

Infection Prevention and Control

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Students:

The following are slides presented to newly hired staff here at KP WLA. Please note that you should practice within your scope as a Student RN. Please approach your Clinical Instructor and the charge nurse prior to taking care of any patients with isolation precaution. Documentation in the patient's medical record should also be under the guidance and supervision of your Clinical Instructor and/or preceptor RN. If any questions arise, please escalate it to them as well.

Objectives

- Define infection prevention.
- State differences between standard precautions versus infection isolations.
- Discuss use of personal protective equipment (PPE).
- Verbalize the four isolation types.
- Discuss differences between Powered Air Purifying Respirator versus Controlled Air Purifying Respirator.
- Identify MRSA Screening policies and procedures (Admission and Discharge Screening).
- Discuss central line associated blood stream infection bundle.
- Verbalize the role of nurse regarding: C.Diff, CAUTI bundle, ventilator associated pneumonia, and TB screening protocols.

What is Infection Prevention?

- **According to the World Health Organization (WHO):** Infection prevention and control (IPC) is a scientific approach and practical solution designed to prevent harm caused by infection to patients and health workers. It is grounded in infectious diseases, epidemiology, social science and health system strengthening.



Standard Precaution vs. Infection Isolations

- Standard Precaution

- Hand Hygiene
- Respiratory Hygiene/ Cough Etiquette
- **Personal Protective Equipment (PPE)**
- Safe Work Practices
- Environmental Cleaning
- Safe Injection Practices

- ALL PATIENTS

- Infection Isolation

- Hand Hygiene
- Respiratory Hygiene/ Cough Etiquette
- **Personal Protective Equipment (PPE)**
- Safe Work Practices
- Environmental Cleaning
- Safe Injection Practices

- Patient with known or suspected infectious (transmissible) disease

Patients with known or suspected transmissible disease is placed in private room and that room is marked with appropriate signage.

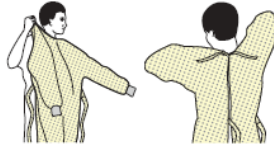
How do you use this darn PPE?

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



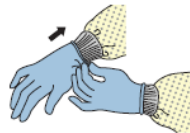
3. GOGGLES OR FACE SHIELD

- 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

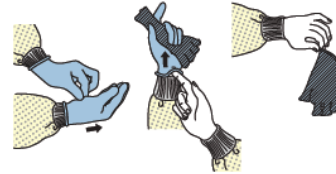


HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

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 an infectious* 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 an infectious* 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 an infectious* waste container



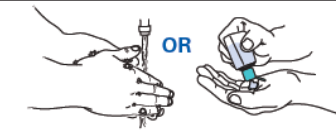
4. MASK OR RESPIRATOR

- 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 an infectious* waste container



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

* An infectious waste container is used to dispose of PPE that is potentially contaminated with Ebola virus.



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

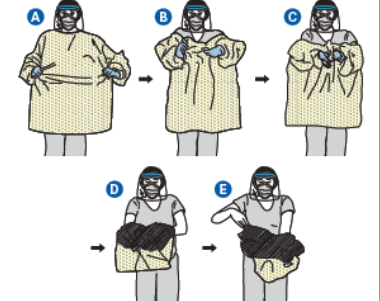


HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

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 an infectious* waste container



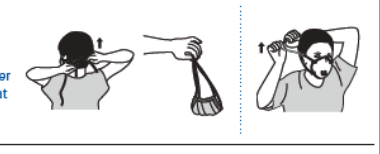
2. GOGGLES OR FACE SHIELD

- 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 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 an infectious* waste container



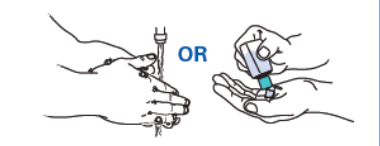
3. MASK OR RESPIRATOR

- 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 an infectious* waste container



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

* An infectious waste container is used to dispose of PPE that is potentially contaminated with Ebola virus.



