Guidance for Use of Personal Protective Equipment PPE for Aerosol Generating Procedures

The following table provides guidance for determining the appropriate PPE and room criteria required for Aerosol Transmissible Diseases (ATDs) when performing Aerosol Generating Procedures (AGP). A PAPR is required for AGP for patients requiring airborne precautions.1

<table>
<thead>
<tr>
<th>Type of Procedure</th>
<th>Aerosol Generating Procedure</th>
<th>PPE</th>
<th>Room criteria</th>
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</thead>
<tbody>
<tr>
<td>Not aerosol generating procedure</td>
<td></td>
<td>PAPR® or N95 eye protection required, refer to isolation table</td>
<td>Airborne Isolation room</td>
<td>N95 with face shield (or PAPR®), gown, gloves required</td>
<td>Private patient room with door closed</td>
<td>N95 recommended. If N95 not worn use a medical mask. Eye protection required.</td>
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<td>Surgical mask with eye protection, refer to isolation table</td>
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<td>PAPR® and refer to isolation table</td>
<td>Airborne Isolation room</td>
<td>N95 with face shield (or PAPR®), gown, gloves required</td>
<td>Private patient room preferred</td>
<td>N95 with eye protection (or PAPR®), gown, gloves</td>
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<td>Private patient room preferred</td>
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</table>

Aerosol Generating Procedures (AGP) include but are not limited to:

- Intubation procedure
- Non-invasive ventilation (BIPAP/CPAP)
- Manual Ventilation
- High frequency ventilation
- Tracheostomy/laryngostoma with open suction, procedure/manipulation, ventilator disconnects
- High Flow Nasal Cannula
- Other high risk procedures that should be considered AGPs: TEE, etmoscopy, Venturi mask

For ALL COVID-19 testing: not considered an AGP. Wear N95 w/eye protection (or PAPR), gloves, gown for collection.

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PAPRs not functioning should be red tagged, removed from circulation and sent to Materiel Services.

1) Per Cal-OSHA regulation Title 8, Section 5199. (a) (3) (B)
2) https://www.dir.ca.gov/title8/5199a.html and isolation table
3) If you are a healthcare worker with recent COVID-19 and are between days 5-10 from your symptom onset (or if asymptomatic from your COVID-19 positive test) please refer to Occupational Health Guidance for guidance on safe N95 and PAPR use.
4) Nocturnal Respiratory Isolation Precautions N95/face shield (or PAPR®), gown, gloves for all patients irrespective of AGP status. If patient receiving a continuous AGP or has a tracheostomy/laryngostoma in place patient in an airborne isolation room; otherwise private patient room indicated. Continue patient on Ventilator Isolation if there are ongoing clinical concerns for COVID-19 even if COVID-19 testing is negative.
5) When AGP performed place ‘Aerosol Generating Procedure in Progress’ sign, wear N95 and depending on the category either eye protection vs face shield as outlined above (or PAPR®), gowns, gloves when entering the room. For patients receiving discrete AGPs place ‘Aerosol Generating Procedure is in Progress’ sign and wear N95 and depending on the category either eye protection vs face shield as outlined above (or PAPR®) during the procedure and when entering the room until >99% air changes achieved [if this is not known, then assume 1 hr]. If risk for splashing/soiling face shield is preferred type of eye protection.
6) Other i) Droplet transmitted infections not included in ATD Standards (e.g. RSV, rhinovirus, parainfluenza, human metapneumovirus), ii) negative respiratory viral evaluation AND no ongoing concern for COVID-19, OR iii) no concern for respiratory infection
7) Having a tracheostomy/laryngostoma without additional manipulation is not aerosol generating though N95/eye protection (or PAPR®) is recommended as there is some unpredictability whether the patient will need an AGP. Open suction or other manipulation/procedures on the tracheostomy/laryngostoma including scooping, surgery, cautery, tube changes, and ventilator circuit disconnects are aerosol generating. Oxygen delivered via tracheostomy mask, tracheostomy/laryngostoma dressing changes including changing trach ties, or replacement of a tracheostomy mask are not aerosol generating. For all patients with tracheostomies/laryngostomas a private patient room is preferred. For additional information refer to this guideline.
8) Chest physiotherapy includes intrapulmonary percussive ventilation (IPPV), high frequency chest wall oscillation (vest), chest physical therapy (CPT), Frequency, Aerobika, pneumatomic compression device

There are exceptions to the above guidance for required use of PAPR. In the following exemptions an N95 may be worn in place of a PAPR: A) Emergent Patient Care that does not allow sufficient time to put on a PAPR, B) PAPR equipment interferes with the medical devices necessary to complete the required procedures or C) Call (415-885-3538) to report other potential exemptions for review and consideration.

Please contact the Medical Center Safety Office at MedicalCenterSafety@ucsf.edu or 415-885-3538 with any questions or concerns.

March 10, 2022