

## Personal protective equipment (PPE), removal, home care

Reviewed: February 21, 2020

### ■ Introduction

Following standard and transmission-based precautions helps prevent the spread of infection from patient to patient, patient to health care worker, and health care worker to patient.<sup>1</sup> It also reduces the risk of infection in immunocompromised patients.<sup>2</sup> Central to the success of these precautions is the selection of the proper personal protective equipment (PPE), including gowns, gloves, masks, and protective eyewear (such as goggles and face shields) as well as the adequate training of those who use the equipment. Home care nurses are responsible for recognizing the need for PPE as well as knowing the kind of PPE that is required for each clinical situation, the limitations of PPE, and the steps for properly putting on and removing PPE, handling PPE, and disposing of PPE.

Proper removal of PPE in the correct sequence is necessary to reduce the risk of exposure to and transmission of infectious pathogens through self-contamination.<sup>3 4 5</sup> The location for removal depends on the type of PPE and clinical situation. Glove removal can occur before leaving the patient care area if gloves are the only PPE worn. If full PPE is needed, remove it upon leaving the immediate patient care area, which may be the patient's room or the home itself, depending on where you perform care.<sup>3</sup> Remove a respirator only after leaving the patient care area and shutting the door.<sup>3 5</sup> Although the combination of PPE worn affects the sequence, the general sequence for PPE removal is gloves first, goggles or face shield second, gown next, and mask or respirator last.<sup>4 5</sup>

◆ **Clinical alert:** For information on Coronavirus disease (COVID-19), please refer to the latest recommendations from the CDC, located at [https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html?CDC\\_AA\\_refVal=https%253A%252F%252Fwww.cdc.gov%252Fcoronavirus%252F2019-ncov%252Fhcp%252Finfection-control.html](https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html?CDC_AA_refVal=https%253A%252F%252Fwww.cdc.gov%252Fcoronavirus%252F2019-ncov%252Fhcp%252Finfection-control.html), when caring for a patient with known or suspected Coronavirus disease.◆

### ■ Equipment

- Waste container lined with a plastic bag
- Optional: sealable biohazard bag

### ■ Implementation

- After completing patient care, collect items that need to be removed from the patient care area and discard them in appropriate receptacles.<sup>6 7 8 9</sup>
- Remember that the outside surfaces of your goggles or face shield, mask or respirator, and gown are considered contaminated after patient care.<sup>1</sup>

### Removing gloves

- Grasp the outside of one glove with your opposite gloved hand and peel it off, turning the glove inside out as you pull it off (as shown below).



- Hold the removed glove in your remaining gloved hand. [5](#) [10](#)
- Slide two fingers of your ungloved hand under the remaining glove at the wrist, taking care not to touch the outer surface of the glove (as shown below). [5](#) [10](#)



- Peel off the glove over the first removed glove, containing the one glove inside the other (as shown below). [5](#) [10](#)



- Discard the gloves in the appropriate receptacle.<sup>5 9 10</sup>
- Perform hand hygiene.<sup>10 11 12 13 14 15</sup>

#### **Removing goggles or a face shield**

- Grasp the earpieces or headband, and lift the goggles or face shield carefully away from your face.<sup>5</sup>
- If the goggles or face shield is disposable, discard it in the appropriate receptacle. If it's reusable, place it in an appropriate receptacle for reprocessing, such as a sealable biohazard bag.<sup>1 5 9</sup>

#### **Removing a gown**

- Untie the neck ties and then the waist ties. Make sure that the sleeves don't touch your body when you reach for the ties *to help prevent contamination*.<sup>5 16</sup>
- Pull the gown away from your neck and shoulders, touching only the inside of the gown (as shown below).<sup>5</sup>



- Turn the gown inside out as you remove it, folding it or rolling it into a bundle *to help ensure containment of pathogens.*<sup>5</sup>
- Discard the gown in the appropriate receptacle.<sup>5 9</sup>

### Removing a mask or respirator

- Grasp the bottom tie or elastic. Untie it or lift it over your head, as appropriate.<sup>5</sup>
- Grasp the top tie or elastic. Untie it or lift it over your head, as appropriate.<sup>5</sup>
- Remove the mask or respirator carefully. Don't touch the front of the mask *to help prevent contamination.*<sup>5</sup>
- Discard the mask or respirator in the appropriate receptacle.<sup>5 9</sup>

### Completing the procedure

- After you've removed all of your PPE, perform hand hygiene immediately.<sup>11 12 13 14 15 16</sup> (See the "[Hand hygiene, home care](#)" procedure.)

### ■ Special Considerations

- Perform hand hygiene if your hands become contaminated at any point in the PPE removal process.<sup>16</sup>
- The Centers for Disease Control and Prevention discusses an alternate method for removing your gown and gloves (see [Removing your gown and gloves together](#)). In this method, a disposable gown is removed along with the gloves rather than separately.<sup>16</sup>

#### REMOVING YOUR GOWN AND GLOVES TOGETHER

According to the Centers for Disease Control and Prevention, follow these steps to remove your gown and gloves together:<sup>16</sup>

- With your gloved hands, grasp the gown in the front.
- Pull the gown away from your body so that the ties break.
- While removing the gown, fold or roll the gown inside-out into a bundle.
- As you remove the gown, peel off your gloves at the same time; touch only the inside of your gloves and gown with your bare hands.
- Discard the gown and gloves in an appropriate receptacle.

- Perform hand hygiene immediately.

## ■ Complications

Improper PPE removal can lead to pathogen transmission and exposure to infectious organisms.

## ■ Documentation

No documentation is needed.

This procedure has been co-developed and reviewed by  
the National Association for Home Care & Hospice.



## ■ References

([Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions](#))

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## ■ Additional References

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### Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions

The following leveling system is from *Evidence-Based Practice in Nursing and Healthcare: A Guide to Best Practice* (2<sup>nd</sup> ed.) by Bernadette Mazurek Melnyk and Ellen Fineout-Overholt.

Level I: Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from well-designed RCTs

Level III: Evidence obtained from well-designed controlled trials without randomization

Level IV: Evidence from well-designed case-control and cohort studies

Level V: Evidence from systematic reviews of descriptive and qualitative studies

Level VI: Evidence from single descriptive or qualitative studies

Level VII: Evidence from the opinion of authorities and/or reports of expert committees

*Modified from Guyatt, G. & Rennie, D. (2002). Users' Guides to the Medical Literature. Chicago, IL: American Medical Association; Harris, R.P., Helfand, M., Woolf, S.H., Lohr, K.N., Mulrow, C.D., Teutsch, S.M., et al. (2001). Current Methods of the U.S. Preventive Services Task Force: A Review of the Process. American Journal of Preventive Medicine, 20, 21-35.*