Learning Objectives

- Outline how to reduce the risk of transmitting and being exposed to SARS-CoV-2 when caring for a patient with COVID-19 in the home
- Describe current CDC recommendations and OSHA regulations for the use and management of PPE in the home.
- Explain best practice recommendations for managing PPE and other supplies when inventory is limited.
SARS-CoV-2:
Preventing Occupational Exposures

- Cases and deaths among healthcare workers
- Occupational exposure criteria
- Universal (Pandemic) precautions:
  - Face mask
  - Eye protection
- Airborne/droplet and contact precautions
Airborne Precautions

Respirator Options:

- Filtering Facepiece Respirator
- Elastomeric Respirator (Half and Full facepiece)
- Powered Air-purifying Respirator
Conserving Filtering Facepiece Respirators

- Limited reuse versus extended use
- When not to not reuse
- Alternative sources

Elastomeric Respirator

**Full Facepiece Respirator**
- Provides eye protection and effective face seal
- Reusable facepiece with replaceable cartridges or filters
- Fit testing required

**Half Facepiece Respirator**
- Covers the nose and mouth only
- Reusable facepiece with replaceable cartridges or filters
- Fit testing required
Powered Air-Purifying Respirator (PAPR)

- Battery powered with blower that pulls air through filters or cartridges
- Reusable components and replaceable filters or cartridges
- No fit testing required for loose-fitting PAPR
- May be used for staff with facial hair

Management of Respirators with Exhalation Valves
Medical Device-related Pressure Injuries

• Causes
• Types of respirators
• Prevention

Respiratory Protection Storage

N95 Respirator and Face Mask:
• “New & never used” N95 respirator storage
• Options for interim storage in “re-use mode”:
  – Container
  – Temperature
  – Location
In-home Aerosol-generating Procedures

- Personal protective equipment required
- Cleaning and disinfection activities
- Considerations for family members

Examples of aerosol-generating procedures performed in the home

<table>
<thead>
<tr>
<th>AGP</th>
<th>CDC</th>
<th>WHO</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open suctioning of airways</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Cardiopulmonary resuscitation</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Non-invasive ventilation</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual ventilation</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nebulizer administration</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High flow O2 delivery</td>
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</tr>
</tbody>
</table>

Current as of 1/8/2021

Droplet Precautions

Face Mask
- May be alternative to respirator
- Extended use versus reuse
- Alternatives
- Prioritized use

Can you tell the difference?
Face Mask Efficacy


Protecting the Eyes

- Options with pros, cons and alternatives:
  - Face Shield
  - Goggles
  - Safety Glasses
- Considerations for wearers of eyeglasses and contacts
- OSHA
Face Shield Placement

Levels of Eye Protection

- Glasses
- Safety Glasses
- Safety Goggles
- Medical Face Shield

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Eye Protection Management

- Removal
- Cleaning and disinfection
- Storage

Conserving Glove Usage

- WHEN REQUIRED
- WHEN NOT REQUIRED
Glove Usage

- Alternatives
- Glove reuse options:
  - Hand sanitizer
  - Washing
  - Bleach dip

Isolation Gown

- Disposable versus cloth gown
- Extended use
- Gown alternatives
Cold Climate Donning and Doffing of PPE

• Where/how to don and doff PPE
• Staff knowledge:
  – How to recognize tasks that may involve exposure to blood or other potentially infectious materials and when PPE must be used
  – What kind of PPE is to be used
  – How to don PPE, adjust it, wear it, take it off and dispose of it
  – The limitations of the PPE
  – How to care for the PPE, maintain it, and how long it can be used
• Preventing self-contamination
• PPE disposal

In-home Wearing of Respiratory Protection by Patient/Family

• When In-home Care Staff Present:
  – Who should wear respiratory protection, when, and what kind
  – Mask exemptions
  – Staff’s respiratory protection
Best Practices for “Bag Technique”

• When not to bring in the home
• Hand hygiene
• Bag placement
• Routine sanitizing
• Management of equipment and supplies

COVID-19 “Bag Technique”

• Personal protective equipment
• Disinfectant wipes
• Surface barriers
• Paper bags
• Hand hygiene supplies
• Supplementary items:
  – Single-use items
  – Reusable items
Performing Hand Hygiene

