



Isolation: Guidelines and Precautions

Julie Wolfe, MSN, RN, CNE

Objectives

- **Define purpose of isolation**
- **Identify methods of transmission**
- **Define tier II criteria & precautions**
- **Recognize the isolated patient/family**
- **Apply basic isolation principles and CDC guidelines for personal protective equipment (PPE)**



https://www.youtube.com/watch?v=nPnPTz_lw4o

What is Isolation?

Definition – *Isolation is the intentional separation and restriction of ill persons with a confirmed contagious, transmittable infection/disease.*

Basic principles of patient care in isolation



Understand how diseases are transmitted and which protective barriers to use



Proper and consistent use of hand hygiene before entering and leaving patient rooms



Disposal of contaminated PPE and supplies in a manner that prevents transmission of infectious organisms



Protection of all people who are at risk of exposure during transport of patient outside of isolation room

Tier Determination Criteria

Tier 1: Standard Precautions

- **ALL** patients in **ALL** healthcare settings.

Tier 2: Expanded Precautions

- Patients who are or are *suspected* of being colonized with a contagious, transmissible pathogen.

Tier 1: Standard Precautions

PURPOSE: To protect healthcare workers and patients from contact with infectious agents in recognized and unrecognized sources of infection

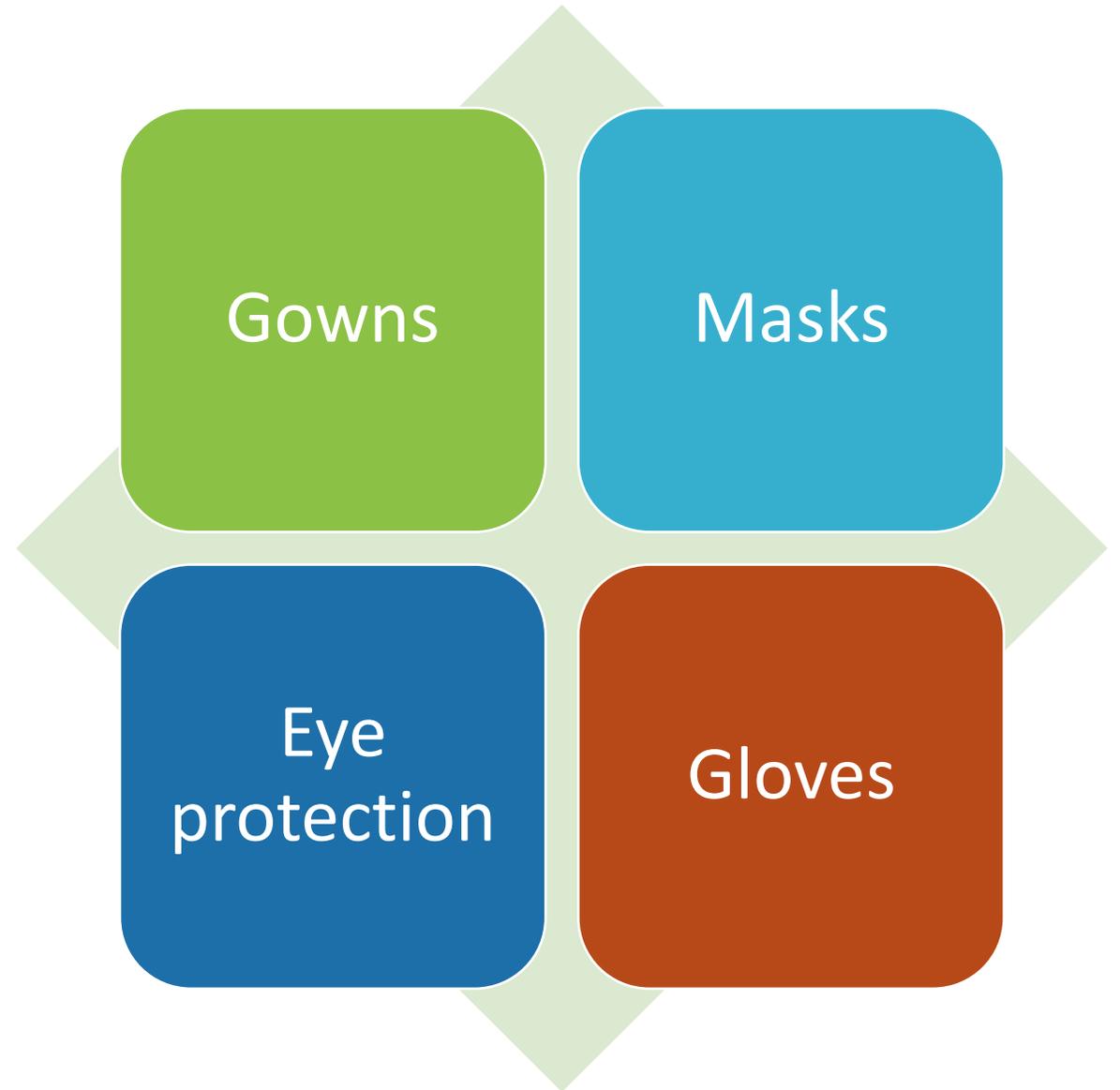
Blood

Body fluids

Non-intact skin

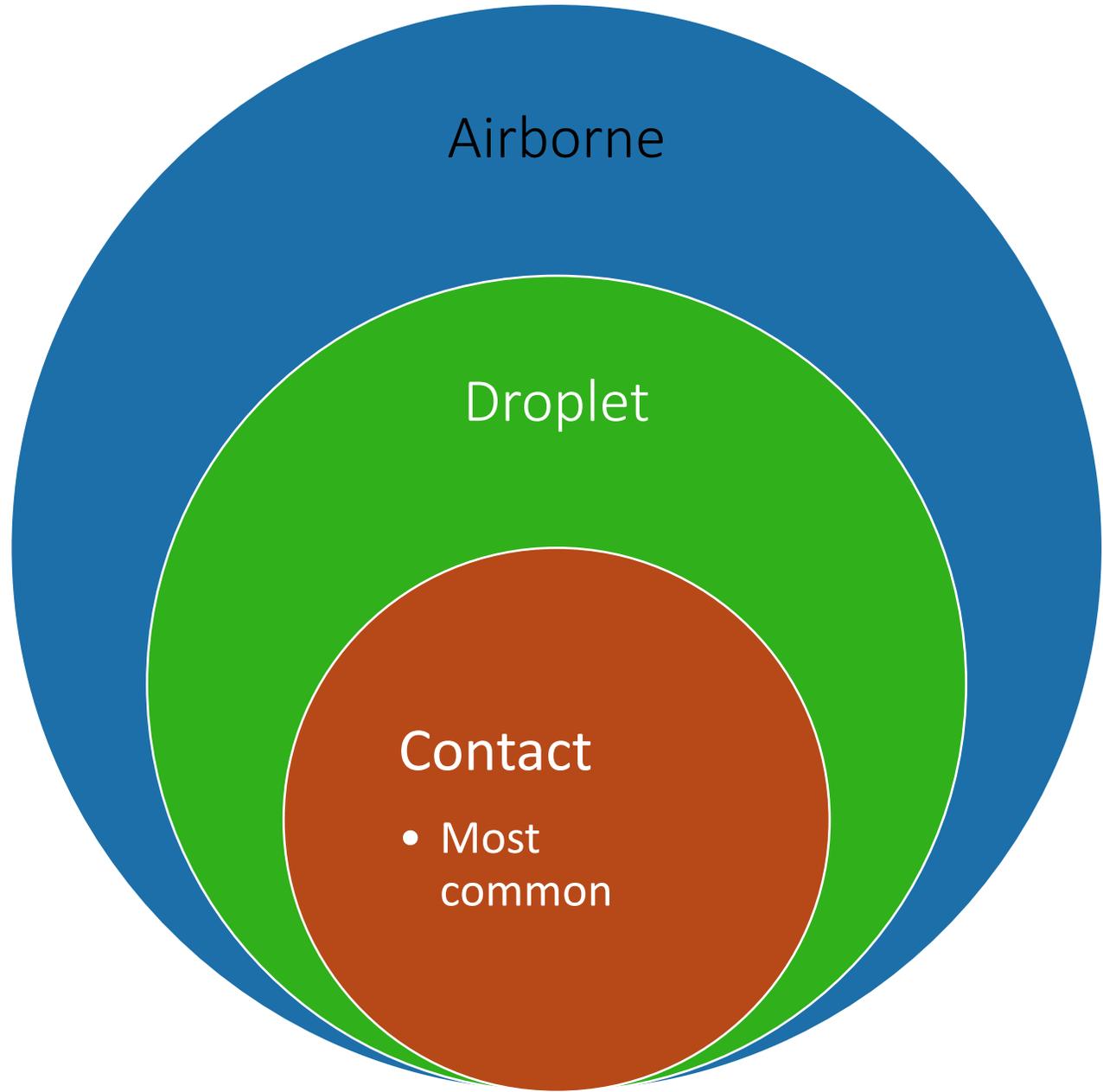
Mucus membranes

Personal Protection Equipment (PPE)

