

Putting Infection Control in Everyday Practice

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Cheri Fast, RN, BSN, CIC



The background features a circular illustration of three healthcare workers in full personal protective equipment (PPE), including masks and gloves. One worker is holding a patient's hand, another is holding a stethoscope, and a third is holding a syringe. The scene is surrounded by stylized virus particles in green and blue. A white stethoscope icon with a plus sign is positioned above the title.

Objectives

1. Review the chain of transmission and strategies to break this chain
2. Explore the mode of transmission
3. Differentiate between standard and transmission based precautions
4. Explore methods for reducing infections while providing care

Infection Prevention Goals

1. Minimize the risk of infection in patients and residents
2. Reduce the risk of transmission of infectious agents among and between residents, patients and healthcare workers
3. Reduce the risk of infections developing in residents and patients related to the use of devices





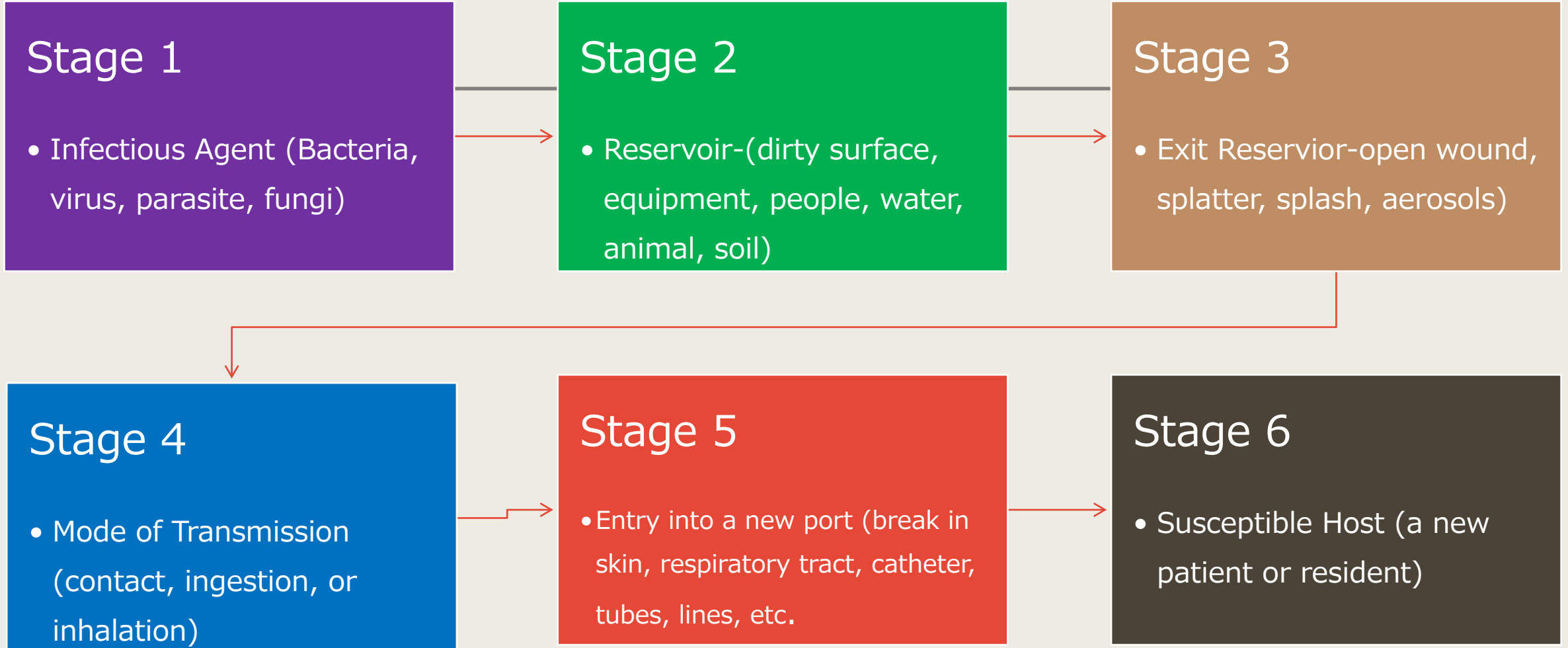
Objective 1-

Review the chain of transmission and discuss strategies to reduce infections.

Transmission of infections in a healthcare settings; we need 3 things...

- * A reservoir or a source
- * A susceptible host with a portal of entry
- * A mode of transmission for the agent

THE SIX LINKS IN THE INFECTION CHAIN



HOW CAN YOU BREAK THE CHAIN OF TRANSMISSION?

- GLOVES
- CLEAN ROOMS
- DISINFECTION OF SURFACES
- PROPER MEDICAL DEVICE (INSERTION, CARE, REMOVAL)
- USING A BARRIER
- EDUCATION
- GET VACCINATIONS
- USE APPROPRIATE PPE
- HAND HYGIENE





ENSURE RESIDENTS AND PATIENTS
HAVE...

- GOOD PERSONAL HYGIENE
- COVERED WOUNDS
- ISOLATION (WHEN NEEDED)
- UNNECESSARY ANTIBIOTICS
- HAND HYGIENE
- SINGLE ROOMS (IF AVAILABLE)
- PROPER HYDRATION
- THEIR OWN PERSONAL CARE ITEMS



Objective 2-

Explore the mode of transmission

Polling Question #1

Coughing, sneezing and talking are best associated with which form of transmission?

