benefit the most from an exercise program that includes lifting weights a few times each week.

Integumentary Changes

[Much of the material in this section is taken from Medline Plus, 2014.]

The integumentary system, consisting of the skin, hair, and nails, has a variety of functions. It acts as a waterproof shield and insulates the body against extremes of temperature; it helps to regulate temperature, cushion and protect the deeper tissues, shield the body from sunlight and harmful chemicals, and excrete wastes. The skin contains sensory receptors to detect pain, sensation, pressure, and temperature and is involved in vitamin D synthesis.

Skin is the largest organ of the integumentary system and contains three primary layers: the epidermis, dermis, and hypodermis. The outermost layer, the epidermis, is a waterproof barrier and contains no blood vessels. The dermis lies just below the epidermis and contains connective tissue; nerve endings for touch and temperature; hair follicles, sweat glands, sebaceous glands; and lymphatic and blood vessels. The hypodermis lies below the dermis and connects it to underlying muscle and bone.

As we age, structures within the skin begin to atrophy and lose elasticity and turgor. A decrease in the number of nerve endings leads to decreased sensation. Melanocytes (pigment-producing cells) decrease, causing gray hair and making the skin more susceptible to sun damage.

As we age the epidermis begins to thin, reducing its protective function and allowing chemicals and pathogens easier access to the body. Adipose tissue also decreases with age, reducing the ability of the skin to cushion the body against trauma and to protect against environmental temperature change. Reduced collagen causes skin to tear more easily.

With a decrease in pigment-producing melanocytes, hair color fades and turns gray or white. Hair strands become smaller and many hair follicles stop producing hair altogether, causing hair thinning and baldness. Nails grow more slowly and may become yellowed and brittle.

Two temperature regulation issues can be especially critical for older adults: **heat intolerance** and **hypothermia**. Older adults adjust less well to sudden changes in temperature and are more prone to heat stress than younger people. They are more likely than younger people to have a chronic medical condition that changes normal body responses to heat, and more likely to be taking prescription medications that impair the body's ability to regulate temperature or inhibit perspiration.

Heat stroke is the most serious heat-related illness in all ages. It occurs when we are no longer able to control body temperature. This creates a cascade in which body temperature rises rapidly, and the body loses its ability to sweat and thus the ability to cool. Body temperatures can rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided. **Heat exhaustion** is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids.

Hypothermia can also be a problem for older adults because of the body's decreased ability to regulate and sense temperature. Certain medications older adults may be taking —such as antidepressants, antipsychotics, and sedatives—can also change the body's ability to regulate temperature (Mayo Clinic, 2014).

Hypothermia is most likely at very cold temperatures, but it can occur even at cool temperatures (above 40°F) if a person becomes chilled from rain, sweat, or submersion in cold water. Hypothermia can be deadly if not treated quickly and it can happen anywhere. Older people can have a mild form of hypothermia if the temperature in their home is too cool.

Temperature regulation issues are a good case in point for the potentially complex interrelationship between age-related body changes, disease, injury, and treatments.

Diseases such as Parkinson's, hypothyroidism, stroke, and arthritis may interfere with the body's temperature regulation. Conditions that decrease sensation and movement—such as stroke, arthritis, and spinal cord injuries—can prevent a person from sensing changes in body temperature and can also prevent that person from moving to a warmer environment or obtaining blankets or warm clothing. Health problems such as diabetes that interferes with circulation, and some skin problems that cause the body to lose more heat than normal, can also contribute to hypothermia. In addition, some medications, including certain antidepressants, antipsychotics, narcotic pain medications, and sedatives can change the body's ability to regulate its temperature (Mayo Clinic, 2014).

Cardiovascular Changes

Age is the major risk factor for cardiovascular disease. Heart disease and stroke incidence rises steeply after age 65, accounting for more than 40% of all deaths among people age 65 to 74 and almost 60% at age 85 and above. Older adults are much more likely than younger people to suffer a heart attack or stroke, or to develop coronary disease and high blood pressure leading to heart failure. Cardiovascular disease is also a major cause of disability, limiting the activity and eroding the quality of life of millions of older people each year. The cost of these diseases to the nation is in the billions of dollars.

Age-related changes in heart muscle cells (myocytes) help explain alterations in the heart as a whole. There are fewer myocytes to do the work as we age and those that remain enlarge, compromising their ability to pump blood efficiently.

As the heart ages, it thickens and becomes less elastic, and it may become enlarged in size. The older heart is less able to relax completely between beats and its pumping chambers become stiffer. The heart is not able to pump as vigorously as it once did and is also less responsive to adrenaline. The older heart is less able to supply adequate blood and oxygen to muscles during exercise (Shea, n.d.).

The older heart is less able to accelerate to meet the body's oxygen demands during pain, anxiety, fever, or hemorrhage. In addition, an older person may not exhibit the typical heart attack symptoms of chest pain and diaphoresis but instead may have only shortness of breath, anxiety, and confusion. Those with diabetes and long-standing angina are much less likely to exhibit typical symptoms of heart attack (Larsen, 2008–2009).

Atherosclerosis is the disease behind the disease. When atherosclerotic processes take hold in the arteries that supply blood to the heart, the condition becomes **coronary artery disease** (**CAD**). Atherosclerosis is a degenerative disorder that injures the inner walls of large arteries. In atherosclerosis, thick abnormal patches called *plaques* accumulate at scattered locations along the artery's innermost layer. The plaques are disorganized masses filled with cholesterol, other lipids, and cells, all covered by a white fibrous coating (Mitchell & Schoen, 2009).

Atherosclerotic plaques narrow an artery and hinder blood flow. Further, the surface of a bulging atherosclerotic plaque sometimes tears, exposing material that stimulates clot formation. Clots and ruptured plaque material can then break away from the wall, be carried by the blood, and clog arteries downstream.

The events leading to CAD begin in childhood and can be addressed with diet and lifestyle changes. The risk of heart disease increases for men after age 45 and for women after age 55 (or after menopause). It is important to know the symptoms of heart attack and that these symptoms may be different in older adults and between men and women.

Coronary Artery Disease can take a chronic course called **stable angina**. It can also give rise to sudden cardiac emergencies called **acute coronary syndromes**. Acute coronary syndromes range from temporary episodes of significant ischemia (unstable angina) to permanent heart muscle damage (myocardial infarction) to **sudden cardiac death**.

