

# Respiratory Specimen Collection

## **DESCRIPTION**

The purpose of this document is to provide specimen collection guidelines for **all levels** of prehospital healthcare providers during a respiratory disease outbreak when the pathogen is unknown. The specimens allowed are those that may need to be collected to detect the etiologic agent during a respiratory disease outbreak. When a specific pathogen is known or very strongly suspected, pre hospital specimen collection should not be performed. Notify the Teller County health department at 719-687-6416 about the potential respiratory outbreak as soon as possible.

## **SPECIAL CONSIDERATIONS**

- 1) All providers must adhere to the [RESPIRATORY ISOLATION](#) guidelines set forth in K03.
- 2) While EMS Providers may collect the samples testing may only be conducted by clinical laboratories, reference laboratories, or city, county or state public health laboratories.
  - a) Only State Health Departments and other Federal Agencies may submit specimens for reference testing to CDC. All specimen submissions to CDC require first approval by the individual State Health Department and CDC prior to shipment.
  - b) Private citizens, EMS agencies, health practitioners, and hospitals must contact The Teller County Health Department about how and when to submit specimens.
  - c) If the Teller County Health Department is unable to make a determination, they will forward the specimen to their State Health Department.
- 3) A list of State and Local Health Departments can be found at <http://www.cdc.gov/mmwr/international/relres.html>. The State list of the Association of State and Territorial Public Health Officials can be found at [http://www.astho.org/index.php?template=regional\\_links.php](http://www.astho.org/index.php?template=regional_links.php).
- 4) These guidelines are designed for use in an outbreak setting where the etiologic agent is unknown.

## **COLLECTION OF UPPER RESPIRATORY SPECIMENS**

- 1) Oropharyngeal (OP) and nasopharyngeal (NP) swab Specimens should (when possible) be collected within 3 days of symptom onset and no later than 7 days from all patients meeting the case definition identified during the outbreak, ideally prior to starting the patient on antibiotics.
- 2) Swab types. Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. **DO NOT** use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays.
- 3) Collecting the OP swab. Insert swab into the posterior pharynx and tonsillar areas. Rub swab over both tonsillar pillars and posterior oropharynx and avoid touching the tongue, teeth, and gums.
- 4) Collecting the NP swab. Insert flexible wire shaft swab through the nares parallel to the palate (not upwards) until resistance is encountered or the distance is equivalent to that from the tragus of the ear to the distal aspect of the nares of the patient (whichever occurs first) indicating contact with the posterior nasopharynx. Gently, rub and roll the swab. Leave the swab in place for several seconds to absorb secretions before removing.
- 5) Specimen handling. Place NP and OP swabs immediately into individual sterile vials containing 2 ml of viral transport media (VTM) without antibiotics.
- 6) Aseptically, cut or break applicator sticks off near the tip to permit tightening of the cap.
- 7) Label the vial with the patient's name, Date of Birth, specimen type, and date and time collected, agency you are with, and your name.
- 8) Place specimen vial in an approved zip lock style bag label as biohazard
- 9) Place the bag with specimen vial inside another approved zip lock style biohazard labeled bag that is half filled with ice.
- 10) Keep specimen at 4°C and ship on wet ice or refrigerant gel-packs.
- 11) Sample should not be allowed to freeze freezing and thawing of sample may lead to a false negative result

# Respiratory Specimen Collection

- 12) Follow instructions from Teller County Public Health Department on shipment and or transportation of sample.

## **COLLECTION OF LOWER AIRWAY EXPECTORATION SPECIMENS**

- 1) Educate the patient about the difference between sputum and oral secretions.
- 2) Have the patient rinse their mouth with tap or bottled water.
- 3) Have patient naturally expectorate deep cough sputum directly into a sterile screw-cap collection cup or sterile dry container.
- 4) Do not force the patient to cough or induce coughing in the patient.
- 5) Make sure all other providers are at least 6 feet back and that doors and windows are open to increase air movement in the area.
- 6) Place un-centrifuged fluid into sterile vials with eternal caps and internal O-ring seals. If there is no internal O-ring seal, then seal tightly with the available cap and secure with Parafilm®. Label each specimen container with the patient's name, date of birth, the specimen type, the date the specimen was collected, agency you are with, and your name.
- 7) Place specimen vial in an approved zip lock style bag label as biohazard
- 8) Place the bag with specimen vial inside another approved zip lock style biohazard labeled bag that is half filled with ice.
- 9) Keep specimen at 4°C and ship on wet ice or refrigerant gel-packs.
- 10) Sample should not be allowed to freeze freezing and thawing of sample may lead to a false negative result
- 11) Follow instructions from Teller County Public Health Department on shipment and or transportation of sample.