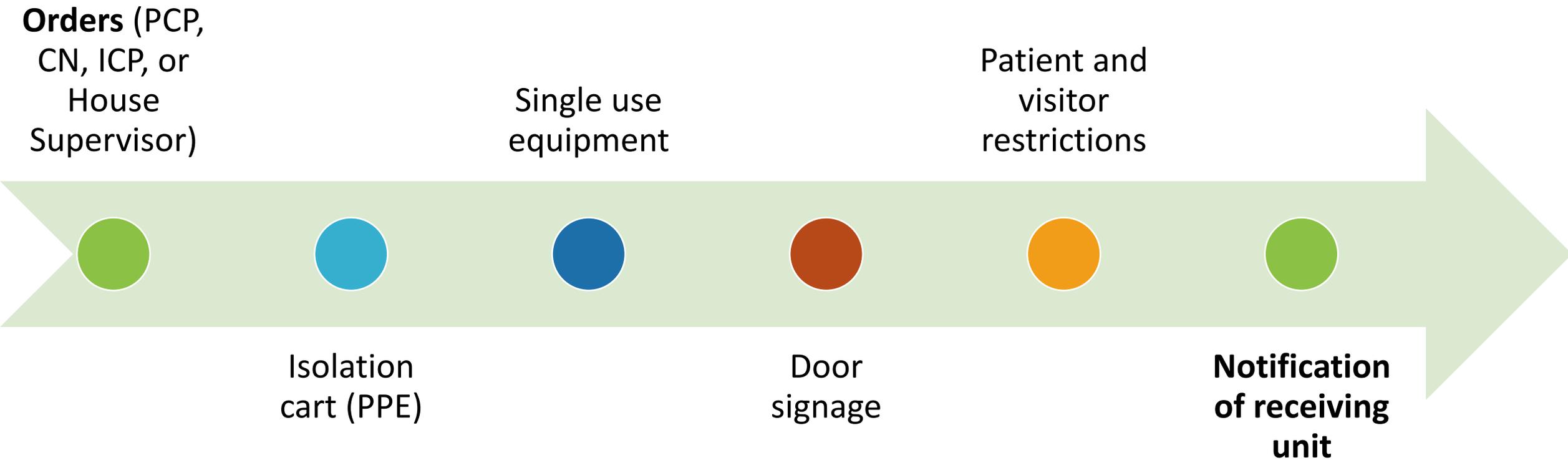


Transmission

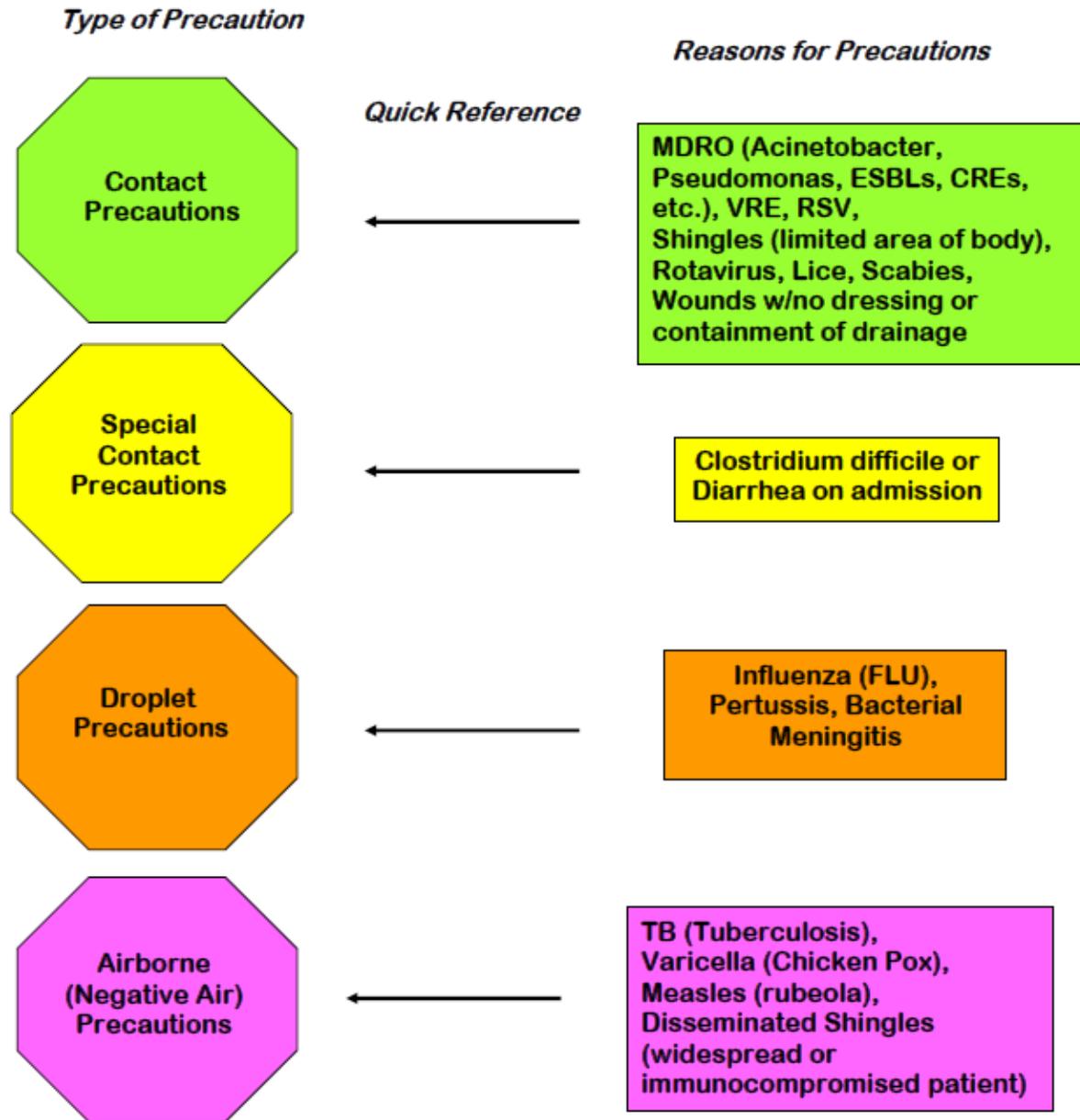
PPE is chosen based on
**method of
transmission**



Tier 2: Expanded Precautions



Expanded Precautions



Contact Precautions



Direct
contact

- Person to person

Indirect
contact

- Person to contaminated object to person

CONTACT PRECAUTIONS

PRECAUCIONES DE CONTACTO



HAND HYGIENE
Before Entering
Room

HIGIENE DE LAS
MANOS
Antes de Entrar al
Cuarto



GOWN
BATA



GLOVES
GUANTES

REQUIRED
To Enter Room
SE REQUERIDA
Para Entrar al Cuarto



- Or -



HAND HYGIENE
Upon Exiting Room

HIGIENE DE LAS
MANOS
Al Salir del Cuarto

Transporters: Assist patient to chair or gurney. Place clean linens over patient.
Using disinfection wipes; clean the wheel chair or gurney bars you touched.
Remove gown and gloves. Clean your hands. Transport patient.

