

## Specimen Collection

### Performance Checklist

#### UNIT ONE Urine Specimens

##### UNIT ASSESSMENT

- Assessed client's ability to understand instructions and to obtain specimens properly.
- Identified if signs and symptoms of urinary tract infections were present: frequency, urgency, dysuria, hematuria, flank pain, fever, and cloudy urine with sediment.

##### COLLECTING MIDSTREAM URINE

###### Procedure

1. Gathered appropriate equipment.
2. Washed hands.
3. Identified client.
4. Explained procedure to client.

**Performed**   **Mastered**  
**yes**   **no**

Performed yes	Mastered no

5. Donned clean gloves and provided perineal care as needed.
6. Instructed client to collect specimen in bathroom or placed on bedpan.
7. Instructed client to clean the urinary meatus and obtain urine specimen.

*for a Male:*

- a. Donned gloves and opened container.
- b. Cleansed end of penis with cleansing swab using circular motion and moving from middle toward outside.
- c. Asked client to initiate urine stream.
- d. After single stream achieved, passed specimen bottle into stream and obtained urine sample. Obtained at least 30 mL.

*for a Female:*

- a. Donned gloves and opened container.
- b. Spread labia minora with nondominant hand.

**Performed**   **Mastered**  
**yes**   **no**

Performed yes	Mastered no



## COLLECTING A SPECIMEN FROM AN INFANT

### Procedure

1. Gathered equipment.
2. Washed hands and donned clean gloves.
3. Identified client by checking identaband.
4. Cleansed and dried child's perineum.
5. Removed paper backing from the adhesive on the urine collector.
6. Applied urine collector to child's perineum, avoiding extension over anus to prevent contamination.
  - a. *Male:* Placed child's penis through opening of collector.
  - b. *Female:* Placed the opening of collection bag over child's urinary meatus.
7. Removed gloves.
8. Placed diaper on the child to help hold collector in place.
9. Washed hands.
10. Checked the collector every 15 minutes until specimen was obtained.
11. Donned clean gloves.
12. Removed collector and placed in urine specimen container.
13. Placed clean diaper on child.
14. Removed gloves and washed hands.
15. Sent urine specimen to laboratory either by placing urine collection bag in urine container or pouring urine from collection bag into urine container.
16. Labeled container appropriately.

Performed    Mastered  
yes    no

Performed yes	no	Mastered

## UNIT THREE Stool Specimens

### UNIT ASSESSMENT

- Determined purpose for test.
- Checked whether specimen must be sent to laboratory immediately.
- Determined eliminatory status of client (i.e., liquid vs. formed stools).
- Assessed gastrointestinal tract dysfunction.

## COLLECTING ADULT STOOL SPECIMEN

### Procedure

1. Checked client's identaband and explained procedure.
2. Determined if dietary restrictions were required.
3. Before collecting stool specimen, asked the client to void. Told client not to void on specimen.
4. Donned gloves.
5. Cleaned out all urine from bedpan or bedside commode.
6. Raised head of bed so that client could assume squatting position on bedpan, or helped client sit on the bedside commode.
7. Provided privacy until client had passed stool.
8. Removed bedpan or bedside commode. If necessary, helped client clean perineum.
9. Used tongue blade to obtain and place small portion (2 teaspoons) of formed stool in waxed cardboard or plastic container. If required for specific test, collected entire specimen. Did not contaminate outside of container.

Performed    Mastered  
yes    no

Performed yes	no	Mastered

10. Discarded remaining stool, cleaned bedpan or bedside commode.
11. Removed gloves and washed hands.
12. Labeled container with client's name.
13. Filled out laboratory request for appropriate test.
14. Took specimen to laboratory immediately.

## COLLECTING STOOL FOR OVA AND PARASITES

### Procedure

1. Followed steps for *Collecting Adult Stool Specimen*. Donned clean gloves to collect stool specimen.
2. Collected exudate, mucus, and blood with all specimens.
  - a. Placed stool in container with preservative.
  - b. Mashed specimen in container.
3. Replaced and tightened cup and mixed contents well.
4. Kept specimens at body temperature to be examined within 30 minutes.
5. Collected complete stools after purgative medications were administered.
6. When presence of tapeworms was suspected, all stools were examined in their entirety in order to find head of parasite.
7. Checked that client had not been given barium, oil, and laxatives containing heavy metals that interfere with extraction process for 7 days prior to stool examination.

Performed    Mastered  
yes        no

Performed yes	Mastered no

8. Used only normal saline solution or tap water if enema was administered to collect specimens. Did not use soap suds or other substances.
9. Did not contaminate specimen with urine because it kills amoeba.
10. Collected three random, normally passed stool specimens to ensure accurate test results.

## COLLECTING INFANT STOOL SPECIMEN

### Procedure

1. Placed clean, disposable diaper on the child or infant.
2. Checked diaper frequently so that you obtained a specimen that was not contaminated with urine.
3. If child was passing liquid stools, placed plastic liner inside diaper.
4. Donned clean gloves before taking diaper off child and collecting specimen.
5. Used cotton swabs to procure specimen.
6. Placed specimen in stool container.
7. Removed gloves, washed hands, labeled, and sent to laboratory immediately.

## TESTING FOR OCCULT BLOOD

### Procedure

1. Explained need for stool specimen to client.
2. Provided privacy.

Performed    Mastered  
yes        no

Performed yes	Mastered no

3. Positioned client on bedpan or commode.
4. Donned clean gloves.
5. Took stool specimen to bathroom or utility room.
6. Prepared slide for testing according to packet instructions:

*gamma Fe-Cult Plus*

- a. Smear thick layer of stool on panel number 1.
- b. Obtained second specimen from a different part of stool specimen and smeared thin layer on panel number 2.
- c. Turned packet over, and removed perforated flap, marked Not To Be Opened By Patient.
- d. Added 2 drops of Fe-Cult developing solution to test area over smear of stool.
- e. Read and recorded test results within 30 seconds.

*Hemoccult*

- a. Followed steps 1 and 2 for Fe-Cult Plus test.
- b. Waited 3–5 minutes before processing test.
- c. Turned packet over, and lifted flap.
- d. Applied 2 drops of Hemoccult developer over each smear.
- e. Read and recorded test results within 60 seconds.
- f. Applied 1 drop of Hemoccult developer between the 1 and 2 performance monitor test strip (orange section at bottom of packet).
- g. Interpreted results within 10 seconds. If positive side turned blue, test slide was accurate.

Performed Mastered  
yes no

Performed yes	Mastered no

7. Discarded filter paper or packet.
8. Removed gloves and washed hands.
9. Checked facility policy for testing.
10. Documented stool smear results in nurses' notes.

### COLLECTING STOOL FOR BACTERIAL CULTURE

#### Procedure

1. Followed steps for *Collecting Adult Stool Specimen*. Donned clean gloves before collecting stool specimen.
2. Collected exudate, mucus, and blood with all specimens.
3. Placed small amount of feces in a waxed cardboard container (if entire specimen was not needed).
4. Removed gloves, washed hands, and sent entire specimen to the laboratory immediately after collection. If there was any delay, specimen was iced.
5. Reported and calculated on basis of daily output any stool specimens that were to undergo chemical analysis.

### TEACHING PARENTS TO TEST FOR PINWORMS

#### Procedure

1. Explained procedure to child and parent.
2. Parents may choose to wear clean gloves.

Performed Mastered  
yes no

Performed yes	Mastered no

3. Instructed parents to make collection upon arising in the morning before bathing, cleansing, or passing a bowel movement.
4. Gave instructions to parents.
  - a. Remove cap in which is inserted a plastic paddle with one side coated with a non-toxic, adhesive material. This is marked “sticky side.” Do not touch this side with fingers.
  - b. Separate the buttocks and press the stick side against several areas around the anus using moderate pressure.
  - c. Replace the paddle in tube. Be sure there is no stool on paddle.
  - d. Label container with your full name, medical record number, and date.
  - e. Keep specimen at room temperature until all specimens are collected (on consecutive days). Return all tubes to the doctor.

	Performed yes	Mastered no

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## UNIT FOUR Blood Specimens

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### UNIT ASSESSMENT

- Checked order for blood withdrawal in client’s chart.
- Noted specific requirements for test (e.g., fasting or administration of medications prior to the test).
- Checked to see if test was routine or urgent.
- Assessed veins for venipuncture site.

## WITHDRAWING VENOUS BLOOD (PHLEBOTOMY)

### Preparation

1. Checked physician’s orders for tests to be obtained.
2. Washed hands.
3. Gathered equipment.
4. Opened sterile packages.

### Procedure

1. Identified client by checking identaband.
2. Donned clean gloves.
3. Placed extremity straight and in dependent position if possible.
4. Placed absorbent pad or towel under arm.
5. Placed equipment close to work area.
6. Placed a tourniquet 4–6 inches above the client’s elbow. (If client had an IV or AV shunt in place, placed the tourniquet on the other arm.) Tightened the tourniquet and told the client to open and close fist.
7. Cleansed the antecubital fossa (inner aspect of elbow) with antimicrobial wipe starting at the vein site and moving in a circular motion about 2 inches away from vein.
8. Let site dry.
9. With needle affixed to the syringe, held skin taut with nondominant hand. Performed a venipuncture with bevel of needle pointed up at 30° angle.
10. Lowered needle toward skin after needle entered vein.

	Performed yes	Mastered no

	Performed		Mastered	
	yes	no	yes	no
11. Threaded needle along path of vein. Watched for backflow of blood in syringe.				
12. Pulled the syringe plunger back gently, and checked for placement of the needle in the vein. If placement was correct, released the tourniquet, waited a few seconds to allow fresh blood to flow into the vein, and then pulled back gently on the plunger.				
13. Filled the syringe to the desired amount.				
14. Removed the needle from the vein, covered the venipuncture site with a sterile sponge, and pressed the sponge firmly on the site for 2–3 minutes.				
15. Removed the top from the laboratory tube. Did not touch the inside of the tube or spill its contents.				
16. Removed the needle from the blood-filled syringe, and gently ejected the blood down the side of the tube. Did not allow the blood to foam or splash.				
17. Replaced the tube top and rotated the blood gently to mix the blood with the tube contents. Alternative method: Needle was inserted through rubber stopper of test tube if 20-gauge needle was used. Injected blood slowly into test tube to prevent hemolysis of cells.				
18. Labeled the tube promptly. Wrote the client's name, date, and the time. Wrote the initials of the person who drew the specimen if the information required by hospital policy.				
19. Checked the client's venipuncture site for oozing. Continued to press the sponge firmly over the site if clots had not begun to form at site.				

	Performed		Mastered	
	yes	no	yes	no
20. Disposed of needle and syringe in biohazard receptacle.				
21. Removed gloves and washed hands.				
22. Took the blood specimens to a designated station or laboratory according to hospital procedure.				

  

### USING VACUTAINER SYSTEM

#### Preparation

1. Checked physician's orders for tests to be obtained.
2. Washed hands.
3. Obtained plastic adapter, double-ended needle, and vacuum tubes.
4. Screwed double-ended needle into plastic adapter, with shorter needle facing plastic adapter.
5. Explained procedure to client.
6. Donned clean gloves.

#### Procedure

1. Followed steps 1–12 in *Withdrawing Venous Blood*.
2. Proceeded with venipuncture. Once needle was positioned inside vein and blood return was visualized, inserted blood collection tube and held plastic adapter steady. Pressed vacuum tube firmly into short needle so that it pierced top of tube. Blood began to spurt quickly into tube until tube was filled.
3. Instructed client to relax first and released tourniquet.

4. Released tube, and set it aside. Attached another tube to Vacutainer, or prepared to remove needle.
5. Placed sponge over needle site, and removed needle while applying gentle pressure to site.
6. Held sponge on site for 2–3 minutes. Did not have client bend elbow.
7. Placed vacutainer with needle in biohazard container.
8. Checked if tube contained additive, gently inverted to mix, and labeled specimen tubes.
9. Removed gloves and washed hands.
10. Completed laboratory slip, and took specimen to designated station or laboratory.

## WITHDRAWING ARTERIAL BLOOD

### Preparation

1. Checked physician's orders for tests to be performed. (Usual test is arterial blood gases.)
2. Assembled equipment.
3. Washed hands.
4. Wiped top of heparin bottle with antimicrobial swab.
5. Uncapped needle and inserted into heparin bottle with antimicrobial swab.
6. Withdrew about 1/2 to 1 mL of heparin solution into syringe.
7. Prepared syringe by pulling plunger back entire length of syringe, rotating syringe to allow heparin to coat syringe sides.