1. Airborne transmission
2. Direct Contact
3. Droplet transmission
4. Indirect transmission

How infectious diseases are transmitted — modes of transmission

Contact transmission-direct contact with infectious blood or body substances

Droplet transmission-infectious agent in large droplets (respiratory secretions/splash/splatter)

Airborne transmission-infectious agent in aerosols and are inhaled

Food-borne transmission-consumption of contaminated food

Water-borne transmission-consumption of contaminated water

Vector-borne transmission-carried by a vector e.g. mosquito bites, etc



Objective 3-Differentiate between standard and transmission-based precautions

“Standard Precautions include a group of infection prevention practices that ***apply to all patients, regardless of suspected or confirmed infection status.***

Transmission Based Precautions - for patients who are known or suspected to be infective or colonized with infectious agents.

Standard Precautions

- Combine the major features of Universal Precautions and Body Substance Isolation and are based on the principle that *all blood, body fluids, secretions, excretions (except sweat), nonintact skin, and mucous membranes may contain transmissible infectious agents.*
- *Consist of hand hygiene, gowns, gloves, face shield, eye protection, safe injection practices.*
- *Examples of tasks when you should wear PPE: suctioning, irrigating wounds, cleaning contaminated equipment*
- *Never wash gloved hands! Never reuse disposable gloves. Change gloves after each procedure even if doing more than 1 procedure on same patient!*

Standard Precautions

- *Dispose of gowns and gloves after use in general waste container, not in medical waste biohazard container. Take off in the patient room, not in hallway!*
- *Situations to wear gown: irrigating a wound, tracheostomy care, anytime blood or body fluid spilling or dripping is possible on your clothes.*
- *Standard Precautions requires HCW's to treat all blood and body fluids as if they are contaminated.*

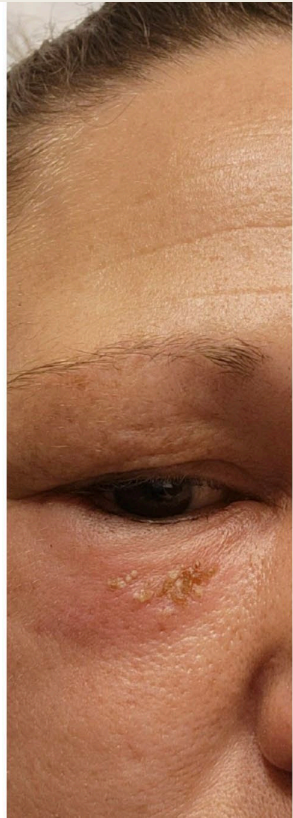
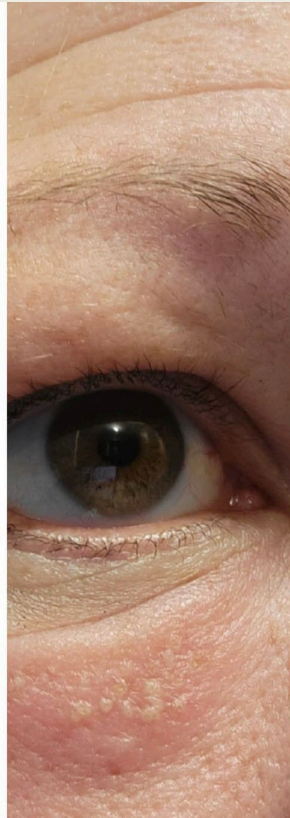
Transmission Based Precautions

Transmission Based Precautions - for patients who are known or suspected to be infective or colonized with infectious agents. This is used in conjunction with Standard Based Precautions.

Contact Precautions
Droplet Precautions
Airborne Precautions



Contact Direct Transmission: When blood or body substance, from a person or animal, comes in direct contact with another person in such a way it can enter the body.
Can be direct or indirect contact!



Contact Indirect Transmission

Indirect Contact: When germs from an infected host, or other source, are passively transmitted to another person - via an inanimate object.

Inanimate objects: e.g. surfaces, keyboards, I-pads, utensils, cups, toothbrushes, razors, computer mouse, soiled linen, sinks, phones, handrails, light switches, door handles, cutting boards, elevator buttons...



Contact Based Precautions– Direct or Indirect

Used for infections, germs, or diseases that are spread by touching the patient or items in the room.
Examples: MRSA, VRE, diarrheal illness, open wounds, RSV, CDiff

Gown and gloves upon entry to room. Discard PPE *before* exiting room

Change gown and gloves after preparing patient for transfer out of room and perform hand hygiene. Don *new* PPE to assist with patient transfer outside of room

Single room if available

Room should be cleaned daily with a focus on high touch surfaces

If Cdiff-1:10 dilution of bleach is recommended



Droplet Precautions

Droplet precautions used for infections or germs that are spread in large droplets caused by coughing and sneezing.

(Examples: influenza, whooping cough or pertussis, bacterial meningitis, RSV)



- Surgical mask is required upon entry to room
- Single rooms preferred
- If must share room, beds need to be at least 6 feet apart, use privacy curtain
- Change gloves and wash hands between patients
- Daily clean of high touch and horizontal surfaces

Airborne/Droplet Transmission



Large particles (droplets) can carry viruses and bacteria through the air which can then be deposited onto mucous membranes (eye, nose, mouth) of a susceptible person (e.g. via sneezing, coughing, talking). Don't travel long distances and need at least 3 feet separation.

(Examples: whooping cough, rubella, mumps, influenza, meningococcal disease)

Small particles (aerosols) that are airborne, may also be deposited on mucous membranes or inhaled directly. Smaller and can be infective over time.

(Examples: tuberculosis, legionella, chicken pox, measles)

Airborne Precautions

Place patients in Airborne Precautions if they have a disease that is transmitted by the airborne route. Airborne transmission occurs when microorganisms are carried in aerosols (tiny particles that are suspended in air) and a susceptible host inhales the particles.