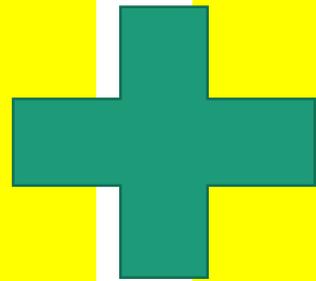


Special Precautions -***Used for Patient's with C. difficile)

(aka Special Contact, Contact +, Enteric Contact, Contact Enteric, or Enteric Precautions)



Gown and
gloves



Soap
and

SPECIAL CONTACT PRECAUTIONS

PRECAUCIONES ESPECIALES DE CONTACTO



HAND HYGIENE
Before Entering Room

HIGIENE DE LAS MANOS
Antes de Entrar al Cuarto



GOWN
BATA



GLOVES
GUANTES

REQUIRED
To Enter Room
SE REQUERIDA
Para Entrar al Cuarto



HAND HYGIENE
Must use SOAP & WATER
Upon Exiting Room

HIGIENE DE LAS MANOS
Debe Usar AGUA & JABON
Al Salir del Cuarto

Transporters: Assist patient to chair or gurney. Place clean linens over patient.

Using disinfection Bleach wipes: Clean the wheel chair or gurney bars you touched.

Remove gown and gloves. Clean your hands with soap and water. Transport patient.



Droplet Precautions: Use Mask (And Additional Standard Precautions as Needed for Patient Care)



>5
microns



mask

DROPLET PRECAUTIONS

PRECAUCIONES CONTRA PARTICULAS Y GOTITAS



HAND HYGIENE
Before Entering Room
HIGIENE DE LAS
MANOS
Antes de Entrar al
Cuarto



Mask with eye shield or Regular Mask
Máscara con protector de ojos o Máscara Regular

REQUIRED
To Enter Room
SE REQUERIDA
Para Entrar al Cuarto



- or -

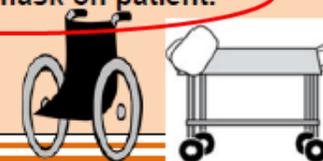


HAND HYGIENE
Upon Exiting Room
HIGIENE DE MANOS
Al Salir del Cuarto

Transporters: Assist patient to chair or gurney. Place clean linens over patient. Place **surgical mask** on patient.

Using disinfection wipes; clean the wheel chair or gurney bars you touched.

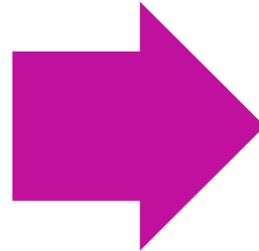
Remove gown, gloves and mask. Clean your hands. Transport patient.



Airborne Precautions



<5 microns



N95 respirator
and negative
pressure room

AIRBORNE PRECAUTIONS

PRECAUCIONES CONTRA AGENTES EN EL AIRE



HAND HYGIENE
Before Entering
Room

HIGIENE DE LAS
MANOS
Antes de entrar al
cuarto



N95 Mask
Worn by Staff
In room

REQUIRED
To Enter Room
SE REQUIERE
Para Entrar al
cuarto



Surgical Mask
Worn by patient
Outside of room

REQUIRED
By patient to leave
the room



Negative Air Pressure
Presión de aire negativa

Contact facilities when
placing patient in Neg
air and at discharge

REQUIRED
Keep Door Closed
SE REQUIERE
que Mantener la
Puerta Cerrada.



-or-



HAND HYGIENE
Upon Exiting Room

HIGIENE DE
MANOS
Al Salir del
Cuarto.

Transporters: Assist patient to chair or gurney. Place clean linens over patient. Place surgical mask on patient.

Using disinfection wipes; clean the wheel chair or gurney bars you touched.

Remove gown, gloves and mask. Clean your hands. Transport patient.



COVID Precautions

- No Aerosolized Procedures
 - Contact + Droplet Isolation
- Aerosolized Procedures - breathing treatments, mechanical ventilation
 - Airborne Precautions

SPECIAL RESPIRATORY PRECAUTION

NO AEROSOL GENERATING PROCEDURES

REMINDER: Patients requiring aerosol generating procedures require Negative Air



Visitors check in at Nurse's Station



HAND HYGIENE
Before Entering Room

HIGIENE DE LAS MANOS
Antes de entrar al cuarto



GOWN/ BATA



N95 Mask Worn by Staff in room



Face shield or Goggles protector de ojos



GLOVES/GUANTES



-OR- CAPR/PAPR Worn by Staff



REQUIRED
Keep Door Closed
SE REQUIERE
que Mantener la Puerta Cerrada.



-OR-



HAND HYGIENE
Upon Exiting Room
HIGIENE DE MANOS
Al Salir del Cuarto.

