Multidrug-Resistant Organism (MDRO) Webinar 3 – Response

Training for Local Health Department Staff

Presented by Division of Patient Safety and Quality, Healthcare-Associated Infections/Antimicrobial Resistance (HAI/AR) Program

3/16/23

Housekeeping

- All attendees in listen-only mode
- Submit questions via Q&A pod to **All Panelists**
- Slides and recording will be made available later

IDPH
Illinois Department of Public Health

LHD MDRO Webinar Series

1: MDROs 101 – An Introduction

Recording:
https://illinois.webex.com/illinois/lsr.php?RCID=2640788517bfd715bfad78682b439ee0

2: MDRO Surveillance and Investigation

Recording:
https://illinois.webex.com/illinois/lsr.php?RCID=5d2b2194c322fe17689d96c80349707d

3: MDRO Response

Webinar recordings and slides will be posted to the IDPH CD SharePoint.

IDPH
Illinois Department of Public Health

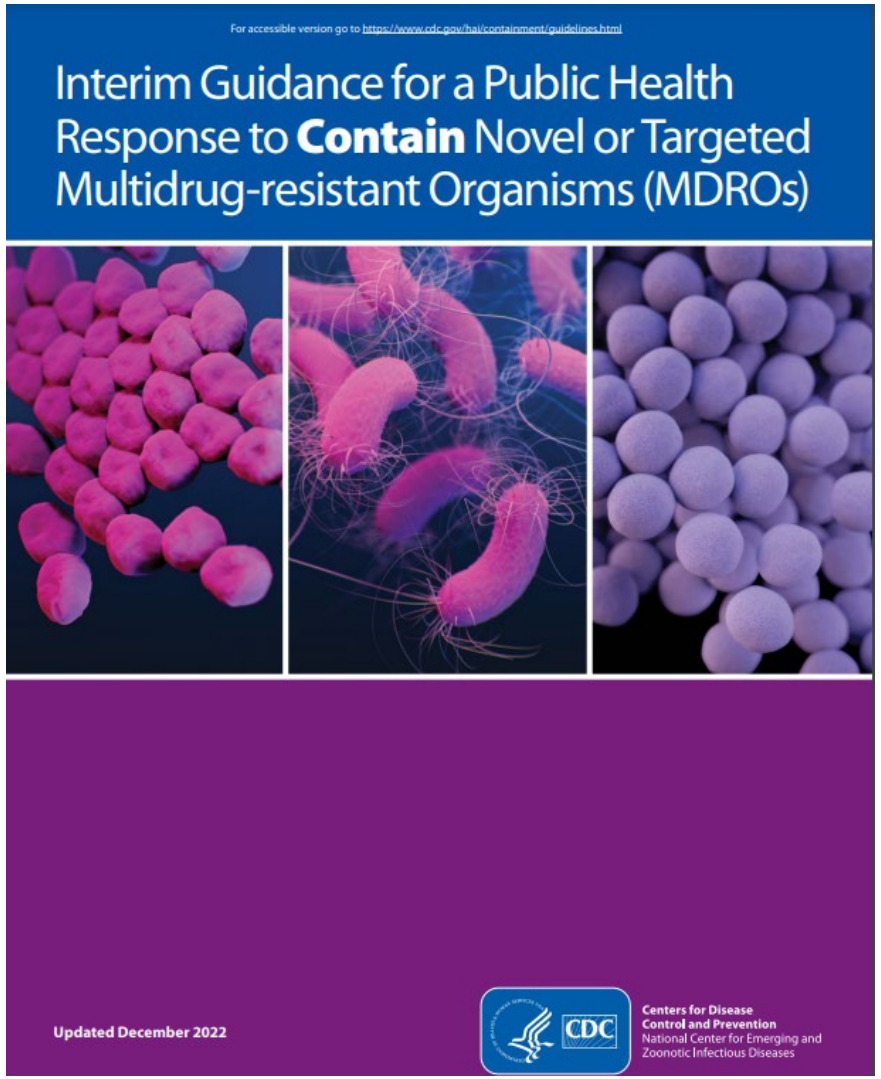
Today's Agenda

- CDC's MDRO containment guidance – response steps
- Infection control measures
- Colonization and point prevalence screening (PPS)
- Infection control assessment and response (ICAR)
- MDRO response scenario
- IPC education and resources

IDPH
Illinois Department of Public Health

Updated CDC MDRO Containment & New Prevention Guidance!