- These diseases include: chicken pox/varicella, measles, tuberculosis, possibly acute respiratory syndrome associated coronavirus
- Patients should be in negative pressure room (acute and long-term care) and should have at least 6-12 air exchanges per hour. Air should be directly exhausted outside
- Door must be kept shut
- N-95 mask or higher respirator



Airborne Precautions



- Patient transport: Limit transport. If necessary, patient should wear a surgical mask; not a N95. The thought is not to limit their ability to breathe. Cover any exposed skin lesions with clean bandages
- If ambulatory care, you suspect patient may have one of these conditions, don't leave them in the waiting room. Get them evaluated as soon as possible
- Cleaning: EVS staff should wear N95 on entry into room. After the patient has left the room, the room should remain unoccupied for enough time to allow for complete air exchange to occur. (Could be up to at least 1 hour)
- Pregnant healthcare workers should not work with these patients

INSIDE INFECTION CONTROL

WHAT'S A RESPIRATORY DROPLET? WHY DOES IT MATTER?

EPISODE 4



[Episode 4: What's a Respiratory Droplet? Why Does it Matter? - YouTube](#)




Objective 4: Explore methods for reducing infections while providing care

Polling Question #2

When is the best time to clean the overbed table?

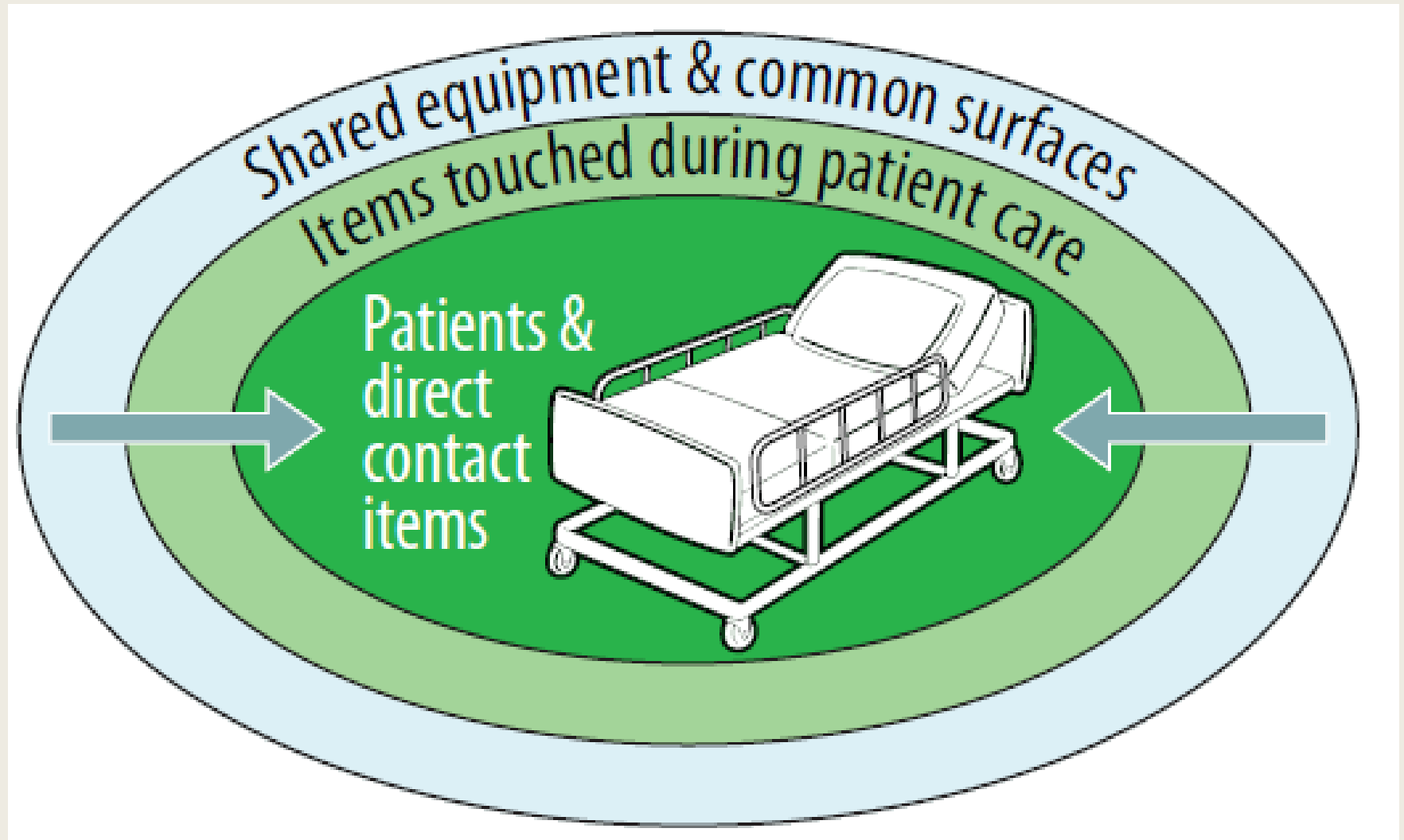
1. Last thing in the room
2. First; because it is usually dirtiest
3. Whenever I think of it
4. Somewhere in the middle

An illustration featuring three individuals engaged in cleaning or disinfection activities. On the left, a person wearing an orange hard hat, safety glasses, a white beard, and a white face mask is spraying a white bottle. In the center, a woman with black hair in a bun, wearing a green headband, a white face mask, and a white lab coat over a green top, holds a green spray bottle. On the right, a woman with black hair in a bun, wearing a white face mask and a green blazer, is spraying a white bottle. The background is a light beige color with several green virus-like particles and orange starburst shapes. A white circular graphic element is overlaid on the left side of the image, containing the text.

