

Date: September 3, 2009

To: Medical Staff, Laboratory, and Key Personnel

From: John G. Newby M.D. Director of Laboratories



RE: **Influenza A and B Virus Antigen Collection and Testing**

Hagerstown Medical Laboratory with the rest of the community is anticipating a significantly aggressive influenza season. We are preparing for an increase in testing for influenza A virus. To this end, we have prepared a new collection kit for respiratory viruses.

FOR THE SAFETY OF UNINFECTED PATIENTS AND STAFF IN HAGERSTOWN MEDICAL LABORATORY PATIENT SERVICE CENTERS, SPECIMENS SHOULD BE COLLECTED IN THE HEALTH CARE FACILITY (OFFICE) WHERE THE PATIENT IS BEING SEEN. DO NOT REFER PATIENTS TO HML FACILITIES TO HAVE INFLUENZA SPECIMENS COLLECTED.

Universal Transport Medium (UTM) is available in the new transport and sampling kit with a flocked nasopharyngeal swab. Acceptable specimens using the new collection kit are:

- **Nasopharyngeal Swab:** Place the Minitip Flocked Swab in 1 ml of Universal Transport Medium (UTM) breaking the swab shaft where it is scored. The Minitip Flocked Swab is recommended to use for **infants, toddlers and preschoolers** but it may be used with all patients. Forward the specimen promptly at ambient temperature.
- **Nasal Swab:** Substitute a standard Flocked Swab and place the swab in 1 ml of the UTM, breaking the swab off into the UTM vial. The Standard Flocked Swab is recommended to use for **school age children, adolescents and adults**. Forward the specimen promptly to the laboratory at ambient temperature.

Acceptable alternate specimens are:

- **Nasopharyngeal Aspirate:** Forward promptly to the laboratory at ambient temperature, or if transport to the laboratory is delayed, place 1 ml of the aspirate specimen into UTM.
- **Nasopharyngeal Washes:** Place 2- 3 ml of the wash specimen in a screw capped, sterile container. Forward promptly at ambient temperature. If transport to the laboratory is delayed, place 1 ml of the wash specimen into the UTM. Place in refrigerator.

If transport to the laboratory is delayed more than four (4) hours; the specimen can be placed in the refrigerator for up to 24 hours.

An enzyme immunoassay is performed to detect the presence of Influenza A and/ or B Viral antigen. Testing is performed 24/ 7 at least once per shift.

A negative antigen test will be reflexed to a comprehensive viral respiratory culture. The culture can detect and differentiate seven (7) respiratory viruses. The test will only detect Influenza A but it will not differentiate between seasonal Influenza H1N1, H3N2 and the novel H1N1 strains. Respiratory viral cultures are performed five (5) days per week , M-F with 2 to 3 day turnaround time. Specimens submitted after 12:00 noon on Friday will be held for culture until the following Monday.

THE NEW RESPIRATORY VIRUS COLLECTION KITS ARE AVAILABLE FROM HAGERSTOWN MEDICAL LABORATORY CLIENT SERVICES AT 301 665- 4900.

Refer to the pictorial **Nasopharyngeal and Nasal Swab Collection** instructions which accompany this memo. Additional copies of the instructions may be printed from Washington County Health System Intranet site. Under Departments, choose Hagerstown Medical Laboratory

Please feel free to contact me at (301) 665- 4900 or Chanhpheng Phengvath, Microbiology Technical Specialist at (301) 665- 4936 with any microbiology questions or comments.

NASAL SPECIMEN COLLECTION PROCEDURE



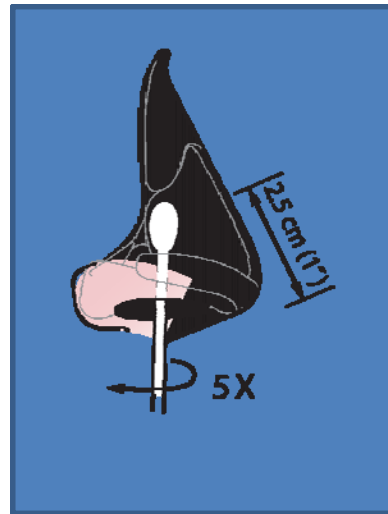
1



Standard Flocked Swab
(School age children, adolescent & adult)

