Lesson # 16

Title: Restraints

Lesson Objectives:

I. The student will be able to explain the resident's right to be free of physical and chemical restraints.

II. The student will be able to explain the need for monitoring of physical restraint use and routine release.

III. The student will be able to describe devices which are enabling versus restrictive.

IV. The student will be able to explain the potential negative outcomes of side rail use.

Key Terms:

Chemical Restraint – any drug that is used for discipline or convenience and not required to treat medical symptoms

Convenience – any action taken by the facility to control a resident's behavior or manage a resident's behavior with a lesser amount of effort by the facility and not in the resident's best interest.

Discipline – any action taken by the facility for the purpose of punishing or penalizing residents.

Entrapment – the act of getting caught in, or trapped in something.

Medical Symptom – an indication or characteristic of a physical or psychological condition.

Physical Restraint – any manual method or physical or mechanical device, material, or equipment attached or adjacent to the resident's body that the individual cannot remove easily which restricts freedom of movement or normal access to one's body.

Side Rail – a barrier device attached to the side of a bed

Content:

I. Physical Restraint

   A. Resident Rights- The resident has the right to be free from any physical or chemical restraints imposed for purposes of discipline or convenience, and not required to treat the resident's medical symptoms

B. Types-“Physical restraints” include, but are not limited to, leg restraints, arm restraints, hand mitts, soft ties or vests, lap cushions, and lap trays the resident cannot remove easily. Also included as restraints are facility practices that meet the definition of a restraint, such as:

1. Using side rails that keep a resident from voluntarily getting out of bed;
2. Tucking in or using Velcro to hold a sheet, fabric, or clothing tightly so that a resident’s movement is restricted;
3. Using devices in conjunction with a chair, such as trays, tables, bars or belts, that the resident cannot remove easily, that prevent the resident from rising;
4. Placing a resident in a chair that prevents a resident from rising; and
5. Placing a chair or bed so close to a wall that the wall prevents the resident from rising out of the chair or voluntarily getting out of bed

C. Medical Symptoms/Rationale for Use- an indication or characteristic of a physical or psychological condition for which the device improves the resident’s function or quality of life

D. Application

1. A restraint shall be applied by an individual who has been properly trained, according to facility policy
2. A restraint shall be applied in a manner that permits rapid removal in case of fire or other emergency

E. Monitoring and Release

1. A record of physical restraint and seclusion of a resident shall be kept
2. Each resident under restraint and seclusion shall be visited by a member of the nursing staff at least once every hour and more frequently if the resident's condition requires
3. Each physically restrained or secluded individual shall be temporarily released from restraint or seclusion at least every two (2) hours or more often if necessary except when the resident is asleep. When the resident in restraint is temporarily released, the resident shall

be assisted to ambulate, toileted, or changed in position as the resident's physical condition permits

F. Self-Releasing Devices – Devices used as a reminder that the resident needs to call for assistance and/or to assist to keep the resident seated; however, the resident can self-release the device upon request. Thus, the device does not restrict freedom of voluntary movement

G. Side rails

Side rails sometimes restrain residents. The use of side rails as restraints is prohibited unless they are necessary to treat a resident's medical symptoms. Residents who attempt to exit a bed through, between, over or around side rails are at risk of injury or death. The potential for serious injury is more likely from a fall from a bed with raised side rails than from a fall from a bed where side rails are not used. They also potentially increase the likelihood that the resident will spend more time in bed and fall when attempting to transfer from the bed. The same device may have the effect of restraining one individual but not another, depending on the individual resident's condition and circumstances. For example, partial rails may assist one resident to enter and exit the bed independently while acting as a restraint for another. Orthotic body devices may be used solely for therapeutic purposes to improve the overall functional capacity of the resident

H. Entrapment

1. FDA Guidance

A. Entrapment Zones

1) Zone 1 – within the rail
2) Zone 2 – under the rail, between the rail supports or next to a single rail support
3) Zone 3 – between the rail and the mattress
4) Zone 4 – under the rail at the ends of the rail
5) Zone 5 – between split bed rails
6) Zone 6 – between the end of the rail and side edge of the head or foot board
7)Zone 7 – between the head or foot board and end of the mattress

I. An enclosed framed wheeled walker, with or without a posterior seat, would not meet the definition of a restraint if the resident could easily open the front gate and exit the device. If the resident cannot open the front gate (due to cognitive or physical limitations that prevent him or her from exiting the device or because the device has been altered to prevent the resident from exiting the device), the enclosed framed wheeled walker would meet the definition of a restraint since the device would restrict the resident's freedom of movement (e.g. transferring to another chair, to the commode, or into the bed). The decision on whether framed wheeled walkers are a restraint must be made on an individual basis

Visual Aides:

- Physical Restraints
- Self-Releasing Devices
- Restraint Record
- FDA guidance/illustrations of entrapment zones/manners of entrapment

RCPS:

- None

Review Questions

1. A resident has the right to be free from any physical or chemical restraint imposed for purposes of discipline or convenience, and not required to treat the resident's medical symptoms. True or False?
2. How often must a resident with a physical restraint in place be visited by a staff member?
3. How frequently must the physically restrained resident be temporarily released to ambulate, toilet or change position?