Collect the right materials, establish a thoughtful plan and put it into practice

CLEAN TO
DIRTY

(TOP TO
BOTTOM)





CLEANING SCHEDULES AND PROCEDURES SHOULD PROGRESS FROM LEAST SOILED AREAS TO THE MOST SOILED AREAS (PATIENT ZONES) AND FROM HIGH TO LOW.

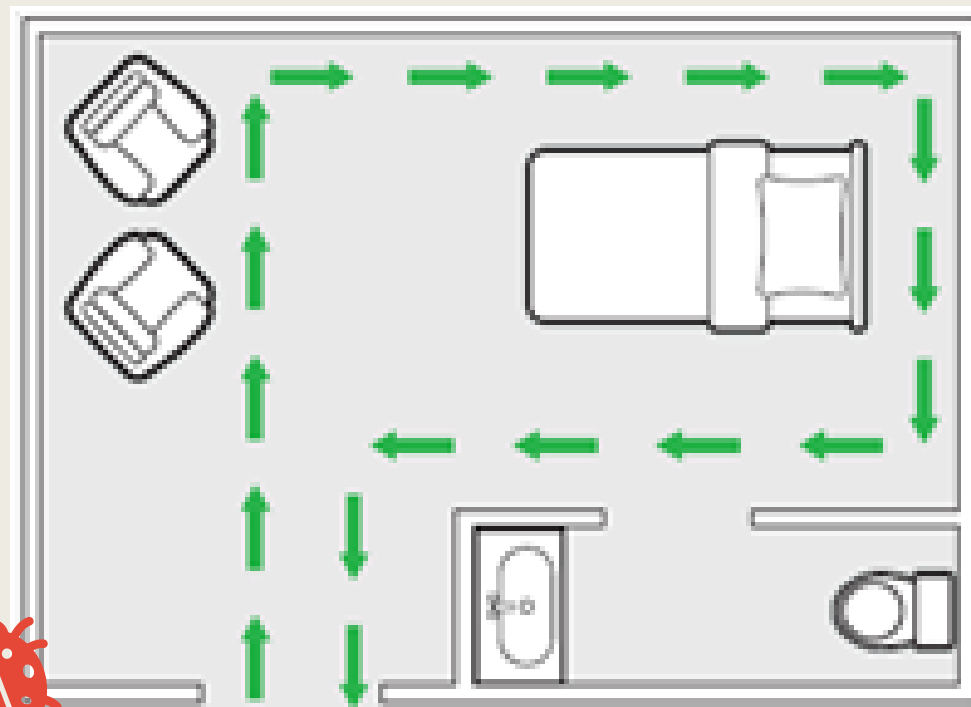


CLEAN BED RAILS BEFORE BED LEGS



CLEAN SURFACE BEFORE FLOORS

TO ENSURE ALL SURFACES ARE REACHED, CLEANING SHOULD BE PERFORMED IN A SYSTEMATIC MANNER. EVERYONE IN FACILITY SHOULD CLEAN BASICALLY THE SAME.



How to use your cleaning cloth



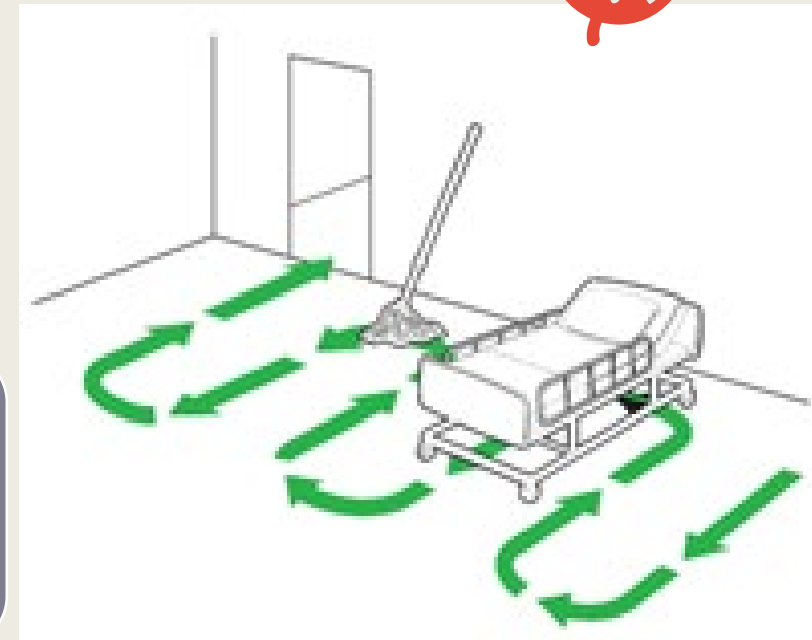
CDC recommends changing floor mopping solutions every 3 rooms and at least every 60 minutes

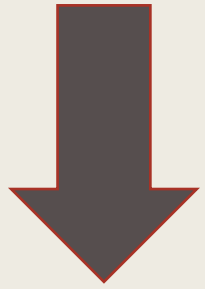
USED MOPS AND CLEANING CLOTHS SHOULD NEVER BE RETURNED TO CONTAINERS OR CLEANING SOLUTIONS. THEY SHOULD BE LAUNDERED OR DISCARDED AFTER USE.



A DISINFECTANT MUST BE USED TO CLEAN FLOORS IN CRITICAL AREAS SUCH AS ISOLATION ROOMS.