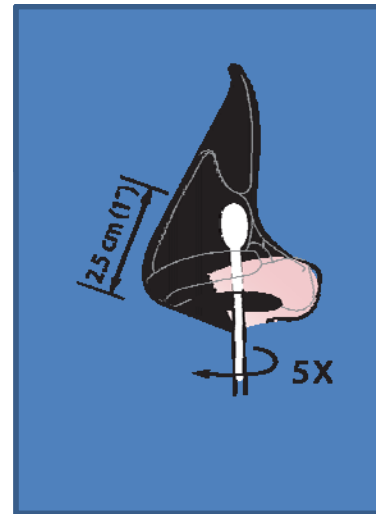
1ml Universal Transport Medium (UTM).
Aseptically remove cap from vial.
Remove the swab from the plastic wrap

2



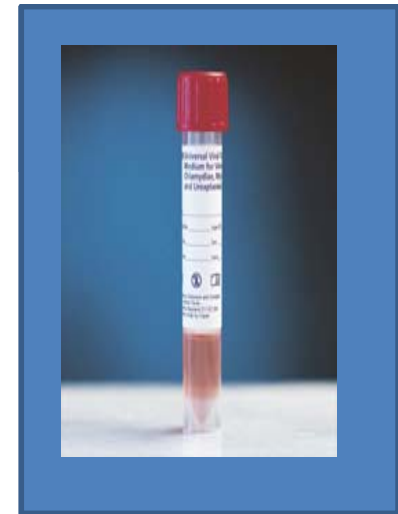
Carefully insert the swab into the patient's nostril (the swab tip must be inserted up to 2.5 cm [1 inch] from the edge of the nares), or until resistance is met at the level of the turbinates (which might be slightly less than that in some neonates and infants). Roll the swab 5 times.

3



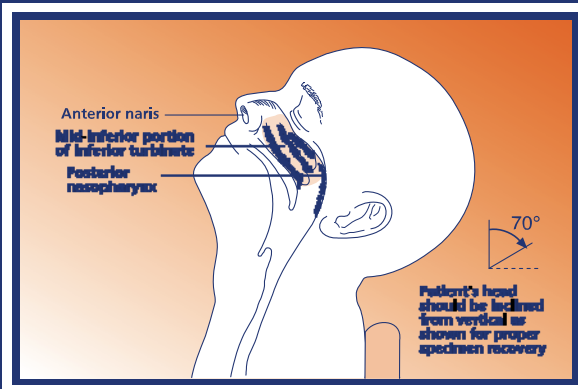
Insert the same swab into the second nostril and repeat sampling as in the preceding step.

4

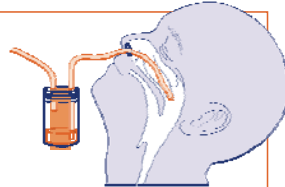


Insert swab into the vial medium.
Break swab shaft by bending it against the vial wall evenly at the pre-scored line.
Replace cap on vial and close tightly. Label with appropriate patient information. Send to the laboratory for immediate analysis.

NASOPHARYNGEAL SPECIMEN COLLECTION



Vacuum-assisted Nasopharyngeal Aspirate Method



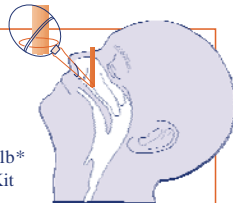
Materials: Suction outlet (Portable/wall)
Sterile suction catheter
Mucus trap (i.e., Luken's tube)
Universal Transport Medium Kit (UTM)

1. Attach mucus trap to suction outlet and catheter, leaving wrapper on suction catheter; turn on suction and adjust to suggested pressure.
2. Without applying suction, insert catheter into the nose, directed posterior and toward the opening of the external ear. **NOTE:** Depth of insertion necessary to reach posterior pharynx is equivalent to distance between anterior nares and external opening of the ear.
3. Apply suction. Using a rotating movement, slowly withdraw catheter. **NOTE:** Catheter should remain in nasopharynx for a minimal period of time, not to exceed 10 sec.
4. Hold trap upright to prevent secretions from going into pump.
5. Rinse catheter (if necessary) with 1mL UTM; Disconnect suction; connect tubing to arm of mucus trap to seal.
6. Repeating procedure for the second nostril will deliver optimal combined sample.
7. After collection, immediately transport specimen to the laboratory for viral testing and viral antigen detection. If transport to the laboratory is delayed, place specimen on ice or in refrigeration.