https://www.cdc.gov/hai/mdro-guides/containment-strategy.html



https://www.cdc.gov/hai/mdro-guides/prevention-strategy.html

Updated MDRO Containment Tiers

Epidemic Stages	No cases identified, Limited spread	Limited to moderate spread	Moderate to advanced spread	Epidemic
Containment Tier	**Tier 1**	**Tier 2**	**Tier 3**	**Tier 4**
Tier definition	Organisms or resistance mechanisms never or very rarely identified in the United States	Mechanisms and organisms not regularly found in a region. Pan-not susceptible organisms with the potential for wider spread in a region	Mechanisms and organisms regularly (i.e., frequently) found in a region but not endemic.	Mechanisms and organisms that are endemic.

IDPH
Illinois Department of Public Health

Selected Response Recommendations – Screening

Containment Tier	Tier 1	Tier 2	Tier 3	Tier 4
Response Elements – Contact Investigation				
Screening of healthcare contacts (i.e., residents and patients)	ALWAYS	ALWAYS	USUALLY	**Prioritize prevention;** containment principles generally do not apply.
Household Contact Screening	USUALLY	RARELY	RARELY	
Healthcare Personnel Screening	USUALLY	RARELY	RARELY	

IDPH
Illinois Department of Public Health

Selected Response Recommendations – Infection Control

Containment Tier	Tier 1	Tier 2	Tier 3	Tier 4
Infection Control Measures				
Notify healthcare providers; promptly implement appropriate transmission-based precautions	ALWAYS	ALWAYS	ALWAYS	ALWAYS*
Infection Control Assessment with observations of practice	ALWAYS	ALWAYS	SOMETIMES	SOMETIMES* (Prevention-driven ICAR)
Clear communication of patient status with transferring facilities	ALWAYS	ALWAYS	ALWAYS	ALWAYS*

*Red font is modified from original CDC document. Refer to CDC's MDRO prevention guidance for more details.

IDPH
Illinois Department of Public Health

INFECTION CONTROL AND PREVENTION MEASURES

Mary Alice Lavin, MJ, BSN, RN, CIC, FAPIC, and Olapeju “Pej” Lawal, RN, BSN

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Infection Prevention and Control Basics

- Standard Precautions
- Transmission Based Precautions
  - Contact Precautions
  - Enhanced Barrier Precautions
- Hand hygiene
- Surface cleaning and disinfection
- Communication

IDPH
Illinois Department of Public Health

Infection Prevention and Control Basics

- Standard Precautions
- Transmission Based Precautions
  - Contact Precautions
  - Enhanced Barrier Precautions
- Hand hygiene
- Surface cleaning and disinfection
- Communication

IDPH
Illinois Department of Public Health

STANDARD PRECAUTIONS

USE WITH ALL RESIDENTS

A group of infection prevention practices that apply to all patients, regardless of suspected or confirmed infection status, in any setting in which healthcare is delivered.

Standard Precautions are based on the principle that all blood, body fluids, secretions and excretions (except sweat) may contain transmissible infectious agents.

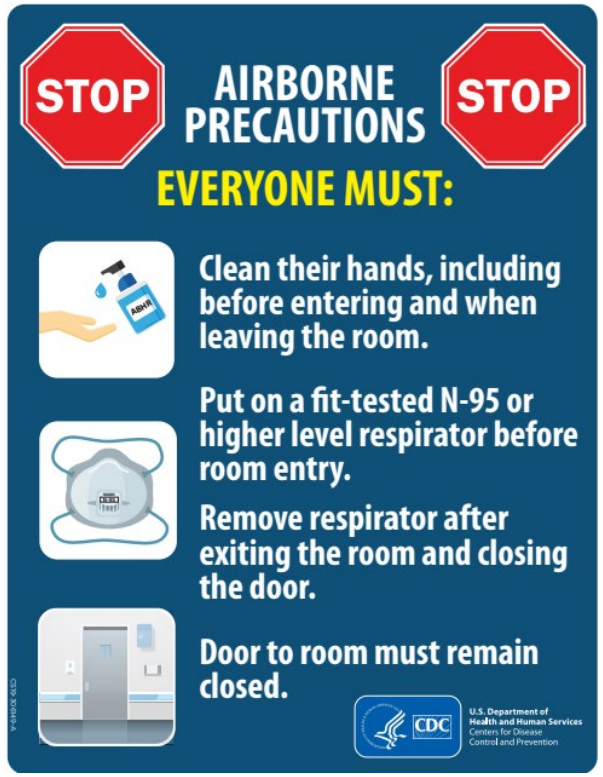
- Hand hygiene
- Use of personal protective equipment (e.g., gown, gloves, masks, eyewear)
- Respiratory hygiene / cough etiquette
- Sharps safety (engineering and work practice controls)
- Safe injection practices (i.e., aseptic technique for parenteral medications)
- Sterile instruments and devices
- Clean and disinfected environmental surfaces

Slide courtesy of Karen Trimberger.