Stroke is the number one cause of serious adult disability in the United States and it is devastating to the stroke patient and family. Stroke strikes all age groups, from fetuses still in the womb to centenarians. However, older people have a higher risk for stroke than the general population and the risk for stroke increases with age. For every decade after the age of 55, the risk of stroke doubles, and two-thirds of all strokes occur in people over 65 years old. People over 65 also have a seven-fold greater risk of dying from stroke than the general population, and the incidence of stroke is increasing proportionately with the increase in the elder population.

Age, and the diseases that occur more frequently with age, are major risk factors for stroke. The most important risk factors for stroke are hypertension, heart disease, diabetes, and cigarette smoking. Others include heavy alcohol consumption, high blood cholesterol levels, illicit drug use, and genetic or congenital conditions, particularly vascular abnormalities (NINDS, 2012).

Urinary Changes

Problems in the urinary system can be caused by aging, illness, or injury. With age, changes in the kidneys' structure cause them to lose some of their ability to remove wastes from the blood. Further, the muscles in the ureters, bladder, and urethra tend to lose some of their strength. Older adults may have more urinary infections because the bladder muscles do not tighten enough to empty the bladder completely. A decrease in strength of muscles of the sphincters and the pelvis can also cause **incontinence**, the unwanted leakage of urine. Illness or injury can also prevent the kidneys from filtering the blood completely or block the passage of urine (NKUDIC, 2014).

With age, the number of **nephrons** (the filtering units of the kidneys) decreases and the kidneys are less able to filter waste from the blood. Blood vessels that supply the kidneys become stiffer, causing the kidneys to filter blood more slowly. The overall amount of kidney tissue also decreases and there is a reduced capacity for renal regeneration in the face of acute renal insults (Medline Plus, 2014a).

Because of age-related changes to the kidneys, older adults are more susceptible to the development of dehydration and drug toxicity due to reduced drug excretion. An important cause of renal toxicity is failure to adjust medication dosage to decreases in **glomerular filtration rate**, which measures how much blood passes through the tiny filters in the kidneys (glomeruli) each minute.

Changes in immune system function with aging can lead from an increased inflammatory response to renal injury and increased susceptibility to infection. Because the older person is less likely to develop a fever or an increase in white blood cells, kidney infections may go unnoticed and untreated, leading to sepsis and kidney injury.

In the older male, benign prostatic hypertrophy (BPH) can develop. The prostate gland, which surrounds the urethra, grows larger and may cause difficulty in urination. In addition, an infection or a tumor may cause problems passing urine. Men in their thirties and forties may begin to have urinary symptoms and need medical attention, but for others symptoms aren't noticed until much later in life.

Urinary tract infections (**UTIs**) are the most common infection found in older adults. Most UTIs are not serious, but some infections can lead to serious problems, such as kidney infections. Recurrent or chronic kidney infections can cause permanent damage, including kidney scars, poor kidney function, high blood pressure, and other problems. Some acute kidney infections—infections that develop suddenly—can be life threatening, especially if the bacteria enter the bloodstream, a condition called **septicemia** (NKUDIC, 2012).

Symptoms of UTI vary by age, gender, and whether a catheter is present. While frequent and intense urge to urinate and a painful, burning feeling in the bladder or urethra during urination are typical in younger women, older people with UTIs are more likely to be tired, shaky, and weak, and to have muscle aches and abdominal pain. Urine may be cloudy, dark, or bloody or have a foul smell. If a person has a catheter, a fever that cannot be attributed to any other condition may be the only sign (NKUDIC, 2012).

Normally, UTIs do not cause fever if they are in the bladder. A fever may mean the infection has reached the kidneys or has penetrated the prostate. Other symptoms of a kidney infection include pain in the back or side below the ribs, nausea, and vomiting (NKUDIC, 2012).

Older adults are more susceptible to UTIs than younger adults for several reasons. They are generally more susceptible to infections and, if they are incontinent, to bacteria that can travel through the urethra to the bladder. Incomplete emptying of the bladder allows urine to stagnate, which is conducive to bacterial growth.

Bacteria may be introduced into the bladder on or around a urinary catheter. The Infectious Diseases Society of America recommends using catheters for the shortest time possible to reduce the risk of a UTI (NKUDIC, 2012).

Respiratory Changes

Similar to other organ systems, aging of the pulmonary system is associated with structural changes leading to a progressive decline in function. Decreased collagen and elastin result in the loss of elastic recoil of the lungs. There is decreased diameter of small airways and a tendency to early closure, leading to air trapping and ventilation/perfusion mismatches.

With age, there is a decrease in the number of alveoli (the primary gas exchange units of the lungs) and lung capillaries, with a corresponding decrease in gas exchange.

Aging lungs become stiffer and less able to expand and contract. Vital capacity, muscle strength, and endurance decrease. The chest wall becomes more rigid and the diaphragm and other muscles of respiration become weaker. A decreased cough reflex and a reduction in the number of cilia that sweep mucous up and out of the lungs results in increased likelihood of infection (Medline Plus, 2014b).

Endocrine Changes

[Material in this section is taken from Hormone Health Network, 2013.]

The endocrine system is made up of glands that secrete hormones that regulate the body's growth, metabolism, and sexual development and function. With age, some hormones increase or decrease, some target organs become less receptive, and hormones may be broken down more slowly.

Despite these age-related changes, the endocrine system functions well in most older people. However, some changes do occur because of normal damage to cells during the aging process and genetically programmed cellular changes. These changes may alter:

- Hormone production and secretion
- Hormone metabolism (how quickly excess hormones are broken down and leave the body, eg, through urination)
- Hormone levels circulating in blood
- Biologic activities
- Target cell or target tissue response to hormones
- Rhythms in the body, such as the menstrual cycle

Increasing age is thought to be related to the development of type II diabetes. Diabetes is a disorder that causes repeated episodes of inappropriately high concentrations of glucose in the bloodstream. This chronic hyperglycemia gradually produces tissue damage, notably to eyes, kidneys, nerves, heart, and blood vessels. With aging, the target cell response time becomes slower, especially in people who might be at risk for this disorder.

The signs and symptoms of endocrine system diseases affect many body systems. In elders they are frequently subtle and may be harder to detect than in younger people. At times, these signs are incorrectly linked with other causes, such as the changes of normal aging, other medical disorders or conditions, or drug therapy.