Lesson #17

Title: Rehabilitation/Restorative Services

Lesson Objectives:

I. The student will understand the role of rehabilitative services.

II. The student will understand the role of restorative services.

III. The student will demonstrate competence in performance of range of motion exercises.

Key Terms:

Abduction – moving a body part away from the body.

Adduction – moving a body part toward the body.

Ambulation – walking.

Contracture – the permanent stiffening of a joint and muscle.

Dorsiflexion – bending backward.

Extension – straightening a body part.

Flexion – bending a body part.

Occupational Therapy – formal therapy which assists the resident to learn to compensate for their disabilities and assist them with activities of daily living

Physical Therapy – formal therapy which uses heat, cold, massage, ultrasound, electricity and exercise to residents with muscle, bone and joint problems. A physical therapist may help a person to safely use a walker, cane or wheelchair.

Pronation – turning downward

Range of Motion – exercises which put a joint through its full range of motion**.**

Active Range of Motion – exercises are done by the resident himself.

Passive Range of Motion – caregivers support and move the resident's joints through the range of motion when the resident cannot move on their own.

Rehabilitation – services managed by professionals to restore a resident to his/her highest practicable level of functioning following a loss of ability to function due to illness or injury.

Restorative Services – a planned approach to keep the resident at the level achieved by rehabilitation following formal rehabilitation

Rotation – turning a joint

Speech Therapy – formal therapy which assists residents with speech and swallowing problems

Splint – device that remains in place at the direction of the physician to maintain a body part in a fixed position

Supination – turning upward

Content:

I. Rehabilitation
   A. Role of Formal Therapy
      1. Physical Therapy
      2. Occupational Therapy
      3. Speech Therapy
   B. Assistive or Adaptive Devices- devices made to support a particular disability by helping resident complete ADLs (e.g., long-handled brushes and combs, divided plate, built-up silverware, reacher/grabber, etc.)

II. Restorative Services
   A. Ambulation
      1. Cane
      2. Walker
      3. Gait/transfer belt
   B. Range of Motion (**see RCP**)
      1. Active Range of Motion (AROM)
      2. Passive Range of Motion (PROM)
   C. Points to Remember:
      1. Be patient when working with the resident
      2. Be supportive and encouraging
      3. Break tasks into small steps to promote small accomplishments
      4. Be sensitive to the resident's needs and feelings
      5. Encourage the resident to do as much for self as possible
   D. Observe and report to the nurse
      1. An increase or decrease in the resident's ability

2. A change in motivation
3. A change in general health
4. Indication of depression or mood changes

E. Splint Application (**see RCP**)

III. Devices which may be applied per Restorative Nursing Program

A. Abdominal Binder (**see RCP**) – may be used to secure G-tube and prevent resident from picking at the insertion site or to provide support to the abdomen due to hernia or recent surgery

B. Abduction Pillow (**see RCP**) – may be ordered to be in place following a surgical procedure to maintain lower extremities in an abducted position, and prevent the resident from crossing the lower legs or ankles

C. Knee Immobilizer (**see RCP**) – may be ordered to be in place following a surgical procedure to keep the leg straight while the bone is healing. Should only be removed at the direction of the licensed nurse

D. Palm Cone (**see RCP**) – may be ordered to be placed in the palm of a resident who is at risk for developing contractures of the digits (i.e., prevent the fingers/nails from turning into the palm permanently and causing skin breakdown)

Visual Aides:

- Abdominal Binder
- Abduction Pillow
- Knee Immobilizer
- Palm Cone
- Splint

RCPS:

- Passive Range of Motion
- Splint Application
- Abdominal Binder
- Abduction Pillow

- Leg Immobilizer
- Palm Cones

Review Questions

1. Describe the difference in “active” range of motion and “passive” range of motion.
2. The permanent stiffening of a joint and muscle is called a _____.
3. A planned approach to keep the resident at a level achieved by rehabilitation following the formal rehabilitation is called _____.