	Performed yes	Mastered no

8. Expressed excess heparin into sink.
9. Called laboratory to apprise them of specimen being sent for ABGs according to hospital policy.

### Procedure

1. Took equipment into room and placed on overbed table.
2. Checked identaband.
3. Explained procedure and purpose of test.
4. Donned clean gloves and goggles.
5. Palpated selected radial site with fingertips.
6. Hyperextended wrist slightly.
7. Cleansed puncture site with antimicrobial swab using a circular motion beginning over the artery site. Placed swab on inside of packet and in close proximity to site.
8. Kept fingertip of nondominant hand over puncture site.
9. Picked up syringe and held needle bevel in uppermost position and inserted needle into artery at a 45° angle.
10. Did not advance needle once blood was observed flowing into syringe.
11. Held needle steady and allowed blood to fill syringe. Did not draw back on syringe.
12. Placed antimicrobial swab next to needle site, and withdrew needle when syringe was filled.
13. Immediately applied pressure over site with alcohol swab. Maintained pressure for 5 to 10 minutes.

	Performed yes	Mastered no

14. Monitored puncture site for signs of oozing. When bleeding stopped, placed 2 × 2 gauze over site and applied tape.
15. Expelled any air bubbles from syringe. Put syringe cap or stopper on needle.
16. Labeled syringe.
17. Placed syringe in plastic bag filled with ice. Closed plastic bag.
18. Removed gloves and washed hands.
19. Completed laboratory requisition slip. Indicated client's temperature and oxygen percentage as necessary.
20. Took specimen to laboratory immediately.

## COLLECTING A SPECIMEN FOR CULTURE

### Preparation

1. Checked physician's orders and client care plan.
2. Washed hands.
3. Gathered appropriate equipment.
4. Donned gloves.
5. Explained procedure to client.

### Procedure

1. Cleansed skin with antimicrobial wipe. Allowed skin to dry.
2. Prepared skin with povidone-iodine. Cleansed starting at vein site and moving in circular motion outward 2 inches.

Performed    Mastered  
yes    no

Performed yes	Mastered no

3. Allowed skin to dry.
4. Removed povidone-iodine with antimicrobial wipe.
5. Performed venipuncture.
6. Withdrew 20 mL of blood from vein without IV. Did not draw specimen through catheter.
7. Removed needle used for venipuncture and replaced with new sterile needle.
8. Swabbed top of paired blood culture bottles with povidone-iodine swab and then swab, and injected 8–10 mL blood into each bottle according to hospital policy. Changed needle each time so new sterile needle used for each bottle.
9. Drew second sample of blood after 15 minutes or according to hospital policy. Used percutaneous stick if required by hospital policy. (Prepared skin with povidone-iodine solution again.)
10. Placed in second set of paired blood culture bottles, using single sterile needle technique.
11. Labeled bottles, and transported to laboratory immediately. Included site where blood specimens were obtained.

## OBTAINING BLOOD SPECIMEN FOR GLUCOSE TESTING (CAPILLARY PUNCTURE)

### Preparation

1. Gathered appropriate equipment.
2. Washed hands.
3. Donned gloves.

Performed    Mastered  
yes    no

Performed yes	Mastered no

**Procedure**

1. Washed client's fingertip (especially side of finger where lancet would puncture, or heel for infant) with soap and water.
2. Gently manipulated finger or heel to determine if good blood supply was available.
3. Took cover off Penlet/Lancet.
4. Placed lancet in Penlet, pushed and twisted in place.
5. Twisted cover of lancet pen to remove.
6. Replaced cover of Penlet.
7. Cocked Penlet to pull lancet back into Penlet.
8. Placed tip of sampling pen against side of finger or heel.
9. Activated to force lancet downward by pressing gently on activating button. Lancet punctured skin immediately.
10. Gently massaged base of finger, stroking toward puncture site. Did not squeeze or apply pressure to site.
11. Waited few seconds to allow blood to collect at puncture site.
12. Placed large drop of blood onto both zones of reagent area on Chemstrip.
13. Wiped puncture site with cotton ball to seal.
14. Discarded used equipment.
15. Removed gloves and washed hands.
16. Documented results.

Performed    Mastered  
yes          no

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**MEASURING BLOOD GLUCOSE USING CHEMSTRIP**

**Procedure**

1. Followed steps in *Obtaining Blood Specimen for Glucose Testing*.
2. Placed blood specimen on reagent area of Chemstrip.
3. Started timer simultaneously with dropping blood on strip.
4. Waited 60 seconds, and wiped blood from Chemstrip using dry cotton ball.
5. Waited additional 60 seconds, and matched color chart for results.
6. If color chart indicated reading was darker than 240 mg/dL, waited additional 60 seconds and compared Chemstrip with color scale.
7. Checked Kardex or physician's orders for insulin, and administered prescribed dose.
8. Removed gloves and washed hands.
9. Documented results of blood glucose and insulin dosage on diabetic record and medication sheet.

Performed    Mastered  
yes          no

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**MEASURING BLOOD GLUCOSE USING GLUCOMETER**

**Preparation**

1. Removed calibration strip from bottle of Chemstrips.
2. Compared lot numbers on calibration strip to lot number on side of Chemstrip bottle. These matched.

3. Placed calibration strip in meter by opening door and inserting top of strip into slot on right side of meter.
4. Inserted strip until I heard a “click.”
5. Closed door.
6. Pushed ON/OFF button. Numbers 888 appeared on screen.
7. Opened door of monitor.
8. Pushed black button on the left side of door, and slid Chemstrip under strip guide with test pads facing up.
9. Closed door quickly. Numbers 000 were displayed on screen indicator. If not, opened and closed door again.
10. Opened door and removed strip. Left door open.
11. Donned clean gloves.

**Procedure**

1. Obtained blood specimen according to steps 1 through 11 in *Obtaining Blood Specimen for Glucose Testing*.
2. Inserted Dextrose Stix into Glucometer according to manufacturer’s instructions.
3. Waited 30 seconds or time noted by manufacturer.
4. Started timer.
5. Read digital display when alarm sounded.
6. Disposed of Dextrose Stix.
7. Turned off Glucometer.
8. Removed gloves and washed hands.
9. Documented findings on appropriate record.

Performed    Mastered  
yes        no

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**MONITORING GLUCOSE:  
SURE STEP METHOD**

**Procedure**

*for Quality Control*

1. Turned on meter.
2. Checked battery status to ensure adequate power.
3. Pressed to continue.
4. Selected Quality Control (QC) Test from the main menu by touching the appropriate area on the screen.
5. Selected Control Test by touching “HIGH” or “LOW” area on the screen to indicate which control test is to be done.
6. Entered operator ID assigned by the specific facility.
7. Selected Control Solution Lot Number from list displayed, or entered it manually. Verified lot number on control solutions.
8. Selected Test Strip Lot Number (and code) from list displayed, or entered in manually. Verified lot number (and code) on test strips.
9. Shook control solution vial gently. Checked confirmation dot on back of test strip to ensure it was completely blue.
10. Applied one drop of control solution to pink test square on test strip.
11. Inserted test strip into test holder within 2 minutes of applying control solutions. Firmly pushed strip into meter.

Performed    Mastered  
yes        no

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4. Checked that code number on test strip matched code number on meter.
5. Explained procedure to client.
6. Donned clean gloves.

**Procedure**

1. Instructed client to wash hands with soap and warm water.
2. Instructed client to place arm at side of body for 10–15 seconds.
3. Removed Penlet II cap by pulling it straight out.
4. Inserted sterile lancet into lancet holder. Did not line up ridges on the lancet with the slots in lancet holder.
5. Replaced Penlet II cap and cocked Penlet to pull lancet back into Penlet.
6. Chose a lateral surface of a fingertip. Rotated sites for sticks.
7. Held Penlet II firmly against side of finger and pressed release button.
8. Squeezed finger gently to obtain drop of blood.
9. Placed tip of bulb at base of blood drop and filled tubing with blood.
10. Turned meter ON.
11. Removed test strip from bottle and inserted test strip into meter until it stopped, notched end first and test spot side up.
12. Placed large drop of blood on test strip. Did not smear blood on test spot or add additional blood after test began.

**Performed**   **Mastered**  
**yes**   **no**



13. Waited for beeping sound (45 seconds) to obtain reading.
14. Used tissue or gauze to apply pressure over puncture site.
15. Removed lancet by removing Penlet II cap. Pulled back on dark gray sliding barrel until lancet dropped out into biohazard container.
16. Cleaned Penlet II sampler and capped with soap and water.
17. Removed test strip, and placed in disposal bag.
18. Removed gloves and washed hands.
19. Documented findings, and administered insulin as needed.

**Performed**   **Mastered**  
**yes**   **no**



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**UNIT FIVE   Sputum Collection**

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**UNIT ASSESSMENT**

- Checked diagnosis for indication of need for specimen.
- Observed client’s ability to cough up specimen. Assisted the client while obtaining a specimen or used suction equipment if necessary.
- Determined degree of pain client could tolerate.
- Checked client’s understanding of procedure so sputum and not saliva was obtained.

## OBTAINING SPUTUM SPECIMEN

Performed    Mastered  
yes        no

### Preparation

1. Checked physician's orders and client care plan.
2. Gathered appropriate equipment.
3. Washed hands.
4. Provided privacy.
5. Placed client in sitting position.

### Procedure

1. Explained procedure and rationale to client.
2. Had client rinse mouth before coughing to remove any oral contaminants.
3. Donned clean gloves. Donned mask, gown, and goggles if client required assistance with procedure.
4. Instructed client to breathe in and out deeply 2 to 4 times. Then give a series of low, deep coughs to raise sputum.
5. Obtained 1–2 teaspoons of sputum in container; closed and sealed lid.
6. Followed directions on specimen container.
7. Labeled specimen tube directly and placed in biohazard transport bag.
8. If client was unable to produce sputum specimen, assisted client by placing palms of hands or rolled pillow around incision area if client was inhibited by pain.
9. Removed gloves, gown, mask, and goggles and washed hands.
10. Evaluated client's status after procedure.



Performed    Mastered  
yes        no

11. Delivered sputum to laboratory within 30 minutes after collection. Obtained specimen during treatment if client was receiving any respiratory treatment (IPPB or PVD).

## USING SUCTION TRAP

### Preparation

1. Checked physician's orders and client care plan.
2. Washed hands.
3. Gathered equipment.
4. Explained procedure to client.
5. Provided privacy.
6. Donned clean gloves, goggles, gown, and mask as appropriate.

### Procedure

1. Set up suction equipment.
2. Attached sputum trap between suction catheter and tubing.
3. Completed suctioning as for nasooropharyngeal suctioning.
4. Placed thumb on top of sputum trap to monitor; removed thumb and provided intermittent suction, lifting thumb at intervals until specimen was collected.
5. Suctioned no more than 15 seconds at a time.
6. Turned off wall suction.
7. Labeled specimen container.

8. Placed suction trap in plastic bag. Followed agency protocol for double-bagging specimens before transporting to laboratory.
9. Removed gloves and other equipment; mask, gown, and goggles if used, and disposed of in appropriate receptacle.
10. Sent specimen that was collected in trap to laboratory.
11. Placed client in comfortable position.
12. Washed hands.

Performed    Mastered  
yes    no

Performed yes	Mastered no

## COLLECTING SPECIMEN BY TRANSTRACHEAL ASPIRATION

### Procedure

1. Explained procedure to client.
2. Gathered equipment.
3. Provided privacy for client.
4. Washed hands and donned gloves.
5. Positioned client by hyperextending client's neck and placing a pillow under shoulders.
6. Cleansed cricothyroid area of neck with antimicrobial solution.
7. Physician anesthetized area with lidocaine (Xylocaine).
8. Physician inserted 14-gauge needle into cricothyroid area, threaded polyethylene tubing through needle, withdrew needle, and left tubing in place.
9. Attached syringe (3–5 mL) with 1–2 mL sterile saline into polyethylene tubing.

10. Injected saline into polyethylene tubing to initiate coughing response.
11. To obtain specimen, immediately pulled back on barrel of syringe.
12. Withdrew catheter and applied pressure over puncture site.
13. Placed sputum secretions in sterile container, labeled container, and sent it to laboratory.
14. Positioned client for comfort.
15. Removed gloves and washed hands.

