Unit 10
Basic Nursing Skills
Nurse Aide I Course
Basic Nursing Skills
Introduction

This unit introduces the basic nursing skills the nurse aide will need to measure and record the resident’s vital signs, height and weight, and intake and output.

The vital signs provide information about changes in normal body function and the resident’s response to treatment.
Basic Nursing Skills
Introduction (continued)

The resident’s weight, compared with the height, gives information about his/her nutritional status and changes in the medical condition.

Intake and output records provide information on fluid balance and kidney function.
10.0 Provide basic nursing skills.
Vital Signs

- Reflect the function of three body processes that are essential for life.
  - Regulation of body temperature
  - Heart function
  - Breathing
10.1 Explain the meaning of vital signs and the abbreviations used for each vital sign.
Vital Signs
(continued)

• Abbreviations:
  – Temperature – T
  – Pulse – P
  – Respirations – R
  – Blood Pressure – BP
  – Vital signs - TPR and BP
Vital Signs
(continued)

- Purpose
  - Measured to detect any changes in normal body function
  - Used to determine response to treatment
Vital Signs
(continued)

• Measurement (taken at rest)
  – Temperature - measures body heat
  – Pulse - measures heart rate
  – Respiration - measures how often resident inhales and exhales
  – Blood Pressure - measures pressure against walls of arteries
Measurement Of Body Temperature
10.2 Define body temperature and discuss the way it is measured.
Temperature – Measurement Of Body Heat

• Heat production
  – muscles
  – glands
  – oxidation of food

• Heat loss
  – respiration
  – perspiration
  – excretion
Balance between heat production and heat loss is body temperature
10.2.1 List the factors that affect temperature.
Factors Affecting Temperature

- Exercise
- Illness
- Age
- Time of day
- Medications
- Infection
- Emotions
- Hydration
- Clothing
- Environmental temperature/air movement
Equipment - Thermometer

• Instrument used to measure body temperature

• Types
  – Non-mercury glass
    • oral
    • rectal
Equipment - Thermometer

- Types (continued)
  - chemically treated paper – disposable
  - plastic – disposable
  - electronic - probe covered with disposable shield
  - tympanic - electronic probe used in the ear
10.2.2 Identify the normal temperature range, and the normal body temperature.
Normal Temperature Range For Adults

• Oral - 97.6° - 99.6° F (Fahrenheit) or 36.5° - 37.5° C (Celsius)
• Rectal - 98.6° - 100.6° F or 37.0° - 38.1° C
• Axillary - 96.6° - 98.6° F or 36.0° - 37.0° C
10.2.3 Read a non-mercury glass thermometer.
To Read A Non-mercury Glass Thermometer

- Hold eye level
- Locate solid column of liquid in the glass
- Observe lines on scale at upper side of column of liquid in the glass
To Read A Non-mercury Glass Thermometer (continued)

- Read at point where liquid ends
- If liquid falls between two lines, read it to closest line
  - long line represents degree
  - short line represents 0.2 of a degree Fahrenheit
10.2.4 List and discuss the sites used to take a temperature.
Sites To Take A Temperature

• Oral – most common
• Rectal – registers one degree Fahrenheit higher than oral
• Axillary – least accurate; registers one degree Fahrenheit lower than oral
• Tympanic – probe inserted into the ear canal
Sites To Take A Temperature
(continued)

Condition of resident determines which is the best site for measuring body temperature
10.2.5 Review safety precautions that should be considered when using a thermometer.
Temperature: Safety Precautions

• Hold rectal and axillary thermometers in place
• Stay with resident when taking temperature
• Check glass thermometers for chips
• Prior to use, shake liquid in glass down
• Shake thermometer away from resident and hard objects
Temperature: Safety Precautions
(continued)

