Chapter 34
Patients With Special Challenges

Unit Summary

After students complete this chapter and the related course work, they will understand the special needs of patients with developmental, sensory, and physical disabilities. They will understand the unique anatomy and physiology, assessment, and treatment needed for these patients. The special care considerations for patients who rely on medical technological assistance are discussed as well as considerations for the management of obese patients.

National EMS Education Standard Competencies

Special Patient Populations

Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs.

Patients With Special Challenges

Recognizing and reporting abuse and neglect (covered in Chapter 32, "Pediatric Emergencies," and Chapter 33, "Geriatric Emergencies").

Health care implications of:
- Abuse (Chapter 32, "Pediatric Emergencies," and Chapter 33, "Geriatric Emergencies")
- Neglect (Chapter 32, "Pediatric Emergencies," and Chapter 33, "Geriatric Emergencies")
- Homelessness (p 1275)
- Poverty (p 1275)
- Bariatrics (pp 1268–1269)
- Technology dependent (pp 1269–1273)
- Hospice/terminally ill (pp 1274–1275)
- Tracheostomy care/dysfunction (pp 1269–1270)
- Homecare (pp 1273–1274)
- Sensory deficit/loss (pp 1264–1266)
- Developmental disability (pp 1261–1264)

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Special Considerations in Trauma

Recognition and management of trauma in the:
- Pregnant patient (Chapter 31, "Obstetrics and Neonatal Care")
- Pediatric patient (Chapter 32, "Pediatric Emergencies")
- Geriatric patient (Chapter 33, "Geriatric Emergencies")

Pathophysiology, assessment, and management of trauma in the:
- Pregnant patient (Chapter 31, "Obstetrics and Neonatal Care")
- Pediatric patient (Chapter 32, "Pediatric Emergencies")
Knowledge Objectives

1. Give some examples of patients with special needs whom an EMT may encounter during a medical emergency. (pp 1261–1275)
2. Discuss the special patient care considerations that may be required when providing emergency medical care to patients with developmental disabilities, including patients with autism, Down syndrome, and prior brain injuries. (pp 1261–1264)
3. Discuss different types of visual impairments and the special patient care considerations that may be required when providing emergency medical care for these patients depending on the level of their disability. (p 1264)
4. Explain the various types of hearing impairments and the special patient care considerations that may be required when providing emergency medical care for these patients, including tips on effective communication. (pp 1265–1266)
5. List the various types of hearing aids that may be worn by patients and describe troubleshooting strategies that may help to fix a hearing aid that is not working. (pp 1265–1266)
6. Discuss the special patient care considerations that may be required when providing emergency medical care to patients who have cerebral palsy, spina bifida, and paralysis. (pp 1266–1268)
7. Define obesity and discuss the special patient care considerations, including the best way to move a morbidly obese patient, that may be required when providing emergency medical care to bariatric patients. (pp 1268–1269)
8. Discuss the special patient care considerations that may be required when providing emergency medical care to a patient who relies on a form of medical technological assistance, including a tracheostomy tube, mechanical ventilator, apnea monitor, internal cardiac pacemaker, left ventricular assist device, central venous catheter, gastrostomy tube, shunt, vagal nerve stimulator, colostomy, and ileostomy. (pp 1269–1273)
9. Describe home care, the types of patients it serves, and the services it encompasses. (pp 1273–1274)
10. Discuss hospice and palliative care and how they differ from curative care, and then explain the responsibilities of the EMT when responding to calls for terminally ill patients who have DNR orders. (pp 1274–1275)
11. Discuss the issues of poverty and homelessness in the US, its negative effects on a person’s health, and the role of the EMT as a patient advocate. (p 1275)

Skills Objectives

1. Demonstrate different strategies to communicate effectively with a patient who has a hearing impairment. (pp 1265–1266)

Lecture

I. Introduction

A. Today more people with chronic diseases live at home.
   1. One reason is society’s focus on decreasing the length of hospitalization.
   2. Another is improvements in medicine and medical technology.