Patient Age	Catheter Size (French)**	Suction Pressure
Premature infant	6	80-100 mmHg
Infant	6	80-100 mmHg
Toddler / Preschooler	8	100-120 mmHg
School age	8	100-120 mmHg
Adolescent / Adult	8	120-150 mmHg

** To determine length of catheter tubing, measure distance from tip of nose to external opening of ear.

Nasopharyngeal Wash: Bulb Method

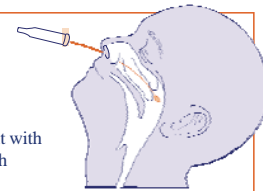


Materials: Saline
1-2 oz. tapered sterile rubber bulb*
Universal Transport Medium Kit (UTM)
Specimen container

1. Suction 3-5 mL saline into a new sterile bulb.
2. Insert bulb into one nostril until nostril is occluded.
3. Instill saline into nostril with one squeeze of the bulb and immediately release bulb to collect recoverable nasal specimen.
4. Empty bulb into sterile specimen container with suitable UTM, according to virology laboratory requirements.
5. Repeating procedure for the second nostril will deliver optimal combined sample.
6. After collection, immediately transport specimen to the laboratory for viral testing and viral antigen detection. If transport to the laboratory is delayed, place specimen on ice or in refrigeration.

* Length and diameter of bulb as appropriate for infant, child or adult.

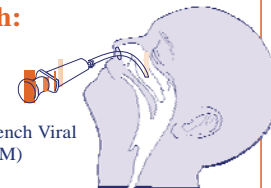
Nasopharyngeal Swab Method



Materials: 1ml Universal Transport kit with Minitip flocked swab with scored plastic shaft.

1. Insert swab into one nostril.
2. Rotate swab over surface of posterior nasopharynx.
3. Withdraw swab from collection site; insert into transport tube or container with UTM.
4. Repeating procedure for the second nostril will deliver optimal combined sample.
5. After collection, immediately transport specimen to the laboratory for viral testing and viral antigen detection. If transport to the laboratory is delayed, place specimen on ice or in refrigeration.

Nasopharyngeal Wash: Syringe Method



Materials: Saline
3-5 mL syringe*
2" Sterile NG tube 8-french Viral Transport Medium (VTM)
Specimen container

1. Fill syringe with saline; attach tubing to syringe tip.
2. Quickly instill saline into nostril.
- 3a. Aspirate the recoverable nasopharyngeal specimen. Recovery must occur immediately, as the instilled fluid will rapidly drain.
 - 3b. (Alternate) in appropriate cases, patients may tilt head forward to allow specimen to drain into suitable sterile container.
4. (If aspirated) Inject aspirated specimen from syringe into sterile specimen container with suitable VTM, according to virology laboratory requirements.
5. Repeating procedure for the second nostril will deliver optimal combined sample.
6. After collection, immediately transport specimen to the laboratory for viral testing and viral antigen detection. If transport to the laboratory is delayed, place specimen on ice or in refrigeration.

* Length and diameter of syringe and tubing as appropriate for infant, child or adult.



SUPPLY REQUISITION	
Requesting Office:	
Phone#	Contact:

HML Fax: 301-665-4949

<u>QUANTITY</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
	Box (100)	Tube, Vacutainer, BLUE TOP
	Box (100)	Tube, Vacutainer, BLUE TOP, Ped's
	Box (100)	Tube, Vacutainer, RED TOP
	Box (100)	Tube, Vacutainer, PINK TOP
	Box (100)	Tube, Vacutainer, LAVENDER TOP
	Box (100)	Tube, SST YELLOW TOP
	Box (100)	Needle, Vacutainer 21G x 1.0"
	Box (100)	Needle, Vacutainer 22G x 1.0"
	Each	Sterile Urine Culture Cups
	Each	Routine Urinalysis Cups w/lids
	Box (100)	Cultures
	Each	Viral Culture Transport Media (Herpes)
Respiratory Virus Collection Kits:		
	Each	Pediatric Minitip Flocked Swab / Universal Transport Media (UTM)
	Each	Adult Standard Flocked Swab / Universal Transport Media (UTM)
	Each	Biopsy Bottles (filled with Formalin) () Small () Large
	Each	Thin Prep- () Broom () Brush & Spatula
	Each	"HPV-Direct" Digene Transport Medium Collection Kit
	Each	Blood Culture Bottle
	Each	Pediatric Blood Culture Bottles
	Each	BD Affirms (Bacterial Vaginosis Collection Kits)
	Each	BD Probe Tech CT/GC () Male () Female
	Each	Autoclave Kits
	Each	Thin Prep/Pap Forms (2-Part)
	Each	Non-Gyn Cytology Request Forms
	Each	Surgical Pathology Request Forms
	Each	ABN Forms (2-part Advance Beneficiary Notice)
	Each	Supply Requisition Forms
	Each	Labslip - Preprinted w/Practice / Provider Names
	Each	Labslip - Generic; 1-Part padded _____ 2-Part _____
	Each	Plastic Specimen Transport Bags- () Small () Large

Other - List item & amount: _____