• Wipe from end to tip of thermometer prior to reading
• Delay taking oral temperature for 10 - 15 minutes if resident has been smoking, eating or drinking hot/cold liquids.
Demonstration and Return Demonstration
10.3 Demonstrate the procedure for measuring an oral temperature using a non-mercury glass thermometer.
10.4 Demonstrate the procedure for measuring an axillary temperature using a non-mercury glass thermometer.
10.5 Demonstrate the procedure for measuring a rectal temperature using a non-mercury glass thermometer.
10.6 Demonstrate measuring temperature using an electronic or tympanic thermometer.
Measurement Of Pulse
10.7 Define pulse and discuss the way it is measured.
Measurement of Pulse

• Pulse is pressure of blood pushing against wall of artery as heart beats and rests

• Pulse easier to locate in arteries close to skin that can be pressed against bone
Sites For Taking Pulse

- Radial – base of thumb
- Temporal – side of forehead
- Carotid – side of neck
- Brachial – inner aspect of elbow
- Femoral – inner aspect of upper thigh
Sites For Taking Pulse (continued)

- Popliteal - behind knee
- Dorsalis pedis – top of foot
- Apical pulse – over apex of heart
  - taken with stethoscope
  - left side of chest
10.7.1 List the factors that affect the pulse.
Factors Affecting Pulse

- Age
- Sex
- Position
- Drugs
- Illness
- Emotions
- Activity level
- Temperature
- Physical training
10.7.2 Identify the normal pulse range and characteristics.
Measurement of Pulse

- Normal pulse range/characteristics: 60 - 100 beats per minute and regular
- Documenting pulse rate
  - Noted as number of beats per minute
  - Rhythm - regular or irregular
  - Volume - strong, weak, thready, bounding
Demonstration and Return Demonstration
10.8 Demonstrate counting the radial pulse rate.
10.9 Demonstrate measuring the apical pulse.
Measuring Respirations
10.10 Define respiration and discuss how the respiratory rate is measured.
Measuring Respirations

- Respiration – process of taking in oxygen and expelling carbon dioxide from lungs and respiratory tract
10.10.1 List the factors that affect the respiratory rate.
Measuring Respirations (continued)

Factors Affecting Rate

- Age
- Activity level
- Position
- Drugs
- Sex
- Illness
- Emotions
- Temperature
10.10.2 Identify the qualities of normal respirations.
Measuring Respirations
(continued)

• Qualities of normal respirations
  – 12-20 respirations per minute
  – Quiet
  – Effortless
  – Regular
Measuring Respirations (continued)

• Documenting respiratory rate
  – Noted as number of inhalations and exhalations per minute (one inhalation and one exhalation equals one respiration)
  – Rhythm – regular or irregular
  – Character: shallow, deep, labored
Demonstration and Return Demonstration
10.11 Demonstrate counting respirations.
Measuring Blood Pressure
10.12 Define blood pressure and discuss how it is measured.
Measuring Blood Pressure

• Blood pressure is the force of blood pushing against walls of arteries
  – Systolic pressure: greatest force exerted when heart contracting
  – Diastolic pressure: least force exerted as heart relaxes
10.12.1 List factors that influence blood pressure.
Factors Influencing Blood Pressure

- Weight
- Sleep
- Age
- Emotions
- Sex
- Heredity
- Viscosity of blood
- Illness/Disease
Blood Pressure: Equipment

• Sphygmomanometer (manual)
  – cuff - different sizes
  – pressure control bulb
  – pressure gauge – marked with numbers
• aneroid
• mercury
Blood Pressure: Equipment
(continued)

• Stethoscope
  – magnifies sound
  – has diaphragm
10.12.2 Identify the normal blood pressure range.
Measuring Blood Pressure

• Normal blood pressure range
  – Systolic: 90-140 millimeters of mercury
  – Diastolic: 60-90 millimeters of mercury
Guidelines for Blood Pressure Measurements

• Measure on upper arm
• Have correct size cuff
• Identify brachial artery for correct placement of stethoscope
Guidelines for Blood Pressure Measurements
(continued)

• First sound heard – systolic pressure
• Last sound heard or change - diastolic pressure
Guidelines for Blood Pressure Measurements (continued)

- Record - systolic/diastolic
- Resident in relaxed position, sitting or lying down
- Blood pressure usually taken in left arm
Guidelines for Blood Pressure Measurements (continued)

