



HOW TO COLLECT NASAL/OROPHARYNGEAL SWABS FOR DETECTION OF RESPIRATORY VIRUSES

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PRINCIPLES FOR COLLECTION OF NASAL/OROPHARYNGEAL SWABS FOR DETECTION OF RESPIRATORY VIRUSES:

- Respiratory viruses are best isolated from material that contains infected cells and secretions. Therefore, swabs should aim to brush cells and secretions off the mucous membranes of the upper respiratory tract.
- **Good specimen quality** (ie. Containing sufficient cells and secretions), **appropriate packaging and transport** (i.e. to keep virus viable/detectable) **is essential**

Step 1: EQUIPMENT

1. Specimen request form (also called 'Case Investigation Form')
2. Nasal flocked swab
3. Tube containing viral transport medium
4. N95 mask
5. Gloves
6. N95 mask for covering health care worker's nose and mouth
7. Biohazard bag for disposal of non-sharp materials
8. Tissue for participant to wipe nose after sample collection
9. Cooler box
10. Cooled ice packs
11. Ziploc plastic specimen bag

Step 2: RECORD KEEPING

1. Complete the specimen request form (Case investigation form)
2. Place the specimen request form into a Ziploc bag
3. Label the tube of viral transport media (VTM) with the patient's name and date of birth

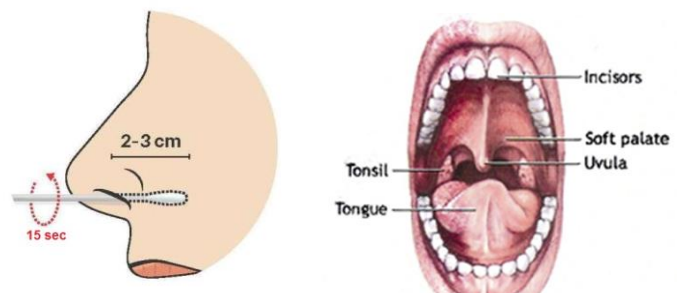
Step 3: COLLECTION of NASAL MID-TURBINATE (NMT) SWAB

1. Don a pair of gloves, and an N95 respirator, making sure the respirator has a good fit. Open a sterile flocked swab at the plastic shaft.
2. Ask the patient to tilt his/her head back.
3. While gently rotating the swab, insert the swab into the nostril until slight resistance is met (± 2 cm, at the level of the turbinate).
4. Gently rotate the swab several times (3-4 times) against the nasal wall.
5. Slowly withdraw the swab and without touching it, put it into a viral/universal transport medium (VTM/UTM).
6. Break the plastic shaft at the break point line and close the tube.

Step 4: COLLECTION of OROPHARYNGEAL SWAB

1. Keeping the same pair of gloves on, and holding the VTM with the NMT in, take a second flocked swab and open it at the plastic shaft.
2. Ask the patient to tilt their head back and open mouth wide.
3. Hold the tongue down with a tongue depressor.
4. Have the patient say "aahh" to elevate the uvula.
5. Swab each tonsil first, then the posterior pharynx in a "figure 8" movement.
6. Avoid swabbing the soft palate and do not touch the tongue with the swab tip as this procedure can induce the gag reflex.
7. Place the swab into the same VTM tube with the mid-turbinate nasal swab already in and break off the shaft at the break point line.
8. Tightly close the tube.

DIAGRAM: How to collect a nasal mid-turbinate swab (left) & oropharyngeal swab (right)



Left: It is important that the swab be rotated whilst collecting the sample to collect as much sample as possible

Right: The oropharyngeal swab should tickle the tonsils and the posterior pharynx, but it should not touch the tongue, soft palate, or uvula.

Step 5: STORAGE AND TRANSPORT OF SPECIMENS

1. Place the closed tube now with two swabs into the Ziploc plastic specimen bag with the specimen
2. Ensure the cooler box and ice packs stay under 8°C until transport back to NICD on the same day as collection.
3. Samples can be refrigerated at 2-8°C before transport to NICD
4. Remove gloves and N95 respirator

Step 6: CONTACT DETAILS FOR ASSISTANCE

For assistance with specimen collection procedures or clinical advice call Dr Sibongile Walaza 011 386 6410 or Prof Cheryl Cohen 011 386 6593. For assistance with laboratory testing, specimen transport or collection, call I: +27 (0)11 555 0315 | 0317