

Frontline Hospital Training



JAMMIE KLIM, MPH
ICAR COORDINATOR

Terms

Florida Department of Health (DOH)

Central Florida Disaster Medical Coalition (CFDMC)

Broward County Healthcare Coalition (BCHC)

Center's for Disease Control and Prevention (CDC)

Personal Protective Equipment (PPE)

Emergency Department (ED)

Emergency Medical Services (EMS)

Patient Under Investigation (PUI)

Healthcare Worker (HCW)

Outline of Discussion

Overview of CDC's Tertiary Classification for Hospitals

Overview of ICAR

Frontline Hospital Criteria

Appropriate PPE

Best Practices

Areas That Need Improvement

Questions & Answers

CDC's Tertiary Classification of Hospitals

Frontline

Identify,
Isolate &
Inform

+

24 hours
patient care

Assessment

Identify, Isolate &
Inform

+

96 hours patient care

+

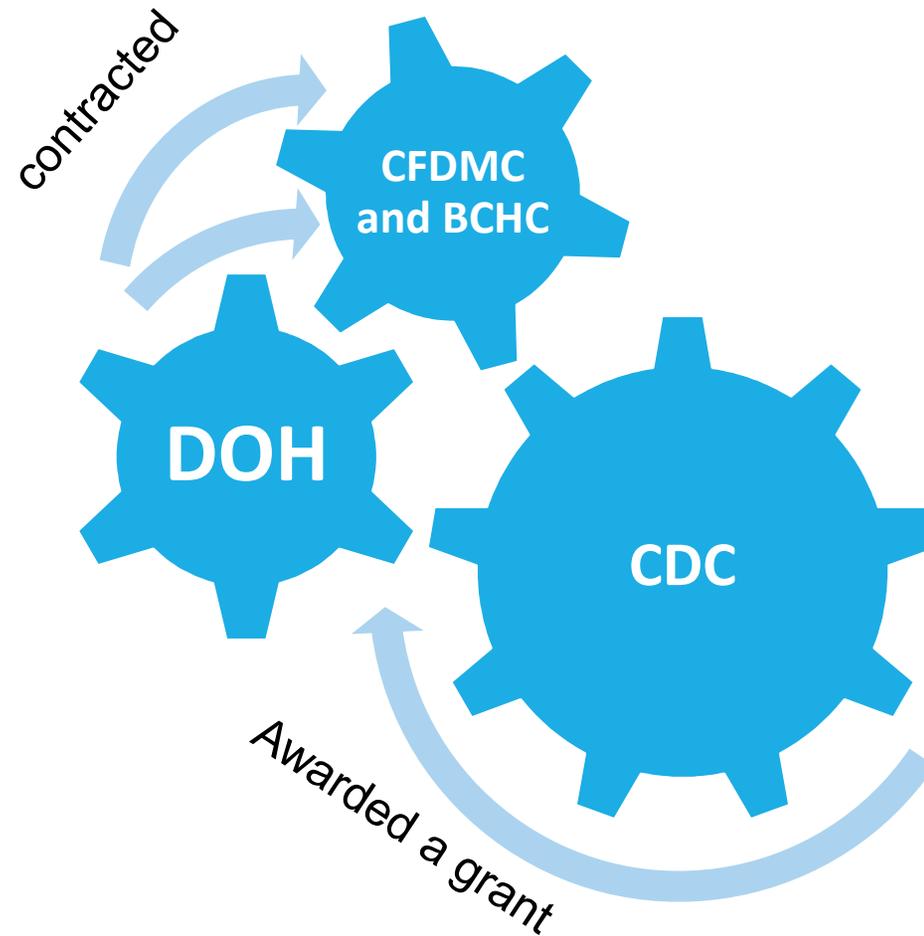
coordinate Ebola
testing

Treatment Center

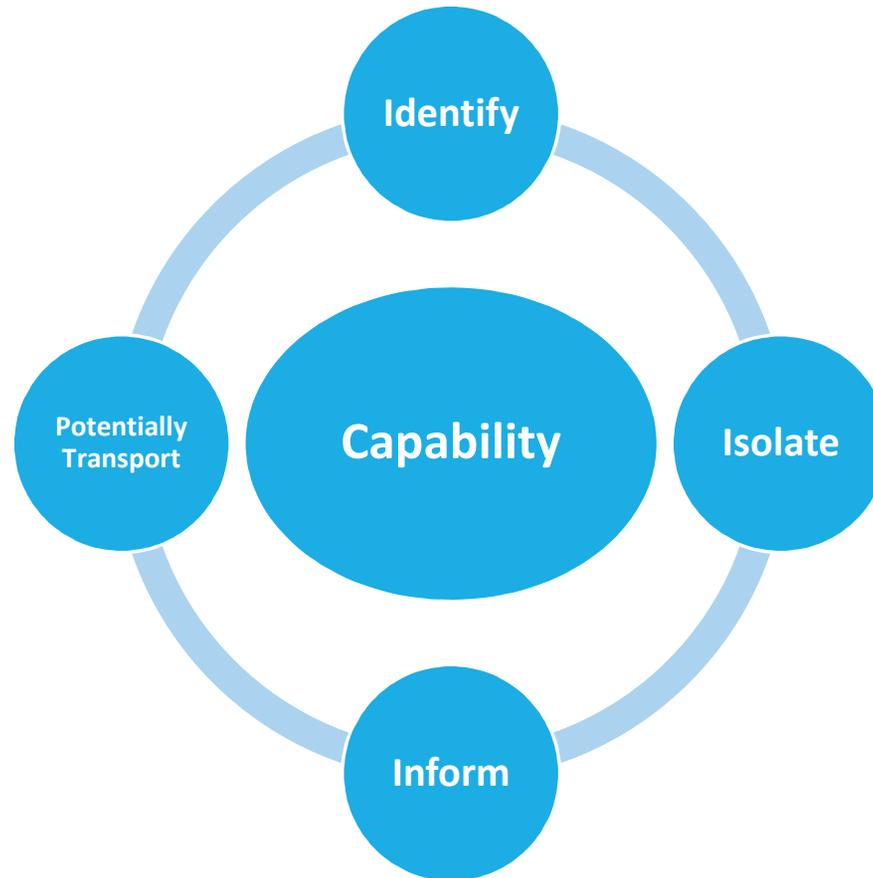
Care for and
manage patient
throughout
disease process