NEVER LEAVE SOILED MOP HEADS AND CLEANING CLOTHS SOAKING IN BUCKETS.





CLEANING PROCEEDS FROM HIGH TO LOW SURFACES, ALLOWING DUST AND DEBRIS FROM HIGH SURFACES TO FALL ONTO LOWER ONES BEFORE LOWER SURFACES ARE CLEANED.

DUSTING CONTAINS FUNGAL SPORES, SUCH AS ASPERGILLUS. TO CAPTURE DUST WITHOUT AEROSOLIZING SPORES, DUSTING SHOULD BE DONE USING A CLOTH OR DUST MOP THAT IS CHEMICALLY TREATED OR MADE OF MICROFIBER.

DUSTING SHOULD BE PERFORMED FIRST! PARTICLES THAT FALL WILL BE CAPTURED WHEN THE FLOOR IS CLEANED.

AVOID FEATHER DUSTING.




Cleaning Precautions

- Always use approved disinfectant
- Always follow manufacturers' guidelines for disinfecting patient care equipment
- Always follow manufacturers' required contact times for disinfection. Contact time indicates how long the surface must remain wet with disinfectant

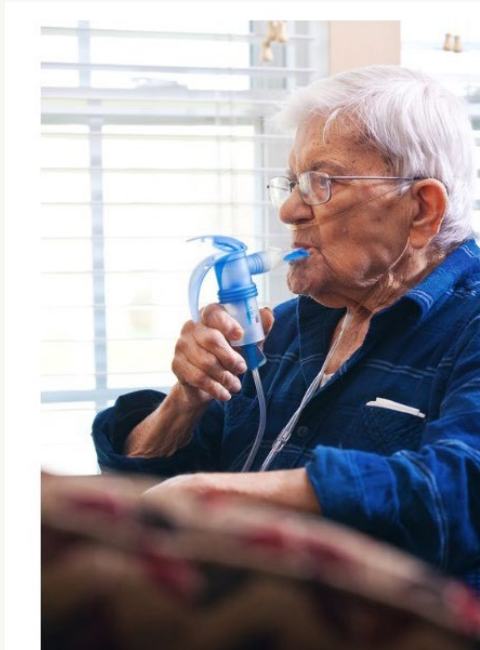






Exam tables-
Don't store unused
supplies in these
drawers!

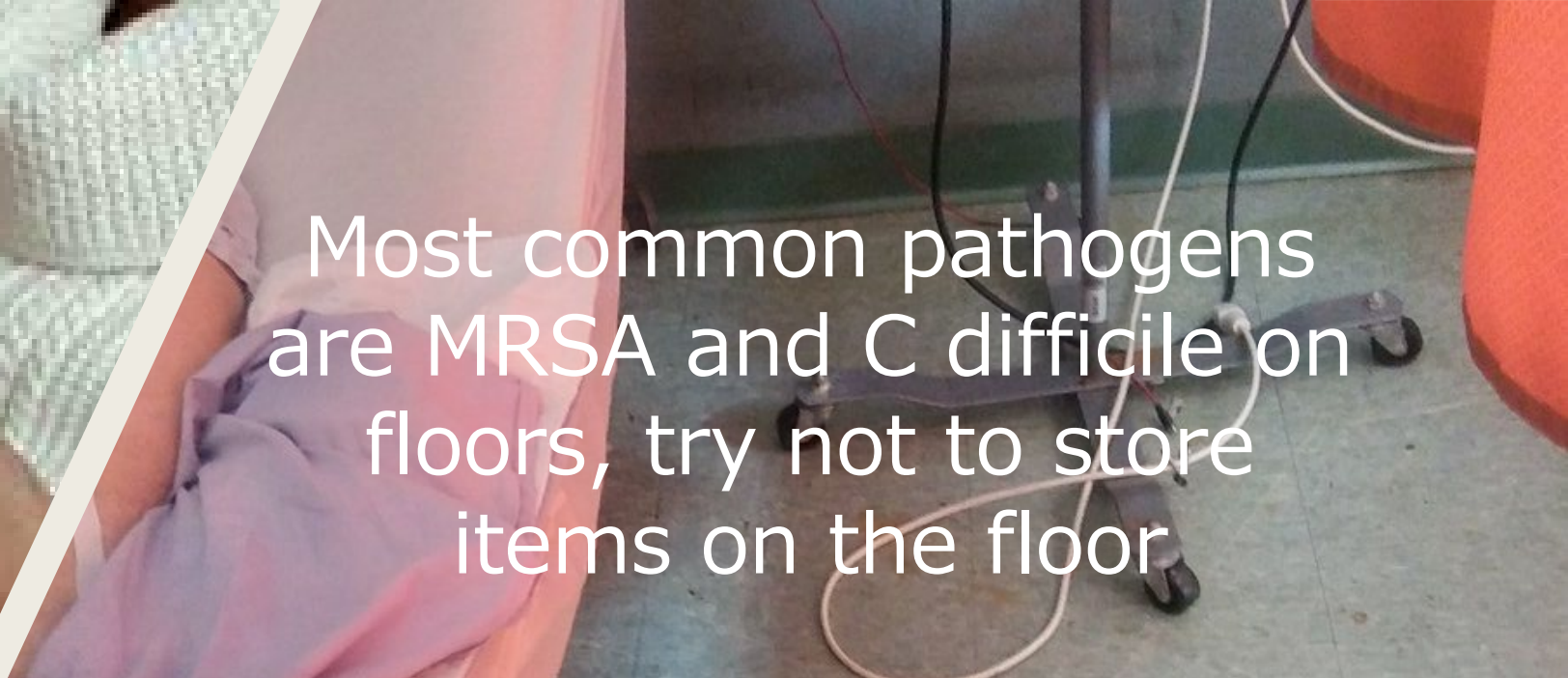
Glucometers



Nebulizers

Say What? Cross Contamination





Most common pathogens are MRSA and C difficile on floors, try not to store items on the floor





