What to Wear

Personal Protective Equipment,
because it works!

Nebraska
Infection Control
Network

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Standard Precautions

The goal of Infection Prevention is to <u>break</u> the chain of infection

In healthcare we can break the chain by decreasing the pathogens in the environment, on the patient, and on the healthcare worker's hands, clothing

Standard precautions help to decrease transmission of an infectious agent from a reservoir to a susceptible host
–Contact is most common mode of transmission (hands and equipment)

https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html
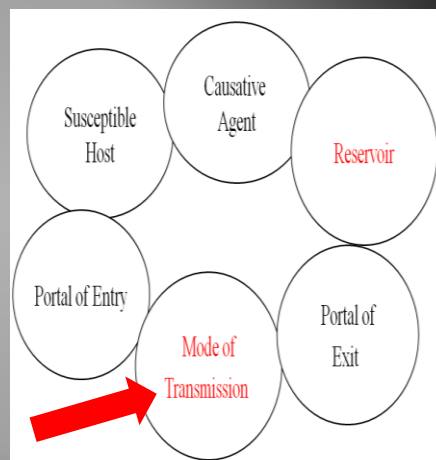
2

CDC Guidelines

CDC Standard Precautions for all patient care:
-Hand hygiene

-Personal Protective Equipment (PPE)

-Respiratory hygiene/cough etiquette

-Appropriate room placement

-Proper handling, cleaning, disinfecting of
   equipment, instruments/devices, environment

-Proper handling of linens

-Safe injection practices, proper handling of sharps

www.cdc.gov/infectioncontrol/basics/standard-precautions.html

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Hierarchy of Safety and Health Controls
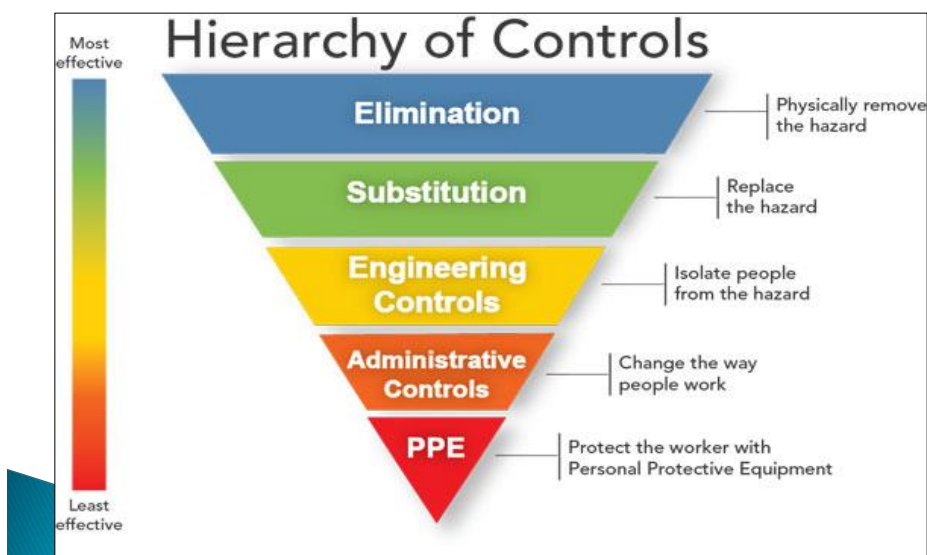
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What is PPE?

▸ "…specialized clothing or equipment, worn by an employee for protection against infectious materials."   – Occupational Safety and Health Administration

▸ "…refers to protective clothing, helmets, gloves, face shields, goggles, facemasks and/or respirators or other equipment designed to protect the wearer from injury or the spread of infection or illness."

– US Food and Drug Administration

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OSHA requires employers to:

▸ Identify and provide appropriate PPE for employees.

▸ Train employees in the use and care of the PPE.

▸ Maintain PPE, including replacing worn or damaged PPE.

▸ Periodically review, update and evaluate the effectiveness of the PPE program.

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Appropriate PPE –
Clothing & Equipment

▸ Gloves – protect hands

▸ Gowns/aprons – protect skin and/or clothing

▸ Masks and respirators– protect mouth/nose

▸ (Respirators – protect respiratory tract from airborne infectious agents)

▸ Goggles – protect eyes

▸ Face shields – protect face, mouth, nose, and eyes

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Appropriate PPE

▸ Standard Precautions
  ◦ For every patient and resident, every interaction
  ◦ Used to protect staff from blood and body fluids
  ◦ Can help with decreasing transmission of pathogens
  ◦ Based on the risk of contact with body fluids

▸ Transmission Based Precautions
  ◦ For those patients/residents who require Contact, Droplet, or Airborne precautions
  ◦ Required based on type of precautions
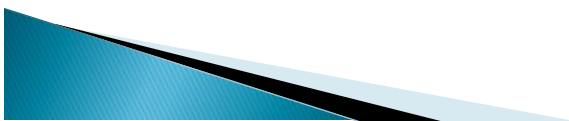
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PPE-Standard Precautions

Gloves
- Should be worn if you think you may come in contact with blood or body fluids
- Gloves should be changed with every task you do in each room (minimum after dirty task)
- Gloves are only as clean as the last thing you touched

Gowns
- Wear when providing care if the patient or resident has blood or body fluids that cannot be contained

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PPE-Standard Precautions

Mouth, Nose, Eye Protection
- Cover your face, (mucous membranes) if splashing or spraying may be anticipated-this is for all patients/residents

- During procedures that generate coughing and sprays of respiratory secretions, use face protection that fully covers mucous membranes.