The aging process affects nearly every gland. For example, the hypothalamus is responsible for releasing hormones that stimulate the pituitary gland. During aging there is either impaired secretion of some hypothalamic hormones or impaired pituitary response. These changes appear to influence the endocrine system's ability to respond to the body's internal environment. As a result, the body cannot respond as well to internal and external stresses.

Gastrointestinal Changes

As we grow older, the prevalence of gastrointestinal problems increases. Gastroesophageal reflux disease, or GERD, occurs when the lower esophageal sphincter does not close properly and stomach contents leak back (reflux) into the esophagus. Heartburn that occurs more than twice a week may be considered GERD, and it can eventually lead to more serious health problems (Medline Plus, 2017).

Food intake may decrease in the older adult for several reasons. An older person's ill-fitting dentures or tooth decay can make chewing difficult. Decreased saliva production causes dry mouth, which may increase tooth decay and even make swallowing more difficult. Taste becomes less acute, making food less appetizing.

Decreased intestinal motility and slower stomach emptying can lead to altered absorption of nutrients and medications. Decreased physical activity, decreased intestinal motility, and a lessened urge to defecate can lead to constipation.

Older adults regularly taking narcotic pain medications frequently experience constipation. Opioid pain medications slow movement of stool through the intestinal tract and the stool becomes hard and more difficult to expel. The usual treatments of fiber, fluids, and exercise are not sufficient. Stool softeners such as docusate and peristalsis-inducing medications such as senna and bisacodyl are the treatment of choice (Herndon et al., 2002).

Up to 40% of older adults experience some kind of gastrointestinal symptoms. In addition to GERD and constipation, these include diverticular disease, ulcers, polyps, and colon cancer. All of these are more prevalent in adults over age 60 (WebMD, 2016, 2016a).

Sensory Changes

[Material in the latter part of this section is taken from NIDCD, 2015.]

As the senses become less acute with age, less information can be gathered and processed about the world around us. The prevalence of sensory impairments is increasing as life expectancy increases. In order to maintain independent living, health, and quality of life for older adults it is important to minimize the impact of sensory impairments.

Sensory impairments are a substantial problem for older Americans. One out of 6 older Americans has impaired vision; 1 out of 4 has impaired hearing; 1 out of 4 has loss of feeling in the feet; and 3 out of 4 have abnormal postural balance testing (CDC, 2010).

Hearing loss is one of the most common conditions affecting older and elderly adults. One in 3 people between 65 and 74 has hearing loss and nearly half of those older than 75 have difficulty hearing, making it hard to understand and follow a doctor's advice, respond to warnings, and hear doorbells and alarms. Hearing loss can also make it difficult to enjoy talking with friends and family (NIDCD, 2016).

In adults, visual impairment is associated with loss of personal independence and difficulty maintaining employment, often leading to the need for disability pensions, vocational and social services, and nursing home or assistive living placement. Older adults represent the vast majority of the visually impaired population. For older adults, visual problems have a negative impact on quality of life equivalent to that of life-threatening conditions such as heart disease and cancer (NEI, 1999).

Between the ages of 40 and 50, most people begin to have difficulty focusing their vision up close. This is a condition call **presbyopia** and it is a normal result of aging caused by a loss of elasticity of the lens. Presbyopia is easily corrected with glasses. The lens also thickens and discolors, making it more difficult to distinguish colors. Pupils decrease in size and more light is needed to see well.

There are certain diseases that are not a normal part of aging that can lead to vision loss. The leading causes of visual impairment are diseases that are common in elders: **age-related macular degeneration (AMD)**, cataract, glaucoma, diabetic retinopathy, and optic nerve atrophy (NEI, 1999).

The largest single risk factor for cataract is age and it afflicts more than 50% of people over age 80. Glaucoma is a leading cause of irreversible blindness among African Americans and Hispanics. With the aging of the U.S. population, increased life expectancy, and higher incidence of glaucoma in older people, the population of those with the disease is expected to rise significantly (NEI, 2012).

More than two-thirds of those with visual impairment are over age 65. Although there are no gender differences in the prevalence of vision problems in older adults, there are more visually impaired women than men because, on average, women live longer than men. However, African Americans are twice as likely to be visually impaired than are whites of comparable socioeconomic status. As the older adult population grows, the number of people with visual impairment and other aging-related disabilities will increase (NEI, 1999).

As with vision and hearing, people gradually lose their ability to smell as they get older. Smell that declines with age is called **presbyosmia** and is not preventable. Roughly 1% to 2% of people in North America say that they have a smell disorder. Problems with smell are more common in men than women. In one study, nearly one-quarter of men ages 60 to 69 had a smell disorder, while about 11% of women in that age range reported a problem. Many people who have smell disorders also notice problems with their sense of taste (NIDCD, 2015).

Age is only one of the many reasons for problems with smell. Most people who develop a problem with smell have recently had an illness or injury. The most common causes are the common cold and chronic nasal or sinus infection.

Problems with the sense of smell can also be a sign of other serious health conditions. A smell disorder can be an early sign of Parkinson's disease, Alzheimer's disease, multiple sclerosis, and (rarely) brain tumor. It can also accompany or be a sign of obesity, diabetes, hypertension, and malnutrition.

When smell is impaired, people often change their eating habits. Some may eat too little and lose weight while others may eat too much and gain weight. Food becomes less enjoyable and people may use too much salt or sugar to improve the taste, a practice that can worsen certain medical conditions such as high blood pressure, kidney disease, or diabetes. In severe cases, loss of smell can lead to depression.

It is important to identify and treat the underlying cause of a smell disorder. Certain antibiotics, some blood pressure pills, some cholesterol-lowering drugs, and some antifungal medications can cause problems with smell. The sense of smell usually returns to normal when the medicine is stopped.

Taste function decreases with aging to some degree and can be influenced by central tumors and lesions (eg, ischemic infarcts secondary to stroke). Taste can also be adversely affected by a number of medications. The most debilitating taste disorders are those in which a persistent, often chronic, bad taste is present, such as a bitter or salty taste. The causes of these taste disorders are poorly understood, although they usually appear later in life. In addition to dental and oral health considerations (eg, the presence of certain metals in oral appliances, purulent discharge from infected teeth or gums), viruses, physical damage to one or more taste nerves, and various medicines may be the cause. Among offending medicines are lipid reducing agents, antibiotics, antihypertensives, anxiolytics, and antidepressants.