REQUIRED To Enter Room
SE REQUIERE Para Entrar al cuarto

Transporters:

Assist patient to chair or gurney. Place clean linens over patient. Place **surgical** mask on patient. Using disinfection wipes; clean the wheel chair or gurney bars you touched. Remove gown, gloves and mask. Clean your hands. Transport patient.



Surgical Mask
Worn by **patient**
Outside of room

SPECIAL RESPIRATORY PRECAUTIONS

AEROSOL GENERATING PROCEDURE



GOWN
BATA



GLOVES
GUANTES



HAND HYGIENE
Before Entering Room
HIGIENE DE LAS MANOS
Antes de entrar al cuarto



N95 Mask
Worn by Staff
In room

+



Face shield or Goggles
protector de ojos

-or-



CAPR/PAPR
Worn by Staff
In room



Negative Air Pressure
Presión de aire negativa

Contact facilities when placing patient in Neg air and at discharge

REQUIRED
Keep Door Closed
SE REQUIERE
que Mantener la Puerta Cerrada.



-or-



HAND HYGIENE
Upon Exiting Room

HIGIENE DE MANOS
Al Salir del Cuarto.

REQUIRED
To Enter Room
SE REQUIERE
Para Entrar al cuarto

Transporters:

Assist patient to chair or gurney. Place clean linens over patient. Place **surgical** mask on patient. Using disinfection wipes; clean the wheel chair or gurney bars you touched. Remove gown, gloves and mask. Clean your hands. Transport patient.



Surgical Mask
Worn by patient
Outside of room

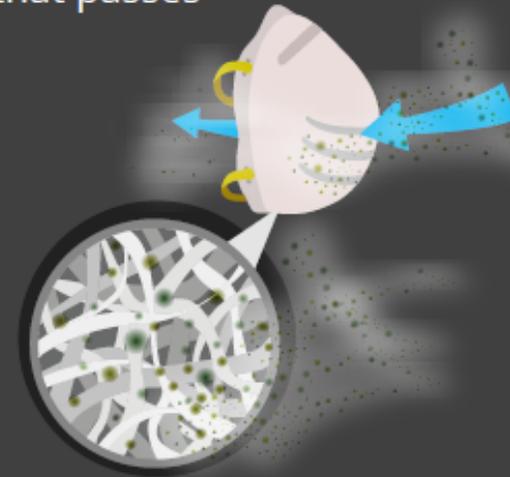
Three Key Factors Required for a Respirator to be Effective



- ① The respirator must be put on correctly and worn during the exposure.
- ② The respirator must fit snugly against the user's face to ensure that there are no gaps between the user's skin and respirator seal.



- ③ The respirator filter must capture more than 95% of the particles from the air that passes through it.



*If your respirator has a metal bar or a molded nose cushion, it should rest over the nose and not the chin area.

What is a Negative Air Pressure Room?

- Air pressure inside room is **lower** than outside of room
 - Uncontaminated air flows into room but keeps it from escaping out of room
 - Keep door CLOSED
 - What happens when door is opened?
- 6 – 12 air changes/hour
- Air in room is filtered (HEPA) and exhausted outdoors
- Verification of negative pressure
 - Visualize **red ball inside patient's room** in the ball/tube monitor above door



**View from outside of room
when door is closed**

Negative Air Pressure Error!!



**View from outside of room
when door is open**

SPECIAL RESPIRATORY PRECAUTIONS

(Used for Patients with COVID and newly emerging respiratory illnesses)

- Combination of Airborne, Droplet, and Contact Precautions **PLUS** eye protection
- Used for patients with diseases transmitted by droplet particles
 - Droplets may become aerosolized during certain medical interventions
 - Aerosolized generating procedures (AGP) = mechanical ventilation (includes intubation, suctioning and extubation), bronchoscopy, nebulized medications

If **NO** aerosolized generating procedures:

Gown, gloves, N95 mask/respirator, eye protection

If **YES** aerosolized generating procedures:

Gown, gloves, N95 mask/respirator, eye protection

PLUS

Negative Air Pressure Room

SPECIAL RESPIRATORY PRECAUTION

NO AEROSOL GENERATING PROCEDURES

REMINDER: Patients requiring aerosol generating procedures require Negative Air



HAND HYGIENE
Before Entering Room

HIGIENE DE LAS MANOS
Antes de entrar al cuarto



GOWN/ BATA



N95 Mask Worn by Staff In room



Face shield or Goggles
protector de ojos

-OR-



CAPR/PAPR Worn by Staff



Visitors check in at Nurse's Station



GLOVES/GUANTES



REQUIRED
Keep Door Closed
SE REQUIERE
que Mantener la Puerta Cerrada.



-OR-



HAND HYGIENE
Upon Exiting Room
HIGIENE DE MANOS
Al Salir del Cuarto.

Transporters:

Assist patient to chair or gurney. Place clean linens over patient. Place **surgical mask** on patient. Using disinfection wipes; clean the wheel chair or gurney bars you touched. Remove gown, gloves and mask. Clean your hands. Transport patient.



Surgical Mask
Worn by **patient**
Outside of room

SPECIAL RESPIRATORY PRECAUTIONS

AEROSOL GENERATING PROCEDURE



GOWN
BATA



GLOVES
GUANTES



HAND HYGIENE
Before Entering Room
HIGIENE DE LAS
MANOS
Antes de entrar al
cuarto



N95 Mask
Worn by **Staff**
In room

+



Face shield or Goggles
protector de ojos

-or-



CAPR/PAPR
Worn by **Staff**
In room



Negative Air Pressure
Presión de aire negativa

Contact facilities when
placing patient in Neg
air and at discharge

REQUIRED
Keep Door Closed
SE REQUIERE
que Mantener la Puerta
Cerrada.