The Infection Control Assessment and Response Program (ICAR)

Overview of ICAR



Purpose of Frontline Hospital Site Visit



Frontline Hospital Criteria

How do we Identify, Isolate and Inform?

Identify

ED triage/screening personnel should ask about travel history

- Have you resided or traveled in a country with widespread Ebola?
- Have you resided or traveled to a country with cases in urban settings with uncertain control measures?
- Have you had contact with an individual with confirmed Ebola within the previous 21 days?

ED triage/screening personnel should question EMS providers about possible risk factors for Ebola in patients being transported via ambulance to hospital

Travel history is VERY important and allows the triage personnel to **immediately** identify if the patient meets epidemiologic risk factor(s) for Ebola

Identify-Risk Factor Question Examples

High risk

In any country

- Have you had any percutaneous or mucous membrane exposure, such as a needle stick, to blood or body fluids from a person with Ebola who has symptoms?
- Have you had direct contact with a person diagnosed with Ebola who had symptoms while not wearing appropriate PPE?
 - Have you had direct contact with their bodily while not wearing appropriate PPE?
- Did you work in or were exposed to the laboratory processing of blood or body fluids from a person diagnosed with Ebola who had symptoms while not wearing appropriate PPE?
 - Did you use standard biosafety precautions?
- Did you provide direct care to a person showing symptoms of Ebola in a household setting?

In countries with widespread transmission or cases in urban setting with uncertain control measures

- Did you have direct contact with a dead body while not wearing appropriate PPE?

Identify-Risk Factor Question Examples

Some Risk

In any country

- Were you in close contact with a person confirmed with Ebola who had symptoms while not wearing appropriate PPE?

In countries with widespread transmission

- Did you have direct contact with a person confirmed with Ebola who had symptoms, or the person's body fluids, while wearing appropriate PPE?
- Were you in the patient-care area of an Ebola treatment unit?
- Did you provide any direct patient care in non-Ebola healthcare settings?

Identify-Risk Factor Question Examples

Low (but not zero) Risk

In any country

- Did you have brief direct contact with a person in the early stages of Ebola, while not wearing appropriate PPE? Early signs can include fever, fatigue, or headache.
- Did you have brief proximity with a person with Ebola who has symptoms while not wearing appropriate PPE?
- Did you work in or were exposed to the laboratory processing of blood or body fluids from a person with Ebola who has symptoms while wearing appropriate PPE?
- Did you travel on an airplane with a person confirmed with Ebola who had symptoms? What exposure did you have to them?

In countries with widespread transmission, cases in urban setting with uncertain control measures, or former widespread transmission and current, established control measures

- Have you traveled or resided in one of these countries and have no known exposures?

Identify-Risk Factors Questions

Low (but not zero) Risk

In any country other than those with widespread transmission

- Did you have direct contact with a person with Ebola who has symptoms, or the person's body fluids, while wearing appropriate PPE?
- Were you in the patient-care area of an Ebola treatment unit?

IF the patient being
triaged/screened has signs and
symptoms of Ebola virus **AND**
meets the epidemiologic risk
factor(s)...

Immediately Isolate

1. Place patient, now a PUI, in private room or separate enclosed area with private bathroom (or covered bedside commode) away from other patient-care areas
2. Notify the Hospital Infection Control Program and other appropriate staff
3. Report to the public health department

