PPE – A Comprehensive Guide to Personal Protective Equipment

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Objectives

- Understand how pathogens can spread
- Identify ways to prevent spread
- How to clean hands with soap and water or alcohol
- Understand why we wear PPE
- Identify appropriate PPE for certain tasks
- Ability to correctly don and doff PPE with a buddy
- Evaluate competency level
Definitions

- Donning: Putting personal protective equipment on
- Doffing: Taking personal protective equipment off
- Droplets: little drops of spit/fluid that come from the nose and mouth when a person talks, breathes, coughs, or sneezes
- Medical masks: masks that protect the mucus membranes of the nose and mouth, these masks protect against splashes and reduce the amount of droplets that come from your nose and mouth
- Non-medical masks: these masks may not protect you against splashes or droplets from others, but will reduce the amount of droplets that come from your nose and mouth
- N95 Mask: Masks that are designed to filter out 95% of the particulates in the air
- PPE: Personal Protective Equipment
How does disease spread?

- Diseases can spread from person to person in different ways
  - Direct contact or indirect contact, like skin to skin contact or high touch surfaces like doorknobs
  - Droplet spread include large short range aerosols that spray up to 2 meters before falling to the ground
  - Droplets can spread through sneezing, coughing, or even talking
    - Examples: COVID-19, Influenza
  - Airborne spread is when the infectious agent is carried by small droplets that can suspend in the air for a period of time and can travel longer distances
    - Examples: Measles, Tuberculosis
How to prevent spread (from Alberta’s Prevent the Spread)

- Practice physical distancing
  - Stay 2 meters (6 feet) away from others if possible
- Wash hands often with soap and water for at least 20 seconds
- Wash or sanitize hands after touching common surfaces
- Cover coughs and sneezes with a tissue or your elbow
- Avoid touching your face with unwashed hands
- Watch for COVID-19 symptoms: cough, fever, shortness of breath, runny nose or sore throat
- Stay home when sick
- Use PPE when appropriate
Hand Washing

- https://youtu.be/vLm4reF_djQ
Alcohol Based Hand Rub

- https://youtu.be/JWdytA-jLt8
When should I choose PPE?

- Will my hands be exposed to contaminated items
  - If yes, wear gloves

- Will my clothing or skin become soiled from splashes/sprays or come in contact with contaminated items
  - If yes, wear gown

- Will my eyes or face or mucus membranes be splashed or sprayed by body fluids
  - If yes, wear goggles

- Will I be within 2 meters of another person who is sick or isolating
  - If yes, wear goggles, gown, gloves, and mask

- Will I be within 2 meters of another person who is healthy
  - If yes, wear non-medical mask or face covering

- Will I be participating in an aerosolizing procedure (CPR)?
  - Use of a fit tested N95 mask is indicated
Always make sure the materials you need are close by (appropriate PPE, facilities to wash hands or hand sanitizer)

Be sure to inspect each piece of equipment before donning to ensure there has been no manufacturing error and that the PPE is clean
Doffing and Doffing PPE
(Video is courtesy of The Red Cross)

- https://youtu.be/cbChv7vg8gs
Order is Important

- Order is just as important as technique
- Note that she does the following:
  - She sanitizes her hands
  - She puts on the mask
  - When it’s time to remove the mask, she sanitizes her hands before removal
  - She removes the mask by the ear loops
  - She sanitizes her hands again
PPE Do’s and Don'ts's

**Do**
- Make sure you have everything you need before you enter your task area
- Consider any PPE you are wearing to be contaminated
- Doff PPE as soon as you are done using it
- Have a buddy watch you don and doff your PPE to ensure you’re using it properly
  - Make sure your buddy is 2m away while watching
- Practice donning and doffing today so you develop good habits for the future

**Don’t**
- Wear jewelry that can rip or contaminate PPE
- Wear used PPE outside of your task area
- Put on dirty or used PPE
- Touch clean PPE with unclean hands
- Forget to wash or clean your hands with alcohol between steps
Your PPE has failed, now what?

- Leave the area of exposure
- Get new PPE
- Torn glove?
  - Leave the area of exposure, clean hands. Don new glove
- Mask wet?
Mask use is mandatory in public spaces as of August 1st, 2020

General principals around non-medical mask use can be applied to cloth masks

Store dirty masks in a sealed bag

Put cloth masks directly into the washing machine and throw out the bag you’ve used to store the masks

Put them in the laundry with other washable items using a hot cycle, and then dry thoroughly
Using Cloth Mask (Video Courtesy of the Government of Alberta)

- https://youtu.be/6MojzHFStNs
**Competency checklist**

<table>
<thead>
<tr>
<th>Training Material Overview</th>
<th>PPE Competency Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong></td>
<td><strong>Date:</strong></td>
</tr>
</tbody>
</table>

To ensure competency, employee’s PPE donning and doffing skills must be assessed. Please review this checklist with each trained employee. The employee should perform all steps without prompting to be considered competent.

Please indicate what equipment the employee was trained on by checking the following boxes:

- [ ] Gloves
- [ ] Gown
- [ ] Medical Mask/Non-medi cal Mask
- [ ] Goggles/Face Shield

Instructions: For each part of the skill, indicate a pass by writing “P” and a fail by writing “F.” Employee must get all “P”s in order to be considered competent. If employee does not get all “P”s, employee must go through donning and doffing again.

### Donning PPE

<table>
<thead>
<tr>
<th>Employee cleans hands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee mentions they should wash hands with soap and water or use a 60% alcohol rub before donning PPE</td>
</tr>
<tr>
<td>Employee can describe the basics on how to wash hands (wash with soap for 30 seconds or rub alcohol until dried, roughly 20 seconds)</td>
</tr>
<tr>
<td>Employee checks all PPE for damage before donning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employee dons gown (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee dons mask</td>
</tr>
</tbody>
</table>

| Employee puts on medical mask ensuring that mask is adequately covering nose and mouth |
| Employee dons goggles or face shield |
| Employee dons gloves, glove cuffs overlap gown cuff (if applicable) |

### Doffing PPE

<table>
<thead>
<tr>
<th>Makes sure employee is 2m away from others and near a garbage and a place you can sanitize hands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee removes gloves</td>
</tr>
<tr>
<td>Employee removes gown (if applicable)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employee cleans hands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee removes face shield or goggles</td>
</tr>
</tbody>
</table>

| Employee cleans hands |
http://tinyurl.com/y9ubphzz
Sources

- **Information**
  - https://www.alberta.ca/masks.aspx

- **Videos**
  - Canadian Red Cross: https://www.youtube.com/watch?v=cbChv7vg8gs
  - Alberta Health Services videos: https://www.youtube.com/watch?v=vLm4reF_djQ&feature=emb_logo
  - https://www.youtube.com/watch?v=JWdytA-jLt8&feature=emb_logo
  - Government of Alberta: https://www.youtube.com/watch?v=6MojzHFStNs&feature=emb_logo
Staff Wellness

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