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



Isolation Types

CONTACT PRECAUTIONS



VISITORS: CHECK WITH NURSE BEFORE ENTERING ROOM

Favor de reportarse con la enfermera(o) antes de entrar al cuarto



- Obtain precautions cart.
- Gown & gloves required when entering room.
- Use dedicated equipment or disinfect between patients.



YES

or



YES

MRSA; VRE; RSV

CONTACT-Plus PRECAUTIONS



VISITORS: CHECK WITH NURSE BEFORE ENTERING ROOM

Favor de reportarse con la enfermera(o) antes de entrar al cuarto



- Obtain precautions cart.
- Gown & gloves required when entering room.
- Use dedicated equipment or disinfect between patients.
- Environmental Cleaning-Clorox Wipes/Hypochlorite Sol



YES



NO

C. diff; enteric bugs
GEL IN ; **WASH OUT**

DROPLET PRECAUTIONS



VISITORS: CHECK WITH NURSE BEFORE ENTERING ROOM

Favor de reportarse con la enfermera(o) antes de entrar al cuarto



- Surgical mask within 3 feet of the patient



YES



YES

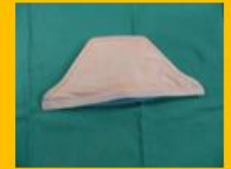
Influenza; SARS;
Meningococcal disease
***Surgical mask**
Prevents outward spread; anyone can use

AIRBORNE PRECAUTIONS



VISITORS: CHECK WITH NURSE BEFORE ENTERING ROOM

Favor de reportarse con la enfermera(o) antes de entrar al cuarto



- N95 Respirator. PAPR for High Risk Procedures
- Airborne Infection Isolation Room (AIIR)



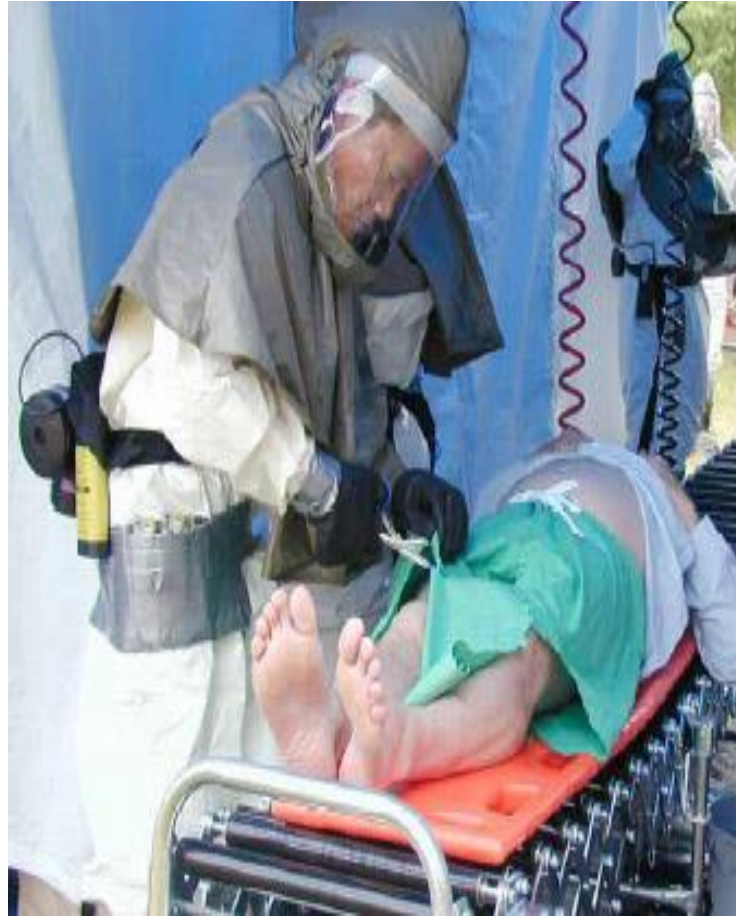
YES



YES

Chicken Pox; Measles
TB; Small Pox; **Novel or Unknown pathogens**
***N95 or PAPR/CAPR**
prevents inhalation
requires fit testing