Title: Oxygen Use

Lesson Objectives:

I. The student will be able to describe the various manners in which oxygen is supplied for a resident.

II. The student will be able to describe necessary safety precautions to be implemented when oxygen is in use.

Key Terms:

Combustion – **the** process of burning.

Flammable – easily ignited and capable of burning quickly.

Content:

I. Oxygen Use

A. Oxygen is prescribed by a physician; however, a nurse may initiate oxygen in response to a medical emergency

B. Nursing assistants never stop, adjust, or initiate the use of oxygen

C. Nasal Cannula – Delivery of oxygen from a long tubing from source to cannula with prongs placed in each nostril and tubing tucked behind the ears of the resident

1. Observe for irritation behind the ears, as the tubing can cause skin breakdown. Notify the nurse, if observed
2. Nasal Cannula Care (**see RCP**)

D. Mask – delivery of oxygen from a long tubing from the source to a mask placed on the resident's face with band around the back of the head

1. Observe for irritation around the face mask and notify the nurse, if observed

E. Concentrator – a device that sits on the floor and plugs into the wall which changes air in the room into air with more oxygen

F. Liquid Oxygen – at extremely cold temperatures, oxygen changes from gas to a liquid. The liquid oxygen is stored in a vessel similar to a thermos. A large central unit is located in an area away from electrical equipment that is well

ventilated. Liquid oxygen can be trans-filled to a bedside unit or can be trans-filled into a portable unit.

1. Contact with liquid oxygen or its vapors can quickly freeze tissues. It is common to see vapors when filling a small vessel from the large vessel. The vapors evaporate quickly and then are harmless. To prevent injury, never touch liquid oxygen, or the frosted parts of liquid oxygen vessels. Avoid getting the vapors in your face

G. Portable Tank – oxygen that is stored as a gas under pressure in a cylinder equipped with a flow meter and regulator to control the flow rate. This system is generally prescribed when oxygen therapy is required in emergency or for a short period of time (e.g., during transport). Compressed oxygen tanks are under extreme pressure and must be kept upright and handled with care

H. Vaporizers/Humidifiers – A vaporizer works by heating water until it turns into hot steam, a humidifier creates a cool mist. Either one may be prescribed by a physician to loosen congestion of the resident

1. When humidifiers and vaporizers are in use, they must be kept clean. Germs thrive wherever there is water, thus, the device must be periodically drained and cleaned according to facility policy. Otherwise, the bacteria that accumulate can become vaporized into the air and affect the resident's lungs, where they can cause infection
2. Prepare vaporizer/humidifier according to manufacturer's instructions
3. Position vaporizer/humidifier on the bedside stand or nearby table
4. Plug vaporizer into electrical outlet
5. Steam should be permitted to flow generally into the room
6. Frequently check the water level; refill as necessary
7. Clean vaporizers/humidifiers routinely according to facility policy

I. CPAP/BIPAP – Positive airway pressure (PAP) is respiratory ventilation used to treat breathing disorders and supply a consistent pressure on inspiration and expiration. As mechanical ventilation, CPAP (continuous positive airway pressure), or BIPAP (Bi-level Positive Airway Pressure) machines, are devices which help residents inhale more air into the lungs. Both of these devices are used for the

treatment of medical disorders like COPD, pulmonary edema, etc. Settings of the machines are prescribed by the physician and may only be administered and settings adjusted by the licensed nurse

J. Ventilator – a machine that supports breathing. These machines are mainly used in hospitals. Ventilators deliver oxygen into the lungs and remove carbon dioxide from the body. Carbon dioxide is a waste gas that can be toxic. The ventilator breathes for people who have lost all ability to breathe on their own. Settings of the ventilator are prescribed by the physician and may only be adjusted by the licensed nurse

K. Safety Precautions

1. Remember oxygen supports combustion
2. Fire hazards should be removed from the resident's room when oxygen is in use
3. Never allow candles or open flames in the area where oxygen is in use
4. Never allow smoking in the area where oxygen is in use
5. **Do not** use electrical equipment in an oxygen-enriched environment

Examples include electric razors, hairdryers, electric blankets, or electric heaters. Electrical equipment may spark and cause a fire

6. **Do not** use flammable products such as rubbing alcohol, or oil-based products such as Vaseline® near the oxygen. Use a water-based lubricant to moisten the resident's lips or nose
7. Although the nursing assistant cannot adjust the oxygen level, the nurse aide should learn how to turn oxygen off in case of fire

Visual Aides:

- Nasal Cannula
- Face Mask
- Concentrator
- Liquid Oxygen
- Portable Oxygen Tank

RCPS:

- Nasal Cannula Care

Review Questions

1. It is permissible for nursing assistants to adjust the level of oxygen administration. True or False?
2. Smoking must never be allowed where oxygen is used or stored. True or False?
3. Oxygen tanks must be kept upright and handled with care. True or False?