**This includes suctioning orally or by vent or trach

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Sequence for Donning PPE

- ▸ Hand Hygiene
- ▸ Gown first – tie/stick it on
- ▸ Mask or respirator – over nose and mold to face
- ▸ Goggles or face shield
- ▸ Gloves – select correct size and type

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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
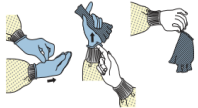**AND LIMIT THE SPREAD OF CONTAMINATION**

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Sequence for Doffing PPE

- Gloves – technique is important
- Goggles or face shield
- Gown
- Mask
- Hand Hygiene

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Key Points About PPE

▸ Perform hand hygiene before donning PPE
▸ Don before contact with the patient, generally before entering the room
▸ Use carefully – don't spread contamination
▸ Remove and discard carefully, either at the doorway or immediately inside patient room; remove respirator outside room
▸ Immediately perform hand hygiene

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Recent Research: Auditing

▸The study found that only about half of health care workers correctly remove their PPE, and very few remove their PPE in the correct order and dispose of it in the proper location.

▸Ongoing education, direct observation and monitoring, written documentation of compliance and type of action for non-compliance are key components of an infection prevention program.

N. Safdar, et al, Variation in health care worker removal of personal protective equipment, *American Journal of Infection Control*, Volume 43, Issue 7 (July 2015)

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Improving Compliance

‣"Healthcare facilities should use this opportunity of heightened interest (Ebola) to undertake practice improvement focused on PPE removal protocol, including technique, for all healthcare-associated conditions that require the donning and doffing of PPE."

‣"There needs to be further education and collaboration within hospitals to improve compliance."

~ N. Safdar

‣This is true with COVID pandemic as well

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Education-PPE

‣ Educating staff members on how and when to wear PPE is important
  ◦ how to select PPE for Standard Precautions-
  ◦ where to find PPE on unit
  ◦ how to don and doff
  ◦ where to dispose of PPE
  ◦ where to find isolation protocols/procedures
  ◦ where to find isolation flag in EMR
  ◦ where to find isolation signage on unit
  ◦ who to call if unsure of isolation/PPE need

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CDC Assessment Tools

▸ Acute Care: Supplies necessary for adherence to personal protective equipment recommendations specified under Standard and Transmission-based Precautions (e.g., gloves, gowns, mouth, eye, nose, and face protection) are available and located near point of use.

▸ Long-term Care: Supplies necessary for adherence to proper PPE use (e.g., gloves, gowns, masks) are readily accessible in resident care areas (i.e., nursing units, therapy rooms).

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CMS Survey Tool and PPE

2.C.1 Supplies for adherence to Standard Precautions using personal protective equipment (e.g., gloves, gowns, mouth, eye, nose, and face protection) are available and located near point of use.

YES   NO

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Auditing Use of PPE

You should audit the use of PPE:
◦ Proper PPE for task
◦ PPE accessibility, at point of care
◦ Proper doffing of PPE and disposal of PPE

Audit PPE use while rounding or monitoring IP practices
◦ Reprocessing
◦ Surgical procedures
◦ Blood glucose monitoring
◦ Foley insertion, maintenance and care
◦ Central line insertion, maintenance and care
◦ Environmental rounding

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Auditing Tools– Competency

Personal Protective Equipment (PPE) Competency Validation
Donning and Doffing
Standard Precautions and Transmission Based Precautions

Type of validation: Return demonstration ☐ Orientation ☐ Annual ☐ Other

Employee Name:_____ Job Title: _____

COMPETENT	YES	NO
Donning PPE:		
1. **Perform Hand Hygiene**		
2. **Don Gown:**		
• Fully covering torso from neck to knees, arms to end of wrists		
• Tie/fasten behind neck and waist		
3. **Don Mask/Respirator:**		
• Secure ties/elastic bands at middle of head and neck		
• Fit flexible band to nose bridge		
• Fit snug to face and below chin (Fit-check respirator if applicable)		
4. **Don Goggles or Face Shield:**		
• Place over face and eyes; adjust to fit		
5. **Don Gloves:**		
• Extend to cover wrist of gown		
Doffing PPE: Example 1		
6. **Remove Gloves:**		
• Grasp outside of glove with opposite glove hand; peel off		
• Hold removed glove in gloved hand		
• Slide fingers of ungloved hand under remaining glove at wrist		
• Peel glove off over first glove		
• Discard gloves in waste container		
7. **Remove Goggles or Face Shield:**		
• Handle by head band or earpieces		
• Discard in designated receptacle if re-processed or in waste container		
8. **Remove Gown:**		
• Unfasten ties/fastener		
• Pull away from neck and shoulders, touching inside of gown only		
• Turn inside out		
• Fold or roll into bundle and discard		

https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf   Revised 12/2022 SPICE