-or-



HAND
HYGIENE
Upon Exiting
Room

HIGIENE DE
MANOS
Al Salir del
Cuarto.

REQUIRED
To Enter Room
SE REQUIERE
Para Entrar al cuarto

Transporters:

Assist patient to chair or gurney. Place clean linens over patient. Place **surgical mask** on patient. Using disinfection wipes; clean the wheel chair or gurney bars you touched. Remove gown, gloves and mask. Clean your hands. Transport patient.



Surgical Mask
Worn by **patient**
Outside of room

Adult Isolation Precautions

Reasons for Precautions

MDRO/CRPA, CRE, Candida Auris
RSV
Rotavirus
Shingles (limited area of body)
Lice
Scabies
Wounds w/no dressing or
containment of drainage



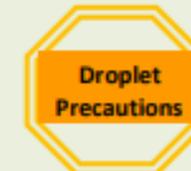
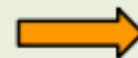
Type of Precaution



Clostridium difficile, Norovirus, or
Diarrhea on admission
(until diagnosis confirmed)



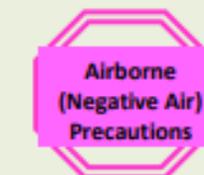
Influenza (FLU), Pertussis,
Bacterial Meningitis (until Neisseria
meningitidis is ruled out)



TB (Tuberculosis),
Varicella (Chicken Pox),
Measles (rubeola),
Disseminated Shingles (widespread
or immunocompromised patient)



Contact facilities when
placing patient in Neg
air and at discharge



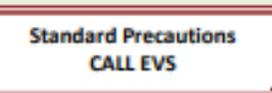
COVID-19
No aerosol generating procedures

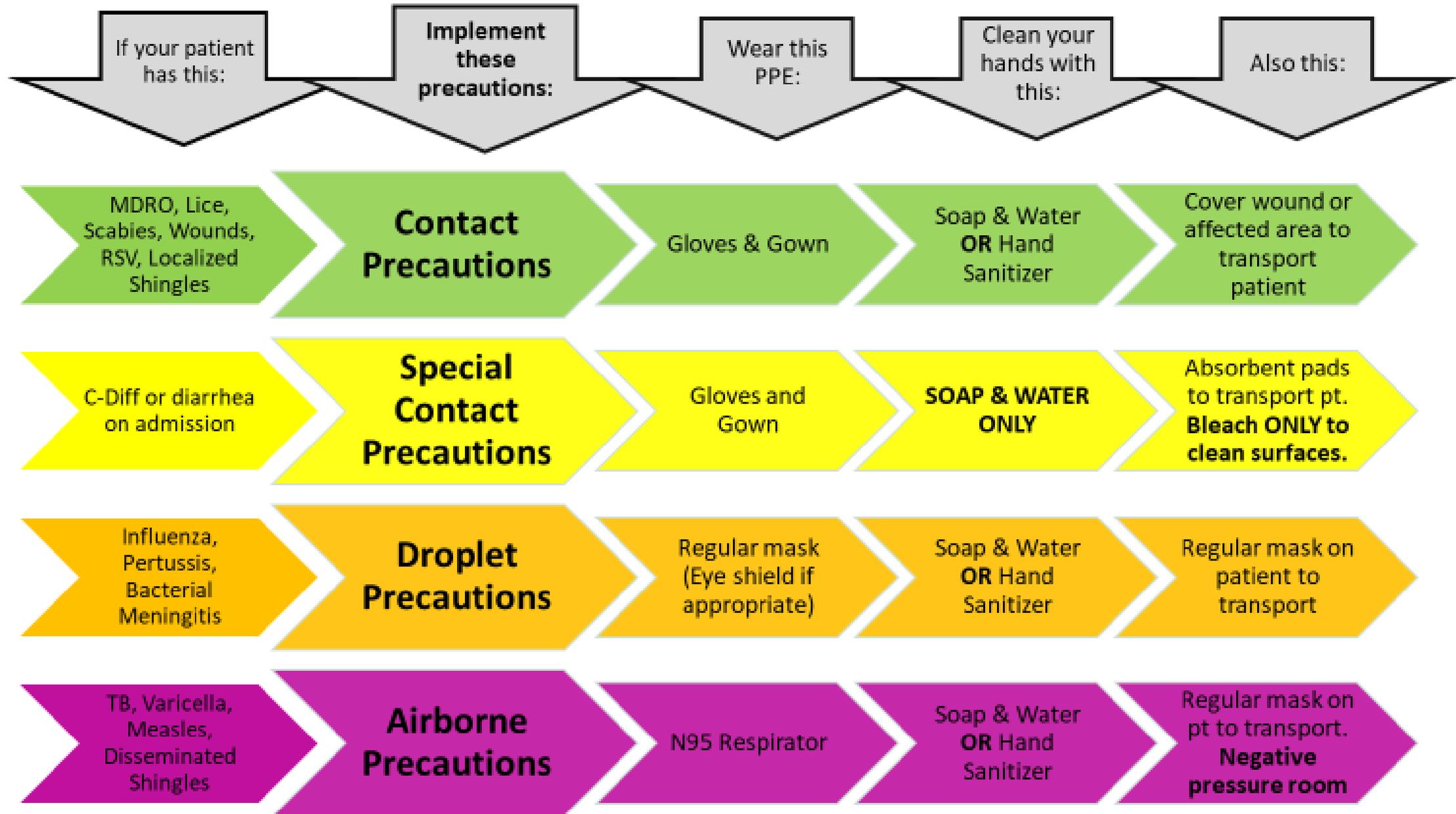


COVID-19
Aerosol generating procedures



Bedbugs





If your patient has this:

Implement these precautions:

Wear this PPE:

Clean your hands with this:

Also this:

COVID without
Aerosolized
Procedures

**Contact +
Droplet
Precautions**

Gloves & Gown
N95 Respirator
Face Shield

Soap & Water **OR**
Hand Sanitizer

Clean Linens on
Patient
Patient wears
Surgical Mask

COVID with
Aerosolized
Procedures

**Special
Respiratory
Precautions**

Gloves & Gown
N95 Respirator
Face Shield

Soap & Water **OR**
Hand Sanitizer

Clean Linens Patient
wears Surgical Mask
**Negative pressure
room**

Protective Precautions





PROTECTIVE PRECAUTIONS



Everyone Must:



Clean hands when **ENTERING**
and **LEAVING** room



Everyone Must:

Use Standard
Precautions



Follow Other Instructions
as Specified by Physician



NOTE: No one should enter the room who has an infection e.g. cold, cough, sore throat, upset stomach (vomiting, diarrhea) until symptoms have resolved

Transport / Ambulation:



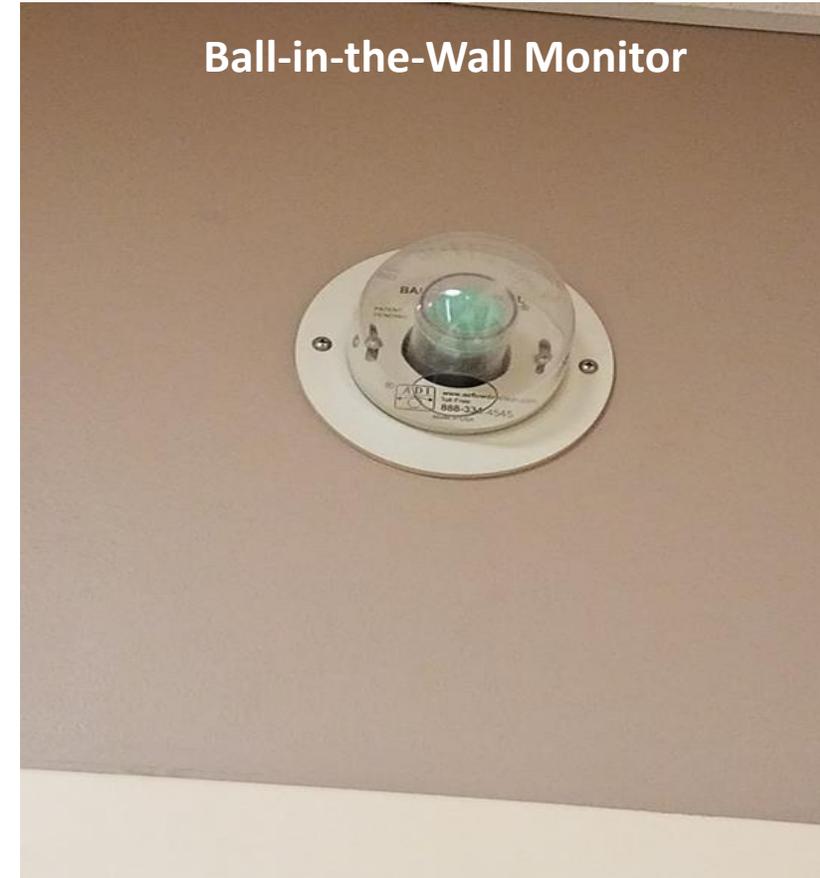
Clean wheelchair or gurney with bleach or hydrogen peroxide wipes
Follow any specific physician's instructions
Assist patient to clean chair or gurney
Place clean linens over patient
Place surgical mask on patient
Remove and trash any used PPE prior to leaving the room
Clean/wash hands
Transport patient



- Staff and visitors must be screened prior to entering unit
- **Positive** pressure room
- **No** fresh fruit, vegetables, or flowers are allowed on unit
- Physician may order PPE if they deem it necessary on a case-by-case basis
- Patient must be masked outside of isolation room

What is a Positive Air Pressure Room?

- Air pressure inside room is **higher** than outside of room
 - Prevents airborne pathogens from entering the room
 - Keep door CLOSED
 - What happens when door is opened?
- 6 – 12 air changes/hour
- Air in room is filtered (HEPA) as it leaves the room via exhausts
- Verification of positive pressure
 - Visualize green ball **outside of patient's room** in the ball/tube monitor above door



**View from outside of room
when door is closed**

Positive Air Pressure Error!