↑ End of Dead Leg

↑ Pipe to Kitchen



“WATER BUGS”

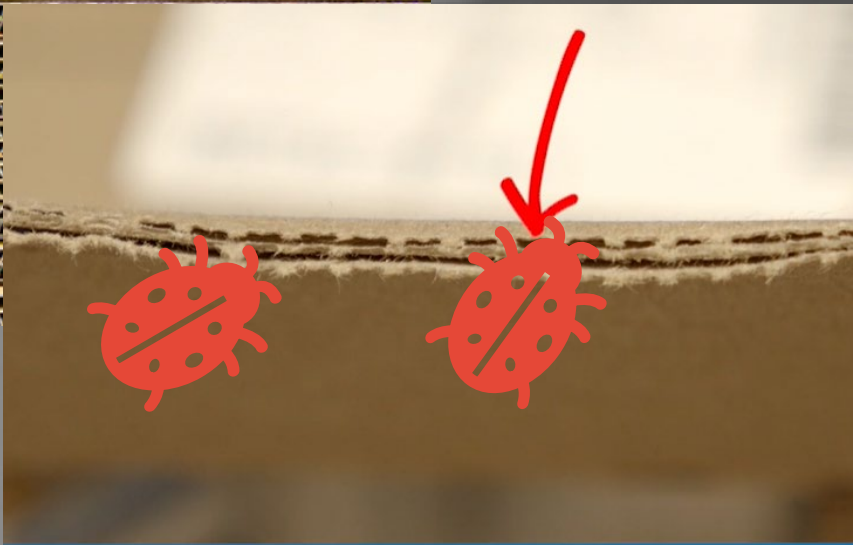
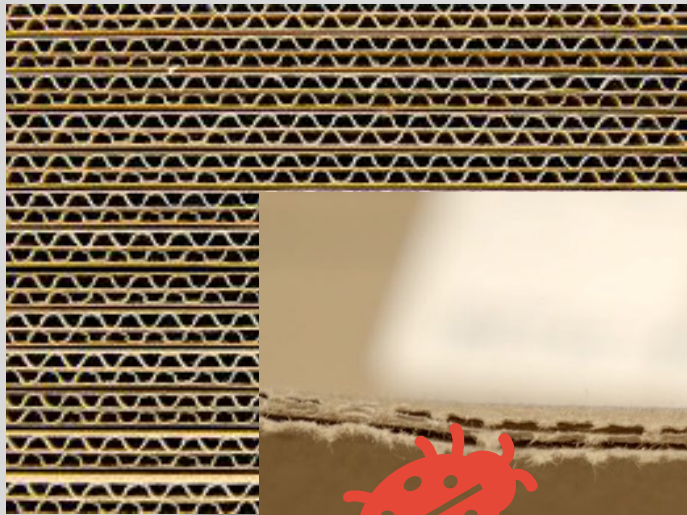
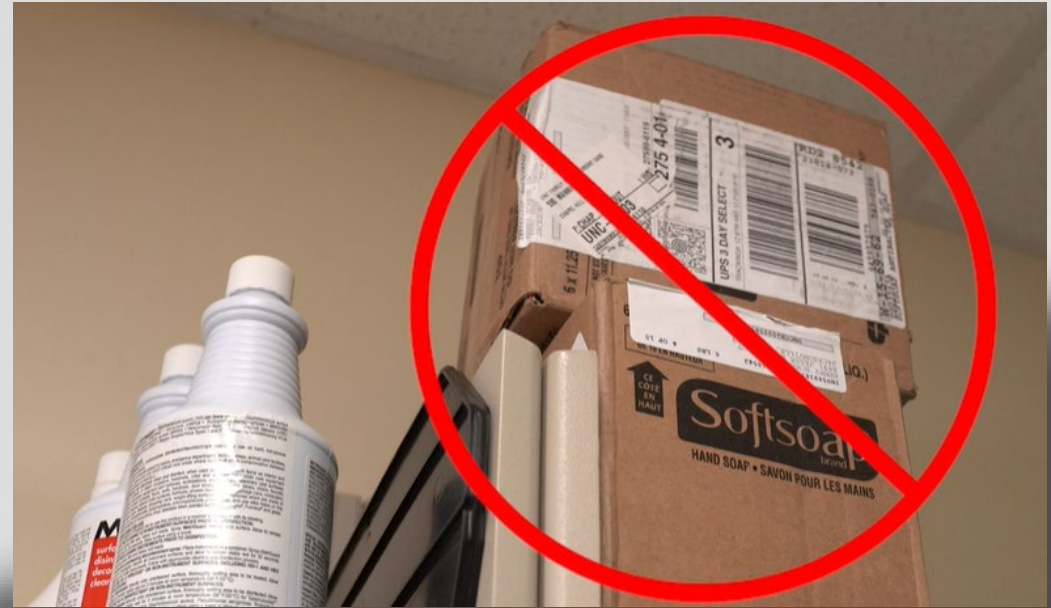
“NO STORAGE ABOVE LINE”