Lesson #19

Title: Devices/Interventions - Prosthetics, Hearing Aides, Artificial Eye, Eyeglasses, Dentures, Compression Stockings

Lesson Objectives:

I. The student will be able to describe the necessary care and maintenance of various devices used by residents.

II. The student will be able to describe the need to monitor for complications with the use and maintenance of devices used by residents.

Key Terms:

Amputation – **the** removal of some or all of a body part, usually as a result of injury or disease.

Elastic/Compression Stockings – stockings that decrease blood pooling in the lower extremities. The stockings help with circulation in the lower legs and decrease the risk for blood clots. They are also referred to as TED (thrombo embolic deterrent) hose.

Phantom Pain/Sensation – **feeling** like the limb is still there after the amputation due to the remaining nerve endings.

Prosthesis/Prosthetic Devices – device that replaces a body part that is missing or deformed due to accident, injury, illness or birth defect.

Content: Prosthetic Device

I. Purpose of a Prosthetic Device
   - A. Improve resident's functional ability
   - B. Improve appearance

II. Types of Prosthetic Devices
   - A. Artificial limbs – arm, leg/foot
   - B. Other prosthetic devices
     1. Hearing aids
     2. Artificial eyes

3. Eyeglasses
4. Dentures

III. Role of the Nurse Aide regarding Amputations & Prosthetic Care

A. Be supportive – amputation can be difficult for a resident to accept due to the change in body image
B. Follow care plan – know what is required related to care and needs
C. Follow instructions regarding applying and removing the prosthesis
D. Keep skin under prosthesis clean and dry – follow care plan
E. Handle with care – prosthesis is fitted to the resident and specially made. A prosthesis can be very expensive
F. Observe skin on stump. Watch for pressure, redness, warmth, tenderness, or open area. Report any concerns to the nurse

IV. Role of the Nurse Aide regarding Hearing Aids

A. Hearing Aid – small battery operated device that fits into the ear to amplify sound
B. Assisting with Hearing Aids (**see RCP**)
    1. Be sure to follow the manufacturer's instructions when inserting the hearing aid into the resident's ear
    2. Be sure to follow the manufacturer's instructions on cleaning the hearing aid.

V. Role of the Nurse Aide regarding Artificial Eye & Eyeglasses

A. Artificial Eye – device that resembles natural eye. The resident cannot see with the artificial eye. The artificial eye is held in the eye socket by suction.
B. Care of artificial eye
    1. Artificial eye – can be removed and reinserted. This should be done by the nurse or independently by the resident
    2. Nurse Aide needs to observe that eye is clean
    3. If eye is removed, make sure it is stored in a safe place with proper solution to avoid drying or cracking of artificial eye

4. Follow directions on care plan
5. Provide privacy when assisting with eye care
6. Resident with artificial eye may be able to provide self eye care – follow directions on care plan

C. Care of eyeglasses
1. Make sure eyeglasses are clean
2. Make sure resident has eyeglasses on
3. Keep eyeglasses in a safe place when not in use

VI. Role of the Nurse Aide regarding Dentures

A. Dentures – artificial tooth or teeth, necessary when resident's natural tooth or teeth have been removed due to damage or decay. Dentures may be partial or full

B. Care of dentures
1. Make sure resident has dentures in place for meals
2. Resident may want dentures removed at night
3. Make sure dentures are cleaned
4. Make sure dentures are in a safe place when not in use

VII. Role of the Nurse Aide regarding Elastic/Compression Stockings (TED Hose)

A. Make certain stockings are on when resident is up, if ordered by the physician

B. Follow care plan directions in regard to when to be applied and removed

C. Elastic/Compression Stocking Application (**see RCP**)

Visual Aides (if available):

- Hearing aid
- Eyeglasses
- Elastic/compression stockings

RCPS:

- Assisting with Hearing Aids
- TED Hose Application

Review Questions:

1. List potential observations of a stump which should be reported to the nurse.
2. When assisting the resident with eyeglasses, it is important to ensure the glasses are clean. True or False?
3. When elastic/compression stockings are applied, the caregiver must ensure there are no wrinkles or twists in the stockings. True or False?