Sleep Changes

Sleep needs change over a person's lifetime. Children and adolescents need more sleep than adults. Older adults need about the same amount of sleep as younger adults—seven to nine hours of sleep per night. However, older adults may get less sleep than they need, often because they have trouble falling asleep. A study of adults over 65 found that 13% of men and 36% of women take more than 30 minutes to fall asleep.

There are many possible explanations for these changes. Older adults may produce and secrete less melatonin, the hormone that promotes sleep. They may also be more sensitive to—and may awaken because of—changes in their environment, such as noise. Older adults may also have other medical and psychiatric problems that can affect their nighttime sleep. Researchers have noted that people without major medical or psychiatric illnesses report better sleep.

Not sleeping well can lead to a number of problems. Older adults who have poor nighttime sleep are more likely to have depressed mood, attention and memory problems, excessive daytime sleepiness, more nighttime falls, and use more over-the-counter or prescription sleep aids. Poor sleep is also associated with a poorer quality of life.

Insomnia is the most common sleep complaint at any age. It affects almost half of adults 60 and older. Disorders that cause pain or discomfort during the night can interfere with sleep, as can conditions such as heart failure, lung disease, Parkinson's disease, dementia, and depression. Medications can also adversely affect sleep.

As people age, their sleeping and waking patterns tend to change. Older adults usually become sleepier earlier in the evening and wake up earlier in the morning. If they don't adjust their bedtimes to these changes, they may have difficulty falling and staying asleep.

Sleep apnea and snoring are two examples of sleep-disordered breathing—conditions that make it more difficult to breathe during sleep. When severe, these disorders may cause people to wake up often at night and be drowsy during the day.

Two **movement disorders** that can make it harder to sleep include restless legs syndrome, or RLS, and periodic limb movement disorder, or PLMD. Both of these conditions cause people to move their limbs when they sleep, leading to poor sleep and daytime drowsiness. Often, both conditions occur in the same person.

Age-Related Memory Changes and Challenges

This section examines dementia as it relates to cognitive impairment, differentiates dementia from other conditions, looks at dementia screening, and discusses types of dementia. Finally, it addresses the care of those who have dementia.

Dementia and Cognitive Impairment

Dementia is a descriptive term for a collection of symptoms that can be caused by a number of disorders that affect the brain. It is estimated that as many as 6.8 million people in the United States have dementia, and at least 1.8 million of those are severely affected. Studies in some communities have found that almost half of all people age 85 and older have some form of dementia. Although it is common in very elderly individuals, dementia is not a normal part of the aging process. Many people live into their 90s and even 100s without any symptoms of dementia (NINDS, 2013).

People with dementia have significantly impaired mental functioning that interferes with normal activities and relationships. They can lose their ability to solve problems and maintain emotional control, and may experience personality changes and behavioral problems such as agitation, delusions, and hallucinations.

Memory loss is a common symptom of dementia but by itself does not mean a person has dementia. Dementia is diagnosed only if two or more brain functions—such as memory, language, perception, reasoning, or judgment, among others—are significantly impaired.

Although memory and other cognitive functions change with age**, age-related cognitive change** is not dementia. Memory may not be as sharp and there may be word-finding difficulties—it may take longer to do certain mental tasks such as memorizing a string of words or numbers. Multi-tasking may be a thing of the past. Older adults with age-related cognitive changes can however read, operate a computer, manage their finances, and prepare their own meals—they do not forget what a coffee pot is or how to operate a microwave. They understand when they are in danger and know that they should call for help or get out of a house if there is a fire.

Mild cognitive impairment (MCI) is a condition in which people have memory problems that are noticeably worse than age-related changes. However, people with MCI do not have the problems associated with dementia such as personality and cognitive changes. Some people with MCI do go on to develop Alzheimer’s Disease (AD), but not everyone does.

Differentiating Dementia from Other Conditions

[Much of the material in this section is taken from NINDS, 2013.]

The symptoms of a number of medical conditions mimic those of dementia and this must be considered when evaluating a person experiencing cognitive changes. Gerontology specialists speak of the "Three Ds"—dementia, delirium, and depression—because these are the most prevalent reasons for cognitive impairment in older adults. Delirium and depression can cause cognitive changes that may be mistaken for dementia, and healthcare providers and caregivers should learn to distinguish among the three conditions.

Delirium

Delirium is a sudden, severe confusion with rapid changes in brain function. Delirium develops over hours or days and is temporary and reversible. It can occur after general anesthesia, from infections (eg, UTI, pneumonia), from fluid/electrolyte or acid/base disturbances, or from other conditions that deprive the brain of oxygen. Pain can also contribute to delirium, as can the medications used to treat pain. Being in an unfamiliar environment such as adult daycare or a nursing home can also contribute to delirium.

Depression

Depression is caused by neurochemical imbalances in the brain. It can lead to cognitive impairment, which should improve when the depression is treated. People with depression are aware of the date and time; however, they may answer "I don't know" to orientation questions and may not make eye contact. They may have a flat affect (show little expression) and may speak in a monotone. A smile does not rule out the presence of depression; people who are depressed may smile while describing the hopelessness of life. Irritability or verbal expression of pessimism, sadness, or hopelessness may indicate depression. Depression commonly occurs in the early stages of Alzheimer's disease (AD) as individuals become aware of their loss of cognitive function.

Other Conditions

There are other conditions that can cause dementia-like symptoms; many of these conditions are reversible with appropriate treatment (NINDS, 2013):

- Reactions to medications or interactions between medications
- Metabolic problems and endocrine abnormalities
- Thyroid abnormalities
- Hypoglycemia
- Too little or too much sodium or calcium
- Pernicious anemia
- Nutritional deficiencies

- Thiamine deficiency (vitamin B1)—can occur with chronic alcoholism and can seriously impair mental abilities, in particular memories of recent events
- Dehydration—can cause mental impairment that resembles dementia
- Infections—can cause neurologic symptoms, including confusion or delirium due to fever or other side effects of the body's fight to overcome the infection
- Subdural hematomas
- Poisoning—exposure to lead, heavy metals, or other poisonous substances Symptoms may or may not resolve after treatment, depending on how badly the brain is damaged.
- Abuse of alcohol, prescription medications, and recreational drugs
- Brain tumors
- Anoxia—a diminished supply of oxygen to the brain. Recovery depends on the severity of the oxygen deprivation.
- Heart and lung problems—chronic lung disease or heart problems that prevent the brain from receiving adequate oxygen can starve brain cells and lead to the symptoms of dementia

Dementia Screening

[This section is taken largely from NINDS, 2013.]