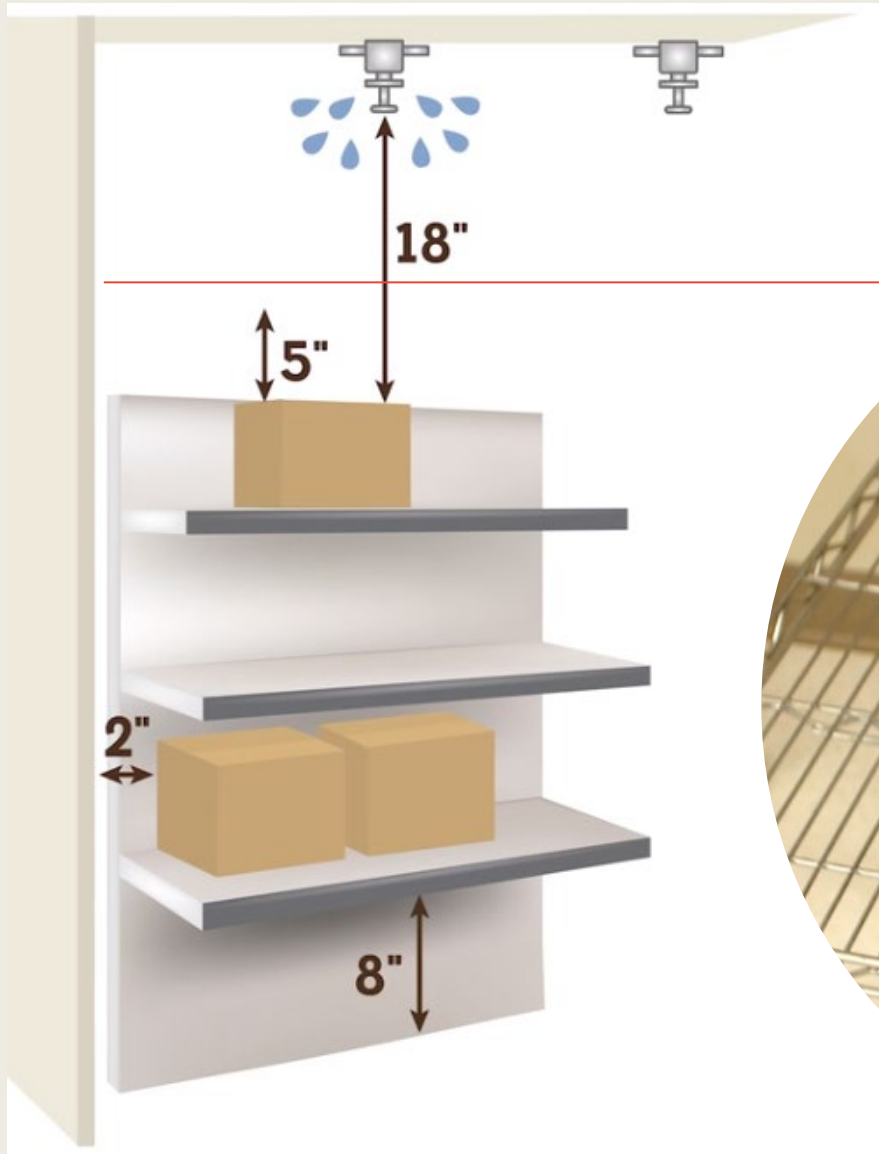
“DRAW A
LINE ON
WALL”

NO CORRUGATED CARDBOARD CONTAINERS

Storage in any cardboard is discouraged!



Items should be removed from shipping cartons and boxes. Outer shipping boxes should not be left in clinical areas due to risk of environmental contamination. Supplies should be stored in plastic, washable containers.



“WHAT DO
YOUR
SUPPLY
CLOSETS
LOOK LIKE?”



Laundry

- * Use rubber gloves before handling soiled linen (sheets, towels, curtains)
- * Never carry soiled linen against your body
- * Carefully roll up soiled linen
- * Do not shake linen
- * Do not take linens out of patient rooms without it being contained. * Soiled bags can be laundered with the soiled linen they contained
- * If soiled with feces or vomit, remove as much as possible
- * If risk of splashing, (doing by hand), always wear appropriate PPE
- * Have designated area for folding and sorting clean linen
- * Keep laundry carts covered at all times

EVERY PATIENT/RESIDENT
SHOULD HAVE THEIR OWN
PERSONAL CARE ITEMS







"WHAT DO I PUT ON FIRST?"

1. GOWN
2. MASK
3. FACE SHIELD
4. GLOVES



WHAT CAN WE
DO TO PROTECT
OUR PATIENTS,
RESIDENTS &
OURSELVES?

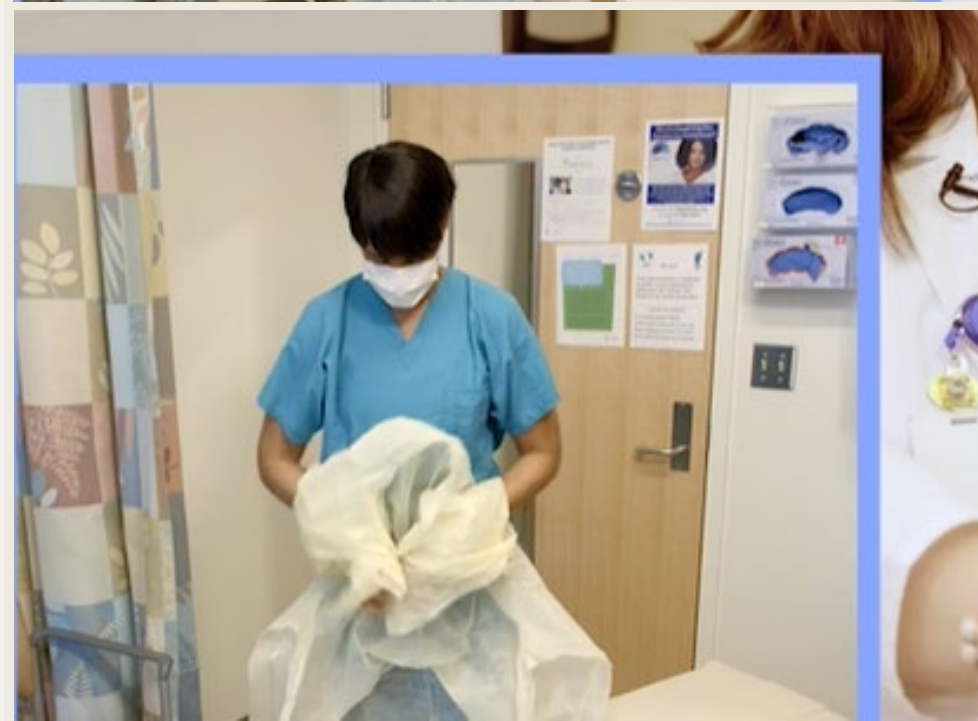
"WHAT DO I TAKE OFF FIRST?"

