

Geriatrics

**EMS Continuing Education
Technician through Technician-Advanced Paramedic**

**Consistent with the
National Occupational Competency Profiles
as developed by
Paramedic Association of Canada
and
“An Alternate Route to Maintenance of Licensure”
as developed by Manitoba Health**

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Disclaimer

These documents were developed for improved accessibility to “An Alternative Route to Maintenance of Licensure” for all paramedics in Manitoba. Regional implementation of Alternate Route is at the discretion of the local EMS Director.

This is a supportive document to the National Occupational Competency Profiles and “An Alternative Route to Maintenance of Licensure.” It is not the intent that this package be used as a stand-alone teaching tool. It is understood that the user has prior learning in this subject area, and that this document is strictly for supplemental continuing medical education. To this end, the Paramedic Association of Manitoba assumes no responsibility for the completeness of information contained within this package.

It is neither the intent of this package to supercede local or provincial protocols, nor to assume responsibility for patient care issues pertaining to the information found herein. Always follow local or provincial guidelines in the care and treatment of any patient.

This package is to be used in conjunction with accepted models for education delivery and assessment, as outlined in “An Alternative Route to Maintenance of Licensure”.

This document was designed to encompass all licensed training levels in the province Technician, Technician-Paramedic, Technician-Advanced Paramedic. Paramedics are encouraged to read beyond their training levels. However, the written test will only be administered at the paramedic’s current level of practice.

All packages have been reviewed by the Paramedic Association of Manitoba’s Educational Subcommittee and physician(s) for medical content.

As the industry of EMS is as dynamic as individual patient care, the profession is constantly evolving to deliver enhanced patient care through education and standards. The Paramedic Association of Manitoba would like to thank those practitioners instrumental in the creation, distribution, and maintenance of these packages. Through your efforts, our patient care improves.

This document will be amended in as timely a manner as possible to reflect changes to the National Occupational Competency Profiles, provincial protocols/Emergency Treatment Guidelines, or the Cognitive Elements outlined in the Alternate Route document.

Any comments, suggestions, errors, omissions, or questions regarding this document may be referred to info@paramedicsofmanitoba.ca , attention Director of Education and Standards.

Geriatrics

Conventions Used in this Manual

Black lettering without a border is used to denote information appropriate to the Technician Level and above.

|| Text with the single striped border on the left is information appropriate to Technician-Paramedic and above.

||| Text with the double striped border on the left is information appropriate to Technician-Advanced Paramedic and above.

Table of Contents

Disclaimer	1
Geriatrics	2
Table of Contents	3
Introduction	4
Assessment of the Geriatric Patient	4
History Taking.....	4
Physical Exam	5
Physiologic Changes of Aging.....	6
Respiratory System Changes.....	6
Respiratory Emergencies in the.....	7
Respiratory Emergencies in the Elderly.....	7
Pneumonia.....	7
Chronic Obstructive Pulmonary Disease	7
Pulmonary Embolism.....	8
Cardiovascular System Changes	8
Cardiovascular Emergencies in the Elderly	9
Coronary Artery Disease.....	9
Angina	9
Myocardial Infarction (MI).....	10
Heart Failure.....	10
Nervous System Changes.....	11
CNS Emergencies	12
Stroke (Cardiovascular Accident).....	12
Alzheimer’s Disease.....	12
Dementia	13
Delirium	13
Musculoskeletal System Changes	13
Integumentary System Changes	14
Endocrine System Changes.....	14
Genitourinary System Changes.....	14
Gastrointestinal System Changes	15
Geriatric Abuse	15
Terminally Ill Patients.....	16
Health Care Directives	16
Do Not Resuscitate (DNR) Orders.....	17
Glossary.....	18
References	19

Introduction

Approximately 25% of North Americans will be 65 years of age or older by the year 2030. This large segment of our aging population will make up 70% of all ambulance transports. In order to anticipate this change in workload, prehospital health care providers must be educated regarding the special needs of the geriatric population. The special characteristics of geriatric patients that can complicate assessments are:

- Geriatric patients are likely to suffer from concurrent illness
 - Chronic problems can make assessment for acute problems difficult
 - Signs and symptoms of chronic illness can be confused with signs and symptoms of acute illness
- Aging can affect an individual's response to illness or injury.
 - Pain may be diminished or absent
 - The patient or paramedic may underestimate the severity of the problem.
- Social and emotional factors may have a greater influence on health in geriatric patients than in any other age group.
 - The patient fears losing autonomy
 - The patient fears the hospital environment
 - The patient has financial concerns about health care

Therefore, vague chief complaints from the geriatric patient must be thoroughly assessed. General Malaise, weakness or fever may indicate significant underlying problems such as **sepsis** or myocardial infarction.