Performed    Mastered  
yes    no

Performed yes	Mastered no

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## UNIT SIX Throat and Wound Specimens for Culture

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### UNIT ASSESSMENT

- Identified appropriate container for specimen swabs or material.
- Determined time frame for expediting specimen to laboratory.
- Assessed exact area for specimen.
- Assessed client's ability to cooperate with procedure.
- Assessed wound and drainage.

### OBTAINING A THROAT SPECIMEN

#### Preparation

1. Checked physician's orders.
2. Gathered equipment.
3. Explained procedure to client.
4. Positioned client in Fowler's position.

Performed    Mastered  
yes    no

Performed yes	Mastered no

5. Placed treatment light or used natural light source to provide good lighting.
6. Washed hands and donned gloves.

**Procedure**

1. Removed sterile applicator from culture tube by rotating cap to break seal.
2. Asked client to open mouth.
3. Used tongue depressor if desired to depress tongue.
4. Swabbed back of throat along tonsillar area.
5. Removed applicator stick and placed in specimen tube.
6. Pushed stick into tube until swab was saturated with culture medium and cap reached black dot.
7. Positioned client for comfort.
8. Removed gloves and washed hands.
9. Labeled specimen tube and sent to laboratory immediately.

**OBTAINING SPECIMEN FOR AEROBIC CULTURE**

**Preparation**

1. Checked physician's orders and client care plan.
2. Washed hands.
3. Gathered equipment.
4. Explained procedure to client.

Performed Mastered  
yes no

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5. Opened all sterile dressing material, and arranged for easy access during dressing change.

**Procedure**

1. Donned clean gloves.
2. Removed and discarded soiled dressing from wound into disposal bag.
3. Removed gloves and donned clean gloves.
4. Removed swab, and wiped swab in wound. Obtained culture specimen from active drainage area.
5. Avoided touching skin edges or other surfaces that would contaminate the swab.
6. Returned swab to container.
7. Crushed transport medium vial, and pushed swab tip into contact with transport medium.
8. Closed container.
9. Placed specimen in sealed biohazard bag.
10. Wrote any antibiotic or antifungal therapy on laboratory slip.
11. Removed clean gloves and washed hands.
12. Donned sterile gloves and replaced dressing.
13. Removed gloves and washed hands.
14. Transported specimen to laboratory within 30 minutes.

Performed Mastered  
yes no

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## OBTAINING SPECIMEN FOR ANAEROBIC CULTURE

### Preparation

1. Checked physician's orders and client care plan.
2. Washed hands.
3. Gathered equipment.
4. Explained procedure to client.
5. Opened all sterile dressing material, and arranged for easy access during dressing change.

### Procedure

1. Donned clean gloves.
2. Took off dressing from wound, and discarded in disposal bag.
3. Removed gloves and donned clean gloves.
4. Removed specimen swab, and wiped in wound as I did with aerobic culturing. Did not tip anaerobic transport medium tube because it contains carbon dioxide.

Performed    Mastered  
yes    no

Performed yes	no	Mastered

Performed    Mastered  
yes    no

Performed yes	no	Mastered

5. Returned swab to container. *Did not* touch sides of container with applicator.
6. Filled out or affixed label to specimen.
7. Wrote any recent antibiotic or antifungal therapy on laboratory slip.
8. Transported specimen to laboratory *immediately*.
9. Alternative method:
  - a. Drew up exudate in syringe with all air expelled or had a physician aspirate wound.
  - b. Injected drainage into anaerobic culture tube.
  - c. Transported specimens to laboratory *immediately*.
10. Removed clean gloves, washed hands, and donned sterile gloves.
11. Replaced sterile dressing following protocol.
12. Removed sterile gloves.
13. Washed hands.

# Diagnostic Tests

## Performance Checklist

### UNIT ONE X-ray Studies

#### UNIT ASSESSMENT

- Assessed client's knowledge of procedure to be done.
- Identified any history of drug or food allergies.
- Evaluated client's ability to follow directions before and during test.
- Assessed vital signs and documented for baseline data.

#### PREPARING FOR X-RAY STUDIES

##### Procedure

1. Identified specific diagnostic test to be performed.
2. Determined if any tests must precede others in order to schedule test appropriately.

Performed    Mastered  
yes    no

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3. Obtained client's history to determine allergies to food or drugs, and noted these on chart. Notified physician of findings.
4. Identified specific preparations that needed to be carried out before studies.
5. Monitored food and fluid restrictions that needed to be altered for studies.
6. Obtained special consent forms for all invasive diagnostic studies after physician had explained study to client.
7. Provided client teaching regarding purpose of study, including any special preparation required and restrictions imposed by study.
8. Provided psychologic support and reassurance to client.
9. Obtained orders regarding medications or nutrition for clients with special problems, such as diabetes or seizure disorders.

Performed    Mastered  
yes    no

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	Performed yes	Mastered no
<p>10. Carried out safety precautions immediately prior to study:</p> <ol style="list-style-type: none"> <li>Checked identaband for accuracy.</li> <li>Had client void if necessary.</li> <li>Removed client's hairpins, jewelry, and dentures if necessary.</li> <li>Charted premedication given.</li> <li>Monitored safe transfer from bed to gurney or wheelchair.</li> <li>Accompanied client to x-ray department if needed.</li> </ol> <p><i>for Oral Cholecystography</i></p> <ol style="list-style-type: none"> <li>Explained purpose of procedure to client.</li> <li>Identified allergies to shellfish or iodine. Notified physician if allergy was noted.</li> <li>Obtained consent form.</li> <li>Instructed client to eat low-fat meal evening before test.</li> <li>Administered iodine radiopaque medication two hours after dinner.</li> <li>Kept client NPO after administration of contrast medium.</li> <li>Took client to x-ray department.</li> <li>Explained details of procedure to client.</li> <li>Explained postprocedure care to client.</li> </ol> <p><i>for Intravenous Pyelography (IVP)</i></p> <ol style="list-style-type: none"> <li>Followed steps as appropriate in <i>Preparation for X-ray Studies</i>. <ol style="list-style-type: none"> <li>Gave client clear liquids the evening before IVP. Maintained NPO or allowed liquid after midnight according to facility policy.</li> <li>Gave laxative or cathartic as ordered.</li> </ol> </li> </ol>		

	Performed yes	Mastered no
<ol style="list-style-type: none"> <li>Identified allergies to shellfish or iodine.</li> <li>Obtained consent.</li> <li>Took client to x-ray department when notified.</li> </ol> <ol style="list-style-type: none"> <li>Explained details of procedure to client.</li> <li>Warned client that contrast medium could cause feelings of nausea, shortness of breath, and a hot, flushed effect.</li> <li>Returned client to room and had client resume ordered activity level.</li> <li>Encouraged fluids (including at least 24 oz water) and offered diet.</li> <li>Monitored client for 24 hours for signs and symptoms for reactions such as oliguria, nausea, and vomiting.</li> </ol> <p><i>for Myelography</i></p> <ol style="list-style-type: none"> <li>Followed steps as appropriate in <i>Preparation for X-ray Studies</i>. <ol style="list-style-type: none"> <li>Identified allergies to shellfish, iodine, or other contrast media.</li> <li>Kept client NPO for 3–4 hours.</li> <li>Obtained baseline levels of motor and sensory function.</li> <li>Obtained consent.</li> <li>Medicated with sedative if ordered.</li> <li>Took client on gurney to x-ray department.</li> </ol> </li> <li>Explained details of procedure to client.</li> <li>After the test: <ol style="list-style-type: none"> <li>Kept client in supine or prone position for 8 hours for water-based or 12 hours for oil-based contrast.</li> <li>Kept head elevated 30–50° if water-based contrast used; client may be on bedrest for up to 24 hours.</li> </ol> </li> </ol>		

	Performed		Mastered	
	yes	no	yes	no
4. Observed for seizure activity if metrizamide was used for procedure.				
5. Monitored vital signs and motor and sensory function.				
a. Cervical myelogram: checked upper and lower extremities and bladder function.				
b. Lumbar myelogram: checked lower extremities and bladder function.				
6. Medicated for pain as ordered.				
7. Increased fluids to at least 2500 mL/day for 2 days.				
8. Monitored output, and observed for distention.				
9. Observed puncture site for 24 hours for bleeding, hematoma, or edema.				
10. Observed for complication of chemical or bacterial meningitis: fever, stiff neck, photophobia, or delayed reaction to dye.				
11. Used comfort measures and relaxation techniques when needed.				
<i>for Arteriography</i>				
1. Followed steps as appropriate in <i>Preparing for X-ray Studies</i> .				
2. Explained purpose of procedure to client.				
3. Identified allergies to shellfish, iodine, or any contrast media. Asked client if taking anticoagulants.				
4. Obtained CBC, PT/PTT, and APT.				
5. Obtained consent.				
6. Kept client NPO for 2–8 hours, as ordered.				
7. Shaved and scrubbed puncture site when ordered.				

	Performed		Mastered	
	yes	no	yes	no
8. Had client void before procedure.				
9. Obtained vital signs and checked peripheral pulses.				
10. Administered preprocedure medications if ordered and transported client to x-ray department.				
11. Explained details of procedure to client.				
12. Returned client on gurney to room.				
13. Monitored vital signs, pulses, and puncture site, as with surgical clients.				
14. Observed for signs of shock and presence of pain, which indicated hemorrhage or thrombosis.				
15. Observed for symptoms of delayed allergic reaction to dye, such as nausea, vomiting, tachycardia, and sweating.				
16. Notified physician immediately if unusual symptoms were present.				
17. Applied ice pack or pressure dressing to puncture site if ordered. Did not flex the involved extremity.				
18. Maintained bed rest with head elevated slightly for at least 8 hours. Checked hospital policy for time.				
19. Offered fluids and diet as ordered and tolerated.				
20. Provided comfort measures as needed.				
<i>for Computed Tomography (CT Scan)</i>				
1. Explained purpose of procedure to client.				
2. Identified allergies to shellfish or iodine if contrast medium was to be used.				

	Performed yes	Mastered no
3. Obtained consent if contrast medium was to be used or facility requested.		
4. Placed client on NPO for 4 hours if contrast medium was to be used.		
5. Administered preprocedure medication if ordered.		
6. Removed all metal objects, such as hair clips, necklace, and jewelry.		
7. Took client on gurney to x-ray department.		
8. Explained equipment and procedure to client.		
9. Explained client would have IV injection of contrast material if enhanced study was to be done. Explained that a warm, flushed feeling or nausea could occur.		
10. Explained that client would be placed in an encircling body scanner.		
11. Instructed client to lie very still during the procedure and not touch scan site.		
12. Returned client to room.		
13. Provided diet and forced fluids to 3000 mL or as ordered.		
14. Observed for signs of delayed allergic reaction if contrast study was done.		
<i>for Cardiac Catheterization</i>		
1. Explained purpose for procedure to client.		
2. Obtained consent.		
3. Identified allergies to drugs, iodine, shellfish, or any other contrast media.		
4. Checked if client was on anticoagulants and called physician for instructions related to drug administration.		

	Performed yes	Mastered no
5. Completed preparation of and shaved groin or brachial area (or both). Marked peripheral pulses for post catheterization assessment.		
6. Established baseline data for vital signs, peripheral pulses, coagulation studies (PTT, protime), and ECG pattern.		
7. Placed client on NPO 4–6 hours before test.		
8. Before procedure, obtained vital signs, took weight, and had the client void.		
9. Administered preprocedure medication.		
10. Took client on gurney to cardiac catheterization lab.		
11. Explained equipment and details of procedure to client.		
12. Following procedure, transported client on gurney to room.		
13. Provided postcardiac-catheterization care.		
a. Monitored vital signs, puncture site, heart and lung sounds, and peripheral pulses as with a surgical client.		
b. Elevated extremity used for catheterization site. Kept extremity extended.		
c. Applied pressure dressing or sandbags to puncture site if bleeding continued.		
d. Encouraged fluids and diet when vital signs were stable and no evidence of nausea or drowsiness was present.		
e. Monitored for signs and symptoms of allergic response.		
f. Monitored for signs of clot-induced stroke or myocardial infarction.		
14. Positioned client for comfort. Placed on back for several hours postprocedure, then turned from side to side.		



	Performed		Mastered
	yes	no	
6. Instructed client to take off clothing above waist and put x-ray gown on so it tied in front.			
7. Instructed client to wait when mammography is finished until films were processed.			
8. Instructed client in self breast examination, if necessary, and answered questions.			