For people with AD or other progressive dementias, early diagnosis allows them to plan for the future while they are still able to make decisions. There are a number of strategies for the assessment and diagnosis of dementia. Screening begins with a detailed patient history to determine when the symptoms began and to determine the person's overall medical condition.

The physical examination helps to rule out treatable causes of dementia and identify signs of stroke or other disorders that can contribute to dementia. Look for signs of illness, such as heart disease or kidney failure, that can overlap with dementia. A review of medications is necessary to determine whether any medications or medication interactions are causing or contributing to the symptoms of dementia.

The neurologic examination assesses balance, motor control, sensory functions, and reflexes, and looks for the presence of any neurologic condition (eg, movement disorders, stroke) that may affect the patient's diagnosis or is treatable with drugs.

Cognitive tests measure memory, language skills, math skills, and other abilities related to mental functioning. The Mini-Mental State Examination (MMSE) may be used to examine orientation, memory, and attention, the ability to name objects, follow verbal and written commands, write a sentence spontaneously, and copy a complex shape.

Brain scans are used to identify strokes, tumors, or other problems that can cause dementia. Cortical atrophy—degeneration of the brain's cortex—is common in many forms of dementia and may be visible on a brain scan. Brain scans also can identify changes in the brain's structure and function that suggest AD.

Electroencephalograms (EEGs) may be used in people with suspected dementia. Many patients with moderately severe to severe AD have abnormal EEGs. An EEG may also be used to detect seizures, which occur in about 10% of AD patients as well as in many other disorders.

A variety of laboratory tests are available to diagnose dementia or rule out other conditions, such as kidney failure, that can contribute to symptoms. A partial list of these tests includes a complete blood count, blood glucose test, urinalysis, drug and alcohol tests (toxicology screen), cerebrospinal fluid analysis (to rule out specific infections that can affect the brain), and analysis of thyroid and thyroid-stimulating hormone levels.

A psychiatric evaluation may be obtained to determine if depression or another psychiatric disorder may be causing or contributing to a person's symptoms.

Common Types of Dementia			
Dementia subtype	Early, characteristic symptoms	Neuropathology	Proportion of dementia cases
*Alzheimer's disease (AD)	▪ Impaired memory, apathy and depression ▪ Gradual onset ▪ Language and visuospatial deficits	▪ Cortical amyloid plaques ▪ Neurofibrillary tangles	50%–75%
*Vascular dementia (VaD)	▪ Similar to AD, but memory less affected, and mood fluctuations more prominent ▪ Physical frailty ▪ Stepwise onset ▪ Patchy cognitive impairment ▪ Often preventable	▪ Cerebrovascular disease ▪ Single infarcts in critical regions, or more diffuse multi-infarct disease ▪ Group of syndromes	20%–30%
Frontotemporal dementia (FTD)	▪ Behavioral and personality changes ▪ Mood changes ▪ Disinhibition ▪ Language difficulties	▪ No single pathology: damage limited to frontal and temporal lobes ▪ Early onset (45 to 60 yrs of age)	5%–10%
Dementia with Lewy Bodies (DLB)	▪ Marked fluctuation in cognitive ability ▪ Visual hallucinations ▪ Parkinsonism (tremor and rigidity) ▪ Adverse reactions to antipsychotic medications	Cortical Lewy bodies (alpha-synuclein)	<5%

*Post mortem studies suggest that many people with dementia have mixed Alzheimer's disease and vascular dementia pathology and that this "mixed dementia" is underdiagnosed. Source: Adapted with permission from Alzheimer's Disease International, 2009.

Types of Dementia

[This section is taken largely from NINDS, 2013.]

Various disorders and factors contribute to the development of dementia. Neurodegenerative disorders such as AD, frontotemporal disorders, and Lewy body dementia result in a progressive and irreversible loss of neurons and brain functions. Currently, there are no cures for these progressive neurodegenerative disorders. However, other types of dementia can be halted or even reversed with treatment.

Tauopathies

In some dementias, a protein called tau clumps together inside nerve cells in the brain, causing the cells to stop functioning properly and die. Disorders that are associated with an accumulation of tau are called tauopathies, and they include Alzheimer's disease, **Corticobasal degeneration (CBD)**, **Frontotemporal disorders (FTD)**.

Synucleinopathies

In these brain disorders, a protein called alpha-synuclein accumulates inside neurons. Although it is not fully understood what role this protein plays, changes in the protein and/or its function have been linked to Parkinson's disease and other disorders.

One type of synucleinopathy, **Lewy body dementia**, involves protein aggregates called Lewy bodies, balloon-like structures that form inside of nerve cells. The initial symptoms may vary, but over time, people with these disorders develop very similar cognitive, behavioral, physical, and sleep-related symptoms. Lewy body dementia is one of the most common causes of dementia, after Alzheimer's disease and vascular disease.

Vascular Dementia and Vascular Cognitive Impairment

Vascular dementia and vascular cognitive impairment (VCI) are caused by injuries to the vessels supplying blood to the brain. These disorders can be caused by brain damage from multiple strokes or any injury to the small vessels carrying blood to the brain.

Dementia risk can be significant even when individuals have suffered only small strokes. Vascular dementia and VCI arise as a result of risk factors that similarly increase the risk for cerebrovascular disease (stroke), including atrial fibrillation, hypertension, diabetes, and high cholesterol.

Mixed Dementia

Autopsy studies looking at the brains of people who had dementia suggest that a majority of those age 80 and older probably had "mixed dementia," caused by both AD-related neurodegenerative processes and vascular disease-related processes. In fact, some studies indicate that mixed vascular-degenerative dementia is the most common cause of dementia in the elderly.

In a person with mixed dementia, it may not be clear exactly how many of a person's symptoms are due to AD or another type of dementia. In one study, approximately 40 percent of people who were thought to have AD were found after autopsy to also have some form of cerebrovascular disease. Several studies have found that many of the major risk factors for vascular disease also may be risk factors for AD.

Researchers are still working to understand how underlying disease processes in mixed dementia influence each other. It is not clear, for example, if symptoms are likely to be worse when a person has brain changes reflecting multiple types of dementia. Nor do we know if a person with multiple dementias can benefit from treating one type, for example, when a person with AD controls high blood pressure and other vascular disease risk factors.

