Test: Viral Culture – Nasopharyngeal Swab for Influenza A H1N1 Specimens

Number: MIC 1085
Section: Microbiology

1.0 Sample Type

A *nasopharyngeal swab* is the preferred specimen for testing pandemic influenza A (H1N1) virus 2009. Specimens are collected using a Copan flocked nasopharyngeal swab collection kit.

A viral nasal swab collected in routine viral transport media is a *suboptimal* specimen, however, may be submitted when a nasopharyngeal swab cannot be collected.

A viral throat swab *should not* be submitted.

2.0 Sample Container

Preferred collection kit:
- Copan flocked nasopharyngeal swab collection kit, e.g. UTM (Universal Transport Media) kit.
  - See “Specimen Collection Devices – Microbiology” in the Fraser Health Laboratory Sample Collection and Dispatch Manual.
  - Available from the hospital laboratory or ordered directly from BCCDC.

Suboptimal collection kit:
- Starswab Multitrans System – viral swab collection kit.
  - The supplied swab is often too big to collect a proper nasopharyngeal specimen.
  - See “Specimen Collection Devices – Microbiology” in the Fraser Health Laboratory Sample Collection and Dispatch Manual.
  - Available from the hospital laboratory.
• **DO NOT USE the routine bacterial culture swabs in clear Amies transport gel** for nasopharyngeal or nasal specimens. Specimens will have to be recollected using the appropriate swabs or will be rejected by BCCDC.

• **DO NOT USE the aluminium wire shaft pertussis nasopharyngeal swab.** The swab and aluminium shaft interfere with the PCR test and may produce a false negative test result.

### 3.0 Requisition

- Meditech order: Viral culture.

- Indicate specimen is for **H1N1** testing or indicate code “**SWFLU09**”.

- Complete required information on order entry:
  - State disease and/or examination requested:
    - Lower Resp Tract Inf/Pneumonia/Severe Resp Inf (SRI)? Y/N
    -Upper Respiratory Tract Infection? Y/N
    - Travel History? Y/N. Specify details.
    - Contact with person with recent travel? Y/N
    - Reachable ordering doc’s phone number for notification:
    - Indicate if patient is hospitalized.

### 4.0 Ward Instructions

Recommend using the Copan flocked nasopharyngeal viral swab collection kit.

**DO NOT USE:**
- routine bacterial culture swabs in clear Amies gel media,
- aluminium wire shaft pertussis swabs or
- throat swabs.

**Note:** See Section 3.0 Requisition above for Ordering Instructions – it is important that this information is complete.

### 5.0 Collection Instructions

**Before Collection:**
- Assemble all supplies needed, eg. gloves, facemask, pen, nasopharyngeal viral swab collection kit (nasopharyngeal flocked swab and viral transport media).
  - Check expiry date of collection kit and transport media.
- Explain the procedure to the patient.
  - Patients with copious discharge should be requested to gently clean their nose by washing or with a tissue.
• Perform hand hygiene.
• For personal protection, recommend that gloves and a facemask be worn when collecting specimens. Follow recommended Infection Control precautions.

Collection Procedure:
1. Have patient sit in chair or lie down on a bed and incline the patient’s head approximately 45°-70°.
2. Estimate the distance to the nasopharynx: prior to insertion, measure distance from corner of the nose to the front of the ear and insert swab to approximately half this distance.
3. Gently insert swab perpendicular to the face along the medial part of the septum, along the base of the nose, until it reaches the posterior nasopharynx. Insert swab straight back, perpendicular to the face, not upwards towards the eyes. Do not force the swab. If resistance or obstruction is felt on one side, try the other nostril as the patient may have a deviated septum.
4. Rotate swab gently several times (eg. 5-10 seconds) around inside of the nasal passage and along the floor of the nasal cavity to collect respiratory cells. Gently remove the swab.
5. Place swab in the accompanying vial of viral transport media and break the plastic swab at the scored line so it does not protrude above the rim of the transport media container. Failure to do so will result in the specimen leaking.
6. Tighten the viral transport media lid securely.
7. Label the transport media vial with the patient’s full name, birth date, and date of collection.

After collection
6.0 Laboratory Instructions

- Specimens are sent to BCCDC Public Health Microbiology & Reference Laboratory.
- Transport specimens according to TDG shipping regulations:
  - All specimens for H1N1 testing must be packaged and shipped as UN 3373 Category B by a staff member with a valid TDG certificate.
- Transport specimens within 72 hours of collection.

7.0 Reference Interval

Final viral typing results available approximately 2 to 3 days after arrival at BCCDC.

8.0 Availability

- **Collection**
  By physician or ward.

- **Routine Testing**
  Referred to the BCCDC Monday to Friday.
  Limited testing may be available on weekends at BCCDC.

**Urgent testing**: May be arranged by contacting the Medical Microbiologist on-call who will coordinate with the BCCDC on-call Microbiologist (604)661-7033.

9.0 Additional Information

Testing includes: Polymerase chain reaction (PCR) testing, with viral sub-typing of positive specimens.

References:

- Fraser Health Medical Health Officer Memo “Increase Influenza Testing of Hospitalized Severe Respiratory Illness”, July 9, 2009.
- Provincial Health Services Authority (PHSA) website, H1N1 Guidelines, accessed July 20, 2009. http://www.phsa.ca/AgenciesServices/Services/PHSALabServices/LaboratoryServices/BCCDC_Public_Health_Microbiology_Lab/H1N1Guidelines.htm