Emergency medical services (EMS) and other first responders play a vital role in providing transport and emergency medical treatment for patients in serious or life-threatening conditions. However, the setting presents incredible challenges due to enclosed space during transport, frequent need for rapid medical decision-making, patient interventions with limited information, and a varying range of patient acuity. Therefore, implementation of prudent infection control precautions and wearing personal protective equipment (PPE) is essential to avoid or reduce infectious exposures. The following are recommended precaution guidelines summarized below for emergency medical service providers. These considerations will help formulate strategies for emergency medical service providers and/or could identify potential gaps in a current strategy to resolve.

### Personal Protective Equipment Summary Guide - based on suspected level of necessary precautions

<table>
<thead>
<tr>
<th>EMS Responder</th>
<th>Standard Precautions</th>
<th>Contact Precautions</th>
<th>Droplet Precautions</th>
<th>Airborne Precautions</th>
<th>COVID-19 Precautions</th>
</tr>
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<tbody>
<tr>
<td>Entering scene and during transport</td>
<td>• Hand hygiene&lt;br&gt; • Gloves&lt;br&gt; • Clothing&lt;br&gt; • Masks</td>
<td>• Hand hygiene&lt;br&gt; • Gloves&lt;br&gt; • Gowns/protective clothing</td>
<td>• Hand hygiene&lt;br&gt; • Gloves&lt;br&gt; • Masks&lt;br&gt; • Eye protection</td>
<td>• Hand hygiene&lt;br&gt; • Gloves&lt;br&gt; • N-95 respirator</td>
<td>• Hand hygiene&lt;br&gt; • Gloves&lt;br&gt; • Gowns/protective clothing&lt;br&gt; • N-95 respirator&lt;br&gt; • Face shield or goggles with side protectors</td>
</tr>
<tr>
<td>Added precautions</td>
<td>Risk of blood and body fluid exposure: • Gowns/protective clothing&lt;br&gt; • Masks&lt;br&gt; • Face shields</td>
<td>Risk of respiratory secretion exposure: • Masks&lt;br&gt; • Face shields</td>
<td>Risk of infectious particle exposure: • Mask for patient if tolerated</td>
<td>Risk of intubation exposure: • Gowns/protective clothing</td>
<td>Risk of COVID-19 exposure: • Mask for driver</td>
</tr>
</tbody>
</table>

### Important Tips on Respirators and Glove Protection:

**Respirators**
- Respirator masks ensure a high level of protection from airborne diseases, as they seal around the nose and mouth to filter out foreign particles.
- Respirator masks have different names based on the standards for their country or region. The respirator standard mask is the N95 in the US, P2 in Australia and FFP2 in Europe.

**Glove Protection**
- First responders’ exam gloves should meet the standard AQL for their region to minimize the potential for pinhole defects (2.5 or less for the US and 1.5 or less for EU).
- The gloves should also meet ASTM F1671 and EN ISO 374-5 VIRUS guidelines for viral penetration and EN 455 standards for medical exam gloves.
CARE AND TRANSPORT OF PATIENTS BY EMS PROVIDERS DURING COVID-19

When an EMS call is placed, there are many personnel and steps in the entire process to consider, especially when dealing with COVID-19. The visual below describes each phase of a call and what providers should consider for providing safe care to patients while maintaining optimal personal protection. However, one should always follow organizational policies and guidelines.

**Call Center**
- Uses prepared screening questions that assess the patient’s potential of being COVID-19 positive.
- Relay information to the dispatched first responders.

**Donning Personal Protective Equipment (PPE)**
- Don the appropriate PPE before arriving to scene based on the responses to the screening questions.
  - If the patient shows respiratory distress when arriving on scene, the first responder should don a respirator.
  - If COVID-19 is suspected, place a mask on the patient, if possible.

**Cleaning**
- The vehicle must be cleaned and disinfected.
  - Rear doors should remain open to allow for air exchange and first responders should remain in their PPE.
  - Contain and dispose of all soiled single-use products.
  - Use a hospital-grade disinfectant to clean all reusable equipment.

**Doffing Personal Protective Equipment (PPE)**
- Once the cleaning process is complete, the first responders can doff their PPE.

**Care Delivery**
If the first responder needs to perform an Aerosol Generating Procedure (AGP) on the patient, an isolation gown, respirator, face shield/eye protection, and examination gloves should be donned. If an AGP is needed while in the transport vehicle:
  - If in motion: ensure HVAC is operating.
  - Not in motion: leave the rear doors open to allow for better air flow and privacy.

**Transportation of Patient**
- If the patient must be transported, minimize the number of first responders in the patient care area, if possible.
- The patient and first responders should keep their masks or respirators on.
- Ensure driver has mask on for COVID-19 positive patients
- Notify the transport facility as soon as possible that a potential COVID-19 patient is coming.
- The vehicle must be cleaned and disinfected.
  - Rear doors should remain open to allow for air exchange and first responders should remain in their PPE.
  - Contain and dispose of all soiled single-use products.
  - Use a hospital-grade disinfectant to clean all reusable equipment.

**References**


For more information on infection prevention and control of COVID-19, please visit:

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