Aerosol Generating Procedure Protection for Patients in Whom COVID-19 is Not Detected or Not Suspected

PURPOSE: To provide guidance on respirator protection against exposure to patient-generated aerosols for patients who are not suspected or detected to have COVID-19

As we stop the spread of COVID-19, the safety of our staff, providers, and patients is our top priority

SITUATION:

Evolving guidance from CDC, IDSA, Joint Commission, and CalOSHA recommends the use of N95 respirators for aerosol-generating procedures (AGPs) to slow the spread of COVID-19 from asymptomatic or pre-symptomatic patients.

BACKGROUND:

Currently staff are not consistently wearing an N95 respirator during AGPs if patients are COVID negative.

ASSESSMENT:

A comprehensive literature review by IPCD, Professional Practice, and Respiratory Care Services resulted in amendments to our current practice recommendations. Clarification has been added to differentiate risk of infectivity based on procedure or treatment type.

Stanford HEALTH CARE

RECOMMENDATION:

Due to increase in community prevalence of COVID-19, new TJC standards, new evidence, and to align with local peer hospital practices, we re-evaluated and decided to expand N95 use for aerosol-generating procedures, regardless of COVID-19 status.

Staff Considerations:

1. Confirm AGP and risk level, see page 2
   - Consider alternatives to AGPs when appropriate
2. Place in a single patient room, negative pressure not needed
   - For areas with limited single patient rooms, cohort or co-locate patients undergoing AGP as much as possible
3. Place **"AGP in Progress" stop sign (see page 4)** on the door during **high/mod risk AGP** and keep on door for **post-AGP precautions for AGPs listed on page 3**
   - Time frame will vary by location, see page 3
4. Use the N95 Request Form Process to obtain a N95
   - Click here for N95 Request Form SBAR

References:

Click here: OSHA 1910.134 - Respiratory Protection Standard

Click here: CDC Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19)Pandemic

Click here: The Joint Commission Resources, June 3, 2020
Preventing nosocomial COVID-19 infections as organizations resume regular care delivery

Click here: Infectious Diseases Society of America Guidelines (IDSA). Infection Prevention in Patients with Suspected or Known COVID-19. Lynch *et al.* Published by IDSA

Click here: Aerosol Generating Procedures and Risk of Transmission of Acute Respiratory Infections to Healthcare Workers: A Systematic Review

Click here: Aerosol-generating procedures and infective risk to healthcare workers from SARS-CoV-2: the limits of the evidence

Updated by RT, IPCD, Professional Practice & CEPD, 8.26.20

Aerosol Generating Procedure Protection for Patients in Whom COVID-19 is Not Detected or Not Suspected

PURPOSE: To provide guidance on respirator protection against exposure to patient-generated aerosols for patients who are not suspected or detected to have COVID-19

	Procedure/Treatment or Patient Scenarios
High/Moderate Risk Continuous/Extended AGPs with POST-AGP Precautions • N95 Respirator with Re-Use and Face Shield • Door Closed • Post-AGP Precautions—see page 3	• High Flow Nasal Cannula (only use flows of 30L/minute or less) • **Salter High-Flow Nasal Cannula (only use flows of 6-15 L/minute)** • Non-Invasive Positive Pressure Ventilation (e.g.: BiPAP, CPAP) • Otolaryngology Procedures and Powered Instrumentation of the Airway (e.g. Endonasal, Transsphenoidal, FESS, otology, MMA, Radiofrequency Turbinate Reduction, Laser Procedures) **The above AGPs require post-AGP precautions – see page 3**
High/Moderate Risk One-Time/Periodic AGPs • **N95 Respirator with Re-Use and Face Shield During AGP** • **Door closed** • **Post-AGP Precautions preferred, but NOT required**	• Bronchoscopy/Laryngoscopy/Esophagoscopy • Chest Compressions (See Emergency and Resuscitation Guidelines for more info) • Cough-Assist • Endoscopy- Upper GI • Endotracheal Intubation/Extubation • Fibrotic Evaluation of Swallowing (FEES) test • Force Vital Capacity (FVC) • Intermittent Percussive Ventilation (IPV) • Manual/Device Assisted Percussion/Vibration • Manual Ventilation with Mask (CODE team will place filter between airway & bag before transporting patient, see Emergency and Resuscitation Guidelines) • Open Suctioning (e.g.: Nasotracheal and Tracheal) • Some Pulmonary Function Tests (Refer to "Outpatient Pulmonary Function Laboratory Scheduling Workflow") • Sputum Induction by Respiratory Therapy • Tracheostomy changes (e.g downsizing, inner cannula change) and Tracheo-esophageal voice prosthesis (TEP) change • Tracheotomy
Low or Unknown Risk • Universal Procedure Masking and • Eye Protection Protocol • N95 Respirator NOT required • Healthcare Workers RE-USING N95 with Face Shield permitted	• Bedside Spirometry, MIF, Slow Vital Capacity (SVC), PEFR • Insertion of NG, NJ, or enteral feeding tubes • Insertion or Removal of Supraglottic Airway (e.g.: LMA) • Endoscopy (Nasal and Lower GI) • Manual Ventilation with Artificial Airway (RCP will place filter between airway & bag before transporting patient) • Medication Administered by Nebulization (includes Veletri, Tyvaso, continuous nebulizers, small volume nebulizers, cool mist aerosol) • Nasopharyngeal Swab • Oscillatory Positive Expiratory Pressure (OPEP) Autogenic Drainage/Huff Coughing • Trach Care-Routine (e.g., dressing changes and wound care) • Transesophageal Echocardiogram (TEE)
NOT Aerosol-Generating • Universal Procedure Masking and • Eye Protection Protocol	• Closed Circuit Mechanical Ventilation (with or without inline nebulizers) • Closed-In Line Tracheal Suctioning • Close Face Mask (Air-entrainment, Venturi mask, or non-rebreather) • Chest Physiotherapy (CPT) with bed for mechanically ventilated patients • Crying • Enemas • Hair Dryers • Humidified Oxygen • Hydrogen Breath Test/Exhaled Nitric Oxide Testing • Manual Oral Suctioning • Mid-Turbinate or Nares nasal swab • Nasal cannula 0-6 L/min • Physiological Cough • Prolonged Conversation • Treadmill Stress Test

Stanford HEALTH CARE

Updated by RT, IPCD, Professional Practice & CEPD, 8.26.20

Post-AGP Precautions:

- Patient care should continue during and after AGP
- Keep door closed when possible
- In High/Moderate Risk Continuous/Extended AGPs **(see page 2),** respirator use needed for post-AGP time period **(see table below)** to allow 99% air clearance
- Post-AGP Precautions preferred, but not required for One-Time or Periodic High/Moderate Risk AGPs

Location		Time respirator must be used post AGP
Ambulatory Care		60 minutes
ED		30 minutes
In-Patient		30 minutes
Interventional Platform	OR, 500P	14 minutes
	OR, 300P	18 minutes
	Cath Lab	18 minutes
	Procedure Room	18 minutes
	Endoscopy	46 minutes

High/Mod Risk
Aerosol-Generating Procedure Precautions in Progress

STOP

ALL personnel must wear a N95 respirator and protective eyewear

Time procedure ended:_____

- For Post-AGP Precautions, please refer to Tables on Page 2 and 3

Visitors: Check with nurse before entering. Visitors must wear procedure mask.

Place stop sign on door during high/mod risk AGP; keep on door when post-AGP precautions are indicated

Updated by RT, IPCD, Professional Practice & CEPD, 8.26.20