B. Some examples of patients with special needs include:
   1. Children who were born prematurely and who have associated respiratory problems
   2. Infants or small children with congenital heart disease
   3. Patients with neurologic disease (occasionally caused by hypoxemia at the time of birth, as with cerebral palsy)
4. Patients with congenital or acquired diseases resulting in altered body function that requires medical assistance for breathing, eating, urination, or bowel function
5. Patients with sensory deficits such as hearing or visual impairments
6. Geriatric patients with chronic diseases requiring visitation from a home health care service

C. Some people living at home depend upon:
   1. Mechanical ventilation
   2. Intravenous pumps
   3. Other devices

D. Do not allow yourself to be distracted by the noise and mechanics of the medical equipment—your focus needs to remain on the patient.
   1. Focus on the ABCs.
   2. If the emergency is the result of mechanical failure, use equipment on the ambulance or the family’s “go bag.”

II. Developmental Disability

A. Developmental disability
   1. Developmental disability (mental retardation) caused by insufficient cognitive development of the brain
      a. Results in inability to learn and socially adapt at a normal developmental rate
      b. Possible causes
         i. Genetic factors
         ii. Congenital infections
         iii. Complications at birth
         iv. Malnutrition
         v. Environmental factors
         vi. Prenatal drug or alcohol use
         vii. Fetal alcohol syndrome
         viii. Traumatic brain injury
         ix. Poisoning (e.g., with lead or other toxins)
   2. Characteristics of developmentally disabled patients
      a. May appear slow to understand or have a limited vocabulary
      b. May behave immaturity compared to their peers
      c. If severely disabled, may not have the ability to care for themselves, communicate, understand, or respond to surroundings
   3. Rely on patients and family members for information to:
      a. Understand how well the patient can understand you
      b. Understand how the patient will interact with you
      c. Gain additional medical information regarding the patient
   4. Patient anxiety
      a. Patient may have difficulty adjusting to change or a break in routine.
      b. Patient may become more difficult to interact with as anxiety increases.
      c. Make every effort to respect the patient’s wishes and concerns.
      d. Take as much time as necessary to explain in a calming, understandable way the treatment the patient is about to receive.
   5. Patients with developmental disabilities are susceptible to the same diseases as other patients.

B. Autism
   1. Pervasive developmental disorder characterized by impairment of social interaction
   2. Other characteristics
a. Severe behavioral problems
b. Repetitive motor activities
c. Impairment in verbal and nonverbal skills

3. Wide spectrum of disability
4. Patients fail to use or understand nonverbal means of communicating
   a. Frequently have difficulty making eye-to-eye contact
   b. Do best with simple, one-step directions
   c. Tend to have trouble answering open-ended questions
   d. Tend to talk in robotic or monotone speech patterns
   e. May repeat phrases over and over again
   f. May confuse pronouns (e.g., say "you" when they really mean "I")
   g. May not speak at all

5. There is no simple explanation of why autism develops in children.
6. Approximately 1 in every 150 American children is diagnosed.
7. It affects males four times greater than females.
8. Typically diagnosed by 3 years of age
10. It is likely that some older adults with autism have never been diagnosed nor received any assistance.
11. Patients with autism generally do not have other medical disorders and will have medical needs similar to their peers without autism.
12. Rely on parents or caregivers for information, and keep them involved in the patient’s treatment.

C. Down syndrome
1. Characterized by a genetic chromosomal defect that can occur during fetal development, resulting in mild to severe mental retardation
2. Increased maternal age and a family history are known risk factors for this condition.
3. Associated abnormalities and conditions
   a. Round head with a flat occiput
   b. Enlarged, protruding tongue
   c. Slanted, wide-set eyes and folded skin on either side of the nose, covering the inner corners of the eye
   d. Short, wide hands
   e. Small face and features
   f. Congenital heart defects
   g. Thyroid problems
   h. Hearing and vision problems
   i. Misalignment of teeth and other dental anomalies
   j. Speech abnormalities
   k. Epilepsy
4. Increased risk for medical complications
   a. As many as 40% may have heart conditions and hearing and vision problems.
   b. Two thirds have congenital heart disease.
5. Intubation may be difficult due to large tongues and small oral and nasal cavities.
6. Mask ventilation can be challenging—jaw-thrust maneuver or a nasopharyngeal airway may be necessary.