• Do not measure blood pressure in arm with IV, A-V shunt (dialysis), cast, wound, or sore
Guidelines for Blood Pressure Measurements (continued)

• Apply cuff to bare upper arm, not over clothing
• Room quiet so blood pressure can be heard
• Sphygmomanometer must be clearly visible
Blood Pressure: Reading Gauge

- Large lines are at increments of 10 mmHg
- Shorter lines at 2 mm intervals
- Take reading at closest line
Blood Pressure: Reading Gauge (continued)

• Gauge should be at eye level
• Mercury column gauge must not be tilted
• Reading taken from top of column of mercury
Demonstration and Return Demonstration
10.13 Demonstrate the procedure for measuring blood pressure.
10.14 Demonstrate the procedure for taking combined vital signs.
Measuring Height And Weight
10.15 Discuss height and weight and how it is measured.
Measuring Height And Weight

- Baseline measurement obtained on admission and must be accurate.
- Other measurements obtained as ordered.
Measuring Height And Weight (continued)

• Height measurements
  – Feet
  – Inches
  – Centimeters

• Weight measurements
  – Pounds
  – Ounces
  – Kilograms
Measuring Height and Weight (continued)

• Reasons for obtaining height and weight
  – Indicator of nutritional status
  – Indicator of change in medical condition
  – Used by doctor to order medications
10.15.1 List three guidelines for weighing residents.
Measuring Height and Weight (continued)

- Guidelines for weighing residents
  - Use same scale each time
  - Have resident void, remove shoes and outer clothing
  - Weigh at same time each day
Measuring Height and Weight (continued)

- Scales
  - Remain more accurate if moved as little as possible.
  - Various types of scales
    - bathroom scale
    - standing scale
    - scales attached to hydraulic lifts
    - wheelchair scales
    - bed scales
Demonstration and Return Demonstration
10.16 Demonstrate the procedure for measuring height and weight.
Measuring Intake And Output
10.17 Discuss measuring and recording intake and output, and conditions for which this procedure would be ordered.
Measuring Intake and Output

Fluid Balance

- Consume 2-1/2 to 3-1/2 quarts daily
  - eating
  - drinking

- Eliminate 2-1/2 to 3-1/2 quarts daily
  - urine
  - perspiration
  - water vapor through respirations
  - stool
10.17.1 Identify five symptoms of edema.
Edema

- Edema – fluid intake exceeds fluid output
  - Retention of fluids frequently caused by kidney or heart failure or excessive salt intake
Edema (continued)

• Symptoms
  – weight gain
  – swelling of feet, ankles, hands, fingers, face
  – decreased urine output
  – shortness of breath
  – collection of fluid in abdomen (ascites)
10.17.2 List eight symptoms of dehydration.
Dehydration

• Dehydration: fluid output exceeds fluid intake
• Common problem of long-term care residents
Dehydration
(continued)

• Symptoms
  – thirst
  – decreased urine output
  – parched or cracked lips
  – dry, cracked skin
  – fever
  – weight loss
  – concentrated urine
  – tongue coated and thick
Dehydration (continued)

• Causes of dehydration
  – poor fluid intake
  – diarrhea
  – bleeding
  – vomiting
  – excessive perspiration
Dehydration (continued)

- Fluids measured in cubic centimeters (cc)
  - 30 cc = 1 ounce
  - cc - metric measure
Measuring and Recording Intake/Output
10.18 Identify the liquids that would be measured and recorded as fluid intake.
Measuring and Recording Intake/Output

- Physician orders intake and output
- Intake includes:
  - All liquid taken by mouth
  - Food items that turn to liquid at room temperature
  - Tube feedings into stomach through nose or abdomen
  - Fluids given by intravenous infusion
10.18.1 List the liquids that would be measured and recorded as fluid output.
Measuring and Recording
Intake/Output
(continued)

• Output includes
  – Urine
  – Liquid stool
  – Emesis
  – Drainage
  – Suctioned secretions
  – Excessive perspiration
Demonstration and Return Demonstration
10.19 Demonstrate measuring and recording fluid intake and output.
The End