Assessment of the Geriatric Patient

History Taking

Geriatric patients tend to have a lengthier past medical history than other patients due to their advanced age, medication use, and chronic illness. Due to physical impediments, such as hearing loss, visual impairment, or simple patient fatigue, the history taking process may take longer. When communicating with the geriatric patient, the paramedic should:

- Always identify yourself
- Speak at eye level to ensure that the patient can see you
- Locate a hearing aid, eyeglasses, or dentures (if needed)
- Speak slowly, distinctly, and respectfully
- Use the patient's surname, unless requested otherwise
- Listen closely
- Be patient
- Use gentleness

- Preserve dignity

When obtaining history from older age patients, it is noteworthy to examine the living conditions of the patient for:

- Alcohol or medication use (compliance, noncompliance, or abuse)
- Medications (current or expired, from one physician or multiple doctors)
- Health information (**ERIK Kit**, Vial of Life, MedicAlert)
- Evidence of nutritional status
- Signs of adequate, personal hygiene
- Sometimes it helps to obtain additional history from caregivers (if any are available), due to an increased incidence of poor memory or dementia in some geriatric patients.

Note: Obtaining a current list of the patient's medications is important for the following reasons:

- It can be determined if the patient has multiple doctors prescribing conflicting medications.
- This information can assist the paramedic in making a working diagnosis.
- It can be determined if the patient is compliant with all of their medications.
- It can be determined if the patient is perhaps abusing their medication.



Assessment of the geriatric patient

Physical Exam

While assessing and examining the geriatric patient, the paramedic should be considerate of the following:

- The patient may fatigue easily
- Geriatric patients commonly wear many layers of clothing for warmth, which may hamper the exam
- Respect the patient's need for privacy unless it interferes with patient care procedures
- Explain actions clearly, particularly if patient is visually or hearing impaired
- Be aware that patients may minimize or deny problems due to fear
- Try to differentiate between chronic and acute problems

Physiologic Changes of Aging

Physiological changes that occur with aging include: alterations in body mass and total body water; a decreased ability to maintain internal homeostasis; a decrease in the function of immunological mechanisms; nutritional disorders; and decreases in hearing and visual acuity. Immunological mechanisms, such as an overall reduction in the number of T-lymphocytes, lowers the elderly patient's cellular immune response, making them more prone to infections.

As an individual reaches 65 years of age, lean body mass may decrease as much as 25% and fat tissue may increase by as much as 35%. These changes in body composition can influence the dosage and frequency of administration of fat-soluble drugs, as there is a larger reservoir for accumulation of the drug. Similarly, the decrease in total body water is likely to increase the concentration of water-soluble medications.

The body's ability to maintain internal homeostasis through normal thermoregulatory mechanisms declines over time beginning at about 30 years of age. This and other factors predispose the geriatric patient to cold and heat related conditions such as hypothermia, heat exhaustion and hyperthermia. Factors which may contribute to an increased risk of thermoregulatory disorders include: impaired sympathetic nervous system function causing decreased capacity for peripheral vasoconstriction, lowered metabolic rate, poor peripheral circulation, and chronic illness.

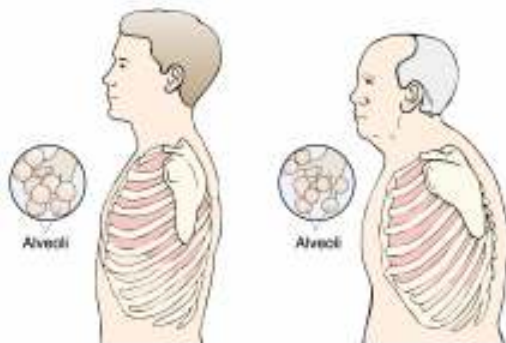
Respiratory System Changes

Respiratory function in older adults is compromised as a result of changes in pulmonary physiology. With aging, the bony thorax becomes more rigid, and lung elastic recoil decreases. In combination with a hunched posture due to spinal curvature (**Kyphosis**), and weakened respiratory muscles, respiratory effort is increased. Changes in bones and teeth can alter the shape of the face and mouth, making it difficult to obtain an air-tight seal and the ability to effectively ventilate the patient. Leaving the patient's dentures in place will help maintain the seal around the mouth, however if partial dentures become dislodged, then remove them.