Lesson #20

Title: Special Care Needs Intravenous Fluids, Non-Pharmacologic Pain Interventions

Lesson Objectives:

I. The student will be able to explain the purpose of IV/PICC lines.
II. The student will be able to describe the importance of observing and reporting complications related to IV/PICC lines.
III. The student will be able to explain the signs/symptoms of pain and acknowledge interventions to be attempted to relieve resident pain.

Key Terms:

Antibiotic – compound or substance that kills or slows down the growth of bacteria.

Chemotherapy – treatment of cancer with an antineoplastic drug or with a combination of such drugs into a standardized treatment regimen; often administered intravenously (IV).

Hydration – the supply and retention of adequate water to keep one from dehydrating.

Intravenous (IV) – refers to a soft, flexible catheter (tube) that is inserted by a nurse or physician into a vein.

Pain – an unpleasant sensory and emotional experience arising from actual or potential tissue damage.

Peripherally Inserted Central Catheter – PICC – a soft, flexible catheter (tube) that is inserted by a specially trained nurse or physician into a vein for administration of medication, total parenteral nutrition (TPN), chemotherapy, or blood products for an extended period of time.

IV Pump – device to regulate the flow of the fluid into the vein. The pump will alarm if there is a problem with flow, and must be managed by the licensed nurse.

Total Parenteral Nutrition (TPN) – no food is given by other routes, only intravenously.

Vein – blood vessels that carry blood toward the heart.

Content: IV or PICC Care

I. Purpose of IV or PICC

A. Medication administration, such as antibiotics
B. Nutrition administration
C. Hydration
D. Blood products
E. Solutions are administered by gravity or through a portable pump

II. Role of the Nurse Aide in caring for IV/PICC
    A. Observe and Report
        1. Line found out or is removed by resident, or accidentally by staff when providing care
        2. Blood present anywhere in the tubing
        3. Tubing is disconnected
        4. Complaint of pain
        5. Fluid in bag is not observed dripping
        6. Fluid in bag is nearly gone or finished
        7. Pump is alarming
        8. Site is swollen or discolored
        9. Dressing is wet or soiled
    B. Take special caution when moving or caring for resident – avoid pulling or catching of tubing
    C. Never disconnect IV or PICC from pump
    D. Never lower bag below IV/PICC site
    E. Do not take blood pressure in arm with IV or PICC

III. Infection Control
    A. Use proper hand hygiene
    B. Observe site for signs of infections and report to the nurse if observed
        1. Redness
        2. Swelling
        3. Pain

Content: Pain Control Interventions

I. Pain Factors
   A. Vital Signs should be taken, if directed by nurse to do so
   B. Information related to pain
      1. Location
      2. When did it start
      3. What was resident doing when pain started
      4. Rate the pain, i.e., mild, moderate or severe on scale of 1-10
      5. How long has resident been having pain
      6. Describe the pain, i.e., ache, stabbing, crushing, dull, constant, burning,
      7. Use resident's words/description to report to nurse

II. Role of the Nurse Aide related to Pain
   A. Observe and report to the nurse signs/symptoms of pain, which may include, but are not limited to:
      1. Change in vital signs – B/P, Pulse, Respiration
      2. Nausea
      3. Vomiting
      4. Sweating
      5. Tearful or frowning
      6. Sighing, moaning or groaning
      7. Breathing heavy or shortness of breath
      8. Restless or having difficulty moving
      9. Holding or rubbing a body part
      10. Tightening jaw or grinding teeth
      11. Anxiety, pacing
   B. Interventions to reduce pain
      1. Report complaints of pain or unrelieved pain (after having been given a pain medication) to the nurse

2. Position the resident's body in good alignment or assist to reposition the resident at the resident's direction in regard to a comfortable position
3. Offer a back rub to the resident
4. Assist the resident to the bathroom or offer the bedpan or urinal
5. Encourage the resident to take slow, deep breaths
6. Provide a quiet and calm environment
7. Use soft music to distract the resident
8. Be patient, caring, gentle and sympathetic in assisting the resident
9. Observe the resident's response to interventions attempted and report to the nurse

C. Barriers for resident regarding pain
1. Fear of addiction to pain medication
2. Feeling caregivers are too busy to deal with pain
3. Fear pain medication will cause other problems, i.e. drowsiness, sleepiness, constipation

Visual Aides:

- Body Diagram of Circulatory System (Arteries & Veins)
- Pain Scale Example
- IV Supplies & Equipment

RCPs:

- None

Review Questions:

1. What are possible signs/symptoms of pain?
2. What are the reasons for an IV or PICC line?
3. Why would a resident not admit to having pain?