

J-150 Sputum Specimen Collection

Purpose

Identify pathogenic microorganisms and/or cancerous cells in the tracheobronchial tree.

Determine sensitivity of bacterial cells to antibiotics.

Applies To

Registered Nurses

Licensed Practical/Vocational Nurses

Other (*Identify*): _____

Equipment/Supplies

Expectorated Specimen:

- Sterile, closed system specimen container.
- One pair of disposable gloves.
- Emesis basin (optional).
- Facial tissues.
- Toothbrush.

Suctioned Specimen:

- Suction device (wall or portable).
- Sterile suction catheter (14 to 18 Fr.).
- Pair of sterile gloves.
- In-line specimen container (sputum trap).
- Sterile normal saline.
- Oxygen therapy equipment as indicated.
- Water-soluble lubricant (optional).

Procedure

1. Wash hands. Instruct the client to wash his/her hands if obtaining expectorated specimen. Refer to Hand Washing procedure.
2. If collecting expectorated specimen, instruct the client to rinse mouth or brush teeth with water. *This removes excess food particles and decreases the number of oral contaminants. Use water instead of toothpaste, as toothpaste can alter the viability of the microorganisms.*
3. Expectorated specimen: Place or assist the client into a semi-Fowler's or standing position. Suctioned specimen: Place or assist the client into a high or semi-Fowler's position. *Positioning promotes full lung expansion and promotes coughing.*
4. Don clean gloves.

Collection of Expecterated Specimen:

- a. Instruct the client on the use of the specimen container. Instruct him/her not to touch the inside of the container.
- b. Instruct the client in cough and deep breathing exercises and have the client perform them. *This opens the airway and stimulates cough reflex.*
- c. Instruct the client to expectorate sputum directly into sterile container.
- d. Repeat until a sufficient amount of sputum is obtained. Collect 2 to 10 ml or 1 to 2 teaspoons of sputum.
- e. Tightly secure top on container.

Collection of Suctioned Specimen:

- a. Prepare suction machine and equipment. Test to ensure suction function is working.
- b. Connect plastic adapter end of sputum trap to end of suction connector tubing.
- c. Open and maintain sterility of suction catheter. Don sterile gloves. *Procedure is sterile.*
- d. Connect sterile suction catheter to rubber tubing end of specimen container. Maintain sterility of dominant hand and suction catheter.
- e. Without applying suction, gently insert catheter tip into the client's nares, endotracheal tube or tracheostomy.

Note: You may use water-soluble lubricant when suctioning through nasopharynx. This minimizes trauma to airway with catheter insertion.

- f. Advance catheter to trachea and apply suction for 5 to 10 seconds (when the client begins to cough). Collect approximately 2 to 10 ml of sputum. *Sputum is collected from lower tracheobronchial tree. Hypoxia is minimized with limited suction time.*
 - g. Stop applying suction and remove catheter.
 - h. Turn off suction and detach catheter from specimen container.
 - i. Rinse connection tubing in normal saline until clear.
 - j. Gather catheter in hand, remove glove(s) around catheter, and discard.
 - k. Securely connect plastic adapter and rubber tubing.
5. Discard equipment as outlined in the agency Waste Disposal Policy.
 6. Wash hands. Refer to Hand Washing procedure.

7. Place labeled specimen in biohazard bag and attach requisition. Deliver to laboratory.

Documentation Guidelines

Document in the clinical record:

1. Specimen collection method, time, and date.
2. Sputum characteristics: amount, color, consistency odor.
3. The client’s tolerance of the procedure.

Related Procedures

None.

Policy History

Approval Date	11/1/2009
Approved By	Anne Tyson, Herman Pippin, Sandra Hill
Revision Date	12/31/2009
Approved by	Anne Tyson, Herman Pippin, Sandra Hill
Revision Date	
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Revision Date	
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