Variable increases in alveolar diameter and a tendency for distal airways to collapse on expiration lead to an increase in residual volume and a decrease in vital capacity. By age 75, vital capacity may decrease by as much as 50%, maximum breathing capacity by as much as 60%, and maximum work rate and maximum oxygen uptake by as much as 70%.

Arterial oxygen pressure (PaO₂) also slowly decreases with age, but arterial carbon dioxide pressure (PaCO₂) remains unchanged (probably related to the much greater reserve in carbon dioxide elimination than in oxygen absorption). At 30 years of age the PaO₂ of a healthy person breathing ambient air at sea level is about 90 torr, whereas at 70 years of age the expected PaO₂ is 70 torr. These findings, combined with the normal decline in central and peripheral chemoreceptor function, produce a diminished ventilatory response to hypoxic and hypercapnic challenge.

A reduction or loss of cilia in the airways and a diminished cough reflex and impaired gag reflex makes the geriatric patient more prone to infectious pulmonary diseases as they are more likely to inhale harmful bacteria and particulate matter. A decreased cough and gag reflex also makes the older patient more susceptible to aspiration and obstruction complications.



Spinal curvature can lead to an anteroposterior hump, which can cause respiratory difficulties. Reduction in the size of the alveoli can also reduce the amount of oxygen that is exchanged in the lungs.

Respiratory Emergencies in the Elderly

Pneumonia

Pneumonia, which is a significant cause of death in elderly patients, is difficult to cure due to age-related decline in pulmonary defense mechanisms.

Diagnosis of pneumonia in the prehospital setting may be complicated by patient presentation. The elderly patient may be too weak to cough or produce sputum. If a patient has preexisting emphysema or CHF, adventitious lung sounds may be misinterpreted. An increased heart rate and respiratory rate are often the most reliable indicators of pneumonia, especially when coupled with fever and an altered mental status. For the patient with suspected pneumonia, the paramedic should focus on managing life threatening problems, providing high flow oxygen and transport to the receiving hospital, where the patient can be admitted for definitive treatment.

Chronic Obstructive Pulmonary Disease

Chronic Obstructive Pulmonary Disease (COPD), which results in reduced expiratory air flow, is a common finding in geriatric patients with a history of cigarette smoking.

Patients experiencing problems with COPD may present with: cyanosis, wheezing or diminished breath sounds, increased work of breathing (including accessory muscle use), dyspnea, decreased pulse oximetry readings, and extreme anxiety. The paramedic should obtain an accurate history, including medications such as steroid therapy or previous intubations for COPD and prepare for aggressive airway intervention.

Based on the training level of the prehospital practitioner, bronchodilators such as Ventolin or Combivent may be administered, or prehospital intubation may be required.

Pulmonary Embolism

Pulmonary embolism is a life threatening cause of dyspnea and respiratory distress in the elderly patient. Certain disease processes such as congestive heart failure, COPD, and malignancies, as well as physical procedures such as immobilization of the geriatric patient, are all factors which may contribute to the development of pulmonary embolism. Most pulmonary emboli develop in the leg veins, possibly causing calf discomfort, mild calf or ankle swelling, or increased warmth in the affected leg. Other signs and symptoms are sudden onset of shortness of breath, unexplained tachycardia, and atrial fibrillation. The patient must be given high flow oxygen and transported rapidly for physician evaluation.

Cardiovascular System Changes

Cardiac function declines with age due to a number of physiological changes, including the high incidence of atherosclerotic coronary artery disease in the North American population.