Alzheimer's Disease

The most common type of dementia in those over age 65, **Alzheimer's disease (AD)**, is caused by the formation of abnormal proteins within the brain called plaques and tangles. Damage typically begins in an area of the cerebrum called the hippocampus, which is responsible for the formation of new memories. In fairly rapid succession, plaques and tangles spread forward to the temporal and frontal lobes, affecting language, judgment, learning, comprehension, orientation, and emotions. Although almost everyone with AD is elderly, it is not considered to be a normal part of aging.

In most people, symptoms of AD appear after age 60. However, there are some early-onset forms of the disease that are usually linked to a specific gene defect, which may appear as early as age 30. AD causes a gradual decline in cognitive abilities, usually during a span of 7 to 10 years. Nearly all brain functions, including memory, movement, language, judgment, behavior, and abstract thinking, are eventually affected. Tangles are largely made up of a protein called tau which is part of a healthy nerve cell's structural support and which is also responsible for delivering substances throughout the cell. In AD, tau is changed in a way that makes it collect into tangles, which causes the collapse of the neuron's support and transport system.

Today, 5.4 million Americans have Alzheimer's disease and about 3.3 million of them are women. By 2050, up to 16 million people will have AD. In 2016 the direct costs of caring for those with AD was estimated to be $236 billion, with Medicare paying nearly half of that (Alzheimer's Association, 2016, 2016a).

In Texas in 2016, 350,000 people were living with Alzheimer's, which is the sixth leading cause of death in the state. Of those 350,000, 57,000 were age 65-74, 160,000 were age 75-84, and 140,000 were 85 and older. In 2015, 1.4 million Texans acted as caregivers for those with Alzheimer's and other dementias (Alzheimer's Association, 2016b).

The Texas Department of State Health Services operates the state's Alzheimer's Disease Program, which was mandated by the legislature in 1987 to provide information and support to Alzheimer's patients, their families, and their long-term care providers. Information can be obtained from the program's website at http://www.dshs.texas.gov/alzheimers/ (TX DSHS, 2019).

Care of Those with Dementia

Those with moderate or advanced dementia often need round-the-clock care and supervision and also may need assistance with daily activities such as eating, bathing, and dressing. Meeting these needs takes patience, understanding, and careful thought by the person's caregivers.

Communicating with a person with dementia is a learned skill. Important elements include:

- Setting a positive mood
- Getting the person's attention
- Stating your message clearly
- Asking simple answerable questions
- Listening with ears, eyes, and heart
- Breaking activities into steps
- Using distracting and redirection to deal with upset and agitation
- Responding with affection and reassurance
- Remembering the past as a soothing technique
- Maintaining a sense of humor

Caregiving is a challenging task made even more so when caring for someone with dementia. Print, online, and in-person resources can help caregivers:

- modify the environment to make it safer and help keep the person with dementia from wandering
- understand frustrating behaviors and how to work with the person
- deal with personal issues of cleanliness—toileting, bathing, and dressing
- manage diet and nutrition
- provide activities and exercise
- deal with agitation, paranoia, and other difficult behaviors

Critical but often overlooked by family caregivers is the need for a caregiver to care for themselves (FCA, 2016).

Elder Abuse

> Elder abuse—in all of its forms—is an outrage against humanity.
>
> Kathy Greenlee
> Fighting Elder Abuse, 2014

Each year hundreds of thousands of older people are abused, neglected, and exploited. Many victims are people who are frail and vulnerable and cannot help themselves. They often depend on others to meet their most basic needs. Abusers of older adults are both women and men and may be family members, friends, or "trusted others" (AOA, 2016b).

Elder abuse is known to be widespread throughout the United States and the world but because it is largely hidden it is under-reported. Although estimates vary widely, experts believe that nearly 85% of elder abuse cases go unreported and 40% of all elder abuse involves some form of financial exploitation by caretakers, guardians/conservators, or attorneys (Abramson, 2003).

There are many reasons why victims do not report the abuse, including lack of confidence, a history of abuse, fear of retaliation by the abuser, cultural beliefs, embarrassment, and shame. For example, people who have never been self-confident are not likely to ask for help when they become dependent. Those who have been abused or neglected their entire lives expect maltreatment to continue, do not think someone would want to help, and often reject help when it is offered.

Many older adults are ashamed to report abuse or are afraid a report will get back to the caregiver and the abuse will get worse. If you think someone is being abused—physically, emotionally, or financially—talk to the person alone and offer to get help from adult protective services.

In general, elder abuse is a term referring to any knowing, intentional, or negligent act by a caregiver or any other person that causes harm or a serious risk of harm to a vulnerable adult. Legislatures in all fifty states have passed some form of elder abuse prevention laws. Laws and definitions of terms vary considerably from one state to another, but broadly defined, abuse may be:

- Physical abuse—inflicting physical pain or injury such as slapping, bruising, or restraining by physical or chemical means
- Sexual abuse—non-consensual sexual contact of any kind
- Neglect—the failure by those responsible to provide food, shelter, healthcare, or protection for a vulnerable older adult
- Exploitation—the illegal taking, misuse, or concealment of funds, property, or assets of an older adult for someone else's benefit
- Emotional abuse—inflicting mental pain, anguish, or distress through verbal or nonverbal acts (humiliating, intimidating, or threatening)
- Abandonment—desertion of a vulnerable older adult by anyone who has assumed responsibility for care or custody of that person
- Self-neglect—the failure of a person to perform essential self-care tasks when such failure threatens the older adult's own health or safety (AOA, 2016b)

Warning Signs of Abuse

While one sign does not necessarily indicate abuse, tell-tale signs of physical, emotional, financial, verbal, or sexual abuse, neglect, or mistreatment include:

- Bruises, pressure marks, broken bones, abrasions, and burns
- Unexplained withdrawal from normal activities, a sudden change in alertness, and unusual depression
- Bruises around the breasts or genital area
- Sudden changes in a person's financial situation
- Bedsores, unattended medical needs, poor hygiene, and unusual weight loss
- Behavior such as belittling, threats and other uses of power and control by spouses
- Strained or tense relationships, frequent arguments between the caregiver and elder (AOA, 2016b)

Texas Adult Protective Services offers some additional perspective on signs of abuse or neglect of the elderly or people with disabilities:

- Abuse may cause various injuries such as scratches, cuts, bruises, burns, broken bones, or bedsores. It can also result in confinement, rape or sexual misconduct, and verbal or psychological abuse.
- Neglect may cause starvation, dehydration, over- or under-medication, unsanitary living conditions, lack of personal hygiene. Neglected adults may also not have heat, running water, electricity, medical care.
- Exploitation may result in loss of property, money, or income. Exploitation means misusing the resources of an elderly or disabled person for personal or monetary benefit. This includes taking Social Security or SSI (Supplemental Security Income) checks, misusing a joint checking account, or taking property and other resources.
- Sometimes adults who are 65 years old or older or those who have disabilities may become isolated or ill and not have someone who is willing and able to help meet their basic needs (TX DFPS, n.d.a).