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Droplet and Airborne Precautions

- Droplet Precautions
- Airborne Precautions



https://www.cdc.gov/infectioncontrol/basics/transmission-based-precautions.html#anchor_1564058318

https://www.cdc.gov/infectioncontrol/pdf/droplet-precautions-sign-P.pdf
https://www.cdc.gov/infectioncontrol/pdf/airborne-precautions-sign-P.pdf

IDPH
Illinois Department of Public Health

CONTACT PRECAUTIONS

Perform hand hygiene before entering and upon exit of room

Wear gown and gloves every time you enter the room

The goal is to prevent the transfer of multidrug-resistant organisms to staff hands and clothing.

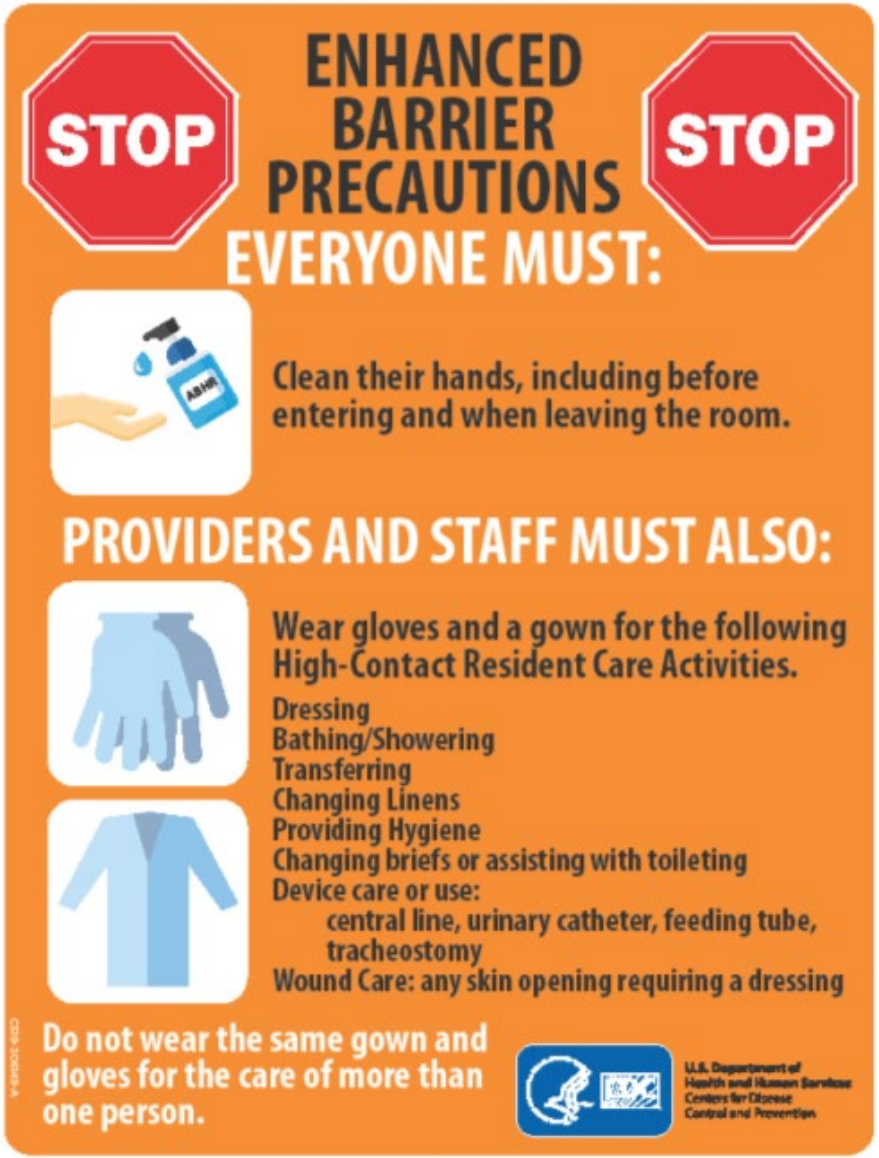
Slide courtesy of Karen Trimberger

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

ENHANCED BARRIER PRECAUTIONS

Enhanced Barrier Precautions

- Use of gown and gloves during high-contact resident care activities
- No private room required
- Residents can participate in group activities
- Intended to be used for resident's entire length of stay



Slide courtesy of Karen Trimberger.