Isolate

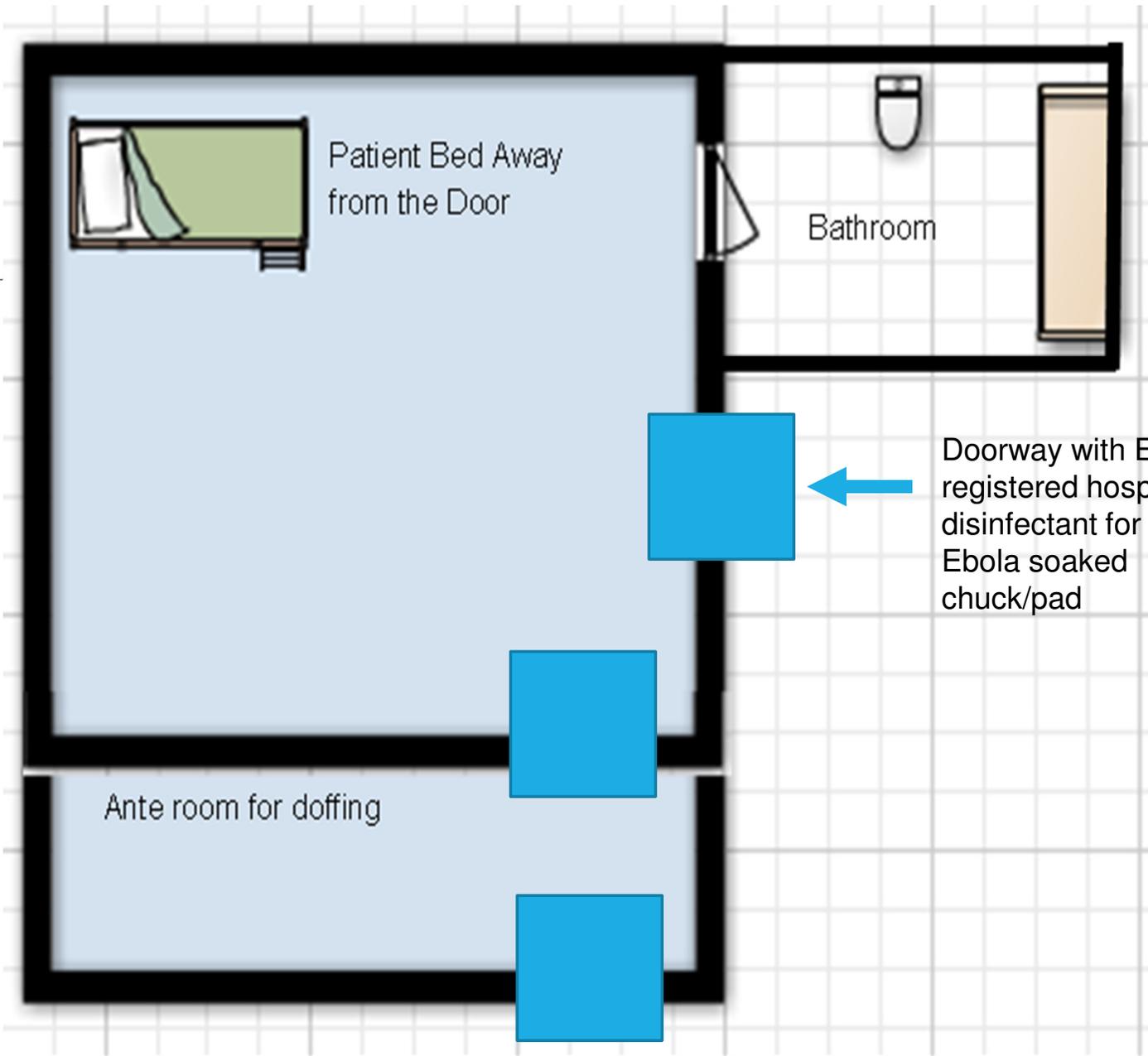
Immediately isolate patients who report relevant exposure history or signs or symptoms consistent with Ebola

- A nurse in appropriate PPE should mask (if there are no contraindications) and gown the PUI
- PUI should be placed in a private room or separated enclosed area with private bathroom or covered bedside commode

Isolate

The Private PUI Room/Separate Enclosed Area

- No carpets
- Take away all decorations (example: art work)
- Adequate space for healthcare workers to move around the room safely
- Puncture-proof sharps containers are located in room in close proximity to PUI bed
- A log for tracking HCW
- All HCW who have contact with a PUI use appropriate PPE based on PUI's clinical status
- Dedicated equipment for the PUI
 - Equipment is not used for the care of other patients until appropriate decontamination is performed

