



PROCEDURE REVIEW COVER SHEET

Procedure Title: **SPECIMEN COLLECTION – NASAL ASPIRATE, WASH OR NASOPHARYNGEAL SWAB & ANTERIOR NARES SWAB FOR MRSA**

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SPECIMEN COLLECTION – NASAL ASPIRATE, WASH OR NASOPHARYNGEAL SWAB & ANTERIOR NARES FOR MRSA

PURPOSE

This procedure will be used to obtain nasal specimens when required for testing and identification of respiratory viruses, *Bordetella pertussis* and MRSA. Appropriate sample collection (whether aspirate, wash or swab), is determined by the type of test ordered. In addition to proper collection, proper labeling, and handling are also of the utmost importance in providing valid specimens for testing.

SCOPE

This procedure is intended for use within the UCSF Medical Center Hospitals and Clinics.

PERSONNEL

Nasal aspirate, wash or nasopharyngeal swab and anterior nares swab are performed when a nasal specimen is required for tests ordered by the patient's health care provider. Licensed individuals authorized by their scope of practice, or unlicensed clinical staff who have completed training and demonstrated competency, may collect nasal samples.

- Medical Doctors – Hospital and Ambulatory setting
- Nurse Practitioners – Hospital and Ambulatory setting
- Physician's Assistants – Hospital and Ambulatory setting
- Registered Nurses – Hospital and Ambulatory setting.
- Licensed Vocational Nurses – Ambulatory setting only
- Medical Assistants – Ambulatory setting only

EQUIPMENT

- Completed Requisition
- Patient Labels
- Box of Tissues
- Sterile Saline or Saline Pillow
- Gloves
- Aspirate:
 - Suction Catheter
 - Mucus trap or specimen container
 - Wall suction
- Wash:
 - Sterile Syringe or
 - Pediatric bulb syringe
 - Specimen container

- Swab:
 - Anterior nares swab for MRSA testing: Amies transport medium with charcoal & nylon swab (packaged together)
 - Nasopharyngeal swab for Respiratory Virus Testing: Flexible Minitip flocced swab & Universal Transport Medium (packaged together)

SPECIMEN REQUIREMENTS

Specimens submitted to the Microbiology Lab:

- Respiratory virus testing from nasopharyngeal site: Obtain sample with a flocced swab and submit swab in Universal Transport Medium. Nasal aspirate or nasal wash may be obtained when unable to collect a nasopharyngeal swab.
- *Bordetella pertussis* testing: Submit a nasal aspirate or nasal wash.
- MRSA testing: Obtain swabs from the anterior nares (1/4” inside the nasal orifice) only.

Specimens obtained for Point of Care tests:

- Point of Care specimens may be nasopharyngeal swab, wash or aspirate. Specific Point of Care testing procedure will identify specimen type.
- Specimens should be tested as soon as possible after collection.

PROCEDURE

I. IDENTIFY PATIENT

A. Use two forms of patient ID.

1. Patient Name
2. Medical Record # number and/or
3. Date of Birth

B. Verify Requisition

1. Patient ID matches patient information on requisition
2. Requisition is completed with required test request information

II. SPECIMEN COLLECTION

As part of our Bloodborne Pathogen Exposure Control Plan, standard precautions must be followed when handling specimens. Gloves should be worn while collecting or testing the specimen.

A. **Nasal Aspirate:**

1. Adult and Older Child: Position patient comfortably in sitting position, neck slightly hyper-extended
2. Infant and Younger Child: Sit child on parent’s lap facing forward, with the child’s back against the parent’s chest. The parent should wrap one arm around the child in a manner that will restrain the child’s body and arms.
3. Neonates: Swaddle tightly for comfort

For adults, children, and infants, proceed as follows:

4. Attach one end of the suction catheter to the mucus trap (both available from Materials Services)
5. Attach other end to wall suction. DO NOT employ mouth suction.
6. Turn on suction and adjust vacuum pressure to 40-60 mmHg. Use thumb control to apply suction when withdrawing the catheter from the nasopharynx.
7. With patient's head slightly hyper-extended, instill 1 to 2 ml of sterile saline into the patient's nostril.
8. Gently thread the tube through the external nostril, into the nasopharynx. **NOTE:** depth of insertion necessary to reach posterior pharynx is equivalent to distance between external nostril and external opening of the ear.
9. Apply suction and using a rotating movement, aspirate material as the tube is withdrawn, at a pressure of 40-60 mmHg. **NOTE:** catheter should remain in nasopharynx no longer than 10 seconds.
10. If needed, draw material into the specimen trap using sterile saline. Hold specimen trap upright to prevent secretions from going into the suction tubing.
11. Repeat procedure until adequate sample (2ml) is obtained.
12. Offer the patient tissues as appropriate.
13. Disconnect and turn off suction device. Tie off the tubing, or seal mucus trap with cap found on bottom of the trap.
14. Label specimen appropriately in front of the patient.
15. Immediately deliver specimen to Microbiology or if performing a point of care test, proceed according to written test procedure.

B. Nasal Wash

1. Adult and Older Child: Position patient comfortably in sitting position, neck slightly hyper-extended
 - a. Prior to the procedure, have the patient blow their nose.
 - b. Using a sterile syringe, introduce 3 ml of sterile saline into one nostril
 - c. If possible, have the patient retain the saline for a few seconds.
 - d. Place specimen container directly under the nose with slight pressure on the upper lip.
 - e. Tilt the head forward and allow the fluid to flow into the specimen container.
 - f. Repeat procedure on other nostril, collecting fluid into the same container.
 - g. Offer the patient tissues.
2. Infant and Younger Child: Sit child on parent's lap facing forward, with the child's back against the parent's chest. The parent should wrap one arm around the child in a manner that will restrain the child's body and arms.
 - a. Fill bulb syringe with 1-3 ml of sterile saline, depending on size of the patient, and instill saline into one nostril, while the head is tilted back.
 - b. Release the pressure on the bulb to aspirate the specimen back into the bulb.
 - c. Transfer the specimen into specimen container.

- d. Repeat procedure on other nostril, transferring second specimen into the same specimen container.
- e. Offer tissues as appropriate.
3. Label specimen container with Patient ID, while in the presence of the patient.
4. Immediately deliver specimen to Microbiology or if performing a point of care test, proceed according to written test procedure.

C. Nasopharyngeal Swab for respiratory virus testing

For respiratory virus testing sent to Microbiology Lab:

1. Use flocked swab/Universal Transport Medium for collection.
2. Insert swab into the nostril, gently rotating the swab inward until resistance is met at the level of the turbinates.
3. Rotate the swab a few times against the nasopharyngeal wall and then withdraw swab.
4. Insert swab into container with Universal Transport Medium. Break end of swab so top of vial can be screwed on securely.
5. Appropriately label specimen and send to the laboratory.

For Point of Care tests:

1. Use the swabs provided in the test kits for collection.
2. Insert swab into the nostril, gently rotating the swab inward until resistance is met at the level of the turbinates.
3. Rotate the swab a few times against the nasopharyngeal wall and then withdraw swab.
4. Appropriately label specimen and immediately perform testing according to written procedure.

D. Anterior Nares Swab for MRSA testing (2 swabs provided in collection kit)

1. Run both swabs quickly under tap water to slightly moisten the swabs.
2. Using both swabs at the same time, gently insert the swabs approx 1/4 " into the anterior nares (just inside the nasal orifice). Swab in a circular motion; and repeat in second nostril, using the same two (2) swabs.
3. Place swabs into Amies (charcoal) transport media, cap and deliver per protocol to Microbiology.

PROCEDURE NOTES:

I. Critical Points

- A. For Inpatients, before obtaining nasal specimen, identify the patient by comparing the patient name and ID# on the requisition and label with the name and ID# on the patient's ID band. If patient has no ID band do not collect specimen until charge nurse has identified patient and an ID band has been placed.
- B. For Outpatients, before obtaining nasal specimen, verify with the patient or patient's guardian that the patient's name and birthdate, are consistent with the information printed on the requisition and labels. If patient is unable to

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communicate verbally, picture ID provided by the patient, such as Driver's License may be used to confirm patient identity.

- C. Always label the specimen container in the presence of the patient; always label the container yourself.

REFERENCES:

Binax protocol: #CSB-001-02; www.nasalaspirationkit.com.

University of California, San Francisco, Medical Center. Clinical Laboratories Manual (2009).

University of California, San Francisco, Medical Center. Respiratory Care Service, "Nasopharyngeal Specimen Collection 16.4." (2003).

Nasopharyngeal swab collection instructions by verbal communication with Lawrence Drew M.D. (9/15/09)