These changes include a reduced ability to raise the heart rate even in response to exercise or stress, a decrease in compliance of the ventricle leading to a decreased stroke volume, a prolonged duration of contraction, and a decreased response to catecholamine stimulation. Between 30 and 80 years of age, resting cardiac output decreases by about 30%. Combined with the progressive increase in peripheral vascular resistance that occurs after 40 years of age (due to decreased **elastin** and **collagen** in the vessel walls), this decrease in cardiac output yields a significant drop in organ perfusion.

Changes also occur in the heart's electrical conduction pathways as functional cells are lost in the sinoatrial (SA) and atrioventricular (AV) nodes and throughout the rest of the conduction system. The number of cells in the SA node will decrease 90% by age 75. These changes can lead to chronic atrial fibrillation, sick-sinus syndrome, bradycardias, and heart blocks, all of which can contribute to decreased cardiac output. Atrial fibrillation is the most common dysrhythmia, causing a 30% reduction in cardiac output, and potentially pulmonary embolism, MI or CVA if left untreated.

Changes due to increased internal thickening of arteries, increased cholesterol deposits, the electrical conduction system, and decreased cardiac output, predispose the geriatric patient to dysrhythmias, heart failure, and sudden cardiac arrest when the cardiovascular system is placed under unexpected stress.

Cardiovascular Emergencies in the Elderly

Coronary Artery Disease

Coronary Artery Disease (CAD) is by far the leading cause of death in the elderly population in North America. The principal feature of CAD is the buildup of fatty deposits (plaque) on arterial walls, a process called atherosclerosis. The following risk factors make this process more likely to occur:

- Hypertension
- Diabetes
- Cigarette smoking
- High cholesterol
- Obesity

Prolonged, uncontrolled hypertension may lead to **hypertrophy** (hypertensive heart disease), which in turn may lead to congestive heart failure.

Angina

When the blood circulation to the heart is compromised, some people experience chest pain (angina) as a major symptom. Some elderly patients may experience **ischemia** without chest pain (“silent” ischemia). In such cases, the primary symptoms may be dyspnea, syncope, and/or nausea. As ischemic chest pain may be vague, the paramedic should conduct a complete history, including past medical history and medications to differentiate ischemic chest pain from other causes of chest discomfort.

Management of the patient with angina includes obtaining vital signs and initiating oxygen therapy. If certified to do so, ASA administration should be considered at this time as well.

Cardiac monitoring (3 lead or 12 lead), if EMS personnel are certified to do so, should be performed on all patients with chest discomfort or suspected cardiac symptoms. Combine the EKG findings with your clinical exam to better assess and treat a patient with cardiac symptoms. As the patient’s symptoms may be nonspecific, a cardiac monitor may help determine if the patient is having an AMI.

Intravenous access should be obtained, sublingual nitroglycerin and ASA administered, if certified to do so, every 3-5 minutes, while monitoring the patient's vital signs carefully.

Patients on certain anti-hypertensive medications may have a precipitous drop in blood pressure following nitrate administration. Also, patients who present with inferior lead ST elevation on 12 lead EKG's should be cautiously administered nitrates, as right ventricular involvement will significantly impact blood pressure following nitro administration. Be prepared to fluid bolus the patient in anticipation of this drop in blood pressure.

Myocardial Infarction (MI)

Myocardial infarction may be difficult to diagnose in the elderly patient due to: decreased pain, denial or fear of the hospital environment, or the patient's perception of chronic versus acute pain. In fact, only 45% of patients over 85 years of age experience any chest pain during a heart attack. The elderly AMI patient is more likely to present with shortness of breath, dizziness, nausea and vomiting, rather than the typical radiating, sub-sternal, chest pain. To properly assess geriatric patients suspected of experiencing a cardiac event, paramedics should perform a thorough past medical history to ascertain:

- Previous MI
- Angina
- Diabetes
- Hypertension
- High Cholesterol
- Smoking

The paramedic must maintain a high index of suspicion for MI in patients with unusual or absent warning signs or symptoms. Emergency care includes airway, ventilatory, and circulatory support; oxygen administration and pain management therapy; management of serious dysrhythmias and rapid, but gentle transport to hospital.

The receiving facility should be given as much advanced notice of an incoming suspected AMI patient as soon as possible. This will give emergency room staff time to prepare and consider thrombolytic therapy, if indicated. In the past, thrombolytic therapy was reserved for patients less than 75 years of age. More recently however, patient presentation has been used as a criteria for the administration of thrombolytic therapy, and as a result, patients over the age of 75 are not automatically excluded from this treatment option.