Reporting Elder Abuse in Texas

The Texas Department of Family and Protective Services maintains a central place for reporting:

- child abuse and neglect
- abuse, neglect, self-neglect, and exploitation of the elderly or adults with disabilities living at home
- abuse of children in child-care facilities or treatment centers
- abuse of adults and children who live in state facilities or are being helped by programs for people with mental illness or intellectual disabilities

Who Must Report

Texas law says anyone who thinks a child, or person 65 years or older, or an adult with disabilities is being abused, neglected, or exploited must report it to the Department of Family and Protective Services (DFPS).

A person who reports abuse in good faith is immune from civil or criminal liability. The Department keeps the name of the person making the report confidential. Anyone who does not report suspected abuse can be held liable for a misdemeanor or felony.

How to Report

By phone: 1-800-252-5400

Online: Texas Abuse Hotline https://www.txabusehotline.org/
Relay Service: 7-1-1 or 800-735-2989 (tell the agent to call the abuse hotline)
Emergency: 911 or local law enforcement

Statewide Intake (SWI) operates the Texas Abuse Hotline. It takes reports and any that meet the legal definition of abuse, neglect or exploitation are prioritized and assigned to the appropriate program for investigation. The program operates around-the-clock every day of the year (DFPS, 2015).

Adult Protective Services

Adult Protective Services is the program charged with:

- investigating reports of abuse, neglect, and exploitation of adults who are elderly or have disabilities
- conducting in-home investigations and providing or arranging for services
- investigating allegations at facilities
- educating the public about the prevention of elder abuse (DFPS, n.d.a)

In 2015 APS received 110,277 reports of alleged abuse/neglect in home, and 12,952 reports for facilities. This was up from 103,019 and 12,314 respectively for 2014, and up dramatically from 2013 when the figures were 87,257 and 11,663 respectively (DFPS, 2013–2015).

While reports of alleged abuse are made by many different people and entities, overall, medical personnel are consistently the largest source of reports of abuse/neglect at 18-19%. In elder and disabled adult abuse the percentage in 2015 was 21.8%, with relatives, community agencies, and victims accounting for another 41.9% of reports.

Care at the End of Life

Care at the end of life involves a team-oriented approach that includes expert medical care, pain management, and emotional and spiritual support. Care is tailored to the person’s needs and wishes while providing support to the person’s loved ones.

Palliative Care

Palliative care manages the needs of patients who have a progressive incurable illness and often includes hospice. Palliative care utilizes an interdisciplinary approach that focuses on the physical, psychological, social, and spiritual needs of patients who have progressive incurable illnesses. Palliative care can be given at any time throughout the course of an illness, along with curative and aggressive treatments. It includes interventions that are intended to maintain quality of life and ease the suffering of both the patient and family. As death approaches, palliative care typically intensifies to ensure that comfort is a priority and practical needs are addressed (NCI, 2016).

The goal of palliative care is to improve the patient's and the family's quality of life by preventing and relieving suffering. This includes treating physical symptoms such as pain, and dealing with emotional, social, and spiritual concerns. When palliative treatment is given at the end of life, care is taken to make sure the patient's wishes about treatments are followed (NCI, 2016).

Hospice

[The following section on hospice is used with permission from Caring Connections, n.d.,a.]

Hospice is not a place; hospice is a family-centered approach to care at the end of life. Hospice care is generally for people with an expected survival of 6 months or less. Its goal is to improve the quality of life that remains by focusing on providing care for the patient and the family rather than attempting to cure the disease. Hospice is designed to relieve or decrease pain or other symptoms, and provide as much quality time as possible with family and friends while meeting the physical, emotional, and spiritual needs of the dying individual. The goal of all hospice care is palliation, or making the patient as comfortable as possible—not dulled by social isolation, drugs, or heroic life-saving efforts. Care is organized around the following principles:

- Care is based on caring, not curing.
- Services are usually provided in the person's home, but may also be provided in freestanding hospice centers, hospitals, nursing homes, or other long-term care facilities.
- Services are available to patients of any age, religion, race, or illness.
- It is covered under Medicare, Medicaid, most private insurance plans, HMOs, and other managed-care organizations.

The Hospice Team

The hospice care team includes doctors, nurses, home health aides, social workers, chaplains, counselors, and trained volunteers who work together to address the dying person's physical, emotional, and spiritual needs. The goal is to help keep the person as pain-free as possible, with loved ones nearby until death. The hospice team develops a care plan that meets each person's individual needs for pain management and symptom control. The team usually consists of:

- Clergy or other counselors
- Home health aides
- Hospice physician (or medical director)
- Nurses
- Social workers
- Trained volunteers
- Speech, physical, and occupational therapists, if needed
- The person's personal physician may also be included.

It is important to have a physician involved to ensure quality hospice care. Patients can generally choose to have their personal doctor work with the hospice medical director to coordinate medical care, especially when symptoms are difficult to manage. The hospice medical director is also available to answer questions the person or loved ones may have regarding hospice medical care.

In many cases, family members or loved ones are the dying person's primary caregivers and have their own special needs for support. As a relationship with the hospice begins, hospice staff will want to know how best to support the person and family during this time.

Among its major responsibilities, the interdisciplinary hospice team:

- Manages the person's pain and symptoms
- Provides emotional support
- Provides needed medications, medical supplies, and equipment
- Coaches loved ones on how to care for the person
- Delivers special services like speech and physical therapy when needed
- Makes short-term inpatient care available when pain or symptoms become too difficult to manage at home, or the caregiver needs respite time
- Provides grief support to surviving loved ones and friends

Support can include conversations with the person and family members, teaching caregiving skills, prayer, telephone calls to loved ones, including family members who live at a distance, and companionship and help from volunteers.