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## UNIT TWO Nuclear Scanning

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### UNIT ASSESSMENT

- Assessed client's understanding of nuclear imaging and specific diagnostic test.
- Assessed client's ability to tolerate procedure.
- Determined psychologic needs of client in relation to nuclear scan.
- Identified allergies to radioactive materials.
- Assessed need to stay with client during procedure.
- Assessed vital signs and documented for baseline data.

### PREPARING FOR NUCLEAR SCANS

#### Preparation

	Performed		Mastered
	yes	no	
1. Identified the specific diagnostic test that would be performed.			
2. Determined if any tests must precede others to schedule test appropriately.			
3. Identified specific preparations that needed to be carried out before the studies. Checked for recent exposure to radionuclides.			
4. Monitored fluid alterations that needed to precede the studies.			

	Performed		Mastered
	yes	no	
5. Obtained special consent forms if required by facility after the physician has explained the study to the client.			
6. Provided client teaching regarding the study, including any special preparation required for the study.			
7. Provided psychologic support and reassurance to the client.			
8. Explained that radiation exposure is minimal and limited.			
9. Recorded client's height and weight.			
10. Carried out safety precautions immediately prior to the study: <ul style="list-style-type: none"> <li>a. Checked identaband for accuracy.</li> <li>b. Checked for allergies.</li> <li>c. Charted premedication if given.</li> <li>d. Monitored safe transfer from the bed to gurney or wheelchair.</li> <li>e. Accompanied client to nuclear medicine department if needed.</li> </ul>			

### Procedure

*for Bone Scan*

1. Followed steps as appropriate for *Preparing for Nuclear Scans*.
  - a. Explained purpose for procedure to client—usually to detect metastatic cancer.
  - b. No fasting or sedation required.
  - c. Had client ready for injection of radionuclide material 1–3 hours before scan.
  - d. Forced fluids between injection of isotope and scan.
  - e. Had client void before going to x-ray.
  - f. Took client to nuclear medicine department.



- d. If sedative was given, did not allow client to drive or engage in any hazardous activities until sedation had worn off. Instructed client to have someone drive him/her home.

*for Nuclear Cardiology*

1. Followed steps as appropriate in *Preparing for Nuclear Scans*.
2. Instructed client that radioactive tracer substances would be used to detect and evaluate cardiovascular abnormalities.
3. Instructed client in specific activities related to the test.
4. Explained that short fasting time may be necessary.
5. Instructed that following isotope injection, 15 minutes to 4 hours later scan would be performed.
6. Instructed client about nuclear medicine department activity.
  - a. Gamma ray detector is placed over heart.
  - b. Repositioned during scan.
  - c. Scan records image of heart.
7. Evaluated client's status following scan.

*for Thyroid Scan*

1. Followed steps as appropriate in *Preparing for Nuclear Scans*.
2. Explained purpose of scan to client.
3. Explained procedure to client.
  - a. Instructed client not to consume any iodine compounds or eat any foods that contain iodine.

**Performed    Mastered**  
**yes    no**



- b. Instructed client not to take thyroid or antithyroid drugs or x-ray contrast medium before the test.
- c. Told client that after the initial oral radioactive technetium, he or she would have to return to the lab 24 hours later.
- d. Instructed client that no isolation is needed following exam.

**Performed    Mastered**  
**yes    no**



## TEACHING FOR NUCLEAR SCANS

### Procedure

1. Informed client that test would be performed in the nuclear medicine department.
2. Explained to the client that he or she would be receiving an injection of a radioisotope through a vein (except for lung scan and gastric-emptying scan).
  - a. Informed client that the isotope emits a harmless amount of radiation.
  - b. Informed client that the camera used for scanning did not emit radiation. The camera detects a small and harmless amount of radiation from the isotope as it is lodged in the part of the body being imaged.
3. Explained to the client that he or she would be lying on a table while the camera is positioned above or below the table.
4. Assured the client that someone would be with him or her throughout the test.
5. Told the client that if he or she was in pain, he or she may receive an analgesic during the procedure, as he or she must remain still while the camera is scanning the body.



- Evaluated if client was at risk for complications, especially infection.
- Assessed biopsy site for indications of bleeding.
- Evaluated for signs of infection following procedure.

## PREPARING FOR ENDOSCOPY

### Procedure

1. Explained test to client.
2. Obtained signed consent form.
3. Completed preparation according to endoscopic test being performed.
4. Placed on NPO status for 8–12 hours for gastroscopy and as directed for other procedures.
5. Removed dentures for bronchoscopy, gastroscopy procedures.
6. Provided bowel prep for laparoscopy, sigmoidoscopy, or colonoscopy to cleanse all fecal material from colon.
7. Obtained lab results for bleeding and clotting factors, Hgb, Hct, electrolytes if potential bleeding could occur or possible biopsy would be done with endoscopy.
8. Completed physical assessment to determine risk factors for possible complications and allergies.
9. Notified special procedure room staff and physician of potential problems with client's condition that could interfere with procedure.

*for Arthroscopy*

1. Followed steps in *Preparing for Endoscopy* as it applies to this procedure.

Performed    Mastered  
yes    no

Performed yes	no	Mastered

Performed    Mastered  
yes    no

Performed yes	no	Mastered

2. Explained that arthroscopy allows direct visualization of specific anatomic site (i.e., knee joint).
3. Explained that client usually receives local anesthesia and procedure takes 30 minutes to 2 hours.
4. Instructed client to remain NPO after midnight if general anesthesia was given.
5. Instructed client in use of crutches, if necessary.
6. Shaved hair 6 inches above and below involved joint, if ordered.
7. Explained procedure to client.
  - a. Anesthesia given, either local or general.
  - b. Leg scrubbed, elevated, and wrapped in elastic bandage from toes to lower thigh.
  - c. Physician places tourniquet or instills saline solution in client's knee before insertion of scope.
  - d. Knee positioned at 45° angle.
  - e. Small incision made in skin around knee and scope inserted into joint space.
  - f. Procedure completed, joint is irrigated, medication to decrease inflammation injected into knee.
  - g. Sutures or butterfly tapes placed on skin, with pressure dressing applied over site.
8. Assessed client's neurovascular status immediately after procedure.
9. Assessed vital signs and observed site for potential complications (e.g., bleeding, edema, or excessive drainage).
10. Provided discharge teaching.
  - a. Elevate knee at all times when sitting, minimizing use of joint for several days.



	Performed yes	Mastered no
8. Started peripheral IV and medicated client with a narcotic analgesic (usually Versed) as ordered.		
9. Explained procedure to client.		
10. Transported client to special procedure room.		
11. Following procedure, instructed client in discharge teaching: <ul style="list-style-type: none"> <li>a. To report any rectal bleeding, abdominal pain, distention, or purulent rectal drainage.</li> <li>b. To resume normal diet and force fluids after test.</li> <li>c. May experience flatulence from air instillation.</li> </ul>		
<i>for Cystoscopy</i>		
1. Followed steps in <i>Preparing for Endoscopy</i> as it applies to this procedure.		
2. Explained that cystoscopy is used to evaluate conditions associated with urinary tract: urethra, bladder, lower ureters. It is used for both diagnostic and therapeutic procedures.		
3. Instructed in bowel prep, if ordered.		
4. Kept client NPO if general anesthesia was to be given.		
5. Administered preprocedural medications one hour before test.		
6. Placed client in lithotomy position. Provided covering to preserve modesty and prevent chilling.		
7. Prepared external genitalia with antimicrobial swabs.		

	Performed yes	Mastered no
8. Explained procedure to client. <ul style="list-style-type: none"> <li>a. Local anesthetic may be instilled into urethra before scope is inserted.</li> <li>b. Cystoscope inserted through the urethra to inspect bladder and urethral wall and facilitate biopsy.</li> <li>c. Bladder filled with sterile irrigating solution to assist in distending the bladder and irrigating bladder of clots.</li> <li>d. Biopsy forceps may be passed through cystoscope to obtain tissue.</li> <li>e. Bladder emptied; scope removed.</li> </ul>		
9. Provided postprocedure instructions: <ul style="list-style-type: none"> <li>a. Observe closely for signs of septicemia (e.g., chills, fever, flushed feeling).</li> <li>b. Force fluids unless contraindicated.</li> <li>c. Monitor urine for persistent bright red color.</li> <li>d. Assess for severe pain (colicky pain is normal with urethral catheterization), continual burning, and frequency.</li> </ul>		
10. Monitored vital signs.		
11. Ensured that client voided before discharge.		
<i>for Gastrointestinal Tract Endoscopy</i>		
1. Followed steps in <i>Preparing for Endoscopy</i> as it applies to this procedure.		
2. Explained that this procedure is used to visualize upper GI tract by inserting flexible fiberoptic-lighted scope.		
3. Kept client NPO for 6–12 hours.		
4. Removed dentures.		
5. Explained procedure to client.		
6. Provided postprocedure care.		

*for Sigmoidoscopy*

1. Followed steps in *Preparing for Endoscopy* as it applies to this procedure.
2. Explained that test allows for visualization of rectum and sigmoid colon.
3. Administered tap water or disposable (e.g., Fleets) enema as ordered the evening before the procedure. Clients with ulcerative colitis will not have enema ordered. Oral cathartic may also be given.
4. Allowed clear, light breakfast on day of test.
5. Had client void before procedure.
6. Explained procedure to client.
7. Instructed client in discharge teaching:
  - a. Resume preexamination activities.
  - b. Monitor stools for bleeding. Bloody stools are normal first 1–2 days after test.
  - c. Avoid enema or barium studies for at least 1 week.
  - d. Observe for signs of increased abdominal distention, increased tenderness, or rectal bleeding.

Performed    Mastered  
yes          no



*for Laparoscopy*

1. Followed steps in *Preparing for Endoscopy* as it applies to this procedure.
2. Explained that scope is inserted through abdominal wall and into peritoneum to visualize abdominal and pelvic organs—to assist in diagnosing pathologic conditions of pelvic and abdominal area.
3. Completed bowel prep as ordered.
4. Instructed in NPO status after midnight. (Client receives general anesthesia.)

Performed    Mastered  
yes          no



5. Shaved and prepped abdomen as ordered.
6. Started peripheral IV as ordered.
7. Had client void just before surgery.
8. Inserted Foley catheter and NG tube before or after anesthesia administration, according to facility policy.
9. Explained procedure to client.
10. Provided general postop care.
11. Instructed client in discharge teaching:
  - a. Observe site for signs of infection, bleeding, increased pulse rate, or fever. Notify physician immediately if these signs occur.
  - b. Instructed client that he/she will have shoulder or subcostal discomfort for 24 hours.

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## UNIT FIVE    Diagnostic Procedures

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### UNIT ASSESSMENT

- Assessed vital signs prior to, during, and following the procedure.
- Assessed client's ability to maintain position necessary for procedure.
- Assessed client's knowledge of the procedure to be performed.
- Reviewed pertinent laboratory tests prior to procedure.
- Evaluated signs and symptoms that indicated a potential problem could exist if test performed.



**Procedure**

1. Washed hands.
2. Took vital signs.
3. Administered sedative as ordered.
4. Obtained tray and any additional equipment needed, (e.g., sterile gloves, sandbag, bath blanket).
5. Placed client in supine position at the right edge of the bed. Raised right arm and extended it over the left shoulder behind the head. If possible, turned head to left side.
6. Opened sterile tray if requested by physician.
7. Assisted, if necessary, with administering local anesthesia around puncture site.
8. Instructed client to inhale and exhale deeply several times and then exhale and hold breath while physician inserted the biopsy needle.
9. Instructed the client to breathe normally after the physician removed the needle.
10. Donned clean gloves, and placed Band-Aid over puncture site.
11. Positioned client on right side for 2–4 hours. Positioned blanket over site to prevent hemostasis.
12. Removed gloves and washed hands.
13. Instructed client to remain on bed rest for 24 hours.
14. Assessed for signs of hemorrhage at least every hour for 12 hours.
15. Monitored vital signs as you would for a surgical client (i.e., every 15 minutes for 1 hour).

Performed    Mastered  
yes        no

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16. Assessed rate, rhythm, and depth of respirations.
17. Assessed breath sounds and checked for signs of dyspnea and restlessness.
18. Sent specimen to laboratory.

Performed    Mastered  
yes        no

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**ASSISTING WITH THORACENTESIS**

**Preparation**

1. Explained purpose of procedure to client.
2. Explained procedure.
3. Obtained consent.
4. Ensured chest x-ray film had been taken.
5. Assessed if client had any allergies to topical anesthetic agents.
6. Explained that movement or coughing must not be done during procedure.