Heart Failure

Heart failure is seen more frequently in geriatric patients and has a larger incidence of non-cardiac causes. It occurs when the ventricular output is insufficient to meet the

metabolic demands of the body. Heart failure often is caused by ischemic heart disease, valvular heart disease, cardiomyopathy, dysrhythmias, hyperthyroidism, and anemia. Common signs and symptoms of heart failure include: dyspnea, fatigue, cough (from dry hacking to productive with frothy sputum), and dependent or pulmonary edema.

Management of CHF is based on the paramedic's training level. Treatment options, which are based on patient presentation and local protocols, include supporting the ABC's, providing high flow oxygen, EKG monitoring, and administering medications such as nitrates, morphine, diuretics such as furosemide. Aggressive prehospital management of the CHF patient may reverse the presenting symptoms and help to prevent intubation, and subsequent ICU admission.

Nervous System Changes

Anatomically, the nervous system undergoes significant change as the body ages. The brain will shrink 10-20% by age 80. There is a loss of neurons and the remaining neurons will shrink in size. Motor and sensory neural networks become slower and less responsive. The metabolic rate of the brain, however, does not change and oxygen consumption remains the same throughout life.

As the brain atrophies, the space between the brain and the skull increases. This makes the elderly patient prone to significant head trauma from falls as the brain shifts inside the skull, increasing the likelihood of subdural hematomas. Subdural bleeds may go unnoticed as bleeding can empty into the void caused by brain atrophy and not have an immediate effect on intracranial pressure (ICP).

Peripheral nervous function also deteriorates with age. As nerve endings deteriorate, sensations become diminished and reflexes slow. These degenerative changes predispose the geriatric patient to injuries from heat, cold, or traumatic forces. Nervous system degeneration may also affect perception of pain from other sources, such as myocardial infarction.

CNS Emergencies

Stroke (Cardiovascular Accident)

Cardiovascular Accident (CVA) is the third leading cause of death in the United States and the leading cause of brain injury in adults. The neurological impairment is caused by either an ischemic or hemorrhagic interruption in the blood supply to the brain. Risk factors include: smoking, hypertension, diabetes, atherosclerosis, and high cholesterol. Signs and symptoms of CVA or Transient Ischemic Attack (TIA) include:

- Facial droop
- Slurred speech
- Arm drift (indicative of unilateral deficits)

Collectively, these signs make up the prehospital Cincinnati Stroke Scale, which is often used to diagnose CVA's. Other signs and symptoms may involve numbness, visual disturbances, dizziness or headache. Management of the CVA patient consists of monitoring the ABC's and vital signs, initiating oxygen therapy, and transporting the patient to an appropriate receiving facility.



Facial droop, may be seen in the CVA patient. The patient may also slur words, use inappropriate words, or be unable to speak.

Alzheimer's Disease

Alzheimer's disease is a condition in which nerve cells in the cerebral cortex die and the brain substance shrinks. It is the single most common cause of dementia, but does not directly cause death. Patients eventually stop eating and become malnourished and immobilized, which may in turn make them more prone to infections. Early symptoms of Alzheimer's disease are primarily related to memory loss, especially the ability to make and recall new memories. As the disease progresses, agitation, violence, and impairment of abstract thinking commence. In advanced stages, patients often become bedridden and totally unaware of their surroundings. Once bedridden, complications such as bedsores, feeding problems and pneumonia contribute to a shortened life expectancy.

Dementia

Dementia is a slow, progressive loss of awareness of time and place, usually with the inability to learn new things or remember recent events. This condition often is a result of the degeneration of brain function caused by strokes, genetic or viral factors, and Alzheimer's disease. Dementia is generally considered irreversible and eventually results in total dependence on others as a result of the progressive loss of cognitive functioning.