Counseling and grief support for the dying person and their loved ones are important parts of hospice care. After the person's death, bereavement support is offered to families for at least one year. These services can include telephone calls, visits, written materials about grieving, and support groups. Individual counseling may be offered by the hospice, or the hospice may make a referral to a community resource.

Paying for Hospice

More than 90% of hospices in the United States are certified by Medicare. Eighty percent of people who use hospice care are over the age of 65, and are thus entitled to the services offered by the Medicare hospice benefit. This benefit covers virtually all aspects of hospice care with little expense to the person or family. In addition, most private health plans, plus Medicaid in 48 states and the District of Columbia, cover hospice services (Caring Connections, n.d.,b).

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Post Test

Use the answer sheet following the test to record your answers.

1. The proportion of older people in the population:

    a. Varies considerably by state.
    b. Is virtually identical from state to state.
    c. Is greater in the north than the south.
    d. Never changes.

2. Each decade after age 30 there is a 2% decrease in metabolism.:

    a. True
    b. False

3. What is the primary activity for the prevention, treatment, and even reversal of sarcopenia?:

    a. Aerobic exercise.
    b. Resistance training.
    c. Special diet.
    d. Swimming.

4. Temperature regulation problems for elders can have a complex of causes and make them susceptible to:

    a. Colds and pneumonia.
    b. Broken bones and sprained ankles.
    c. Heat stroke and hypothermia.
    d. Constipation and gastric distress.

5. The most common infection found in older adults is:

    a. Septicemia.
    b. Kidney infections.
    c. Skin infections.
    d. Urinary tract infections (UTIs).

6. Constipation while taking narcotic pain medication:

a. Is frequent but of no particular concern.

b. Can usually be treated successfully by fiber, fluids, and exercise.

c. Generally requires stool softener and peristalsis-inducing medications.

d. Can be easily addressed by drinking extra water.

7. Sense of smell that declines with age is called:

a. Presbycusis.

b. Presbyosmia.

c. Presbyopia.

d. Presbyteria.

8. The three most prevalent reasons for cognitive impairment in older adults do NOT include:

a. Dementia.

b. Delirium.

c. Depression.

d. Dehydration.

9. The most common type of dementia in those over age 65 is Alzheimer’s Disease.:

a. True

b. False

10. Elder abuse is:

a. Abusive behavior by an older adult toward a caregiver.

b. Intentional harm done by a minor to an adult.

c. Restraint of an elder in a residential setting.

d. Any intentional or negligent act that causes risk of harm to a vulnerable adult.

11. In Texas, who is required to report elder abuse?:

a. Only healthcare professionals.

b. Only healthcare professionals and law enforcement.

c. Anyone who suspects abuse.

d. Only victims.

12. The goal of palliative care is to:

a. Replace aggressive treatments with a caring regimen.

b. Prevent or relieve suffering and enhance quality of life to the end.

c. Focus exclusively on the needs of the patient’s family.

d. Substitute for hospice care when hospice is not available.

13. Hospice is a place where people can go for specialized care as they live out the final days of their lives.:

a. True

b. False

Answer Sheet

TX: Geriatric Care

Name (Please print your name): _____

Date: _____

Passing score is 80%

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

Course Evaluation

Please use this scale for your course evaluation. Items with asterisks * are required.

- 5 = Strongly agree
- 4 = Agree
- 3 = Neutral
- 2 = Disagree
- 1 = Strongly disagree

* Upon completion of the course, I was able to:

a. Summarize the demographics of the older adult population in the United States.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

b. Review age-related effects on all body systems.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

c. Differentiate among types of age-related memory changes, identifying their basic symptoms and challenges.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

d. Define elder abuse and explain Texas requirements for reporting abuse.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

e. Identify important end-of-life issues for elders and caregivers.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

* The author(s) are knowledgeable about the subject matter.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

* The author(s) cited evidence that supported the material presented.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

* This course contained no discriminatory or prejudicial language.

Yes No

* The course was free of commercial bias and product promotion.

Yes No

* As a result of what you have learned, do you intend to make any changes in your practice?

Yes No

If you answered Yes above, what changes do you intend to make? If you answered No, please explain why.

* Do you intend to return to ATrain for your ongoing CE needs?

- Yes, within the next 30 days.
- Yes, during my next renewal cycle.
- Maybe, not sure.
- No, I only needed this one course.

* Would you recommend ATrain Education to a friend, co-worker, or colleague?

- Yes, definitely.
- Possibly.
- No, not at this time.

* What is your overall satsfaction with this learning activity?

5 4 3 2 1

* Navigating the ATrain Education website was:

- Easy.
- Somewhat easy.
- Not at all easy.

* How long did it take you to complete this course, posttest, and course evaluation?

- ○ 60 minutes (or more) per contact hour
- ○ 50-59 minutes per contact hour
- ○ 40-49 minutes per contact hour
- ○ 30-39 minutes per contact hour
- ○ Less than 30 minutes per contact hour

I heard about ATrain Education from:

- ○ Government or Department of Health website.
- ○ State board or professional association.
- ○ Searching the Internet.
- ○ A friend.
- ○ An advertisement.
- ○ I am a returning customer.
- ○ My employer.
- ○ Other
- ○ Social Media (FB, Twitter, LinkedIn, etc)

Please let us know your age group to help us meet your professional needs.

- ○ 18 to 30
- ○ 31 to 45
- ○ 46+

I completed this course on:

- ○ My own or a friend's computer.
- ○ A computer at work.

- ○ A library computer.
- ○ A tablet.
- ○ A cellphone.
- ○ A paper copy of the course.

Please enter your comments or suggestions here: _____

_____

_____

_____

Registration Form

Please print and answer all of the following questions (* required).

* Name: _____

* Email: _____

* Address: _____

* City: _____ * State: _____ * Zip: _____

* Country: _____

* Phone: _____

* Professional Credentials/Designations:

_____

Your name and credentials/designations will appear on your certificate.

* License Number and State: _____

* Please email my certificate:

○ Yes ○ No

(If you request an email certificate we will not send a copy of the certificate by US Mail.)

Payment Options

You may pay by credit card or by check.
Fill out this section only if you are **paying by credit card.**
2 contact hours: $19

Credit card information

* Name: _____

Address (if different from above): _____

* City: _____ * State: _____ * Zip: _____

* Card type:

○ Visa ○ Master Card ○ American Express ○ Discover

* Card number: _____

* CVS#: _____

* Expiration date: _____