**Procedure**

1. Washed hands.
2. Took vital signs, and completed a respiratory assessment.
3. Administered sedative as ordered.
4. Positioned client on edge of bed with arms crossed and resting on the overbed table.
5. Provided adequate warmth and covering for client using bath blanket.
6. Placed unwrapped sterile tray on bedside stand.
7. Opened sterile gloves as indicated.
8. Assisted physician as needed with skin prep.







# Urine Elimination

*Performance Checklist*

## UNIT ONE Intake and Output

### UNIT ASSESSMENT

- Assessed if strict measurement of intake and output was ordered.
- Assessed client's ability to assist in keeping I&O record.
- Assessed all potential sources of intake (e.g., IVs, oral fluids) and output (e.g., urine, drainage from tubes).
- Observed color, clarity, and odor of urine.
- Determined all forms where documentation of I&O must occur.
- Assessed for signs of dehydration or overhydration.
- Evaluated weight changes.

### MEASURING INTAKE AND OUTPUT

#### Preparation

1. Instructed client to keep record of all fluids taken orally. Kept an I&O record at the bedside for client to document intake.
2. Instructed client to void into bedpan or urinal, not into toilet.
3. Instructed client not to place toilet tissue in bedpan or defecate in bedpan.

#### Procedure

##### *Oral Intake*

1. Measured all fluids taken (including oral, IV, fluid medications, and tube feedings) according to hospital values (e.g., cup = 150 mL, glass = 240 mL).

Performed		Mastered
yes	no	

	Performed yes	Mastered no
2. Recorded time and amount of fluids in appropriate space on bedside form.		
3. Checked hospital procedure manual or bedside I&O record for approximate amounts of fluid containers.		
4. Transferred 8-hour total fluid intake from bedside I&O record to graphic sheet for 24-hour intake and output record on chart.		
5. Recorded all forms of fluid intake in total amount column of 24-hour record (IVs and oral fluid).		
6. Completed 24-hour intake record by adding together all three 8-hour totals.		
<i>Output</i>		
1. Donned clean gloves to measure output from all sources.		
2. Emptied urinal, bedpan, or drainage bag into graduate. For accurate record, emptied urine into graduate.		
3. Drained urine collection bag. <ul style="list-style-type: none"> <li>a. Slipped spigot from bag sleeve.</li> <li>b. Used client's individual graduate receptacle.</li> <li>c. Unclamped spigot and drained bag.</li> <li>d. Swabbed end of spigot with alcohol before replacing into sleeve.</li> </ul>		
4. Removed gloves, and washed hands.		
5. Recorded time and amount of output on bedside I&O record.		
6. Completed 24-hour output record by adding together all three output totals, and placed total on graphic sheet.		
7. Notified physician of any significant imbalance.		

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## UNIT TWO External Catheter System

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### UNIT ASSESSMENT

- Assessed genital area for signs of irritation and edema during use of condom catheter.
- Assessed activity level of client to determine when leg bag or continuous drainage system was necessary.
- Assessed that client is able to empty bladder completely and spontaneously.

### APPLYING A CONDOM CATHETER

#### Preparation

1. Checked physician's orders and client care plan.
2. Gathered equipment.
3. Identified client and explained procedure.
4. Washed hands and provided privacy.
5. Raised bed and lowered side rail on working side of bed. Placed client in flat supine position.
6. Donned gloves.
7. Draped for privacy.
8. Washed genital area with soap and water and dried thoroughly.
9. Clipped hair from base of penis, if necessary.

#### Procedure

1. If commercial condom catheter was used, applied protective prep to skin on penile shaft and allowed to dry completely (60 seconds).

	Performed yes	Mastered no
1. Checked physician's orders and client care plan.		
2. Gathered equipment.		
3. Identified client and explained procedure.		
4. Washed hands and provided privacy.		
5. Raised bed and lowered side rail on working side of bed. Placed client in flat supine position.		
6. Donned gloves.		
7. Draped for privacy.		
8. Washed genital area with soap and water and dried thoroughly.		
9. Clipped hair from base of penis, if necessary.		



## UNIT THREE Catheterization

### UNIT ASSESSMENT

- Assessed the client's bladder for distention.
- Assessed purpose of catheterization or urine output monitoring.
- Checked physician's orders for method of catheterization to be done.
- Assessed urinary meatus for exudate, inflammation.
- Assessed character and amount of urine.
- Noted client's I&O balance.

### DRAPING A FEMALE CLIENT

#### Procedure

1. Brought bath blanket to bedside.
2. Identified client and explained procedure.
3. Provided privacy.
4. Washed hands.
5. Placed bed in HIGH position, and lowered side rail on working side.
6. Placed bath blanket over client's top linen so that one corner of the blanket was pointed toward the client's head to form a diamond shape over the client.
7. Instructed client to hold onto bath blanket. (Fanfolded linen to foot of bed and placed on chair.)
8. Requested that client flex knees and keep them apart with feet firmly on bed.

Performed    Mastered  
yes        no

Performed yes	no	Mastered

9. Wrapped lateral corners of bath blanket around feet in a spiral fashion until they were completely covered.

### USING A BLADDER SCANNER

#### Procedure

1. Turned the device on and pressed "SCAN."
2. Applied conducting gel to scanner head.
3. Selected MALE or FEMALE mode on scan unit. Selected *MALE MODE* if female client has had a hysterectomy.
4. Fanfolded linens to expose client's suprapubic area.
5. Placed head of scanner 3 cm above client's symphysis pubis and aligned the icon.
6. Pressed scanhead button and held scanner until a beep was heard.
7. Scanned until the bladder image was lined up on the cross hairs.
8. Took several scans at different angles and pressed DONE when finished.
9. Pressed PRINT for a printout of client's bladder volume in mL.
10. Wiped gel from client's skin.
11. Repositioned client for comfort.

Performed    Mastered  
yes        no

Performed yes	no	Mastered





	Performed		Mastered	
	yes	no	yes	no
9. Used forceps to pick up cotton ball saturated with antiseptic solution.				
10. Cleansed meatus with circular stroke using cotton ball. Discarded cotton ball into plastic bag at foot of bed.				
11. Repeated circular motion and prep around tip of penis. Cleansed three times using a new cotton ball each time.				
12. Continued to hold penis with nondominant hand.				
13. Discarded forceps into plastic bag.				
14. Lubricated catheter about 3–4 inches using generous amount of lubricant.				
15. <i>Alternate method:</i> Inserted tip of lubricant syringe at urethral opening and injected 15–20 mL lubricant (or 2% <i>lidocaine</i> , if ordered) directly into urethra.				
16. Picked up catheter with sterile gloved hand about 8–10 cm (3–4 inches) from tip of catheter.				
17. Lifted penis to a 90° angle (perpendicular to body) and exerted slight traction by pulling upward.				
18. Inserted catheter about 20 cm (8 inches) until urine began to flow.				
19. Decreased angle of penis to 45°, twisted catheter, and asked client to take a deep breath.				
20. Obtained urine specimen if needed. Pinched tubing, and transferred end of catheter into collection container.				
21. Allowed urine to drain into collection container until flow stopped.				

	Performed		Mastered	
	yes	no	yes	no
22. Removed catheter, and placed lid on specimen bottle.				
23. Dried penis, and removed drapes.				
24. Made client comfortable. Placed bed in LOW position and replaced side rail.				
25. Discarded equipment in appropriate container.				
26. Removed gloves, and washed hands.				
27. Sent specimen to lab, and documented findings.				

## INSERTING A RETENTION CATHETER (FEMALE)

### Preparation

1. Followed Preparation Steps 1–14 in *Inserting a Straight Catheter (Female)*.

### Procedure

1. Opened sterile package by tearing package on lined edge of plastic wrap. Placed plastic wrap at foot of bed for waste disposal.
2. Placed catheter tray on bed between client's legs.
3. Folded back corner of bath blanket to expose perineum.
4. Opened white outer wrap away from package with last turn toward client.
5. Brought white wrap under client's buttocks.
6. Positioned sterile absorbent pad, plastic side down, under client's buttocks. Had client lift buttocks if able. Positioned pad by holding corners of pad only.

	Performed		Mastered	
	yes	no	yes	no
7. Donned sterile gloves, and separated the two containers. Placed container with cotton balls and lubricant toward client. Placed container with catheter and bag toward foot of bed (next to first container).				
8. Opened package, and poured antiseptic solution over cotton balls.				
9. Removed rubber protector and inserted tip of the prefilled syringe into catheter side arm to inflate balloon to test catheter bag. Omitted pretesting step for catheters with prefilled balloons on drainage end of catheter.				
10. Pulled back on syringe to remove fluid after testing balloon.				
11. Lubricated catheter by uncapping syringe filled with lubricant or opened package, and generously lubricated tip in lubricant. Kept catheter on tray.				
12. Positioned fenestrated drape over the client to expose the genitalia.				
13. Cleansed client's meatus:				
a. Separated the client's labia minora with nondominant hand.				
b. With dominant hand, used forceps to pick up an absorbent ball that had been saturated with antiseptic solution.				
c. Cleansed client's meatus with one downward stroke of forceps or swab. Discarded absorbent ball in plastic bag at foot of bed.				
d. Repeated step c at least three to four times.				
e. Continued to hold client's labia apart until catheter inserted.				
14. Discarded forceps in plastic bag at foot of bed.				
15. Took catheter from tray with uncontaminated hand, and inserted gently into meatus 2–3 inches or until urine started to flow.				

	Performed		Mastered	
	yes	no	yes	no
16. Guided catheter gently just beyond point at which urine began to flow.				
17. Injected entire contents of prefilled (9 mL sterile water) syringe into side arm of catheter used for balloon inflation.				
18. If client complained of pain on inflation of balloon, immediately aspirated sterile water.				
19. Retracted catheter until resistance felt.				
20. Taped catheter to client's thigh.				
21. Attached drainage bag to bed frame (not side rails); coiled tubing to allow free gravity flow of urine.				
22. Cleansed client's perineum of antiseptic solution. Removed drapes.				
23. Repositioned client for comfort; put bed in LOW.				
24. Removed and discarded disposable supplies in appropriate container.				
25. Measured and recorded urine output on I&O bedside record.				
26. Washed hands.				

**INSERTING A RETENTION CATHETER (MALE)**

**Preparation**

1. Followed Steps 1–6 in *Inserting a Straight Catheter (Female)*.
2. Placed client in supine position with knees slightly apart.

3. Draped client by placing bath blanket over chest area and fanfolded top linen down to cover lower extremities, exposing only perineal area.
4. Donned clean gloves, and washed client's perineal area if necessary.
5. Removed gloves, and prepared for catheterization.

**Procedure**

1. Opened sterile package by tearing the package on lined edge of plastic wrap. Placed plastic wrap at foot of bed for waste disposal.
2. Placed sterile kit between client's thighs or at client's side near thigh.
3. Opened outer white wrap away from sterile package with last turn toward penis.
4. Placed sterile drape over thighs and under penis.
5. Donned sterile gloves.
6. Placed container with cotton balls or swabs and lubricant toward client. Placed container with catheter and urinary drainage collection bag toward foot of bed (next to first container).
7. Opened package and poured antiseptic over cotton balls or opened Betadine swab package.
8. Removed rubber protector, and inserted tip of prefilled syringe into catheter side arm to inflate balloon to test catheter bag.
9. Pulled back on syringe to remove fluid after testing balloon.

Performed    Mastered  
yes          no



10. Lubricated tip for 3–4 inches or inserted lubricant directly into urethra using prefilled syringe.
11. Positioned fenestrated drape over the penis.
12. Held penis upright with nondominant hand. Held sides of penis to prevent closing of urethra.
13. With dominant hand, used forceps to pick up cotton ball saturated with antiseptic solution or picked up swab.
14. Cleansed meatus with one circular stroke using forceps.
15. Discarded cotton ball or swab into plastic bag at foot of bed.
16. Repeated circular prep around head of penis. Cleansed three times using a new cotton ball or swab each time.
17. Continued to hold penis with nondominant hand.
18. Discarded forceps into plastic bag.
19. Picked up catheter with sterile hand about 8–10 cm (3–4 inches) from tip of catheter.
20. Raised penis to a 90° angle (perpendicular to body) and exerted slight traction by pulling upward.
21. Inserted catheter about 20 cm (8 inches) until urine began to flow.
22. If resistance was met, lowered angle of penis to 45° and asked client to take deep breath.
23. Guided the catheter gently 1–2 inches beyond the point at which urine began to flow.