D. Patient interaction
1. It is normal to feel somewhat uncomfortable when initiating contact with a developmentally disabled patient.
2. Treat the patient as you would any other patient.
3. Approach the patient in a calm, friendly manner, watching for signs of increased anxiety or fear.
4. Have the members of your team hold back slightly until you can establish a rapport with the patient.
5. Introduce the team members and explain what they are going to do.
6. Move slowly but deliberately, explaining beforehand what you are going to do, just like you would with any other patient.
7. Watch carefully for signs of fear or reluctance from the patient.
8. Make sure you are eye level with the patient.
9. Do your best to soothe the patient’s anxiety and discomfort as you work through your assessment and provide treatment.
10. By initially establishing trust and communication, you will have a much better chance for a successful outcome.

E. Brain injury
1. Patients who previously experienced head injuries may be difficult to assess and treat.
2. Take the time to speak with the patient and family to establish what is considered normal for the patient.
3. Talk in a calm, soothing tone, and watch the patient closely for signs of anxiety or aggression.
4. Do not expect the patient to walk to the ambulance or stretcher.
5. Treat the patient with respect, use his or her name, explain procedures, and reassure the patient throughout the process.

III. Sensory Disabilities

A. Sight
1. Possible causes
   a. Congenital defect
   b. Disease
   c. Injury
   d. Degeneration of the eyeball optic nerve, or nerve pathway (eg, with aging)
2. Degree of blindness may range from partial to total.
   a. Some patients lose peripheral or central vision.
   b. Some can distinguish light from dark or discern general shapes.
3. Visual impairments may be difficult to recognize.
   a. Look for signs that the patient is visually impaired.
4. Patient interaction
   a. Make yourself known when you enter the room.
   b. Introduce yourself and others in the room or have them introduce themselves so that the patient can identify their placement and voice.
   c. Retrieve any visual aids to make the interaction more comfortable for your patient.
   d. A visually impaired patient may feel vulnerable, especially during the chaos of an accident scene.
   e. The patient may have learned to use other senses such as hearing, touch, and smell to compensate for the loss of sight, and the sounds and smells of the scene may be disorienting.
   f. Tell the patient what is happening, identify noises, and describe the situation and surroundings, especially if you must move the patient.
5. Patient ambulation
   a. Patient may use a cane or walker (be sure to take it with you).
   b. A service dog can remain in the room and will provide reassurance for the patient and prevent delays in transport; however, you may need to make arrangements for the care or accompaniment of the dog.
   c. An ambulatory patient may be led by a light touch on the arm or elbow or the patient may rest his or her hand on your shoulder.
      i. You may ask patients which method they prefer to use.
      ii. Patients should be gently guided but never pulled or pushed.
iii. Obstacles need to be communicated in advance.

B. Hearing

1. Impairment may range from a slight hearing loss to total deafness.
   a. May have difficulty with pitch, volume
   b. May have inability to speak distinctly
   c. May speak even though they have never heard sounds
   d. Parkinson disease or other disease processes may cause patients to slur words, speak very slowly, or speak in a monotone.