- When indicated:
  - Before and after having direct contact with patient
  - Before donning PPE
  - Before performing an aseptic procedure
  - After contact with patient’s immediate environment
  - After contact with blood body fluids, or contaminated surfaces
  - After removing PPE
- Using correct technique

Hand Sanitizer Products

- Compounded hand sanitizer preparations expiration date
- FDA Safety Alerts:
Persistence of SARS-CoV-2

<table>
<thead>
<tr>
<th>Surface</th>
<th>SARS-CoV-2 Survival Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerosols</td>
<td>≤ 3 Hours</td>
</tr>
<tr>
<td>Plastic</td>
<td>≤ 2-3 Days</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>≤ 2-3 Days</td>
</tr>
<tr>
<td>Copper</td>
<td>≤ 4 Hours</td>
</tr>
<tr>
<td>Cardboard</td>
<td>≤ 24 Hours</td>
</tr>
</tbody>
</table>


Cleaning and Disinfection

- Disinfect with product from EPA “List N”:
  - [https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2](https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2)

- Contact time
- Manufacturer’s instructions for use:
  - Personal protective equipment
  - Storage
Best Practices for Device Management

- Device management
- Paper documentation
- Electronic visit verification:
  - Patient’s skin contamination
  - Equipment contamination
- Disinfection


COVID-19: Policies and Procedures

- Update policies to minimally include:
- Transmission-based precautions:
  - Caring for a patient suspected or confirmed of having COVID-19 in the home or hospice IPU
  - Re-use and storage of PPE, including storage and maintenance
- Hand hygiene
- Management of equipment and supplies:
  - Bag technique
  - Cleaning and disinfection activities
- Respiratory protection plan
- Employee health screening and when staff need to be excluded from work
Secondary Household Transmission of SARS-CoV-2

• Assessment and PCR testing of positive patients and their household contacts:
  – 53% tested positive in the first 7 days of PCR testing
  – ~75% of secondary infections occurred within the first 5 days of index patient’s illness
  – 60% of infected household contacts were asymptomatic


Secondary Household Transmission

• Meta-analysis: 54 studies with 77,758 participants
• Secondary transmission higher in households with:
  – Symptomatic patient
  – Adults
  – Spouses
  – Household with one contact

Preventing Secondary In-home Spread of SARS-CoV-2

- Individualized infection prevention and control patient/family education
- How to avoid transmission of COVID-19:
  - All household members wear a mask in shared spaces around others
  - Keep at least 6 feet apart
  - Provide information from CDC’s web pages:
    • “Interim Guidance for Implementing Home Care of People Not Requiring Hospitalization for Coronavirus Disease 2019 (COVID-19)”
    • “If You are Sick or Caring for Someone”
    • “Protect your Home from COVID-19”
  - Get vaccinated (for both COVID-19 and influenza)

Steps to Successful Management of In-home COVID-19

01 Leadership prioritization of infection prevention and control *
02 Provide access to PPE, hand hygiene, and disinfection, and other supplies
03 Provide IC training and observe staff’s competence on the proper use of PPE and other IC principals
04 Arrange for COVID-19 testing following occupational exposure or symptom development
05 Arrange for COVID-19 vaccination

COVID-19 Vaccination

- Encourage vaccination
- Educate staff to reduce vaccine hesitancy
- Stagger scheduling of the vaccine
- Be aware of COVID-19 risk and timeframe for full immune response

Summary

- Reduce the risk of transmitting and being exposed to SARS-CoV-2 when caring for a patient with COVID-19 in the home
- Management of PPE in the home based on CDC recommendations and OSHA regulations
- Best practice recommendations for managing PPE and other supplies when inventory is limited
Questions

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Upcoming Events

February 23, 2021  |  12:00-6:00 PM EST  |  Virtual
Upcoming Webinars

**PDGM: Lessons Learned from 2020**
Tuesday, January 26, 2021 | 2:00-3:00pm Eastern

**HHFMA Innovations: Innovative Payment Models:**
Panel Discussion of Industry Trends and One Organization’s Journey
Wednesday, February 3, 2021 | 2:00-3:00pm Eastern

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