**View from outside of room
when door is open**

The Isolated Patient and Family

**Nurse as
CAREgiver**



**Explain
the
Situation**

**Explain
the Basics
–
Educate!!**

**Ease their
Concerns**

**Comfort
and
Reassure**

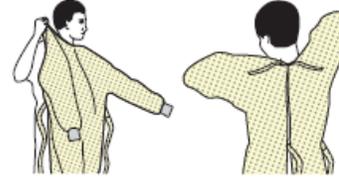


SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



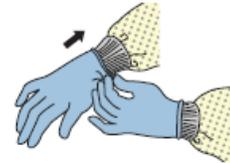
3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



4. GLOVES

- Extend to cover wrist of isolation gown



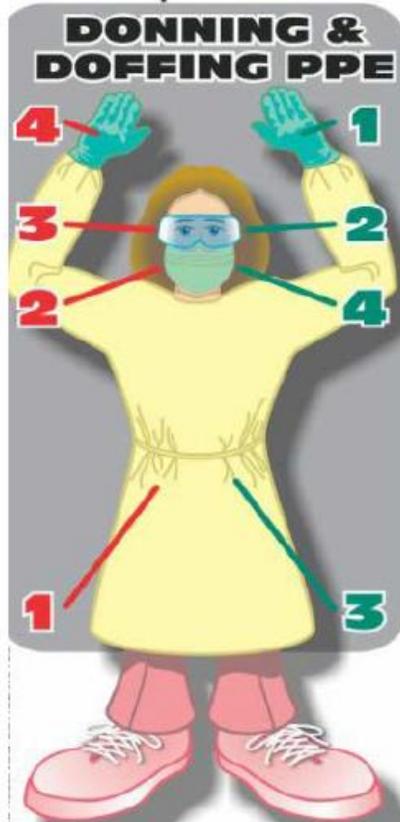
USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



**CLEAN YOUR HANDS
BEFORE DONNING PPE AND AFTER DOFFING PPE**

**ISOLATION
PPE
Sequence***



*Refer to CDC Guidelines for application and isolation category

**DON PPE
From the
BOTTOM UP**

- 1. Gown**
- 2. Mask**
- 3. Goggles**
- 4. Gloves**

**DOFF PPE
in
ALPHABETICAL
Order**

- 1. Gloves**
- 2. Goggles**
- 3. Gown**
- 4. Mask**

USE ONLY ARTICLES
REQUIRED FOR EACH
ISOLATION LEVEL...

- CONTACT
- DROPLET
- AIRBORNE

**PATIENT
SAFETY
FIRST**

What's Clean and What's Dirty?



CLEAN

- inside and back of gown including ties,
- inside gloves
- ties of the mask

DIRTY

- Outside front and sleeves of gown
- Outside of mask
- Outside of gloves

DOFFING PPE SEQUENCE (1)

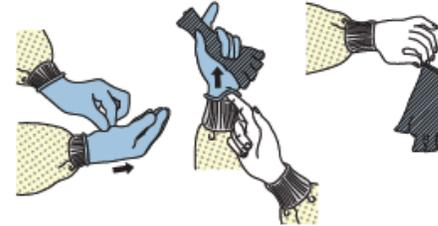
1. Gloves
2. Goggles/Face Shield
3. Gown
4. Mask or Respirator
5. HAND HYGIENE!

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container



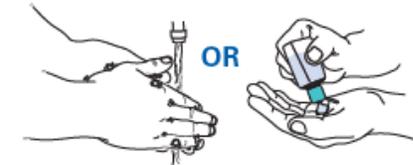
← Untie gown

4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



- ### 5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



DOFFING PPE SEQUENCE (2)

A different way

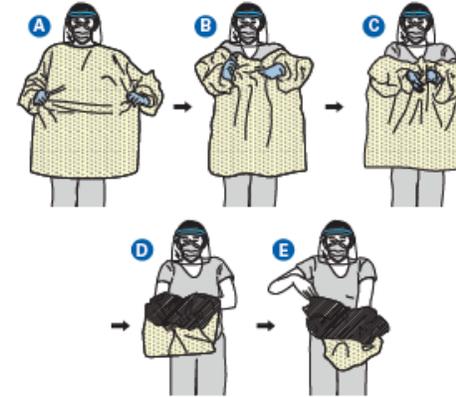
1. Gown & Gloves
2. Goggles/Face Shield
3. Mask or Respirator
4. HAND HYGIENE!

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Remove all PPE before exiting the patient room except a respirator, if worn. Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into a waste container



← Pull gown, break ties

2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

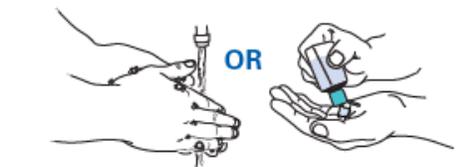


3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



Isolation: A Few More Things

- All isolation rooms should have disposable equipment (BP cuffs, stethoscope) that remains in the room – do not take personal or unit-specific shared equipment into room
- All PPE should be removed & discarded **prior to exiting** patient's room
 - **Except: N95 masks** – Remove & discard N95 masks **outside** of the room after closing the patient's door
- Hope Tower has electronic monitors for Negative and Positive Air Pressure rooms
 - Outside of patient's room near doorway
 - Peace & Mercy towers continue to have Ball-in-the-Wall monitors
- Reminder: **ALWAYS** perform hand hygiene after removing gloves & in between gloves changes



Questions?