2. Most common forms of hearing loss
   a. Sensorineural deafness
      i. Nerve damage
      ii. Occurs from a lesion or damage to the inner ear
      iii. Elderly persons will have some degree of sensorineural hearing loss because of advanced age.
   b. Conductive hearing loss
      i. Caused by a faulty transmission of sound waves
      ii. Can occur when a person has an accumulation of wax within the ear canal or a perforated eardrum
   c. Clues that a person could be hearing impaired
      i. Presence of hearing aids
      ii. Poor pronunciation of words
      iii. Failure to respond to your presence or questions
   d. Communication
      i. Use a piece of paper and a writing utensil.
      ii. Assist the patient with finding and inserting any hearing aids.
      iii. Aids can be either external or internal, depending on the type of hearing damage.
      iv. Face the patient while you communicate.
      v. Do not exaggerate your lip movements or look away.
      vi. Position yourself approximately 18″ directly in front of the patient.
      vii. Most people who are hearing impaired have learned to use body language (eg, hand gestures and lip reading).
   viii. Do not speak louder, and try lowering the pitch of your voice.
   ix. Ask the patient, “How would you like to communicate with me?”
   x. American sign language
      (a) May use an interpreter, family member, or friend
      (b) If an interpreter is not readily available, call your receiving facility early on to request one.
   xi. Helpful hints for communication
      (a) Speak slowly and distinctly into a less-impaired ear, or position yourself on that side.
      (b) Change speakers to one with a low-pitched voice.
      (c) Provide paper and a pencil so that you may write your questions and the patient may write responses.
      (d) Only one person should ask interview questions, to avoid confusing the patient.
      (e) Try the “reverse stethoscope” technique: put the earpieces of your stethoscope in the patient’s ear and speak softly into the diaphragm of the stethoscope.

C. Hearing aids

1. Device that makes sound louder
2. Several types are available.
   a. Behind-the-ear type
      i. Contained in plastic case that rests behind the ear
   b. Conventional body type
      i. Older style used for profound hearing loss
c. In-the-canal and completely in-the-canal type
   i. Contained in plastic case that fits partly or completely inside of ear canal
d. In-the-ear type
   i. Contained in shell that fits in outer part of ear
e. Implantable options are also available.

3. The device should fit snugly.
4. If whistling occurs, the hearing aid may not be in far enough.
5. If the hearing aid is not working, troubleshoot the problem.

IV. Physical Disabilities

A. Cerebral palsy
   1. Group of disorders characterized by poorly controlled body movement
   2. Possible causes
      a. Result of damage to the developing fetal brain while in utero
      b. Traumatic brain injury at birth or early during childhood
      c. Postpartum infection such as meningitis
   3. Range of mild to severe symptoms
      a. Poor posture
      b. Uncontrolled, spastic movements of the limb
      c. Visual and hearing impairments
      d. Difficulty communicating
      e. Epilepsy (seizures)
      f. Mental retardation (75% of patients have a developmental delay)
      g. Unsteady gait (ataxia), which may necessitate wheelchair or walker (if so, transport equipment with the patient)
      h. Seizure disorder
   4. Observe airway closely
      a. Patient may have increased secretion production and difficulty swallowing (dysphagia).
      b. May require aggressive suctioning to clear the airway
   5. Important considerations
      a. Do not assume that patients are mentally disabled.
      b. Limbs are often underdeveloped and are prone to injury.
      c. Patients who have the ability to walk may have an ataxic or unsteady gait and are prone to falls.
      d. If the patient has a specially made pillow or chair (pediatric patients), the patient may prefer to use it during transport.
      e. Pad the patient to ensure his or her comfort.
      f. Never force a patient’s extremities into any position.
      g. Whenever possible, take walkers or wheelchairs along during transport.
      h. Be prepared for a seizure and keep suctioning available.

B. Spina bifida
   1. Birth defect caused by incomplete closure of spinal column
   2. Spinal cord and undeveloped vertebrae are exposed.
   3. Opening can be closed surgically but leaves spinal damage.
   4. Associated conditions
      a. Hydrocephalus
         i. Most patients with spina bifida also have hydrocephalus.
         ii. Requires the placement of a shunt to drain excessive amounts of cerebrospinal fluid from the brain.
b. Partial or full paralysis of the lower extremities
c. Loss of bowel and bladder control
d. Extreme latex allergy

5. Ask patients how it is best to move them before you transport them.

C. Paralysis

1. Inability to voluntarily move one or more body parts
2. Possible causes
   a. Stroke
   b. Trauma
   c. Birth defects

3. Patient may have normal sensation or hyperesthesia (increased sensitivity).
4. May also cause communication challenges (facial paralysis)
5. Diaphragm may not function correctly, requiring the use of a ventilator.
6. Patients may have specialized equipment
   a. Urinary catheters
   b. Tracheotomies
   c. Colostomies
   d. Feeding tubes

7. Patients may have difficulty swallowing, creating the need for suctioning.
8. Each type of spinal cord paralysis requires its own equipment and may have its own complications.
9. Always take great care when lifting or moving a paralyzed patient.
10. Ask patients how it is best to move them before you transport them.

