

EXPERIMENT NO: 08

Aim of the Experiment:

To Learn a Standard operating procedure to wear the PPE kit

Theory:

Personal Protective Equipment (PPE) is specialized clothing or equipment worn by an employee for protection, against infectious materials. PPE prevents contact with an infectious agent or body fluid that may contains an infectious agent. by creating a barrier between the potential infectious material and the health care worker.

Moreover, PPE kits are not made exclusively only for healthcare personnel but are manufactured for several purposes. This is primarily to protect workers in all professions from occupational health hazards and avert injuries from perilous physical, chemical, heat/inflammable and electrical materials, besides pollutants, biohazards and airborne particulate matter. People in jobs such as chemical plant operators, mining industry workers, waste collection and disposal sectors, construction units, burial ground laborers etc. are examples of non-healthcare activities wherein PPE kits are necessary.

Components of Personal Protective Equipment (PPE): Specific components of PPE includes gloves, gowns, shoe covers, head covers, masks, respirators, eye protection, face shields, and goggles which have following functions.

Gloves: Gloves help protect you when directly handling potentially infectious Materials or contaminated surfaces.

Gowns: Gowns help protect you from the contamination of clothing with potentially infectious material.

Shoe and Head Covers: Shoe and head covers provide a barrier against possible exposure within a contaminated environment.

Masks and Respirators: Surgical masks help protect your nose and mouth from splattered of body fluids, respirators filter the air before you inhale it.

Other Face and Eye Protection: Goggles help protect only your eyes from splatters. A face shield provides splatter protection to facial skin, eyes, nose, and mouth.

Sequence for donning (put on) and doffing (Taking off) personal protective equipment (PPE)

Steps to put on personal protective equipment (PPE):

1. Always put on essential required PPE when handling either a suspected, probable or confirmed case of viral hemorrhagic fever.
2. The dressing and undressing of PPE should be supervised by another trained member of the team.
3. Gather all the necessary items of PPE beforehand. Put on the scrub suit in the changing room.
4. Put on rubber boots. If not available, make sure you have closed, puncture & fluid resistant shoes & put on over shoes.
5. Place the impermeable gowns over the scrubs.
6. Put on face protection;
 - (a) Put on a medical mask.

- (b) Put on goggles or a face shield.
7. If available, put a head cover on at this time.
 8. Perform hand hygiene.
 9. put on gloves (over cuff).

While wearing PPE:

- Avoid touching or adjusting PPE.
- Remove gloves if they become torn or damaged.
- Change gloves between patients.
- Perform hand hygiene before putting on new gloves.

10. If an impermeable gown is not available, place water proof apron over gown.

Use double gloves if any strainers activity (example carrying a patient or handling a dead body) or task in which contact with blood & body fluids are anticipated. Use heavy duty/rubber gloves for environmental cleaning & waste management.

Steps to taking off personal protective equipment (PPE):

- Remove shoes cover(if applicable)
- Remove gown & gloves together.
- Perform hand hygiene.
- Remove eye protection (if applicable)
- Remove masks/respirator(if applicable)

If gloves are removed first, hands must only touch un contaminated surfaces of the gown, typically behind the neck (ties) at the back of the shoulders. The gown is then peeled down of the body & arms, balling or rolling in the contaminated surfaces (front & sleeves). This is difficult to do, however, without contaminating the hands. The preferred method for doffing a disposable gown & gloves is therefore, to break the ties & neck by pulling on the upper front portion of the gown with the hands still gloved, balling or rolling in the contaminated surfaces, & pulling the gloves off inside out as the hands are withdrawn from the gowns, sleeves. The gown & gloves can then be placed in a disposal receptacle together.

Hand hygiene is the corner stone of preventing infection transmission. You should perform hand hygiene immediately after removing PPE. If your hands become visibly contaminated during PPE removal, wash hands before continuing to remove PPE.

Wash your hands thoroughly with soap & warm water or, if hands are not visibly contaminated, use an alcohol based hand rub.

After you use PPE:

Remove & dispose of PPE safely to protect others from being exposed to germs. Before leaving your work area, remove all PPE & put it in the right place. This may include:

- Special laundry containers that can be reused after cleaning.
- Special waste containers that are different from other waste containers.
- Specially marked bags for cytotoxic PPE.

RESULT: Understood the SOPs of PPE kit.