Delirium

Unlike dementia, delirium is an abrupt onset of disorientation to time and place, usually with illusions and hallucinations. Delirium commonly is a result of physical illness. To help you remember the potential causes of delirium, think of this mnemonic:

- D** - drugs and toxins
- E** - emotional (psychiatric)
- L** - low PaO₂ (CO poisoning, CHF, COPD, AMI, pneumonia)
- I** - infection (UTI, **sepsis**, pneumonia)
- R** - retention of stool or urine
- I** - ictal (seizures)
- U** - under nutrition, dehydration
- M** - metabolism (thyroid/endocrine, electrolytes)
- S** - subdural hematoma

Management of these patients consists of maintaining personal and patient safety, ensuring adequate ABC's, and treating the suspected cause of the delirium.

Musculoskeletal System Changes

As the body ages, muscles shrink, muscles and ligaments calcify, and intervertebral discs become thin. **Osteoporosis** is common in geriatric patients (especially women), and an estimated 68% of geriatric patients show some degree of **kyphosis** ("humpback posture" or "Potts curvature"). These changes result in a decrease in total muscle mass, a decrease in height of 2 to 3 inches, widening and weakening of certain bones, and a posture that impairs mobility and alters the body's balance. As a result, falls are common and are often associated with significant morbidity and mortality. In fact, the tenth leading cause of hospital admission in the elderly population is a hip fracture, of which over 60% occur in the home.

Kyphosis: commonly caused by osteoporosis.



Integumentary System Changes

As people get older, their skin gradually becomes dry, transparent and wrinkled. These changes are associated with a loss of elasticity, uneven pigmentation, and various lesions. There is also a decreased thickness of the epidermal cell layer, a reduction in the number of sweat and sebaceous glands, and a reduction in hair and nail growth. These factors contribute to complaints such as dry, itchy skin; alterations in thermal regulation, and skin complications, such as: slower healing, increased risk of infections, and increased susceptibility to abrasions and skin tears. Care must be taken when applying EKG electrodes or securing IV's to minimize skin tears associated with the removal of these adhesive items.

Endocrine System Changes

The geriatric population is more prone to diabetes due to the following associated risk factors: decreased ability to care for self, living alone, concurrent illness, decline in renal function, and polydrug use. Type II diabetes affects about 20% of this older age group.

Thyroid disease is more common in geriatric patients, although classic signs and symptoms may not always be present. Suspect thyroid dysfunction in geriatric patients with: unexplained weight loss, changes in mental status, CHF, tachycardia, lethargy, constipation, or unexplained musculoskeletal complaints.

Genitourinary System Changes

Geriatric patients often experience a general decline in renal efficiency due to age-related changes in both structure and function of the kidneys. Filtration function falls an average of 50% between the ages of 20 and 90. Kidney mass decreases by 20% and there is a degeneration of nephrons, the basic filtering unit of the kidneys. Many drugs, such as digoxin, are eliminated through renal filtration. Thus, underlying renal dysfunction is often the cause of decreased drug efficacy and other medication-related problems in older patients.

Urinary continence, or the ability to maintain bladder control, is affected by age. Some causes of incontinence in the elderly are: a decrease in bladder capacity, involuntary bladder contractions, decreased ability to postpone voiding, medications that affect bladder control, injury or disease of the urinary tract, decline in sphincter muscle control surrounding the urethra, damage to the brain or spinal cord, prostate cancer, and dementia.

Causes of difficulty in urination usually result from enlargement of the prostate (in men), urinary tract infection, and acute or chronic renal failure. Problems with elimination can cause extreme pain and anxiety for geriatric patients, and these concerns should be taken seriously.

Gastrointestinal System Changes

Changes in gastric and intestinal function may inhibit nutritional intake and utilization. Taste bud sensitivity to salty and sweet sensation decreases. Saliva secretion decreases, reducing the body's ability to process complex carbohydrates. Gastric motility slows, causing geriatric patients to feel constipated or not hungry. Poor oral intake or loss of appetite may also be attributed to loose fitting dentures that cause pain while chewing. Thus, malnutrition, combined with renal and gastrointestinal changes, may cause medications to pass through the GI tract without being completely absorbed, or may be stored and accumulated, leading to increased levels.

GI bleeding most commonly affects patients between 60 and 90 years of age. Geriatric patients are most susceptible to GI bleeds for the following reasons:

- Less able to compensate for acute blood loss
- Less likely to feel symptoms and thus seek medical attention later in the process
- More likely to be taking blood-thinning medications

Slower gastric motility, previous abdominal surgeries, hernias, or colon cancer may lead to bowel obstruction. Constipation, abdominal pain, and the inability to pass gas are all signs and symptoms of bowel obstruction.