V. Bariatric Patients

A. Obesity is a condition in which a person has an excessive amount of body fat.
   1. The result of an imbalance between food eaten and calories used
   2. Causes of obesity are not fully understood.
   3. May be attributed to a low metabolic rate or genetic predisposition
   4. Obese is 20% to 30% over the ideal weight.

B. Severe or morbid obesity
   1. Severely obese is 50 to 100 lb over the ideal weight.
   2. Afflicts about 9 million adult Americans
   3. Persons are often ridiculed publicly and may be victims of discrimination.
   4. Quality of life may be negatively affected.
   5. Associated health problems
      a. Diabetes
      b. Hypertension
      c. Heart disease
      d. Stroke
      e. Chronic joint injuries or osteoarthritis
      f. Patients may have a complex and extensive medical history.

C. Interaction with bariatric patients
   1. Patients may be embarrassed by their condition or be fearful of ridicule as a result of past experiences.
   2. If transport is necessary, plan early for extra help.
      a. Send a member of your team to find the easiest and safest exit.
b. Do not risk dropping the patient or injuring a team member by trying to lift too much weight.

3. Treat the patient with dignity and respect.

D. Lifting and transporting considerations

1. Ask your patient how it is best to move him or her before attempting to do so.
2. Avoid trying to lift the patient by only one limb, which would risk injury to overtaxed joints.
3. Coordinate and communicate all moves to all team members prior to starting to lift.
4. If the move becomes uncontrolled at any point, stop, reposition, and resume.
5. Look for pinch or pressure points from equipment because they could cause a deep venous thrombosis.
6. Very large patients may have difficulty breathing if you lay the patient in a supine position.
7. Many manufacturers make specialized equipment for morbidly obese patients, and some areas have specially equipped bariatric ambulances for such patients.
8. Become familiar with the resources available in your area.
9. Plan egress routes to accommodate large patients, equipment, and the lifting crew members.
10. Notify the receiving facility early.

VI. Patients With Medical Technology Assistance

A. Tracheostomy tubes

1. Plastic tube placed in a surgical opening from the anterior part of the neck into the trachea
2. Can be temporary or permanent
3. Passes from the neck directly into the major airways
4. For patients who:
   a. Depend on home automatic ventilators
   b. Have chronic pulmonary medical conditions
5. Tubes bypass the nose and mouth.
6. Because it is foreign to the respiratory tract, the body reacts by building up secretions in or around the tube.
7. Tubes are prone to becoming obstructed by mucous plugs or foreign bodies.
   a. Obstructions of the tracheostomy tube are emergency events that could lead to cardiopulmonary arrest.
   b. DOPE mnemonic helps to recognize cause of obstruction
      i. Displacement, dislodged, or damaged tube
      ii. Obstruction of the tube (secretions, blood, mucus, vomitus)
      iii. Pneumothorax, pulmonary problems
      iv. Equipment failure (kinked tubing, ventilator malfunction, empty oxygen supply)
8. Common problems
   a. May be bleeding or air leaking around the tube
   b. Tube can become loose or dislodged
   c. Opening around the tube may become infected
9. Management
   a. Maintain an open airway.
   b. Suction tube if necessary to clear a mucous plug.
   c. Maintain the patient in a position of comfort.
   d. Administer supplemental oxygen.
   e. Provide transport to the hospital.

