Chapter 20

Patient Environment and Safety

Lesson 20.1
Preparing a Safe Environment
(Slide 1 of 2)

Theory

1) Discuss nursing responsibilities for environmental management.
2) Identify common noises in health care facilities and ways to minimize their effects on patients.
3) Explain the importance of neatness and order in the patient's environment.

Lesson 20.1
Preparing a Safe Environment
(Slide 2 of 2)

Clinical Practice

1) Discuss how the health care facility's environment affects your patient.
2) Using correct technique, make an unoccupied and an occupied bed.

Factors Affecting the Environment

- Florence Nightingale wrote about environmental factors that needed to be controlled more than a century ago
  - Temperature
  - Ventilation and humidity
  - Lighting
  - Odor control
  - Noise
  - Interior design
  - Neatness
  - Privacy

Environmental Factors
(Slide 1 of 7)

- Temperature
  - Infants and older adults require warmer rooms
  - Room temperature should be between 68°and 74°F
  - Operating rooms and critical care areas slightly cooler
- Ventilation—supplying a room with fresh air continually
  - Fans are discouraged because of infection control concerns
  - Do not open windows in the hospital

Environmental Factors
(Slide 2 of 7)

- Humidity—amount of moisture in the air
  - From 30% to 50% is comfortable
  - Too little humidity will dry respiratory passages
- Lighting
  - Should be adequate to perform tasks and prevent accidents and injury
  - Should be bright enough to see, but soft enough to prevent sharp shadows
  - Patient should be able to control lights independently

Environmental Factors
(Slide 3 of 7)

- Odor
  - To control odors:
  - Empty and rinse bedpans, bedside commodes, and urinals promptly
  - Dispose of dressings and used equipment
  - Nothing odorous should be placed in trash in a patient's room
  - Avoid the sources of odors
  - Remove old flowers and stagnant water
  - Perfumes, scented lotions, or scented cosmetics should not be worn in patient areas

Environmental Factors
(Slide 4 of 7)

- Noise
  - The main source in a hospital is people
  - Patient may experience sensory overload from noise
  - Soft, pleasant background music can mask other sounds and promote relaxation
  - Reduce noise by:
    - Avoiding long conversations in the hallways
    - Encouraging staff to speak in lowered voices
    - Avoiding jokes and laughter at the nurses' station
    - Answering alarms on IV pumps and equipment promptly

Environmental Factors
(Slide 5 of 7)

- Interior design
  - Patients' rooms and public areas look more like a hotel now as opposed to the stark white of the past
  - Rooms have draperies and colorful bedspreads
  - These changes are to promote comfort by providing a homelike environment for the patient

Environmental Factors
(Slide 6 of 7)

- Neatness
  - Straighten the patient's unit after making the bed and whenever appropriate
  - Remove trays and dishes promptly after meals
  - Keep the over-the-bed table clear of unnecessary clutter or equipment

Environmental Factors
(Slide 7 of 7)

- Privacy: essential for patient's well-being
  - Always knock gently and identify yourself before entering the room
  - In multiple-patient rooms, close the curtain around the patient for personal tasks such as using a bedpan and bathing
  - Post a sign on the door informing others of such tasks to discourage them from entering the room

Patient Units
(Slide 1 of 2)

- Beds
  - Usually have a firm mattress covered with a material that allows easy cleaning between patients; side rails should not present a hazard
  - May use an overlay to prevent pressure ulcer formation
  - Always lock wheels on a bed when not moving it and leave it in the low position when not performing a procedure on a patient

Patient Units
(Slide 2 of 2)

- Unoccupied bed
  - Made when the patient is out of bed in the chair or out of the room for a diagnostic procedure or therapy
- Occupied bed
  - Made only if the patient absolutely cannot be out of bed
- Bed linens should be neat, orderly, and free from wrinkles

Lesson 20.2 Prevention, Containment, and Protection (Slide 1 of 2)

Theory

4) Describe methods to prevent mechanical and thermal accidents and injury in health care facilities and the home.
5) Discuss the various forms of bioterrorism, safety measures to be taken, signs and symptoms of agents used, and measures to treat or contain the threat.
6) Discuss the principles for using protective devices.
7) Demonstrate knowledge of the legal implications of using protective devices.

Lesson 20.2
Prevention, Containment, and Protection (Slide 2 of 2)

Clinical Practice

3) Explain, according to your facility's procedures, how to clean up a biohazard spill.
4) Discuss your clinical facility's response plan to a bioterrorism threat.
5) Given an emergency scenario, practice triaging the victims.
6) Correctly apply an extremity immobilizer.

