Nasopharyngeal Specimen Collection for Coronavirus

(County of San Mateo, 2020)
**Introduction**

- Why nasopharyngeal specimen collections?
  - To identify pathogens
  - To identify asymptomatic carriers of easily transmitted disease organisms

- Correct collection and handling of the swabs assists in the accurate identification of pathogens with minimal contamination from normal bacterial flora

- Sterile cotton tipped swabs are used to sample inflamed tissue & exudate from the nasopharynx

- The swabs are immediately placed in the sterile culture tube containing a transport medium and sent to the lab
Equipment

- Gloves
- Tissue
- Sterile, flexible cotton-tipped swab
- Tongue blade
- Sterile culture tube with transport medium
- Specimen label
- Laboratory biohazard transport bag
- Optional: mask with face shield or mask and goggles, gown, commercially prepared kit with flocked swabs, laboratory request form
Preparation of Equipment

- Inspect all equipment and supplies
- If a product is expired, its integrity is compromised, or it's defective, remove it from patient use, label it as expired or defective, and report the expiration or defect

(Borresen, 2020)
Implementation

- Verify the practitioner's order.
- Gather the appropriate equipment.
- Perform hand hygiene.
- Confirm the patient's identity using at least two patient identifiers.
- Provide privacy.
- Explain the procedure to the patient and family (if appropriate), according to their individual communication and learning needs.
Implementation

- Tell the patient that the procedure may produce the need to gag or the urge to sneeze during the swabbing but that the procedure takes less than 1 minute.
- Instruct the patient to sit erect at the edge of the bed or in a chair, facing you.
- Perform hand hygiene.
- Put on gloves and other personal protective equipment as necessary.
Implementation

- Instruct the patient to blow the nose into a tissue to clear the nasal passages.
- Determine the more patent nostril by instructing the patient to exhale and occlude one nostril at a time.
- While it's still in the package
  - Bend the sterile, flexible cotton-tipped swab in a curve
  - Measure the distance from the patient's nostril to the ear to determine the distance to insert the swab (half the distance measured)
  - Open the package without contaminating the swab.
Implementation

- Instruct the patient to cough *to bring organisms to the nasopharynx for a better specimen.*
- Instruct the patient to tilt the head back at a 70-degree angle.
- Pass the swab gently through the patient's more patent nostril into the nasopharynx
  - Keep the swab near the septum and the floor of the nose,
  - Insert the swab straight back until the posterior nasopharynx is reached (distance from the nostrils to the sternal opening of the ear) (LabCorp, 2020)
  - Rotate the swab gently 2 to 3 times and hold for 5 seconds *to absorb secretions*, and then remove it.
Implementation

- If unable to obtain nasopharyngeal swab alternatively may do an oropharyngeal swab
  - Depress the patient's tongue with a tongue blade
  - Pass the bent swab up behind the uvula.
  - Rotate the swab quickly and then withdraw it.

(Rhode Island Department of Health, 2020)
Implementation

- Remove the cap from the sterile culture tube
- Insert the swab into the transport medium
- Break off the contaminated end of the swab
- Close the culture tube tightly
- Perform hand hygiene
Implementation

- Label the culture tube in the presence of the patient to avoid mislabeling
- Complete a laboratory request form if necessary
- Immediately send the culture tube to the laboratory in a laboratory biohazard transport bag, because a delay in transporting the specimen to the laboratory may damage it and affect the accuracy of the results
- Perform hand hygiene
- Document the procedure
Special Considerations

- When collecting a nasopharyngeal specimen from an infant or a young child
  - use a specially designed midturbinate nasal flocked swab equipped with a collar that prevents excessively deep insertion into the nasopharynx.
- Note on the request form any recent antibiotic therapy the patient received
- If possible, collect a nasopharyngeal specimen for culture before starting the patient on antimicrobial therapy, as ordered.
- If you're collecting a nasopharyngeal specimen to isolate a possible virus, check with the laboratory for the recommended collection technique.
Patient Teaching

Discuss hygiene and infection-control techniques for upper respiratory secretions with the patient and family.

(Mission CISD, n.d.)
Complications

- Laryngospasm may occur after nasopharyngeal specimen collection if the patient has epiglottitis or diphtheria.
  - Keep resuscitation equipment nearby.
Documentation

- Record
  - Date, time, and site of nasopharyngeal specimen collection
  - any recent or current antibiotic therapy.
- Note whether the specimen has an unusual appearance or odor
- Document
  - teaching you provided to the patient and family (if appropriate),
  - their understanding of that teaching
  - any need for follow-up teaching
Bibliography


(County of San Mateo, 2020)