# Centers for Disease Control and Prevention National Center for Emerging and Zoonotic Infectious Diseases



# Infection Prevention and Control (IPC) for Marburg Virus Disease (MVD):

Personal Protective Equipment (PPE) Part 1 – PPE Basics: What, When, and Why to Use PPE

Healthcare Settings with Limited to Intermediate Resources

#### **Learning Objectives**

After this presentation, participants will be able to

- Explain why PPE is important in the context of MVD
- Choose appropriate PPE for certain activities
- Identify if PPE is being used correctly

What Is Personal Protective Equipment (PPE)?

#### **Definition: PPE**

PPE is **specialized clothing or equipment** worn by healthcare workers that provides barriers or layers to protect their eyes, nose, mouth, skin, and clothing from contact with a patient's body fluids (blood, vomit, urine, stool, or sweat).

Correct use of PPE helps protect you from infection.

#### **PPE Items**

**Head covering** 



Head + hair

Goggles



Eyes

Mask



Nose + Mouth

**Face shield** 



Eyes + Nose + Mouth

Gown



**Body** 

Coverall



Body

**Apron** 



Body

**Gloves** 



Hands

**Boots** 



Feet

## Why PPE?

MVD can spread through direct contact (such as through broken skin or mucous membranes in the eyes, nose, or mouth) with

- Blood or other body fluids of a person who is sick with or has died of MVD
- Objects contaminated with blood or other body fluids from a person who is sick with or has died from MVD

PPE works as a barrier to protect your eyes, nose, mouth, skin, and clothing from contact with a patient's body fluid.

When to Use PPE

#### **Standard Precautions**

- Used for <u>all patient care</u>
- Protect healthcare workers from infection and prevent the spread of infection from patient to patient



Hand hygiene



Cover coughs / respiratory hygiene



Personal protective equipment (PPE) based on risk of exposure



Clean and disinfect patient care equipment and instruments



Safe injection practices



Clean and disinfect healthcare environment



Sharps safety



Handle textiles and linens carefully

#### Key Point on PPE

**PPE alone is not enough.** Safe patient care during an MVD outbreak requires all standard precautions including:

- Screening and isolation
- Hand hygiene
- Environmental cleaning

#### PPE and Standard Precautions during an MVD Outbreak

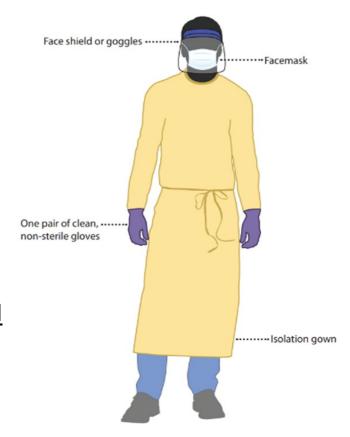
- It is not always possible to clearly identify patients with MVD because early symptoms are nonspecific.
- Because of this, during an MVD outbreak, use Standard Precautions for any care or activities that might allow exposure to blood or other body fluids.

Note: Gloves should be considered if you will be touching the patient.

## PPE for MVD Screening

#### Screening can be a non-contact activity

- Maintain distance of at least 1 meter (arm's length)
- Avoid direct face-to-face interaction (physical separation such as plexiglass preferred)
- If distance can be maintained → PPE not required
- If distance can't be maintained → PPE
  - Mucous membrane protection (goggles + face mask OR face shield + face mask)
  - Single gloves
  - Gown
- If PPE is worn → remove after each person you screen + perform hand hygiene



Use PPE for screening when distance cannot be maintained

## PPE for Patient Care & Environmental Cleaning

- Double gloves (inner pair and outer pair)
- Gown OR coverall
- Apron
- Head cover
- Waterproof boots
- Mucous membrane protection (face mask\* + face shield)
   OR (face mask\* + goggles)

\*Respirator can be used in place of face mask (structure of respirator keeps it from collapsing when soaked with sweat; may be preferred in hot, humid climates)



## Using PPE Correctly

#### Key Point on PPE

PPE helps protect you from infection but...

PPE only works if it is used correctly every time.

#### Do's and Don'ts While Wearing PPE

#### DO

- ✓ Change PPE that is heavily contaminated with blood or other body fluids
- ✓ Change PPE if it gets damaged (e.g., glove tears, gown rips)
- ✓ Remove PPE correctly and carefully, even when you're tired

#### **DON'T**

- ▼ Touch or adjust PPE once it's on
- Touch your face
- Touch unnecessary objects, such as cell phones, pens, patient charts
- Touch surfaces such as bed rails, counters unless absolutely necessary

#### What if PPE Is Limited?

- Prioritize PPE use for:
  - Cleaning staff
  - Any patient interaction with potential for exposure to body fluids, especially blood (e.g., maternity and trauma patients)
- Remember that PPE is one aspect of Standard Precautions:
  - Maintain at least 1 meter distance (e.g., neutral space for passing medication)
  - Perform hand hygiene as indicated
  - Identify solutions based on local context (adaptations to procedures and clothing)

#### Knowledge Check: PPE

Imagine these are your co-workers. Based on what you know about proper use of PPE, what suggestions would you give them in each of these scenarios to help them better protect themselves?





1 2

#### Feedback: PPE

#### Picture 1:

- PPE worn out of context
- Face mask not worn correctly ensure mask covers nose and mouth; adjust to fit
- Overly soiled gloves need to be removed

#### Picture 2:

- Touching coverall hood and sides of face mask with gloved hands
- Coverall hood not fully covering hair
- Mask not covering nose
- No eye protection





#### Reflection

- Have you experienced a shortage or lack of PPE in your healthcare facility before? If so, what did you and your coworkers do to protect yourselves despite limited PPE?
- In the context of MVD, what are some adaptations you might consider in your facility if PPE is limited?

## **Key Takeaways**

- PPE helps protect you from infection.
  - Protecting yourself helps protect your patients and your community.
  - But PPE only works if it is used correctly.
- PPE is just one aspect of Standard Precautions.
  - Hand hygiene, environmental cleaning and disinfection, and other precautions are key to helping keep you, your patients, and your community safe.

## Thank you!

For more information, contact CDC 1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