B. Mechanical ventilators

1. Used when patients cannot breathe without assistance
2. Possible causes
   a. Congenital defect
b. Chronic lung disease  
c. Traumatic brain injury  
d. Muscular dystrophy  
e. Disease process that weakens the ability to breathe and requires a permanent tracheostomy and mechanical ventilator

3. If the ventilator malfunctions:  
a. Remove the patient from the ventilator.  
b. Begin ventilations with a bag-valve-mask device (attached to the tracheostomy tube).  
c. Masks  
   i. May be designed specifically for patients with tracheostomies  
   ii. Cover the tracheostomy hole and have a strap that goes around the neck.  
   iii. May not be available in a prehospital setting  
   iv. Can improvise by placing a face mask over the stoma

4. The patient’s caregivers will know how the mechanical ventilator works.

C. Apnea monitors
   1. Used for infants who:  
      a. Are premature and have severe gastroesophageal reflux that causes choking episodes  
      b. Have a family history of sudden infant death syndrome  
      c. Have experienced an apparent life-threatening event  
   2. Used for 2 weeks to 2 months after birth to monitor the respiratory system  
   3. Monitor sounds an alarm if the infant experiences bradycardia or apnea.  
   4. Attached with electrodes or belt around the infant’s chest or stomach  
   5. Will provide a pulse oximetry reading that will assist you in assessing the patient’s respiratory status  
   6. If possible, bring the apnea monitor to the receiving hospital with the patient.

D. Internal cardiac pacemakers
   1. Device implanted under the patient’s skin to regulate the heart rate  
   2. Typically placed on the nondominant side of the patient’s chest (or, for small or extremely thin patients, in the abdomen)  
   3. Pacemaker may also include an automated implanted cardioverter defibrillator to monitor heart rhythm.  
   4. Never place defibrillator paddles or pacing patches directly over the implanted device.  
   5. Ask the patient about the type of cardiac pacemaker and document.

E. Left ventricular assist devices
   1. Special piece of medical equipment that takes over the function of either one or both heart ventricles  
   2. Used as a bridge to heart transplantation while a donor heart is being located  
   3. Care  
      a. Provide support measures and basic care.  
      b. Use the caregiver as a resource during the transport.  
      c. Be prepared to provide CPR.  
   4. Risk factors associated with the implantation  
      a. Excessive bleeding following the surgery  
      b. Infection  
      c. Blood clots leading to strokes  
      d. Acute heart failure

F. Central venous catheter
   1. Venous access device with the tip of the catheter in the vena cava  
   2. Used for many types of home care patients receiving:
a. Chemotherapy  
b. Long-term antibiotic or pain management  
c. High-concentration glucose solutions  
d. Hemodialysis  

3. Common locations  
a. Chest  
b. Upper arm  
c. Subclavicular area  

4. Common problems  
a. Broken lines  
b. Infections around the lines  
c. Clotted lines  
d. Bleeding around the line or from the tubing attached to the line  

G. Gastrostomy tubes  
1. Sometimes referred to as gastric tubes or G-tubes  
2. Placed directly into the stomach for feeding patients who cannot ingest fluids, food, or medication by mouth  
a. May be inserted through the nose or mouth into the stomach (using a nasogastric or orogastric tube)  
b. May be placed surgically  
c. Typically sutured in place  
3. May become dislodged during the patient’s normal daily activity  
a. Assess for signs or symptoms of bleeding into the stomach  
   i. Vague abdominal discomfort  
   ii. Nausea  
   iii. Vomiting (especially “coffee ground” emesis)  
   iv. Blood in emesis  
4. Patients may be at increased risk of aspiration.  
a. Always have suction readily available.  
b. Patients with difficulty breathing should be transported while sitting or lying on the right side with the head elevated 30°.  
5. Diabetic patients who receive insulin and gastric tube feedings may become hypoglycemic quickly.  