Powered Air-Purifying Respirator (**PAPR**) or Controlled Air Purifying Respirator (**CAPR**)



It's the **LAW!** MRSA

- MRSA Screening: **Senate Bill 1058**
 - Patients meeting specific criteria must be screened for MRSA surveillance within the first 24 hours of their admission
 - Patients who were screened negative upon admission to the hospital and are at high risk for MRSA colonization, will be screened again prior to discharge
 - **Patients testing + shall be informed, receive written instruction regarding aftercare and precautions**



MRSA Admission Screen

All patients being admitted to the acute care hospital who:

- Have been previously discharged from a general acute care hospital within 30 days prior to the current admission.
- Will be admitted to the ICU (this includes patients being transferred into an ICU).
- Will receive inpatient dialysis (either peritoneal or hemodialysis) treatment
- Is being transferred from a skilled nursing facility

Must be screened for nasal colonization of MRSA within 24 hours of admission

MRSA Discharge Screen

- **Beginning January 1, 2011**
 - additional requirements for MRSA surveillance testing became effective.
 - **California state law** requires that patients who met the initial screening criteria identified above, and had a negative MRSA surveillance test on admission, should be screened **immediately prior to discharge** **IF** they may be at increased risk for an invasive MRSA infection.
- Identified group to screen:

All chronic dialysis patients who tested negative for MRSA on admission and were admitted to the ICU at some point during their hospital stay.

It's the **LAW!** Central Line Insertion Practice (CLIP)

- CLIP Reporting → Senate Bill 739 , **Title 22**, §70739
 - California Dept. Public Health HAI Advisory Committee recommended that the following procedures be followed for compliance with SB 739 reporting requirements.
 - These requirements are now mandatory and may be enforced by the CDPH Licensing and Certification Program.
 - **Need to complete documentation**
 - CLIP reporting requirements as specified in Attachment 1 must be reported through NHSN effective July 1, 2008.

Central line insertion practices are the first line of defense in preventing central line associated bloodstream infections (CLABSI)...Lets keep it ASEPTIC

Hospital Bundle

Central Line Insertion Practices (CLIP)

Central Line Associated Bloodstream Infections (CLABSI)

Define Properties

SINGLE LUMEN

Origin of Site (if not this admission):

Placement Date: 4/20/2012

Placement Time: 1134

Reason for central line insertion:

-
-
-

Skin prep agent dry at skin puncture:

Maximal sterile barrier protection used (INCLUDES Mask/Eye shield, Large sterile drape, Sterile gown, Sterile gloves, Cap):

Type:

-
-
-

Size: 1.2

Catheter Length Inserted (cm): 7

If line replacement, exchanged over guidewire:

Antimicrobial Line:

Site:

-
-
-
-
-
-

Ultrasound Used:

Blood Return:

Number of Attempts: 1

Catheter confirmed:

Catheter tip placement:

X-ray reviewed by: M. Villosis, MD

Line used for Dialysis:

Line Secured:

Antiseptic ointment used:

Disposition:

-
-

Central Line Associated Bloodstream Infection (CLABSI)

- Prevention is key
 - Rule of Thumb: **No line no infection**...**GET LINES OUT** as soon as it is medically indicated

THE BUNDLE (Provider)

- Basics of **insertion**
 - Hand Hygiene prior to insertion and anytime you handle a central line
 - use of full barrier precautions during insertion (including cap, sterile gown/gloves, mask, full length sterile drape) **ASEPTIC TECHNIQUE**
 - chlorhexidine skin prep; **allow product to dry on its own do not blow or fan the skin**
 - avoidance of the femoral site; if femoral line is inserted, it must be removed within **48 hours** and moved to a high line if still medically indicated
 - removal of unnecessary catheters (daily assessment of catheter need)

Central Line Associated Bloodstream Infection (CLABSI) cont.