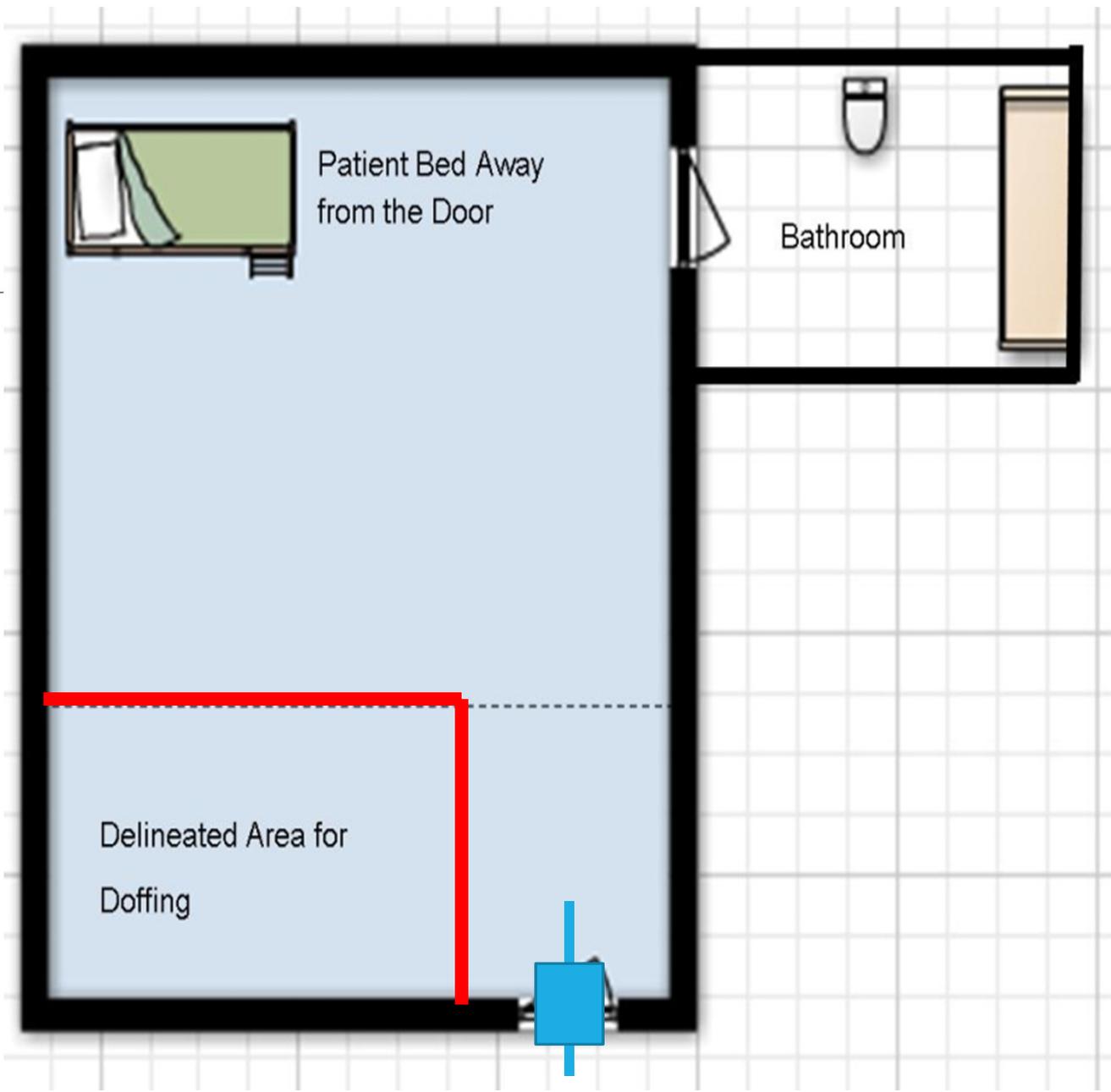


Patient Bed Away from the Door

Bathroom

Doorway with EPA registered hospital disinfectant for Ebola soaked chuck/pad

Ante room for doffing





What Changes Would You Make to This Room?