COMPETENT	YES	NO
9. **Remove Mask/Respirator** (respirator removed after exit room/closed door):		
• Grasp bottom, then top ties or elastics and remove		
• Discard in waste container		
10. **Perform Hand Hygiene**		
Doffing PPE: Example 2		
11. **Remove Gown and Gloves:**		
• 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 gown, fold or roll the gown inside-out into bundle		
• While removing gown peel off your gloves at the same time, only touching inside of gloves and gown		
• Discard in waste container		
12. **Remove Goggles/face shield**		
• Remove from back by lifting head band		
• Discard in waste container		
13. **Mask or Respirator**		
• Grasp bottom ties or elastic of mask/respirator, then top and remove		
• Discard in waste container		
14. **Perform Hand Hygiene**		
Standard Precautions & Transmission Based Precautions		
15. **Staff correctly identifies the appropriate PPE for the following scenarios:** *Additional PPE to be worn based on standard precautions guidelines* (anticipated level of exposure) *		
• Contact/Contact Enteric Precautions (gown & gloves)		
• Droplet Precautions (surgical mask)		
• Airborne Precautions (fit-tested respirator if applicable)		
• Enhanced Barrier Precautions (gown & gloves for high contact activities) **RECOMMENDED IN NURSNING HOME SETTINGS ONLY**		

NOTE: Examples include mask for coughing/vomiting patient, goggles/face shield for irrigating draining wound, gown for dressing change if scrubs may touch patient, etc.,

Comments or follow up actions:

_____   _____/_____
Employee Signature   Validator Signature   Date

https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf   Revised 12/2022 SPICE

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Auditing Tools–Adherence to Policy

SPICE

Statewide Program for Infection Control and Epidemiology
Education to prevent and control healthcare associated infections across the healthcare spectrum

Personal Protective Equipment (PPE) Audit Tool

Date/Shift/Unit	Role	Compliant	Missed Opportunity	Observation Type
	Key: P/Provider = Physician, resident, PA, NP, or student of role N/Nursing = RN, LPN, CNA, NA, CMT, MT, or student of role AH/Allied Health = PT/OT, Resp. Tech, Rad Tech, Lab Tech, or student SS/Support Staff (ancillary staff) =Dietary, Front Desk, House Keeping/ EVS			Observation/Encounter type examples: Glove use prior to contact or potential contact with blood & body fluids, gown and glove use with contact isolation precautions, mask use with droplet precautions or potential exposure to infectious droplets, high level respirator with airborne precautions or potential exposure such as aerosolized generating.
	P N AH SS	○	○	
	P N AH SS	○	○	
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To calculate your PPE rate, add all the compliant observations that were made and divide that number by the total number of observations both compliant and missed opportunities. Example: If this whole sheet was filled out there would be 20 observations, if only half (10) were checked as compliant (compliant with PPE when indicated) 10 ÷ 20 then your rate would be .50 or 50% . You can also calculate compliance rate by role. Take the number of compliant observations by one role category and divide that number by total observations for that particular role.

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Face shield or goggles ··········

··········Facemask
N95 or higher respirators are preferred but facemasks are an acceptable alternative.

One pair of clean, ········
non-sterile gloves

··········Isolation gown

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Resources

Centers for Disease Control and Prevention: Occupationally-Acquired Infections in Healthcare Settings (2023) https://www.cdc.gov/infectioncontrol/oai-hcp.html

Centers for Disease Control and Prevention: Core Infection Prevention and Control Practices (2022) www.cdc.gov/infectioncontrol/guidelines/core-practices/index.html
www.cdc.gov/infectioncontrol/basics/standard-precautions.html

US Food and Drug Administration, Personal Protective Equipment Infection Control (2020)
Occupational Safety and Health Administration webpage (2022)

APIC Text Online, Chapter 28 Standard Precautions and Chapter 29 Isolation Precautions (accessed 2023)

Centers for Disease Control and Prevention: Infection Control Assessment Tools
 (ICAR), 2023 https://www.cdc.gov/hai/prevent/infection-control-assessment-tools.html

Centers for Medicare & Medicaid Services Hospital Infection Control Worksheet
https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/Survey
CertificationGenInfo/Downloads/Survey-and-Cert-Letter-15-12-Attachment-1.pdf

The University of North Carolina SPICE (2022) Statewide Program for Infection Control & Epidemiology – Education to prevent and control healthcare associated infections across the healthcare spectrum (unc.edu)

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Questions?

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