Performed    Mastered  
yes          no

	Performed		Mastered
	yes	no	
24. Injected entire contents of prefilled syringe into side arm of catheter used for balloon inflation.			
25. Retracted catheter until resistance felt.			
26. Taped catheter to abdomen with 1-inch tape.			
27. Attached drainage bag to bed frame (not side rail).			
28. Cleansed client's perineum of antiseptic solution. Removed drapes.			
29. Repositioned client for comfort; put bed in LOW position and replaced side rail.			
30. Removed all equipment, including gloves, and discarded in the appropriate container.			
31. Measured and recorded urine output on I&O bedside record.			
32. Washed hands.			
33. Documented findings.			

## PROVIDING MALE CATHETER CARE

### Preparation

1. Identified client and explained procedure.
2. Provided privacy.
3. Washed hands.

### Procedure

#### *for Circumcised Male*

1. Donned clean gloves.
2. With mitten washcloth, soap and water, cleansed around urinary meatus.

	Performed		Mastered
	yes	no	
3. Dried area with towel.			
4. Using separate washcloth, cleaned area between scrotum and rectal area, then dried.			
5. Placed soiled linen in hamper.			
6. Removed gloves and washed hands.			
<i>for Uncircumcised Male</i>			
1. Donned clean gloves.			
2. Retracted foreskin back away from catheter.			
3. With mitten washcloth, soap and water, cleansed around urinary meatus.			
4. Dried penis with towel.			
5. After drying, pulled foreskin back around catheter.			
6. Placed soiled linen in hamper.			
7. Removed gloves and washed hands.			

## REMOVING A RETENTION CATHETER

### Preparation

1. Checked physician's orders for catheter removal.
2. Washed hands.
3. Gathered equipment.
4. Explained procedure to client.
5. Provided privacy.
6. Donned clean gloves.

**Procedure**

1. Removed tape attaching catheter to client.
2. Inserted syringe needle hub into balloon port of catheter. Did not cut with scissors.
3. Withdrew fluid from balloon (usually 5–10 mL water in balloon).
4. Pulled gently on catheter to ensure balloon was deflated before attempting to remove.
5. Held paper towel under catheter with non-dominant hand.
6. Slowly withdrew catheter allowing it to fall into paper towel, if resistance was not met.
7. Disconnected catheter bag from bed frame.
8. Emptied catheter drainage bag into graduate and measured output.
9. Recorded output on I&O bedside record.
10. Disposed of catheter in appropriate receptacle.
11. Washed perineum with soap and water. Dried thoroughly. Removed gloves.
12. Positioned client for comfort.
13. Washed hands.
14. Instructed client to drink oral fluids.
15. Offered bedpan or urinal after removing catheter, until voiding occurred. Kept accurate I&O record.
16. Reported to physician if client had not urinated in 8 hours.

**Performed**    **Mastered**  
**yes**    **no**

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**UNIT FOUR Bladder Irrigation**

**UNIT ASSESSMENT**

- Determined rationale for irrigation.
- Noted rate of urine flow from bladder, color of urine, presence of clots or debris.
- Assessed for distended bladder.
- Assessed for bladder discomfort.
- Noted client’s I&O balance.

**IRRIGATING BY OPENING A CLOSED SYSTEM**

**Preparation**

1. Checked physician’s orders for system irrigation and client care plan.
2. Gathered equipment.
3. Checked client’s identaband.
4. Explained procedure and rationale to client.
5. Washed hands.
6. Premedicated client as indicated.
7. Provided privacy, and placed client in comfortable position.

**Procedure**

1. Raised bed, and lowered side rail. Fanfolded linen to expose catheter.
2. Palpated client’s bladder to check for distention.

**Performed**    **Mastered**  
**yes**    **no**

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	Performed		Mastered	
	yes	no	yes	no
3. Opened sterile container on bed or over-bed table. Maintained sterility on inside of container.				
4. Donned clean gloves.				
5. Placed an absorbent pad under connection of tubing and catheter.				
6. Poured prescribed irrigant into solution container.				
7. Placed syringe in container. Did not contaminate syringe tip.				
8. Placed catch basin on pad to form working field. (Always kept syringe tip and irrigant uncontaminated.)				
9. Disconnected catheter from drainage tube. Placed sterile protective cap over end of drainage tube or held in nondominant hand being careful not to contaminate tip of tubing.				
10. Coiled tubing on bed.				
11. Placed catheter into catch basin.				
12. Inserted irrigating syringe into catheter and attempted to aspirate any obstructing debris.				
13. Withdrew irrigating solution into syringe.				
14. Instilled 30–50 mL of irrigant into catheter with gentle but firm pressure.				
a. Removed syringe and allowed solution to drain.				
b. Lowered catch basin to facilitate solution return via gravity or aspirated instilled solution.				
c. Continued to irrigate client's bladder with 30–50 mL of irrigant until fluid returns were clear or clots removed.				
15. Removed protective cap from drainage tube and wiped it with an antiseptic swab.				

	Performed		Mastered	
	yes	no	yes	no
16. Wiped end of catheter with alcohol sponge, and connected catheter to drainage tube.				
17. Ensured straight line from tubing to drainage bag. Curled excess tubing loosely on bed and secured tubing to linen.				
18. Taped catheter to inner thigh for female and to abdomen for male.				
19. Lowered bed, and raised side rail.				
20. Discarded equipment; removed gloves.				
21. Made sure client was clean and comfortable. Placed call light within easy reach.				
22. Washed hands.				
23. Subtracted any irrigating solution still remaining in urinary drainage system from client's intake and output record.				

## IRRIGATING A CLOSED SYSTEM

### Preparation

1. Checked physician's orders and client care plan.
2. Gathered appropriate equipment.
3. Identified client and explained procedure.
4. Washed hands.
5. Provided privacy and placed client in dorsal-recumbent position if tolerated.
6. Raised bed, and lowered side rail on working side of bed.
7. Premedicated client, if ordered.
8. Donned clean gloves.

- Emptied client's urinary drainage bag and recorded amount.

**Procedure**

- Opened sterile container. Maintained sterility on inside of container.
- Placed absorbent pad under end of catheter to form working field.
- Poured irrigant into solution container.
- Clamped catheter drainage tubing just distal to injection port.
- Swabbed tubing injection port with alcohol or povidone-iodine (Betadine) solution.
- Inserted needleless cannula into tubing injection port.
- Attempted to aspirate obstructing clot or debris.
- Withdrew irrigating solution into syringe.
- Swabbed injection port again.
- Injected solution slowly into port.
- Removed syringe from injection port.
- Unclamped drainage tube, and lowered catheter.
- Repeated irrigation steps until return was free of clots or debris.
- Lowered bed, and raised side rail.
- Disposed of equipment.
- Removed gloves and washed hands.
- Subtracted irrigating solution from client's intake and output record.

Performed    Mastered  
yes        no

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**MAINTAINING CONTINUOUS IRRIGATION**

**Procedure**

- Checked physician's orders and client care plan.
- Noted client has triple lumen indwelling catheter and drainage bag.
- Placed label on irrigating bag. Included client's name, date, room number, type of solution, and additives.
- Identified client.
- Explained procedure and provided privacy.
- Washed hands and donned clean gloves.
- Removed protective covering from spike on tubing, and inserted spike into insertion port of solution container. Used aseptic technique.
- Placed irrigating solution container on IV pole and primed tubing. Height of pole was appropriate, 24-36 inches above bladder.
  - Removed protective cover from end of tubing using aseptic technique.
  - Opened roller clamp, and allowed irrigating solution to run through tubing until all air was expelled.
  - Closed roller clamp, and replaced protective cover on end of tubing.
- Connected tubing to catheter irrigating (indwell) lumen using aseptic technique.
- Removed gloves.
- Adjusted drip rate of irrigating solution by adjusting clamp on tubing to increase or decrease based on urine outflow color.
  - Infused continuously to keep urine drainage pink to clear.

Performed    Mastered  
yes        no

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	Performed yes	Mastered no
b. Instructed client to notify nurse if he or she feels fullness in bladder during clamping.		
c. Donned gloves.		
d. Clamped catheter.		
e. Emptied drainage bag or removed drainage tubing from catheter, maintaining aseptic technique. Placed drainage tubing in sterile package; placed catheter plug in catheter. Removed gloves. Recorded urine output on I&O bedside record.		
f. Left catheter clamped for 3–4 hours depending on client’s level of comfort and physician’s orders.		
6. At 3- to 4-hour intervals or when client felt fullness in bladder, asked client to void normally. Donned gloves to measure urine and recorded output on I&O bedside record.		
7. Immediately after client voided, unclamped catheter and left unclamped for 5 minutes, collecting residual urine.		
a. Donned gloves to measure residual urine following unclamping of catheter.		
b. Reclamped catheter.		
c. Sent urine specimen to laboratory after first clamping.		
8. Repeated clamping protocol every 3–4 hours according to physician’s orders.		
9. When client was voiding normally, clamped catheter throughout night in preparation for its removal.		
10. When client’s residual urine output was less than 100 mL or retained less than 20% of residual urine on two successive checks, notified physician for removal of catheter.		
11. Applied Band-Aid or small 2 × 2 sterile dressing over insertion site.		
12. Disposed of catheter in biohazard bag.		

	Performed yes	Mastered no
13. If client was discharged from hospital with catheter, provided following teaching for home care:		
a. Instructed client to drink one glass of fluid every hour while awake.		
b. Instructed client to follow clamping procedure when awake or as instructed by physician.		
c. Instructed client to leave the catheter open to drainage system at night.		
d. Told client to notify physician if dysuria occurs when voiding or if urine becomes cloudy, odorous, or full of sediment.		

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## UNIT SIX Specimens From Closed Systems

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### UNIT ASSESSMENT

- Assessed type of specimen needed: Sterile specimens for culture and sensitivity tests; clean specimens for urinalysis.
- Checked to see if closed urinary system had port for obtaining specimen or catheter was made of self-sealing material (not silastic or silicone).
- Identified amount of urine needed for specimen.

### COLLECTING SPECIMEN FROM A CLOSED SYSTEM

#### Procedure

1. Gathered equipment.
2. Identified client.
3. Explained procedure and rationale to client. Clamped catheter tubing for 15 minutes.

	Performed yes	Mastered no





	Performed yes	no	Mastered
2. Removed clean catheter from plastic bag.			
3. Lubricated tip of catheter.			
4. Inserted catheter 1½–2 inches into stoma. Placed distal end of catheter into toilet or bedpan.			
5. Instructed client to take a deep breath as you gently inserted catheter through nipple valve until urine returned.			
6. Left catheter in place until urine stopped draining.			
7. Pinched catheter, and removed gently.			
8. Washed and dried peristomal area with soap and water.			
9. Replaced pouch or dressing if needed. Assisted client back to bed or positioned for comfort.			
10. Cleaned catheter with warm soap and water, allowed to dry, and placed in clean bag. Returned to storage area in client's bathroom.			
11. Removed gloves and washed hands.			

- Reviewed chart and laboratory reports for factors that may alter management of dialysis.
- Assessed vital signs.
- Assessed causes of hypotension.
- Checked serum electrolytes, BUN, and creatinine before and after dialysis according to physician's orders.
- Weighed client before and after dialysis to determine fluid loss.

## PROVIDING HEMODIALYSIS

### Preparation

1. Obtained dialysate bath composition as ordered.
2. Set up 1000-mL IV of normal saline using IV tubing inline blood set.
3. Loaded heparin pump (e.g., 8 mL heparin) per manufacturer's instructions.
4. Checked location of nearest emergency power outlet.
5. Tested dialysis machine for presence of bleach with Hemastix.
6. Primed dialyzer and arterial and venous blood lines with saline.
7. Hung additional IV solution of saline.
8. Connected pressure monitor lines to both arterial and venous drip chambers.
9. Set the alarm pressures—high and low.
10. Connected air leak detector to venous drip chamber.
11. Tested all machine alarms—venous and arterial pressure, air detector, and blood leak detector.