EMORY

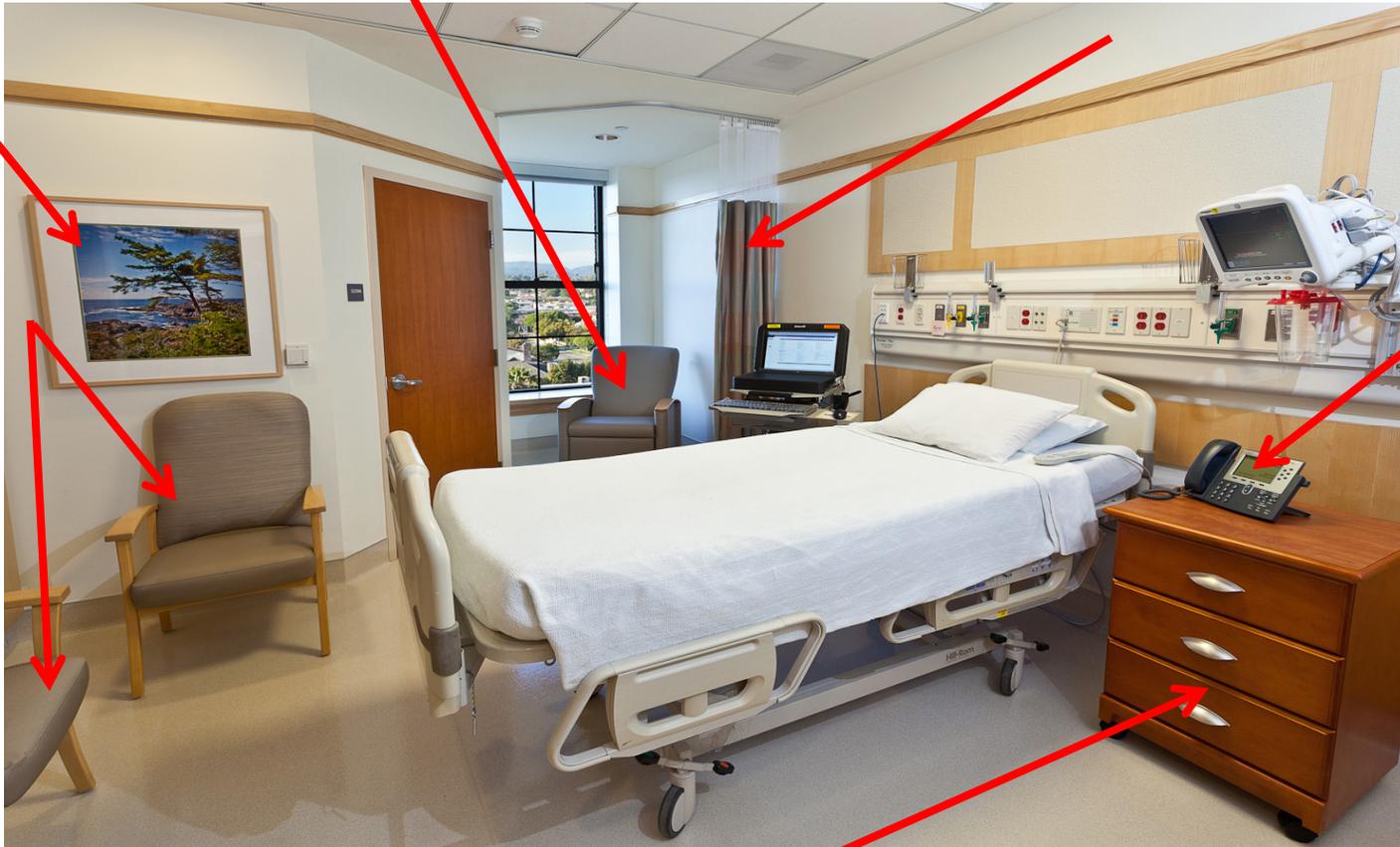




What Changes Would You Make to This Room?



EMORY



Isolate

Separate areas for donning and doffing PPE in proximity to the PUI room

- HCW changing area
- Clean area to store PPE so HCW can don PPE before entering patient room
- Designated area for waste storage
- A shower in close proximity to PPE doffing area for HCW to use following PPE doffing protocol

Inform

The hospital Infection Control Program (and other appropriate staff) and health department are immediately notified upon determination the patient is a PUI

Items the hospital should consider

- Does the facility have a plan to inform and educate staff of plans to care for PUI until patient is transferred?
- Does the hospital have a plan in place for protecting the privacy of the PUI?
 - Example: controlling and monitoring access to their patient record
- Does the hospital have a single staff member designated as the primary point of contact for communicating information?
 - Example: to the health department

Transport

Before a PUI arrives

- The hospital should identify/map out routes that are secure and free of traffic for movement from the ambulance to the PUI private room

Pre-designate personnel, or a team that will meet EMS upon arrival to the hospital

- All pre-designated personnel are trained and can don and doff in Ebola PPE correctly

A mask (if there are no contraindications) is placed on the PUI (if not already present) before movement through the hospital

Patient transport from the private PUI room to an assessment hospital/treatment center

- The hospital should identify/map out routes that are secure and free of traffic for movement from the PUI private room to ambulance for transport

Treatment

Frontline hospitals must have the capability to provide care and stabilize a PUI until they are transferred to another facility.

The PUI may have other underlying conditions, those underlying medical conditions should be stabilized as well during the 24 hour period.

Limit the use of needles and other sharps as much as possible.

All needles and sharps, if used, should be handled with extreme care and disposed in puncture-proof, sealed containers.

More information is found on CDC's Ebola website.

Appropriate PPE Example

Identify Signs & Symptoms: The use of PPE should be determined based on the patient's clinical status.

If the patient is exhibiting obvious bleeding, vomiting, copious diarrhea or a clinical condition that warrants invasive or aerosol generating procedures, then use PPE listed below.

Put on this PPE



- Respirator (PAPR)
- Inner and outer gloves with tape
- Impermeable coveralls plus disposable impermeable apron
- Tape (around the boot covers and coveralls)
- Boot covers

Identify Signs & Symptoms: The use of PPE should be determined based on the patient's clinical status.

If the patient is not symptomatic for EVD, then use PPE listed below.

Put on this PPE



- Face shield
- Surgical or N95 mask
- Inner and outer gloves with tape
- Impermeable Coveralls
- Boot covers

Best Practices- Identify

Collaborate with your Information Technology (IT) Department to keep staff up to date with highly infectious diseases around the world

- Integrate information that will help ask travel questions for other highly infectious disease in patient care charts
- Healthcare workers have to manually click a button indicating they have asked all prompted questions before moving onto next section of patient care chart

Train nurse managers or key leaders to debrief staff at the beginning of each shift on infectious disease around the world

Best Practices- Private Room

Walk the designated routes for transporting PUI to the private room and look for hazards

Remote communication: The private PUI room should have a method of remote communication so that only essential personnel enter the room

- Call bell system
- White boards
- Telemedicine
- iPads or tablets

Make every attempt to identify a patient room that allows adequate space for the healthcare worker to move around the room and patient safely

- Ideally 3-6 feet distance when not performing an intervention
- Walk the space and look for hazards that can compromise PPE
- Also consider the workflow for healthcare worker

Include information to assign exposure categories (high, some, low risk) in the personnel log

Best Practices-Private Room

Use disposable equipment when possible (blood pressure cuffs, pulse oximeters, ECG leads etc..)