Safety

(Slide 1 of 2)

- A primary concern when caring for your patients
- Safety is needed to prevent accidents and possible injuries to patients, visitors, and health care personnel

Safety
(Slide 2 of 2)

- Most common patient accidents/incidents:
  - Falls
  - Burns
  - Cuts and bruises
  - Fights with others
  - Loss of possessions
  - Choking
  - Electrical shock
- Review Box 20.3 for ways to promote patient safety

Falls

- Three common factors
  - Impaired physical mobility
  - Altered mental status
  - Sensory and/or motor deficits
- Patients at risk for falls may need a leg or bed alarm
  - Sense a change in position or pressure and sound an alarm to alert health care workers or family members that patients are attempting to get out of bed or a chair

Burns

- Prevention includes protecting the patient from thermal injury
- Can be caused by hot or cold materials
- Diabetic patients, paralyzed patients, or patients with altered mental awareness at risk for burns
- The nurse should check the temperature of liquids before giving them to the patient
- The nurse should caution the patient about sleeping on a heating pad or a cold pack
- Inspect electrical cords for frayed or broken areas that may cause sparks or fires

Smoking

- Banned in most health care facilities
- Some long-term care agencies allow smoking in designated areas
- Carefully supervise the patient who wants to smoke and is sedated, confused, or irrational
- Smoking is never allowed when oxygen is in use because a spark could cause a fire
- Any equipment that might cause a spark is also prohibited near oxygen

Fire

- Know and be familiar with your institution's fire regulations
- Know the location of the fire extinguishers, fire alarms, and escape routes, and how to notify the telephone operator of a fire in your area
- Should a fire occur, you must
  - Rescue any patients in immediate danger by removing them from the area
  - Activate the fire alarm system
  - Contain the fire by closing doors and windows
  - Extinguish flames with an appropriate extinguisher

Nursing Actions to Promote Patient Safety in the Health Care Facility (Slide 1 of 3)

- Orient the patient to the unit on admission
- Assess patient's gait and risk for falling on admission
- Evaluate patient's drug regimen for side effects that increase the risk for falling
- Keep bed in low position when not giving direct care
- Toilet the patient on a regular schedule

Nursing Actions to Promote Patient Safety in the Health Care Facility (Slide 2 of 3)

- Lock the wheels on the bed
- Provide a night-light for going to the bathroom
- Encourage the use of nonskid slippers
- Answer call lights promptly
- Tell the patient when you will next check in
- Encourage the use of grab bars

Nursing Actions to Promote Patient Safety in the Health Care Facility (Slide 3 of 3)

- Place high-risk patients in a room close to the nurses' station
- Be sure the patient's call bell is within reach
- Stay with confused or unsteady patients when they are up
- Provide diversionary activities for confused patients
- Make sure wheelchair brakes are locked

Nursing Actions to Promote Patient Safety in the Home

- Place a nonskid bath mat in the tub or shower
- Use night-lights to help patient find the bathroom
- Suggest installation of grab bars
- Install door buzzers or bed alarms
- Maintain the same furniture arrangement
- Encourage removal of extension cords
- Caution the patient about toys and animals
- Provide appropriate community resources

Biohazards

- A biologic agent, chemical, or condition that can be harmful to a person's health
- OSHA publishes specific guidelines for labeling, handling, cleaning spills, and disposing of these materials
- Material safety data sheet (MSDS) consulted for recommended methods of storage, labeling, handling spills, and disposal

Bioterrorism and Other Terrorism Agents

- Bioterrorism: the release of pathogenic microorganisms into a community to achieve political and/or military goals
- Chemical terrorism: use of certain compounds to cause destruction to achieve political and/or military goals
  - Pulmonary agents, cyanide agents, nerve agents, vesicants, and incapacitating agents
- Radioactive substances attached to an explosive device (a “dirty bomb”) disperse radiation

Common Diseases Spread Through Bioterrorism

- Anthrax
- Botulism
- Ebola virus
- Lassa fever
- Plague
- Ricin
- Smallpox
- Tularemia

Decontamination

- Staff must wear masks and protective clothing that are impervious to chemicals and cover all skin surfaces
- Military mission-oriented protective posture (MOPP) suits may be used
- A chemical mask with filtered respirator must be worn with the suit

Triage and Treatment

- Assessed and labeled according to the priority of care as “immediate,” “delayed,” “minimal,” or “expectant”
- Treatment based on type of agent to which the patient was exposed and degree of exposure
  - Antibiotics used for some biologic agents
  - Antidotes used for some of the chemicals and poisonous gases
  - Otherwise, treatment is directed at supporting organ function while the body tries to recover

Poisons

- A substance that when ingested inhaled, absorbed, applied, injected, or developed within the body, may cause functional or structural disturbances
- Treatments and antidotes obtained from a poison control center or listed on some containers
- In the event of a suspected poisoning:
  - Contact the poison control center; have the label of the product in front of you and be ready to report:
    - Name of the product
    - Patient's age
    - Amount you believe is involved
    - Any symptoms involved

Protective Devices

- Behavioral indications
  - Psychiatric setting
  - Sudden change in mental status/behavior
- Nonbehavioral indications
  - Continuation of medical treatments
- It is your responsibility to be aware of and follow the regulations in your facility and area

Legal Implications of Using Protective Devices

- Federal and local laws mandate:
  - Protect the patient from physical and mental abuse and from physical and chemical restraints
  - Except those that are authorized by a physician, in writing, for a specified and limited period of time, or that are needed in an emergency situation

Alternatives to Protective Devices

- The goal is to move to a less-restrictive environment
- Health care workers are encouraged to find alternatives to the use of protective devices
- Family and friends of a patient who is confused can be encouraged to sit with the patient to promote safety

Principles Related to the Use of Protective Devices

- Protective devices must help the patient or be needed to continue medical therapy
- Use the least amount of immobilization needed
- For all restrictive devices there must be a written order. As soon as the device is no longer needed, the physician must be notified
- Apply the device snugly but not so tightly as to interfere with blood circulation or nerve function
- Device must be removed and patient's position changed every 2 hours. Active or passive exercises for immobilized joints and muscles