	Performed yes	no	Mastered
1. Obtained dialysate bath composition as ordered.			
2. Set up 1000-mL IV of normal saline using IV tubing inline blood set.			
3. Loaded heparin pump (e.g., 8 mL heparin) per manufacturer's instructions.			
4. Checked location of nearest emergency power outlet.			
5. Tested dialysis machine for presence of bleach with Hemastix.			
6. Primed dialyzer and arterial and venous blood lines with saline.			
7. Hung additional IV solution of saline.			
8. Connected pressure monitor lines to both arterial and venous drip chambers.			
9. Set the alarm pressures—high and low.			
10. Connected air leak detector to venous drip chamber.			
11. Tested all machine alarms—venous and arterial pressure, air detector, and blood leak detector.			

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## UNIT EIGHT Hemodialysis

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### UNIT ASSESSMENT

- Reviewed dialysis orders.
- Assessed patency of vascular access.
  - a. Femoral vein catheter
  - b. Central venous dual-lumen catheter (DLC)
  - c. Permanent dual-lumen catheter (PDLC)
  - d. Arteriovenous fistula
  - e. Arteriovenous graft

12. Connected arterial and venous lines for recirculation with adapter, and turned blood pump to 200 mL/minute.
13. Documented alarm checks in dialysis bag.

### Procedure

*for AV Fistulas or Grafts*

1. Placed blood line at same level as bed.
2. Donned mask and gown. Put on goggles, and washed hands.
3. Donned clean gloves, and removed dressing if used. Removed and discarded gloves.
4. Donned sterile gloves.
5. Cleaned access site using alcohol swab, then providone-iodine swab. Using a circular motion, cleansed from needle insertion site outward. Allowed to dry.
6. Inserted needles into fistula or graft. Taped securely to extremity.
7. Obtained blood for predialysis blood samples as ordered by the physician.
8. After blood was drawn for lab work, heparin bolus was given to client according to physician's order—started heparin pump at ordered rate.
9. Primed extracorporeal circuit with blood.
  - a. Connected arterial tubing of the blood line to client's arterial site.
  - b. Connected venous tubing.
  - c. Unclamped venous blood line.
  - d. Unclamped arterial blood line.
  - e. Clamped saline infusion line.
10. Noted time of dialysis initiation.

Performed    Mastered  
yes        no

Performed yes	Mastered no

11. Taped all connections securely; secured blood tubing to client's extremity.
12. Set alarm pressures—high and low.
13. Established blood flow rate (usually 300–450 mL/min).
14. Ensured that access connections were visible.
15. Checked client's blood pressure and pulse once dialysis had been initiated, then every 30 minutes unless otherwise indicated.
16. Assessed client at least every 30 minutes for vital signs and potential complications.
17. Administered any ordered medication through the venous line.
18. Turned heparin infusion off last 30–60 minutes.

### ONGOING CARE OF HEMODIALYSIS CLIENT

#### Procedure

1. Limited fluid intake to prescribed amount (e.g., 1500 mL/day).
2. Maintained diet as prescribed.
3. Checked BP for hypertension/hypotension; checked temperature for possible infection.
4. Auscultated heart and lung sounds for signs of fluid overload (pulmonary edema and pericarditis).
5. Provided access site care.
6. Observed client's mental status.
7. Administered Epogen, if ordered.

Performed    Mastered  
yes        no

Performed yes	Mastered no

8. Encouraged regular rest periods.
9. Weighed daily to assess fluid accumulation.
10. Used antibacterial soap and lotion to bathe.
11. Determined that client understood when and how to take medications.
12. Provided continued emotional support.
  - a. Allowed for expression of feelings about change in body image and role performance.
  - b. Encouraged expression of fears.
  - c. Encouraged family support.
  - d. Gave support for required change in life-style.

## TERMINATING HEMODIALYSIS

### Procedure

1. Donned gloves, gown, goggles, and protective mask.
2. Removed tape and dressing to visualize needle insertion site.
3. Placed pads under connectors.
4. Opened IV of normal saline to return blood on the arterial side of tubing.
5. Started pump at 200 mL/min.
6. Returned venous blood.
7. Clamped lines.
8. Removed needles according to unit protocol.
9. Measured and recorded postdialysis vital signs and weight.

Performed    Mastered  
yes    no

Performed yes	no	Mastered

## MAINTAINING CENTRAL VENOUS DUAL-LUMEN DIALYSIS CATHETER (DLC)

### Preparation

1. Washed hands.
2. Filled two 20-mL syringes with 20 mL NS each and two 3 mL syringes with 3 mL 1000 U/mL heparin each.
3. Masked client and self and donned gloves.
4. Placed drape under catheter lumens.
5. Removed gauze wrap from lumens, if present, and disposed in appropriate receptacle.

### Procedure

1. Injected remainder of heparinized saline solution into lumen.
2. Clamped catheter by placing clamp on arterial and venous lines.
3. Flushed catheter with heparinized saline according to facility procedure.
4. Removed old dressing, and discarded in appropriate receptacle.
5. Cleansed area surrounding catheter with Betadine swabs using circular motion. Began at catheter insertion site and worked outward. Swabbed area with skin preparation.
6. Placed 4 × 4 transparent dressing over catheter insertion sites.
7. Provided catheter site care daily and after each dialysis.
8. Removed gloves and mask, and discarded. Washed hands.
9. Monitored for signs of infection, bleeding, or displacement of catheters daily.

Performed    Mastered  
yes    no

Performed yes	no	Mastered

# Bowel Elimination

## *Performance Checklist*

### UNIT ONE Bowel Evacuation

#### UNIT ASSESSMENT

- Assessed for symptoms indicating presence of impaction.
- Evaluated client's diet.
  - Amount of high-bulk foods
  - Amount of fluid intake daily
- Evaluated client's physical status.
  - Extent of physical exercise performed daily.
  - Ability to ambulate (i.e., spinal cord injury, CVA).
  - Ability to perform bed exercises, abdominal exercises.
  - Extent of disease process.
  - Medications routinely taken.
- Assessed surgery outcomes affecting development of constipation.
- Assessed effectiveness of drugs, such as stool softeners, bulk formers, suppositories.
- Assessed time of day client usually evacuates bowels, any changes in normal routine.

- Identified client's ability to adapt and psychologic readiness for above program.
- Identified position most effective for bowel evacuation.
- Assessed consistency and amount of stool for abnormal findings (diarrhea or fecal impaction).
- Assessed when client had last bowel movement.
- Assessed for abdominal distention and bloating.
- Assessed perianal area for tears, ulcerations, or excoriation.

#### REMOVING A FECAL IMPACTION

##### Preparation

1. Checked physician's order for impaction removal if client was at risk for possible complications from vagal stimulation (i.e., cardiac or spinal cord injured patient).
2. Gathered appropriate equipment.
3. Identified client and explained procedure.

Performed		Mastered
yes	no	



14. Repeated digital stimulation for 1–3 minutes at 5-minute intervals up to 20 minutes if bowel movement did not occur.
15. Placed stool in bedpan as it was removed.
16. Used two fingers, if necessary, to break up hard stool.
17. Assessed vital signs if prolonged digital removal was required.
18. Assessed for bleeding.
19. After bowel evacuation occurred, assisted client with cleaning and drying perineum.
20. Removed equipment from room.
21. Washed equipment, and returned to storage area.
22. Discarded gloves, and washed hands.
23. Positioned client for comfort.

## DEVELOPING A REGULAR BOWEL ROUTINE

### Preparation

1. Checked physician's orders and client care plan.
2. Gathered appropriate equipment.
3. Identified client and explained procedure.
4. Identified time of day client usually evacuates bowels.
5. Evaluated diet, exercise, and former use of medications for bowel evacuation.

Performed    Mastered  
yes          no



6. Administered the following drugs as ordered:
  - a. Stool softener—(Colace or Parlax)—daily.
  - b. Bulk former—(Metamucil)—q.d. to t.i.d.
  - c. Mild laxative (Senokot, Doxidan)—8 hours before program.
  - d. Suppository (glycerin or Dulcolax) just before digital stimulation.
7. Washed hands.

### Procedure

1. Donned gloves.
2. Performed digital stimulation  $\frac{1}{2}$  hour after dinner or breakfast or according to client's time schedule for evacuating.
3. Placed client on toilet or commode. (Used bedpan if client was on bed rest.)
4. Removed gloves.
5. Washed hands.
6. Provided privacy and sufficient time for evacuation.
7. Donned gloves.
8. Washed and dried perineal area if client was unable to do so.
9. Removed gloves.
10. Placed client in wheelchair or bed and positioned for comfort.
11. Washed hands.
12. Weaned client away from suppositories and laxatives when spontaneous bowel movements occurred with digital stimulation.

Performed    Mastered  
yes          no





**Procedure**

1. Filled water container with 100°F solution (500 mL or less for a child, 250 mL for an infant).
2. Opened clamp and allowed solution to run through tubing so that air was removed.
3. Clamped tube and hung solution container on IV pole.
4. Placed bed protector under child.
5. Placed child on left side or in knee–chest position.
6. Donned clean gloves.
7. Lubricated tip of tubing or infant enema syringe with bulb.
8. Gently separated buttocks and inserted catheter or syringe into child’s rectum (1–1½ inches for infants, 2–3 inches for children).
9. Elevated solution container no more than 12–18 inches.
10. Opened clamp and allowed solution to flow slowly for 10–15 minutes.
11. After solution instilled, closed clamp and gently removed tubing or syringe.
12. Held child’s buttocks together or taped them with hypoallergenic paper tape. If child was toilet trained, placed a potty chair nearby.
13. Retained solution 10–15 minutes for cleansing enemas.
14. Placed child on potty chair or bedpan to expel solution.

**Performed    Mastered**  
**yes    no**

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**Performed    Mastered**  
**yes    no**

15. If there were no contraindications, gently massaged child’s abdomen to help child expel returns.
16. If child wanted to be left alone while expelling returns, provided privacy. Child expelled total volume of the instilled solution.
17. Removed potty chair or bedpan.
18. Cleaned child’s perineal area, and helped child assume comfortable position.
19. Estimated returns to determine that child expelled total volume of solution.
20. Cleaned all equipment, and replaced in appropriate area.
21. Removed gloves, and washed hands.

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**ADMINISTERING A SMALL VOLUME ENEMA**

**Preparation**

1. Checked physician’s orders and client care plan.
2. Gathered equipment.
3. Washed hands.
4. Identified client and explained procedure. Explained benefit of relaxing and taking deep breaths.
5. Placed bed protector under client.
6. Placed client on left side in a Sims’ position.
7. Provided privacy.
8. Donned clean gloves.



6. Filled fluid container with 100–200 mL of ordered solution; checked that temperature was between 105–110°F.
7. Allowed solution to run through tubing so that air was removed.
8. Hung container on IV pole.

### Procedure

1. Explained procedure and benefits of relaxing and taking periodic deep breaths during procedure.
2. Raised bed to HIGH position, and lowered side rails.
3. Donned gloves.
4. Placed bed protector under client.
5. Placed client on left side in Sims' position.
6. Lubricated tip of tubing with water-soluble lubricant.
7. Gently spread buttocks, and inserted tubing 3–4 inches into client's rectum, past external and internal sphincters. Avoided traumatizing hemorrhoids during insertion.
8. Raised water container to maximum height of 18 inches above bed.
9. Opened clamp and allowed solution to flow slowly into rectum and sigmoid colon. If cramping occurred, clamped tube for few minutes and then continued infusion.
10. Lowered solution container below level of rectum and allowed all fluid to flow back into container.
11. Raised container 18 inches above rectum and allowed solution to flow back into rectum.

Performed    Mastered  
yes    no

Performed yes	Mastered no

12. Repeated inflow–outflow process 5–6 times, changing solution when it became thick with feces.
13. Provided privacy until client had expelled total volume of instilled solution following last inflow–outflow series.
14. Assisted client with perineal care, and helped client assume comfortable position.
15. If client was on strict I&O, measured returns to make sure total volume of solution was expelled.
16. Cleaned all equipment, and replaced in bathroom or appropriate location.
17. Removed gloves, and washed hands.
18. Lowered bed and raised side rails.

Performed    Mastered  
yes    no

Performed yes	Mastered no

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## UNIT THREE Fecal Ostomy Pouch Application

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### UNIT ASSESSMENT

- Assessed type and location of stoma.
- Observed stoma color.
- Inspected client's abdomen for creasing, firmness, softness, contour, scars, folds, and incisions.
- Inspected client's peristomal skin for signs of erythema, excoriation, ulceration, and fistula formation.
- Assessed how far stoma protrudes above skin surface.
- Assessed size of stoma.
- Assessed output of effluent including amount, consistency, odor.
- Assessed client's learning abilities, age, manual dexterity, and visual acuity.