Ensure that you have sharp containers in the room and that they are conveniently located

- Engage the NURSES who will be working—they know their workflow and where items should be in the patient room

Designate a single doffing area

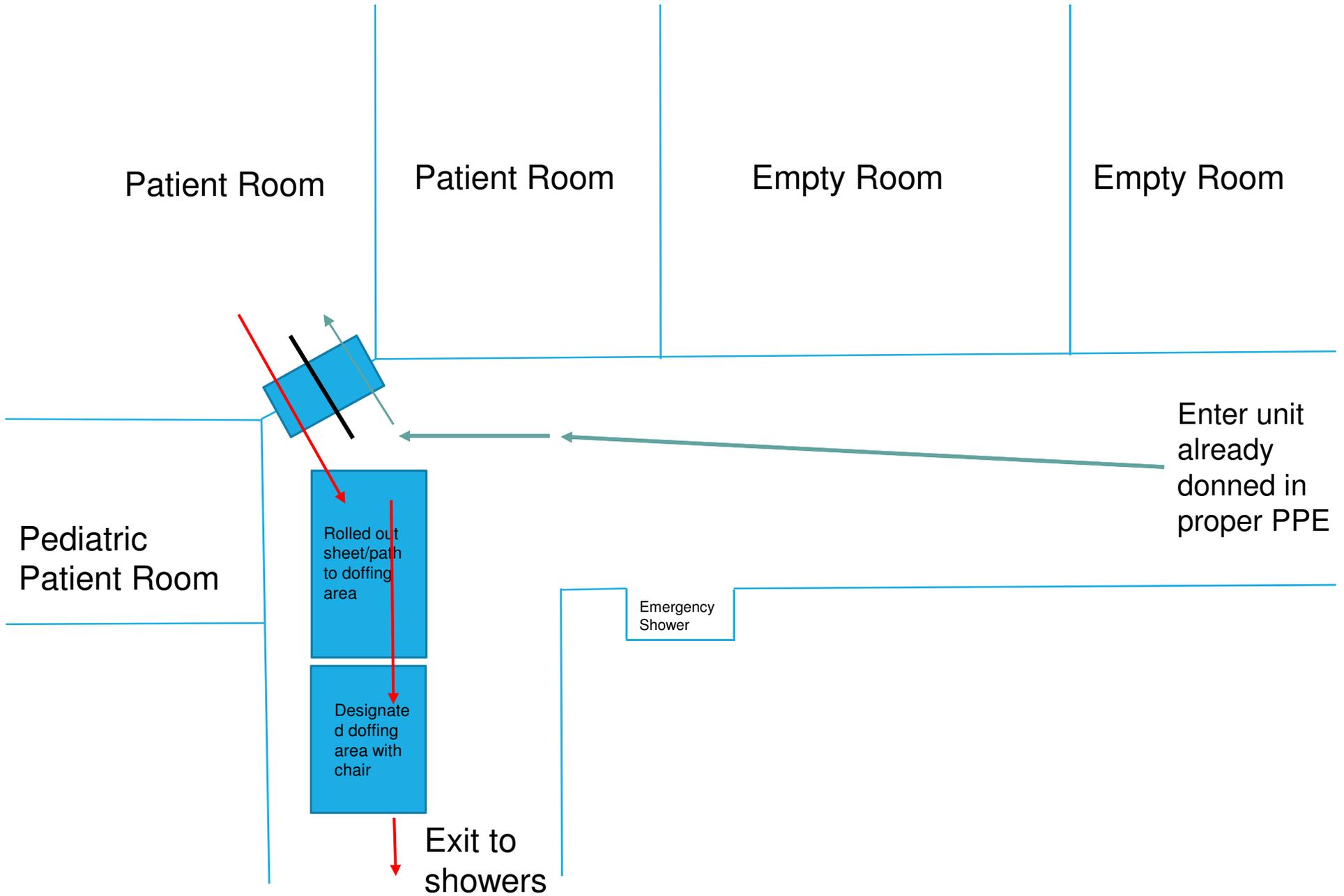
Unidirectional Flow

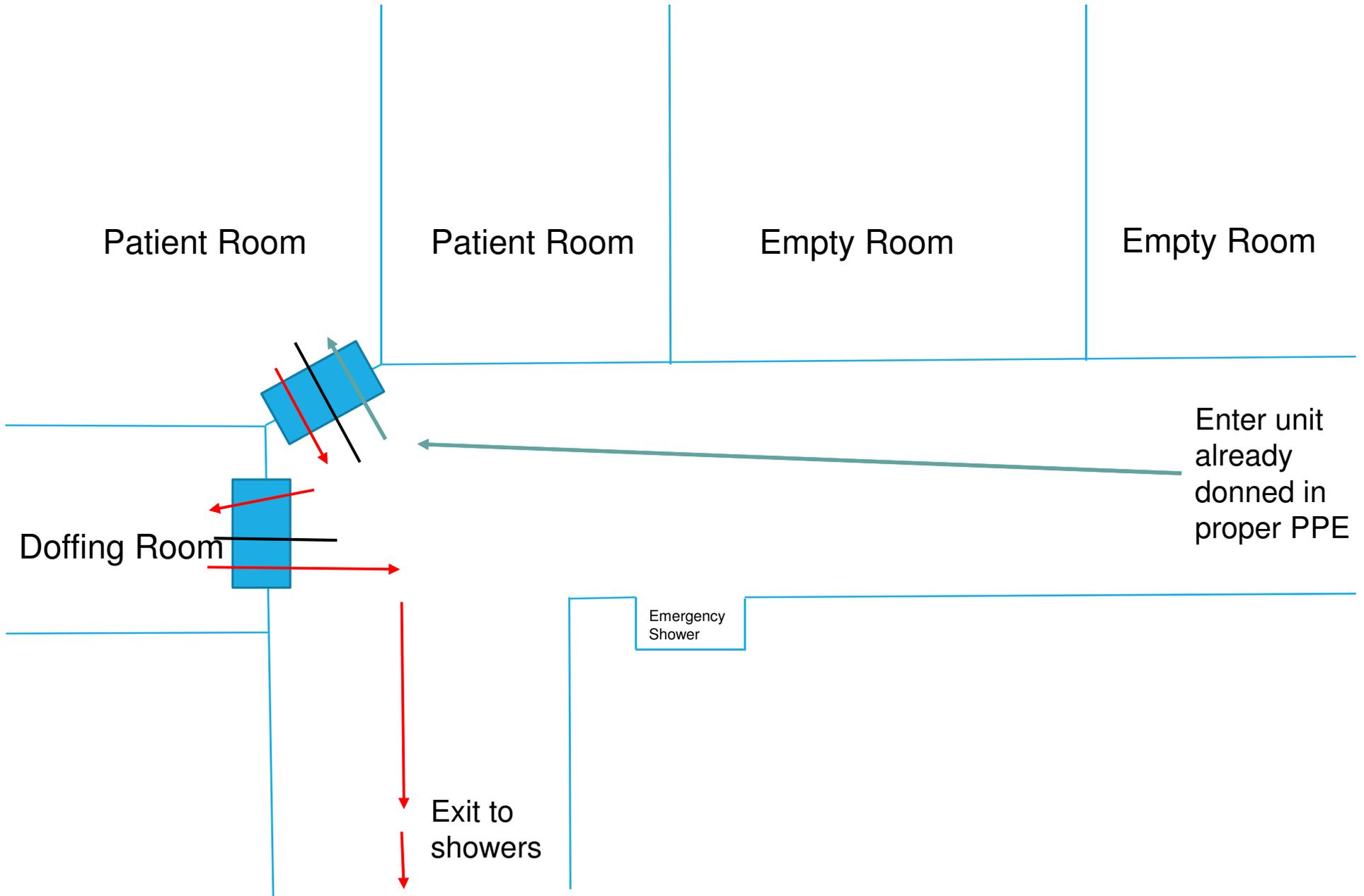
- HCW enter the PUI room in one direction and at end of shift exit the through another direction to PPE doffing area/showers

