Respiratory Secretion Specimens

Collection of sputum or nasal discharge is sometimes required for the diagnosis of respiratory infections, especially tuberculosis and respiratory syncytial virus (RSV). Older children and adolescents are able to cough as directed and supply sputum specimens when given proper directions. The nurse must make it clear to them that a coughed specimen, not mucus cleared from the throat, is needed. It is helpful to demonstrate a deep cough. Infants and small children are unable to follow directions to cough and will swallow any sputum produced; therefore, gastric washings (lavage) may be used to collect a sputum specimen. Sometimes a satisfactory specimen can be obtained using a suction device (such as a mucus trap) if the catheter is inserted into the trachea and the cough reflex elicited. A catheter inserted into the back of the throat is not sufficient. For children with a tracheostomy, a specimen is easily aspirated from the trachea or major bronchi by attaching a collecting device to the suction apparatus.

Nasal washings are usually obtained to diagnose an infection of RSV. The child is placed supine, and 1 to 3 ml of sterile normal saline is instilled with a sterile syringe (without needle) into one nostril. The contents are aspirated using a small, sterile bulb syringe and are placed in a sterile container. Another method uses a syringe with 5 cm (2 inches) of 18- to 20-gauge tubing. The saline is quickly instilled and then aspirated to recover the nasal specimen. To prevent any additional discomfort, all of the equipment should be ready before beginning the procedure.

Other respiratory secretion collection methods include nasopharyngeal swabs to diagnose *Bordetella pertussis* and throat cultures. The nurse swabs both the tonsils and the posterior pharynx when obtaining a throat culture. The swab stick is inserted into the culture tube. Some culture kits require squeezing an ampule to release the culture medium.

Administration of Medication

Determination of Drug Dosage

Nurses must have an understanding of the safe dosages of