

INTENDED AUDIENCE: Clinical and Operational Leaders Responsible for COVID-19 Planning and Response

BACKGROUND

- Participating in certain aerosol generating procedure (AGP) increases the risk of viral transmission
- The World Health Organization (WHO) has defined which AGPs are known to increase risk of respiratory pathogen transmission versus which AGPs are controversial and/or possibly increase risk of respiratory pathogen transmission
- There are procedures, processes and/or medical events that can potentially generate aerosols or heavy droplet concentration, though they are **not clearly linked to transmission**
- Service lines and Provider/clinicians are requesting to “add” non-AGPs to the list of AGPs in an effort to secure respirator use for non-AGP processes/medical events

PURPOSE

- Clearly define and confirm which AGPs are known to increase risk of respiratory pathogen transmission versus which AGPs are controversial and/or possibly increase risk of respiratory pathogen transmission

POSITION STATEMENT

The following 4 lists were used for reference in determining use of a respirator (N95):

- AGPs Known to Increase Risk of Respiratory Pathogen Transmission
- AGPs that Possibly Increase Risk of Respiratory Transmission
- AGPs not commented on by either WHO or CDC but have been reviewed and approved by Infectious Disease/Infection Prevention team
- Evidence does not currently exist to discern whether or not aerosols are generated during these procedure

- These lists should remain consistent with current evidence to reduce confusion and constant iteration based on requests to acquire respirators for specific procedures.
- Please refer to [Elective Procedure key interdependencies](#)
- Determining when a respirator is recommended can be found in the [PPE resource guide](#), which will allow flexibility to make nimble recommendations regarding respirator provision based on evolving evidence, current PPE supplies and trends in local infection rates.
- Respirators must be worn when conducting an AGP on a patient with confirmed or rule out COVID status
- **Patients that receive COVID test within 48-72 hrs. of procedure and test negative, TM/provider may use universal mask & standard precautions.**
- Use of negative pressure room is preferred for any AGP. If not available, the door should remain closed during the procedure and room should remain vacant for 60 min. after procedure to allow for appropriate air exchange. (Based on 6 air exchanges/per hour) Contact engineering for additional guidance, if needed.
Use of negative pressure and room close does not apply for patient who have tested negative for COVID-19
- Clean and disinfectant surfaces after procedure.

1. Aerosol Generating Procedures (AGPs) Known to Increase Risk of Respiratory Pathogen Transmission per WHO and CDC guidelines:

- Intubation/extubation
- Cardiopulmonary resuscitation
- Manual ventilation
- Open suction catheter via tracheostomy, endotracheal tube, nasotracheal intubation
- Open suctioning of airways (**in-line suctioning should be used to reduce risk of aerosolization**)

- Bronchoscopy*
- Autopsy when bone saw drills are in use
- CPAP/BiPAP (non-invasive mechanical ventilation)
- Sputum Induction

2. Aerosol Generating Procedures (AGPs) that Possibly Increase Risk of Respiratory Pathogen Transmission per WHO and CDC guidelines:

- High-frequency oscillating ventilation
- Nebulized treatments (MDI should be used unless clinically contraindicated)

3. Aerosol Generating Procedures (AGPs) Not Commented on by WHO or CDC (Discerned through internal ID/IP):

Respiratory

- Placing or exchanging tracheostomy tubes
- Opening a ventilator circuit
- High flow nasal cannula oxygen therapy
- Continuous aerosol therapy
- RT interventions which cause aerolization by design (i.e., IPV/Metaneb)
- Pulmonary Function Test*
- Spirometry*

Speech and Language

- Dysphagia treatment, evaluations using mechanical or nonmechanical intervention
- Instrumental assessment of swallowing or voice via endoscopy with or without stroboscope
- Assessment and management of laryngectomy, including voice restoration using voice prosthesis and stoma care

Gastroenterology/Digestive Health Institute:

- Endoscopy/EGD/colonoscopy
- ERCP/EUS
- Flex sigmoidoscopy
- Anorectal Manometry
- Esophageal Manometry

Cardio diagnostic/Cardiovascular

- TEE
- Exercise stress/exercise Echo**
- ABI w/exercise

Obstetrics/Gyn

- Vaginal delivery (2nd stage labor)

Peri-op Services

- Laparoscopy
- Oropharyngeal surgery
- Chest tube insertion*
- Electrocautery smoke plumes
- Surgery in which high speed drills and bone saws are used

Head and Neck

- Flex Nasolaryngoscopy
- Nasal endoscopy
- Oral cavity/oropharyngeal biopsy
- Tracheobronchoscopies
- Nasopharyngoscopies
- Nasolaryngoscopies
- Tracheostomy tube changes
- Tongue and Lip tie releases
- Cautery for recurrent nose bleeds with silver nitrate

Imaging Studies and Procedures

- Biopsy, lung, Pleura or mediastinum (perc needle)
- Pulmonary tumor ablation
- Pleural drainage (insertion of indwelling catheter)
- Thoracentesis (needle or catheter aspiration pleural space)
- Bronch artery ablation
- Bronchoscopy/tracheal stent, dilatation
- Pulmonary vent/perf

Occupational Health

- Breath alcohol testing (BAT) Breathalyzer

4. Evidence Does Not Currently Exist to Discern Whether or Not Aerosols Are Generated During These Procedures:

N-95 is not required for the following-

- Normal oral or nasal suctioning, including NG or OG tube insertion
- Toilet flushing
- Nasopharyngeal/oropharyngeal swab collection or nasal wash
- Heavy coughing, including RT interventions that promote coughing and/or mucus mobilization (i.e., CPT, PEP)
- Vomiting
- Non-rebreather facemask

**Procedure crosses service lines*

**** Testing may be optional, if appropriate PPE and social distancing can be achieved.**

References

Tran K, Cimon K, Severn M, Pessoa-Silva CL, Conly J (2012) Aerosol Generating Procedures and Risk of Transmission of Acute Respiratory Infections to Healthcare Workers: A Systematic Review. PLoS ONE 7(4);

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