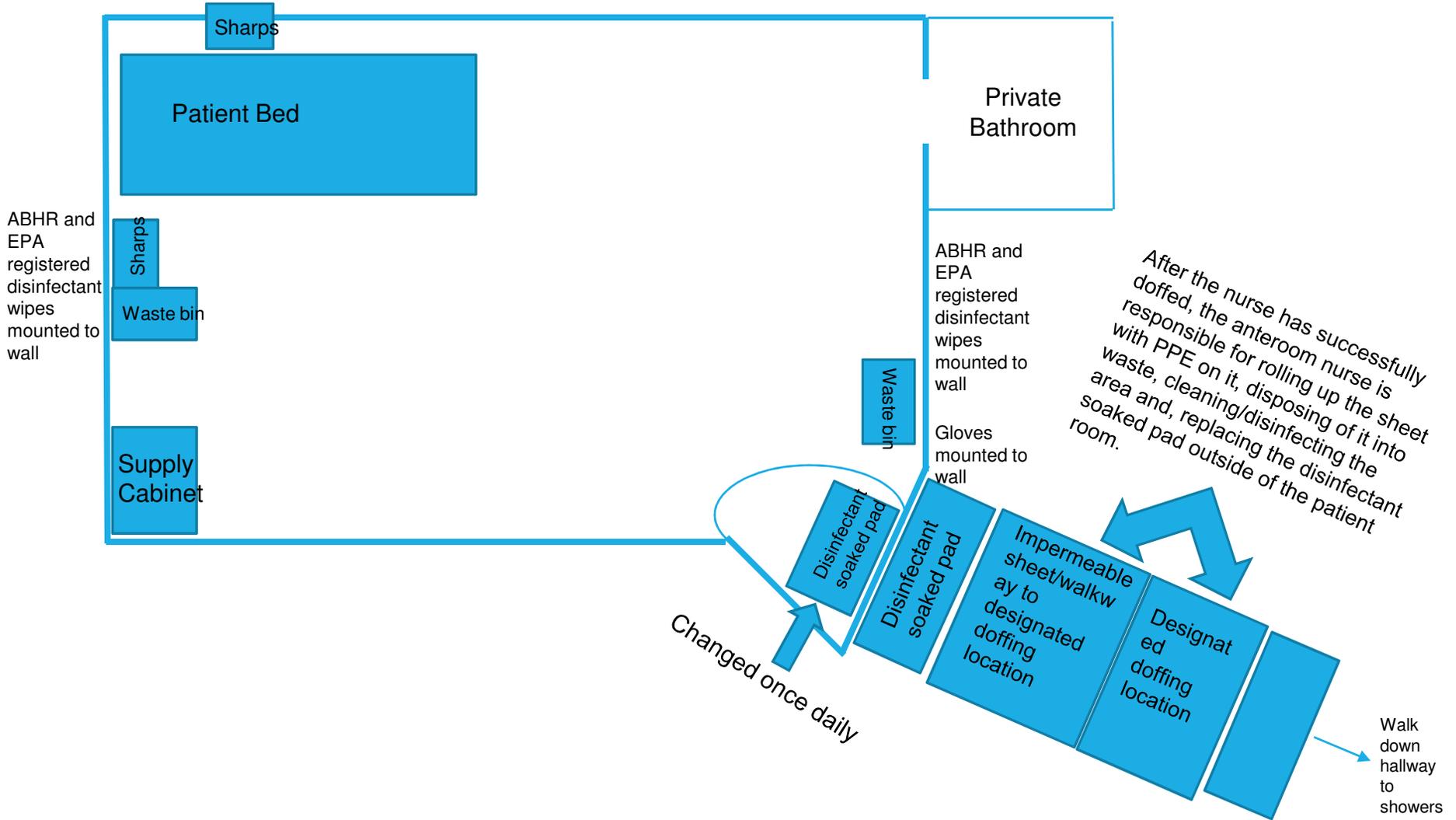
Best Practices-Private Room

If unidirectional flow is not possible

- Ensure flow within PUI care area minimizes encounters between “clean” staff/materials and “dirty” staff/materials
- Designate “clean” and “dirty” areas
- Designate doffing areas that are
 - Clean immediately after doffing process
 - Routinely cleaned during the shift
 - Avoided by staff other than the individual who is doffing and the trained observer and/or trained assistant







Best Practices- PPE

When hospitals are choosing their PPE, it is very important to take into consideration your healthcare workers and what they would feel most comfortable in.

- During our site visit with CDC, the PPE SME stated “sometimes too much PPE is just as dangerous as too little PPE. It all comes down to the healthcare worker”.

CDC recommends fluid impermeable gowns or coveralls for a clinically unstable or “wet patient” and hospital can choose to use fluid resistant gowns or coveralls for a clinically stable or “dry patient” or for the trained observer/trained assistant.

Some hospitals during our site visits has PPE assigned to, pre-fitted and adjusted for individual staff

Best Practices-Emergencies

Plan for emergencies and identify an evacuation route and location

- Where does the team evacuate?
- What route should be traveled?
- What should the PUI don?
- What are specific processes in place if the patient needs to be evacuated during an emergency?
- Ensure that the staff know!

Best Practices

Feedback from hospitals, county health departments, task force members

Areas That Need Improvement As Observed on Site Visits Nation Wide

Infrastructure

- Problematic layout for movement of HCW providing clinical care for up to 24 hours
 - Draw out the room and label where items will go
- Inadequate PPE doffing space
 - Practice/drill/exercise in the doffing space

Staffing

- Inadequate number of trained staff available to provide care for up to 24 hours
 - Improve strategies to recruit and maintain appropriate staffing levels for the unit and laboratory
- Unrealistic shift durations in full PPE
 - Recommend 4 hours in each role for N-95 mask option
 - Recommend 2-3 hours in each role for PAPR option

PPE

- Inter-facility variability in protocols
- Different supply chains, personal preference, experience
- Expertise to train healthcare workers varies
 - Recommend facilities develop and post demonstration posters for donning and doffing of PPE

Areas That Need Improvement As Observed on Site Visits Nation Wide

Training

- Competency in defined roles is labor intensive to establish and maintain
 - Recommend facilities increase the frequency of training and exercises (at minimum every 6 months)
- There is a perception that training resources and opportunities are limited

Waste Management

- Highly variable local regulations
- Hauling and disposal of solid waste
- Flushing of human waste into sewage system
- Workable solutions usually exist but can be very expensive
- *Florida Department of Health has released guidance stating it is safe for hospitals to flush their toilets

Environmental cleaning and disinfection

- Potential overuse or misuse of bleach products
- Need for terminal cleaning protocols

Areas That Need Improvement

Feedback from hospitals, county
health departments, CFDMC
members

Question & Answer Session

Resources

Resources for Frontline Hospitals

- A Microsoft Word document that has compiled resources for each Frontline Hospital domain
 - To access the links hold the CTRL button on your keyboard when clicking the hyperlink

Emory Assessment Hospital Preparedness Training

Nebraska Assessment Hospital Preparedness Training

CDC Ebola Website

- <http://www.cdc.gov/vhf/ebola/index.html>

Florida Department of Health Website

- <http://www.flhealth.gov/ebola>

Contact Information

Jammie Klim, MPH

Email: jammie.klim@flhealth.gov

Direct Telephone: 305-325-2544

Work Cellphone: 850-445-3728