1. GLOVES
2. FACE SHIELD
3. GOWN
4. WASH HANDS
5. MASK
6. WASH HANDS



WHAT CAN WE
DO TO PROTECT
OUR PATIENTS,
RESIDENTS &
OURSELVES?

PPE 101



What Else Can I Do?

Practice hand hygiene at every opportunity. Unclean hands will promote the spread of infections.

Teach patients to ask healthcare workers to clean their hands before they are being examined or procedures are done. Have patients wash their hands before and after eating, using toilet, etc

Educate your patients and their family/ies on proper precautions to do at home



Staff are key to breaking the chain of infection by preventing pathogens from "going mobile" or spreading throughout the facility. Good hand hygiene, proper glove use, cleaning residents' rooms, disinfecting surfaces and equipment and using isolation precautions, when necessary, are just some of the ways staff help prevent pathogen transmission

What is Project Firstline?

**PROJECT
FIRSTLINE
IS FOR
YOU**

**PROJECT
FIRSTLINE**
CDC's National Training Collaborative
for Healthcare Infection Prevention & Control

The graphic features four diverse healthcare professionals in a 2x2 grid. Top-left: A woman with dark hair in a black top against a pink background. Top-right: A woman with dark hair in blue scrubs against a teal background. Bottom-left: A woman with a large afro in green scrubs against an orange background. Bottom-right: A man with short dark hair in teal scrubs against a lime green background. The text 'PROJECT FIRSTLINE IS FOR YOU' is on the left, and the Project Firstline logo is at the bottom left.

Training Needs

Implementing IC
with vulnerable
populations

Strategies for
putting IC in place

COVID 19

Source Control

Cleaning and
Disinfection

Triage

Device
Reprocessing

PPE

Free infection prevention training. Check out South Dakota Project Firstline



Training is:

- * Short*
- * Easy to understand*
- * Certificate available*
- * Great tips*
- * Customizable*

<https://www.sdprojectfirstline.org/>

ICARS are Available | FREE

South Dakota Long-Term Care Facilities and Assisted Living Centers

What else should I know about the ICAR?

It is non-regulatory: this process is designed to give your facility the chance to identify where there may be gaps in your infection control processes and provide timely, helpful feedback that can help your facility improve protocols and procedures.

How do we sign our facility up for this opportunity? Email Leah Bomesberger @ leah.bomesberger@state.sd.us your facility name and main contact person.

Questions? Contact: Leah Bomesberger @ leah.bomesberger@state.sd.us or Kipp Stahl @ kipp.stahl@state.sd.us

We have had 35 assisted living facilities and 52 long-term care facilities complete ICAR's across the state

INFECTION CONTROL TRAINING **FOR YOU**



- ✓
- ✓ **Free live training events**
- ✓ **Recordings of past training events**
 - **Opportunity to earn CEU through North Dakota Board of Nursing**

Stay in touch! Email us at dohpfl@nd.gov if you would like to receive updates on new trainings.

Visit our website: www.health.nd.gov/projectfirstline



Charlotte Hofer

Charlotte.hofer@sdfmc.org

Jess Danko

Jess.danko@sdfmc.org



Cheri Fast

Cheri.fast@sdfmc.org



Diane Eide

Diane.eide@sdfmc.org

Meet the team at SD Project Firstline

RESOURCES

[South Dakota Project Firstline](#)

[CDC Project Firstline](#)

[CDC Project Firstline Facebook Page](#)

[APIC Infection Control Resources](#)

[APIC Do's and Don'ts With Glove Removal](#)

[How to Not Get Sicker in the Hospital | YouTube Video](#)

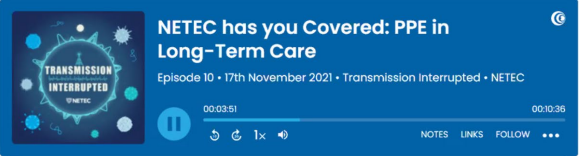
[It's in Your Hands - Official song for the World Hand Hygiene Day \(5th of May\)](#)

[Infection Prevention and Control \(IPC\) for COVID-19 Virus | OpenWHO](#)

[CDC Infection Control Guidance](#)


[Disinfection & Sterilization Guidelines | Guidelines Library | Infection Control | CDC](#)

NETEC has you Covered: PPE in Long-Term Care



<https://netec.org/podcast/netec-has-you-covered-ppe-in-long-term-care/>

★ PPE educational refresher: **great resource geared directly to LTC and ALF!** ★
★ <https://repository.netecweb.org/exhibits/show/ncov/item/1617>



Are your SURGICAL instruments CLEAN???