H. Shunts  
1. For patients with chronic neurologic conditions  
2. Tubes that extend from the brain to the abdomen to drain excess cerebrospinal fluid  
3. Types  
a. Ventricular peritoneum shunt—a drains excess fluid from the ventricles of the brain into the peritoneum of the abdomen  
b. Ventricular atrium shunt—a drains excess fluid from the ventricles of the brain into the right atrium of the heart  
4. Shunts keep pressure in the skull from building up.  
5. Fluid reservoir  
   Device beneath the skin on the side of the head, behind the ear.  
   Should alert you to the possibility that the patient has an underlying shunt  
6. Blocked or infected shunt  
a. Changes in mental status and respiratory arrest may occur.  
b. Infections may occur within the first 2 months after insertion.  
7. Signs of distress  
a. Bulging fontanelles (in infants)
b. Headache
c. Projectile vomiting
d. Altered mental status
e. Irritability
f. High-pitched cry
g. Fever
h. Nausea
i. Difficulty with coordination (walking)
j. Blurred vision
k. Seizures
l. Redness along the shunt track
m. Bradycardia
n. Heart arrhythmias

I. Vagal nerve stimulators
1. Alternative treatment to medication for patients with chronic seizure disorders
2. Surgically implanted in patients when medications fail to resolve seizure activity or if the patient is not a good candidate for brain surgery
3. Stimulate the vagus nerve to keep seizure activity from occurring
4. Used in children older than 12 years
5. Located under the patient’s skin
6. About the size of a silver dollar
7. If you encounter a patient with this device, contact medical control or follow your local protocols.

J. Colostomies and ileostomies
1. Surgical procedure that creates an opening (stoma) between the small or large intestine and the surface of the body
2. Allows for elimination of waste products into a clear external bag or pouch, which is emptied or changed frequently
3. Assess for signs and symptoms of dehydration if the patient has been complaining of diarrhea or vomiting
4. Area around the stoma is prone to infection with the following signs:
   a. Redness
   b. Warm skin around the stoma
   c. Tenderness with palpation over the colostomy or ileostomy site

VII. Patient Assessment Guidelines

A. Interaction with the caregiver of an adult or child with special needs is an important part of the patient assessment process.
B. They have become experts on caring for the patient.
C. Determine the patient’s normal baseline status before assessment.
D. Ask, “What is different today?”

VIII. Home Care

A. Home care occurs within a patient’s home environment.
B. Applies to a wide spectrum of needs and services
   1. Needs
      a. Infants
      b. Elderly
      c. Chronic illnesses
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C. EMS may be called to a residence by the home care provider.

D. Obtain baseline health status and history from the home care provider.

IX. Hospice Care and Terminally Ill Patients

A. Terminally ill may receive hospice care at a hospice facility or at home with diseases such as:
   1. Cancer
   2. Heart and lung failure
   3. End-stage Alzheimer disease
   4. AIDS

B. May have do not resuscitate (DNR) order

C. May have medical orders for scope of treatment

D. Comfort care
   1. Pain medications are provided by hospice during a person's last days.
   2. Also called palliative care
   3. Improves the patient's quality of life before the patient dies and allows the patient to be with family and friends

E. Follow your local protocols, the patient’s wishes, or legal documents such as a DNR order.

F. All necessary documentation must be brought to the hospital if the patient is to be transported.

G. If the patient is at home, the care you give will have a lasting impact on family; show compassion, understanding, and sensitivity.

H. Ascertain the family’s wishes about having the patient remain in the home or having the patient transported to the hospital.

I. If a family member requests to accompany the patient, he or she should be allowed to do so.

J. Follow local protocols for handling the death of a patient.

X. Poverty and Homelessness

A. People who live in poverty are unable to provide for all of their basic needs:
   1. Housing
   2. Food
   3. Child care
   4. Health insurance
   5. Medication

B. Disease prevention strategies (eg, dental care, nutrition, and exercise) are likely absent, which leads to increased probability of disease.

