

Policy for COVID-19 testing of patients with pre-existing tracheostomes (Tracheostomy/laryngectomy)

Background:

Based on what is currently known about COVID-19 and what is known about other coronaviruses, spread is thought to occur mostly from person-to-person via respiratory droplets among close contacts.

- being within approximately 6 feet (2 meters) of a person with COVID-19 for a prolonged period of time.
- having direct contact with infectious secretions from a patient with COVID-19. Infectious secretions may include sputum, serum, blood, and respiratory droplets.

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/caring-for-patients.html>

Early reports suggest person-to-person transmission most commonly happens during close exposure to a person infected with COVID-19, primarily via respiratory droplets produced when the infected person coughs or sneezes. Droplets can land in the mouths, noses, or eyes of people who are nearby or possibly be inhaled into the lungs of those within close proximity. The contribution of small respirable particles, sometimes called aerosols or droplet nuclei, to close proximity transmission is currently uncertain.

<https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html>

Approximately 100,000 people in the US undergo a tracheostomy each year, and a portion of these are permanent. About 12,000 people per year are treated for laryngeal cancer and as many as 1000 per year will undergo laryngectomy. This population have altered anatomy; because they are neck breathers they may have two potential sites of colonization/infection with the novel coronavirus that may be isolated from each other. Nasopharyngeal (NP) colonization - even if no airflow is occurring through the nose, hand contamination and face touching could lead to contamination at the anterior nasal surface and mucocilliary transport could result in NP colonization. Tracheal colonization - the stoma could become colonization through either hand contamination/touching as is required during phonation and routine trach care, or from aerosolized exposure should they be close to an individual carrying the virus who sneezes or coughs.

For initial diagnostic testing for COVID-19, CDC recommends collecting and testing upper respiratory tract specimens (nasopharyngeal swab). CDC also recommends testing lower respiratory tract specimens, if available.

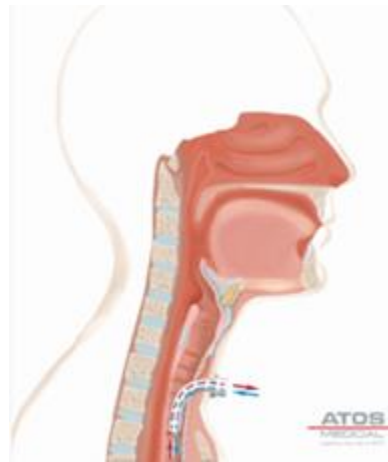
Criteria for testing will vary by local supply and practices and is outside the scope of this policy.

<https://www.cdc.gov/coronavirus/2019-nCoV/hcp/clinical-criteria.html>

Post-laryngectomy Anatomy



Trach Anatomy with Trach Tube



Diagrams courtesy of Atos Medical

Recommendation:

When a patient with a pre-existing tracheostome meets criteria for testing per local protocols based upon local testing availability, specimens for testing should be collected from both the upper aerodigestive track (NP swab), and the lower respiratory track (tracheal swab).

Points for consideration:

- NP swabs may be collected in standard fashion
- Full PPE should be worn while collecting tracheal swabs (gown, gloves, n95 respirator, face shield/goggles, head and shoe covers) because of the risk of aerosolization should a cough be induced during specimen collection.
- Tracheal swabs must be collected while trying to minimize the risk of coughing/aerosolization during collection
 - No effort should be made to induced sputum.
 - If the patient wears a device – a tracheostomy tube, laryngectomy tube the tube should be left in place
 - If mucous is present externally around the tube this may be used for specimen collection.
 - If a Heat/Moisture Exchange (HME) filter is worn, this should be removed, mucous accumulated on the HME should not be utilized for testing as it may contain virus from an inhaled exposure that has not resulted in infection.
 - If a tracheostomy tube is present that contains an inner cannula, this inner cannula may be removed and the distal end swabbed for any visible mucous.
 - If the patient does not have a tracheostomy tube with an inner cannula but has a tube in the stoma, while stabilizing the tube with one hand to prevent motion, a swab should be gently inserted through the inside of the tube with the intent of reaching the distal end of the tube (5 cm for a standard laryngectomy tube, 7 cm for a standard Adult size 6 tracheostomy tube). The swab should be rotated 360

degrees and then removed and inspected. If there is no visible mucous on the swab the procedure should be repeated with careful attention to getting the swab deep enough, to obtain visible mucous on the swab.

- If a cough is stimulated any expectorated mucous may be used for the swab.

While test results are pending (patient under investigation status), a HME should be worn over the stoma/tracheostomy tube, to prevent potential spread via aerosolization.