## Heat and Cold Therapies

### *Performance Checklist*

#### UNIT ONE Local Heat Therapies

##### UNIT ASSESSMENT

- Reviewed client's history for possible circulatory problems (peripheral vascular disease, diabetes).
- Determined site, and type and duration of therapy to be applied.
- Determined rationale for heat therapy.
- Assessed area to be treated.
- Determined client's ability to sense temperature at site.
- Assessed skin condition before and after therapy.

##### APPLYING A COMMERCIAL HEAT PACK

###### Procedure

1. Checked physician's orders for type and duration of heat treatment.

Performed		Mastered
yes	no	

2. Washed hands.
3. Gathered equipment.
4. Explained procedure to client.
5. Provided privacy.
6. Removed heat pack from outer wrapper.
7. Broke inner seal by holding pack tightly in center and in an upright position.
8. Squeezed firmly to break seal.
9. Checked for leakage from pack. Removed pack immediately if leakage occurred.
10. Gently shook pack, then applied to treatment area.
11. Removed pack after 5 minutes, and assessed skin for erythema.
12. Replaced pack and secured with tape. Kept in place 15–30 minutes or as ordered by physician.

Performed		Mastered
yes	no	

13. Placed call bell in client's reach.
14. Removed pack, and discarded in appropriate container.
15. Washed hands.

## MONITORING AN INFANT RADIANT WARMER

### Preparation

1. Followed manufacturer's operating instructions for safety and to determine if a manual or proportional controller was to be used.
2. Checked caster locks to make certain that each caster was in locked position.
3. Adjusted procedure table to desired position.
4. Plugged line cord into a three-wire receptacle.
5. Turned power switch ON. Turned alarm switch ON to test alarm system.
6. Turned manual knob to automatic.
7. Installed skin or rectal probe in controller and set switch to either rectal or skin, depending on which probe was being used.
8. Warmed unit for 7 minutes.
9. Adjusted temperature to degree ordered; temperature was dialed on digital temperature set switch.
10. Washed hands.

### Procedure

1. Placed infant in warmer.

Performed    Mastered  
yes          no

Performed yes	Mastered no

2. Attached skin probe.
  - a. Placed 1-cm skin probe with polished surface touching skin to left of umbilicus.
  - b. Used a rectal probe if hospital protocol permitted.
3. Monitored placement of skin probe.
  - a. Inspected infant's skin under probe at regular intervals.
  - b. Changed probe location if irritation began to appear.
  - c. Did not use adhesive tape or pads.
4. Allowed 3–5 minutes for probe to reach infant's temperature.
5. Activated audible alarm by setting switch to ON.
6. Washed hands.

## APPLYING AN AQUATHERMIC PAD

### Preparation

1. Reviewed physician's orders to determine treatment area, type of application, and temperature of treatment.
2. Washed hands.
3. Gathered equipment, and checked it for safety factors (e.g., frayed cords, water leaks).
4. Took equipment to client's room and identified client.
5. Connected aquathermic pad to pump hoses (male and female fittings).
6. Snapped locking rings into place to ensure hose fittings are snug, then opened hose clamps.

Performed    Mastered  
yes          no

Performed yes	Mastered no

7. Filled reservoir  $\frac{2}{3}$  full with *room temperature* distilled water.
8. Placed pump on bedside stand or other surface at or *above* the level of the pad.
9. Used plastic key to set reservoir temperature as ordered, then removed key.
10. Plugged pump into grounded wall outlet.
11. Turned pump power switch ON. Checked that temperature was reached in about 20 minutes.

### Procedure

1. Explained procedure to client and provided privacy.
2. Applied aquathermic pad with its *coiled surface* against client's extremity or over moist pack that has been placed on area to be treated.
3. Secured pad with tape, if necessary; *did not use safety pins*.
4. Checked client's skin after 2–3 minutes.
5. Instructed client to notify you if the pad seemed too warm.
6. Removed pad after 15–20 minutes. Observed area for redness, pain, or any untoward reaction.
7. When pad was used to keep dressings or soaks warm, continued treatment longer than 20 minutes if ordered.
8. Turned pump OFF. Closed hose clamps, and held hose with connectors above pump and pad.
9. Removed aquathermic pad and joined male and female connectors.

Performed    Mastered  
yes    no

Performed yes	Mastered no

10. Placed pad on bedside stand until next treatment or placed in appropriate disposal area.
11. Repositioned client for comfort.
12. Washed hands.

### APPLYING HOT MOIST PACK

#### Preparation

1. Checked physician's orders for type of hot moist treatment, length of treatment, and time interval between treatments.
2. Gathered specific equipment for type of hot moist pack ordered.
3. Placed material in a warming solution (usually water).
4. Determined amount of time elapsed since last application.
5. Determined safe temperature of application to prevent burning.
6. Identified client and explained procedure.
7. Washed hands.

#### Procedure

1. Positioned client appropriately to expose and assess area to be treated.
2. Assessed client's ability to sense touch and heat/cold at site to be treated.
3. Removed any jewelry from area to be treated.
4. Opened container of gauze sponges. Opened ABD outer wrap, if used.
5. Donned gloves.

Performed    Mastered  
yes    no

Performed yes	Mastered no



	Performed		Mastered
	yes	no	
9. Emptied and rinsed client's sitz basin and stored in convenient location for future use. If drainage present, donned clean gloves.			
10. Discarded soiled linen.			
11. Washed hands.			

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## UNIT TWO Cold Therapies

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### UNIT ASSESSMENT

- Reviewed client's history for possible circulatory problems.
- Determined purpose for cyotherapy.
- Assessed site to be treated.
- Determined client's ability to sense temperature at site.
- Assessed skin condition before and after therapy.

### APPLYING AN ICE PACK OR COMMERCIAL COLD PACK

#### Preparation

1. Checked physician's orders for type of cold pack, duration and frequency of treatments..
2. Filled ice bag 1/2–2/3 full.
3. Removed excess water from bag.
4. Added salt to ice if colder slush mixture was needed.
5. Took equipment to client's room.
6. Washed hands.

	Performed		Mastered
	yes	no	
1. Checked physician's orders for type of cold pack, duration and frequency of treatments..			
2. Filled ice bag 1/2–2/3 full.			
3. Removed excess water from bag.			
4. Added salt to ice if colder slush mixture was needed.			
5. Took equipment to client's room.			
6. Washed hands.			

### Procedure

1. Identified client by checking identaband and asked client to state name.
2. Provided privacy.
3. Explained procedure and rationale to client. Discussed sensory experiences to expect with cold therapy.
4. Positioned client to expose area to be treated and removed any jewelry, if present.
5. Assessed client's ability to sense touch and heat/cold at site to be treated.
6. Used pillows or other items to elevate area to be treated.
7. Placed moist towels directly onto skin area.
8. Placed ice/cold pack atop moist towel and molded it to fit treatment area.
9. Secured pack in place with toweling or elastic wrap using tape.
10. Placed call bell within client's reach.
11. Assessed client and treatment site in 5 minutes.
12. Limited treatment time to 10–15 minutes or as prescribed.
13. Assessed treatment area for adverse signs (wheals, cyanosis, pallor, pain, or tingling/numbness *distal* to treatment over a superficial nerve such as the radial nerve at the lateral elbow).
14. Discarded used towels in linen hamper.
15. Returned reusable ice bag or cold pack to freezer for at least 30 minutes before reusing.

	Performed		Mastered
	yes	no	
1. Identified client by checking identaband and asked client to state name.			
2. Provided privacy.			
3. Explained procedure and rationale to client. Discussed sensory experiences to expect with cold therapy.			
4. Positioned client to expose area to be treated and removed any jewelry, if present.			
5. Assessed client's ability to sense touch and heat/cold at site to be treated.			
6. Used pillows or other items to elevate area to be treated.			
7. Placed moist towels directly onto skin area.			
8. Placed ice/cold pack atop moist towel and molded it to fit treatment area.			
9. Secured pack in place with toweling or elastic wrap using tape.			
10. Placed call bell within client's reach.			
11. Assessed client and treatment site in 5 minutes.			
12. Limited treatment time to 10–15 minutes or as prescribed.			
13. Assessed treatment area for adverse signs (wheals, cyanosis, pallor, pain, or tingling/numbness <i>distal</i> to treatment over a superficial nerve such as the radial nerve at the lateral elbow).			
14. Discarded used towels in linen hamper.			
15. Returned reusable ice bag or cold pack to freezer for at least 30 minutes before reusing.			



	Performed yes	Mastered no
5. Wrung out excess solution, and placed cloths on forehead, back of neck, axilla, groin, and wrists.		
6. Depending on type of bath, changed wraps or soaks every 5 minutes.		
7. Stopped the treatment if shivering occurred.		
8. Cooled the air to 68°–72°F (20.0°–22.2°C).		
9. Promoted movement of air (fanning) if possible.		
10. Took temperature every 15 minutes. When temperature had decreased to desirable level, dried skin and replaced light covering over client and repositioned for comfort.		
11. Continued to take vital signs every 1–2 hours until temperature was stabilized.		
12. Provided high-calorie diet.		
13. Placed cloths in linen hamper and returned equipment to utility or storage area.		
14. Washed hands.		

## USING A COOLING BLANKET

### Preparation

1. Checked physician's orders for desired client temperature.
2. Identified medications client had received (antipyretic, narcotic, sedative, or paralytic agents).
3. Gathered equipment and took to client's room.
4. Connected power cord to grounded outlet.

	Performed yes	Mastered no
5. Ensured that reservoir (distilled water) level was adequate.		
6. Washed hands.		
7. Identified client and explained procedure.		
8. Provided privacy.		
9. Obtained baseline vital signs.		
<b>Procedure</b>		
1. Placed cooling blanket on bed, and connected it to machine. <ol style="list-style-type: none"> <li>a. Pushed tab. Inserted male tubing connector of cooling pad into inlet opening. Released the tab.</li> <li>b. Repeated connection using the outlet opening.</li> <li>c. Turned unit ON by pushing power switch.</li> </ol>		
2. Placed a sheet or a thin bath blanket over the cooling blanket.		
3. Placed client on the cooling blanket and applied compression wraps to client's legs/feet.		
4. Wrapped client's lower arms and hands and lower legs and feet (and scrotum if indicated) in towels and taped to secure.		
5. Set the master temperature control to either automatic or manual operation. <p><i>for Automatic Control</i></p> <ol style="list-style-type: none"> <li>a. Inserted lubricated temperature probe into client's rectum 2 inches.</li> <li>b. Set temperature control at desired temperature (fluid temperature set point).</li> <li>c. Observed that automatic mode light was on.</li> <li>d. Checked that pad temperature limits were set at desired safety limits.</li> <li>e. Pressed start when fluid set point was correct.</li> </ol>		

- for Manual Control*
- a. Inserted lubricated temperature probe into client's rectum 2 inches.
  - b. Observed that manual mode light was on.
  - c. Monitored fluid set point, which indicated temperature of pad.
6. Set temperature control to 98.6°F (37°C), and began lowering temperature 1°C every 15 minutes until 91.4°–93.2°F (33°–34°C) was reached (or set temperature as ordered).
  7. Monitored client's tympanic temperature every 15 minutes.
  8. Observed client for signs predicting onset of shivering: ECG muscle tremor artifact, visible facial muscle twitchings, hyperventilation, and verbalized sensations.
  9. If manifestations of shivering occurred, notified physician and obtained order for IV medications, usually chlorpromazine.
  10. While client underwent hypothermia, monitored vital signs every 15–30 minutes during reduction of temperature control and then every 2 hours.
  11. Monitored ECG for possible arrhythmias.
  12. Observed obese clients for fluid balance alterations.

	Performed		Mastered	
	yes	no	yes	no

13. Monitored client's serum glucose.
14. Removed and cleaned rectal probe every 4 hours.
15. Checked physician's order for and applied thigh-high support stockings or compression wraps.
16. Turned, coughed, and deep-breathed client every 30 minutes.
17. Monitored client's skin condition and bony prominences every 2 hours.
18. Turned off unit when client's temperature was 1°–3° above desired temperature.
19. Monitored vital signs every 15 minutes during warming.
20. Observed for edema.
21. Cleaned and returned equipment to central supply following use. Disposed of blanket.
22. Monitored client's vital signs frequently after discontinuation of treatment.
23. Made client comfortable.
24. Washed hands.

	Performed		Mastered	
	yes	no	yes	no