C. Homeless population includes:
   1. Persons with mental illness
2. Victims of domestic violence
3. Persons with addiction disorders
4. Impoverished families

**D. You are an advocate for all patients.**

**E. Your job is to provide emergency care and transport to the appropriate facility.**

**F. All health care facilities must provide assessment and treatment regardless of the patient’s ability to pay.**

**G. You can be an advocate by becoming familiar with the social services resources within your community.**

**XI. Summary**

**A. Medicine and medical technology continue to improve.**

**B. However, the number of children and adults with chronic diseases or injuries living outside of the hospital setting continues to grow.**

**C. Assess and care for patients with special needs in the same manner as all other patients.**

**D. Developmental disability is caused by insufficient development of the brain, resulting in the inability to learn and socially adapt at a normal developmental rate.**

**E. Down syndrome**
1. Patients often have large tongues and small oral and nasal cavities.
2. Intubation may be difficult.

**F. Visual impairment**
1. May be difficult to recognize
2. Look for the presence of eyeglasses, a cane, or a service dog.
3. Make yourself known when you enter the room.
4. Introduce yourself and others in the room so that the patient can identify their placement and voices.

**G. Hearing impairment**
1. May range from a slight hearing loss to total deafness
2. Signs
   a. Presence of hearing aids
   b. Poor pronunciation of words
   c. Failure to respond

**H. Cerebral palsy**
1. Patients may have unsteady gait and require wheelchair or walker.
2. Associated conditions
   a. Visual and hearing impairments
   b. Difficulty communicating
   c. Epilepsy
   d. Mental retardation

**I. Spina bifida patients**
1. Partial or full paralysis of the lower extremities
2. Loss of bowel and bladder control
3. Extreme latex allergy

**J. Bariatric patients**
1. May be embarrassed by their condition
2. May be fearful of ridicule as a result of past experiences
3. If transport is necessary, plan early for extra help.
4. Send a team member to find the easiest and safest exit.

**K. Tracheostomy tube, for patients who:**
1. Depend on home automatic ventilators
2. Have chronic pulmonary medical conditions

**L. Mechanical ventilator**
1. Patients cannot breathe without assistance.
2. If the ventilator malfunctions, remove the patient from the mechanical ventilator and begin ventilations with a bag-valve-mask device.

**M. Apnea monitors are typically used for infants who:**
1. Are premature
2. Have severe gastroesophageal reflux that causes episodes of choking
3. Have a family history of SIDS
4. Have experienced an apparent life-threatening event

**N. Internal cardiac pacemaker—device implanted under the patient’s skin to regulate the heart rate**

**O. Left ventricular assist device**
1. Special medical equipment that takes over the function of either one or both heart ventricles
2. Used as a bridge to transplantation while a donor heart is being located

**P. Gastrostomy tubes**
1. Placed directly into the stomach for feeding in patients who cannot ingest fluids, food, or medication by mouth
2. May be inserted through the nose or mouth, or placed through the abdominal wall surgically

**Q. Shunts—tubes that extend from the brain to the abdomen to drain excess cerebrospinal fluid**

**R. Colostomy or ileostomy**
1. Surgical procedure that creates an opening between the small or large intestine and body surface
2. Allows for elimination of waste products into an external bag or pouch

**S. Interaction with the caregiver of a child or adult with special needs will be an important part of the patient assessment process.**

**T. Patients requiring home services involve a spectrum of special health care needs.**

**U. Terminally ill patients may be in a hospice facility or at home.**
Post-Lecture

Unit Assessment

1. What are causes of developmental disability?

2. Why does autism develop in children?

3. What anatomic features of Down syndrome patients make airway management challenging?

4. Why are the limbs of cerebral palsy patients prone to injury?

5. What physical disability is due to incomplete closure of the spinal column?

6. What health problems are associated with obesity?

7. What does the mnemonic DOPE stand for?
   - Displacement, dislodged, or damaged tube
   - Obstruction of the tube (secretions, blood, mucus, vomitus)
   - Pneumothorax, pulmonary problems
   - Equipment failure (kinked tubing, ventilator malfunction, empty oxygen supply)

8. True or false: Defibrillator paddles or pacing patches can be placed directly over an internal cardiac pacemaker.

9. Describe when left ventricular assist devices are used.

10. Describe why the caregiver of an adult or child with special needs is an important part of the patient assessment process.