Bowel incontinence may be caused by: fecal impaction, severe diarrhea, damage to the brain or spinal cord, or dementia.

Geriatric Abuse

Geriatric patients may be subject to abuse by the people who are responsible for their care. Elder abuse is defined as any action which involves the infliction of physical pain, injury, debilitating mental anguish, theft, or willful deprivation of necessary services needed to maintain the health of the geriatric patient. The abuse may be perpetrated by a number of people who have contact with the patient, including: the elderly person's family members or associated persons who have daily household contact; people on whom the elderly rely for daily needs of food, clothing, shelter; or by a professional caretaker.

Some warning signs of geriatric abuse include:

- An upset or agitated patient
- Dehydration, malnutrition, or poor personal hygiene
- Hazardous or unsafe living conditions
- Unsanitary and unclean living conditions
- Unexplained or vague history of injuries
- Questionable self-inflicted injuries
- Delay in seeking medical attention for injuries

The profile of an abused elderly patient typically involves:

- A patient over 65, but typically a female patient over 75 years of age
- A history of dementia
- A patient with an impaired sleep cycle (sleepwalking, shouting)
- Incontinence (urine, feces, or both)
- A patient dependent of others for daily activities of living

EMS personnel should document the warning signs of abuse and pass this information on to the receiving hospital facility.

Terminally Ill Patients

Paramedics sometimes care for patients in advanced stages of diseases which have an unfavorable prognosis and no known cure. These encounters with terminally ill patients are often emotionally charged situations involving both the patient and the family. Paramedics should appreciate that a patient's culture has a significant impact on how grief is expressed and they should be familiar with the various cultures within their response areas. When caring for terminally ill patients, it is important for the medics to remain calm, take control of the scene, and gather a complete history of the patient's condition. This should include asking the patient or family about the presence of Advanced Health Care Directives or Do Not Resuscitate orders. These documents should be carefully reviewed to ensure that the patient's wishes can be fulfilled and appropriate care provided. Care of the terminally ill patient will often be supportive, including calming and comfort measures, and transport for physician evaluation. Based on the arrangements made by the family and physician, transport may be direct to a palliative care facility and not to an emergency department.

Health Care Directives

A health care directive is a document that allows a patient to express the level and type of treatment they desire in the event that they become incapacitated and unable to make decisions for themselves. A Directive also allows the patient to name a proxy (or proxies) to make health care decisions for them. Patients with a terminal illness, or patients in nursing homes, often have some form of health care directive. Usually, the Directive has been discussed between the family, physician, and proxy if identified. The document must be signed and dated by the patient to be valid. Various levels of requested care ranging from comfort measures only to simply no CPR, are available on a health care directive, depending on the source of the directive, (hospital, government agency, personal care home, etc.).

In the event that the health care directive exists, but is not readily available to the paramedic, resuscitative measures should be initiated until the document is produced or until the resuscitation is discontinued in the receiving facility.

Do Not Resuscitate (DNR) Orders

DNR orders should not be confused with advanced health care directives, which are legal documents executed to inform health care practitioners of an individual's wishes for treatment or withholding of treatment in the event that a person becomes incapacitated and unable to communicate those wishes directly. Advanced health care directives may have a DNR component within them.

DNR orders specify that resuscitative steps be withheld only. This does not include care such as IV therapy, drug administration, or advanced skills such as intubation.

Glossary

Atrophy - Wasting

Collagen - Ropelike protein found in the extracellular matrix

Elastin - A major connective tissue protein of elastic tissue; it has a structure of a coiled spring

ERIK Kit - Emergency Response Information Kit developed for Manitobans to include all relevant patient information, including medications, health care directives, organ donation forms, etc.

Hypertrophy - Increase in the size of an organ caused by an increase in the size of the cells rather than the number of cells.

Ischemia - Decreased supply of oxygenated blood to a body organ or part, often marked by pain

Kyphosis - Abnormal condition of the vertebral column characterized by an increased convexity in the curvature of the thoracic spine as viewed from the side.

Osteoporosis - The generalized loss of bone mass caused when bone reabsorption exceeds new bone production.

Sepsis - Infection

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