- Prevention is key

THE BUNDLE (Nursing)

- Basics of **daily care**

- Curoc[®] caps on all ports of the line.
 - Disinfects in **1 minute**. Protects ports for up to 7 days if not removed
 - If Curoc[®] cap not used scrub the hub with 70% alcohol pad or chlorhexidine pad for 15 seconds
- use of a 2-person dressing change to optimally maintain aseptic technique
- Blood draws through central line must be the last draw of choice. **DO NOT** draw blood through central lines! **Blood draws increase risk for infection.**
- remove emergently placed catheters within 24 to 48 hours
- Daily CHG baths
- Daily necessity documentation
- 24 hour post insertion dressing change and weekly thereafter

Clostridium Difficile (C. diff)

- If your poo looks like pee collect # 3 in 24 hours
- C. diff is the acute onset of **UNEXPLAINED** watery/loose diarrhea
- C. diff can be accompanied by (MD should determine)
 - Frequency (increased)
 - Fever
 - White count
 - *Colitis on radiograph
 - Clinically diagnosed abdominal pain
- NOT SURE? ASK
 - Speak with the doctor if the patient meets the criteria for testing
- Avoid Stool samples from patients with
 - Laxatives, bowel prep or oral contrast within the last 48 hours
 - Small bowel surgery, colon surgery or new tube feeding



“If you’re looking for your patient with the bowel problem, I think he went that way.”

ONLY SEND STOOLS THAT ARE APPROVED BY THE MD FOR TESTING

Catheter Associated Urinary Tract Infection Prevention

- Prevention is key
 - Rule of Thumb: **No line no infection**...**GET LINES OUT** as soon as it is medically indicated

THE BUNDLE (Nursing)

- Basics of **daily care**
 - Daily review of indwelling catheter necessity with prompt removal if unnecessary
 - Unobstructed flow
 - Bag below level of bladder
 - Tubing secured to patient with appropriate adhesive or Velcro device
 - Bag off the floor
 - Peri Care: Bathe your patients...clean the tube start at the point of insertion and wipe toward the bag

Catheter Associated Urinary Tract Infection Prevention cont.

- Who should have a Foley?
 - Frequent urine output monitoring for critically-ill patient (e.g. shock, sepsis)
 - Chemically-paralyzed, sedated, or comatose patient
 - Acute urinary retention/obstruction
 - Trauma: spinal injury or pelvic fracture (If urethral disruption is suspected, a Urologist must see patient first)
 - End of life care or comfort measures per patient/family's request
 - Continuous bladder irrigation

- If we only had another way...

- PURWICK® (Female)



- Condom Catheter (male)



Other things to know....

- Ventilator associated pneumonia (VAP)
 - Keep their heads up (30-45° unless contraindicated)
 - Brush their teeth every 4 hours and swab/rinse their mouth with chlorhexidine every 12 hours
 - GET the tube out as soon as medically indicated...no line no infection.
- Tuberculosis (TB)
 - Can only be discharged with an approval letter from the health department. IPC will assist you in getting this letter.
 - Once letter of discharge is written, it is only good for 24 hours and must be renewed if patient is not discharged

Food for thought: Should family members be given N95 masks while visiting?

EDUCATION the key to Prevention

In order to control we must prevent.. In order to prevent we must educate!

What to educate on:

- Preventing spread of infection in the hospital: hand washing, covering the cough etc.
- Patient devices: central line, Foley catheters (care and maintenance)
- Preventing surgical site infections (care for the surgical site)

How do we know you educated?

- Document....Document....DOCUMENT

Documentation

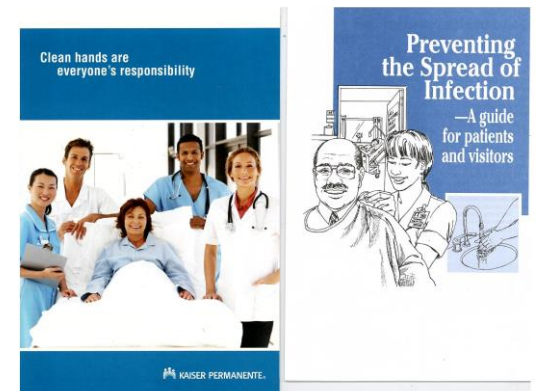


Documentation on education is very important. The Joint Commission (TJC) has this as a high priority during surveys.

But is any documentation enough?

Documentation of education must be specific. If you teach about MRSA you must document about MRSA education not just infection prevention in general.

Only use KP approved education handouts when teaching patients.



Documentation cont.

Hyperspace - WLA 2A1 MSXD - PROD - HCSPRODMLM PRODMLM

Epic Home Event Management Patient Lists My Reports Schedule In Basket Chart Encounter Tel Enc Message Enc Secure KPHC Support Remind Me Panel Mgmt Hospital Chart Print Log Out

Kphc,Fifteentczzst

KPHC,FIFTEENTCZ... DOB: 04/25/1925 MRN: 000019340002 Allergies: ACE Inhibitors (Angiotensin... Code: Prior ISO: None ATTEND: SACCONI, ... Infection: Methicillin Resista... PCP: DUMMY, TEST (... GFR: 36 NB m...

Age: 88 yrs, Female LOS (days): 186 Room, Bed: PASS, 01

Unresolved Education

Assessment Unresolved Education Education Review Manage Education

Title/Topic/Teaching Point: Point Description/Learner Progress:

1. Click on Unresolved Education

2. Open Infection, Risk/Actual

3. Add a point "MRSA" or "VRE" or "MDRO" or "C. diff"

4. Click/ indicate the appropriate items.

Learner	Ready?	Method	Res...	Comments	Taught By	Date	Time	Status
P	A	E,AV,PM	VU	MRSA	WONG, JENNIFER	4/18/2011	1415	Done
P	A	E,PM	VU		WONG, JENNIFER	4/18/2011	1416	Done
P	A	E,PM	VU		MEDINA, MARICAR	5/16/2011	1008	Done
P	A	AV	VU		BARRAQUIAS, MAY FLOR	5/16/2011	1046	Done

Infection, Risk/Actual (Adult, Obstetrics)

- Personal Risk Factors and Signs/Symptoms Related To Infection
- Personal Hygiene Measures
- Infection Signs and Symptoms, What To Do If Present, and When To Report
- Infection Modes of Transmission, Preventative Measures, Incubation Period, Isolation Recommendations
- Soiled Materials Disposal
- Identify Clean and Dirty Areas and Avoid Cross Contamination
- Temperature: When/How To Take and Baseline Reading
- Safety Measures To Promote Skin Integrity
- Lifestyle Alterations, Present and Future
- MRSA**
- C.Diff

Learner
 P: Patient
 F: Family
 S: Significant
 C: Caregiver
 O: Other

Readiness
 E: Eager
 A: Acceptance
 N: Nonacceptance
 R: Refuses
 SL: Second learner

Method
 E: Explanation
 D: Demonstration
 PM: Printed material
 AV: Audio-visual
 GC: Group/class
 IT: Interpreter/TTY

Response
 VU: Verbalizes understanding
 DU: Demonstrates understanding
 NR: Needs reinforcement/practice
 R: Refuses

Education Materials: Delete Apply Defaults Copy Previous

Infection, Risk/Actual (Adult, Obstetrics)

Provider References:
[Clinical Practice Guideline](#) [Clinical Library References](#)

Add Title Add Point Delete N/A Expand All Collapse All Resolve Comments Multiple File

Infection Prevention and Control Team

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- Eveline Mejia 323.857.3019
- IPC pager #5390

[Alyssa Hemmelgarn | Patient Safety Movement](#)