IDPH
Illinois Department of Public Health

Cohorting Maps

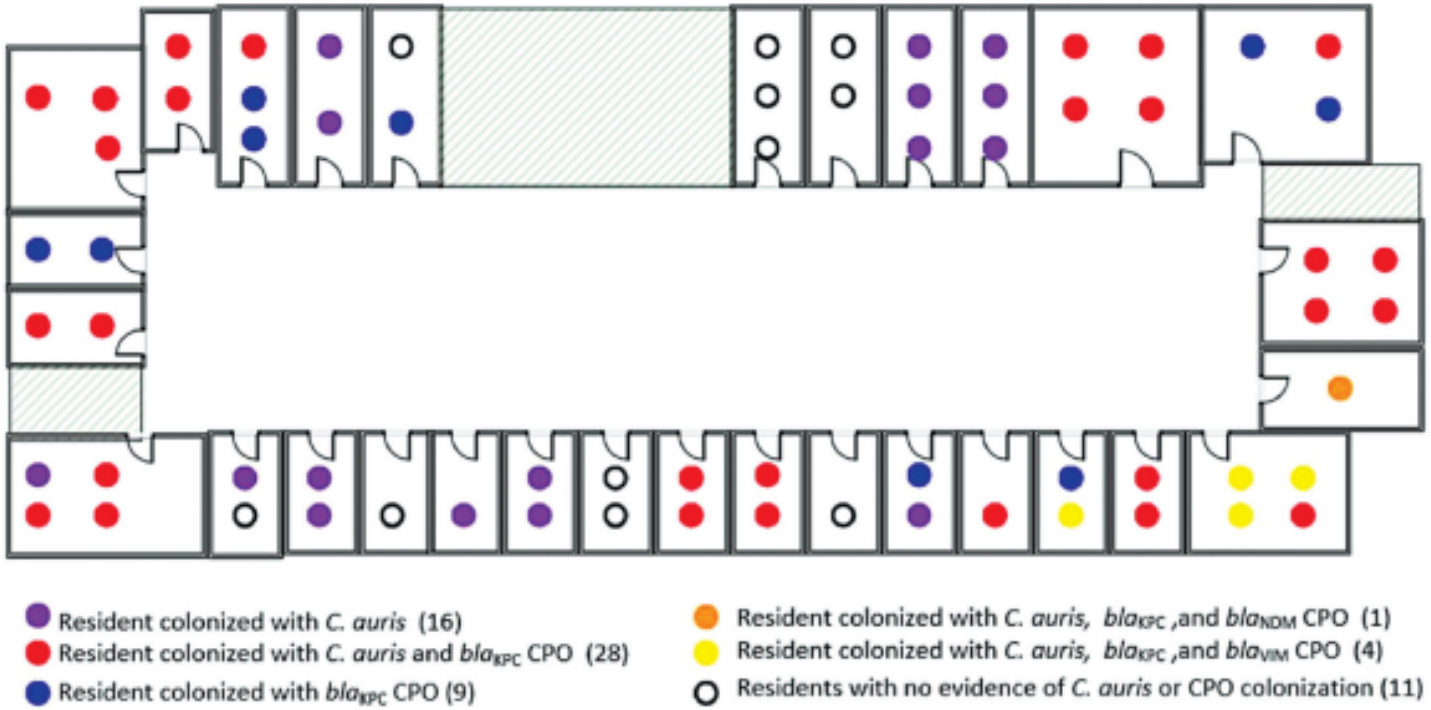


Figure 4.
Resident *Candida auris* (*C. auris*) and CPO colonization status and room assignment: vSNF-A ventilator-capable unit, October 2018. *C. auris* prevalence, 71% (49 out of 69); CPO prevalence, 61% (42 out of 69). Abbreviations: CPO, carbapenemase-producing organism; vSNF, ventilator-capable skilled nursing facility.

https://pubmed.ncbi.nlm.nih.gov/32291441/

IDPH
Illinois Department of Public Health

Cohorting Considerations and Challenges in Long Term Care Facilities

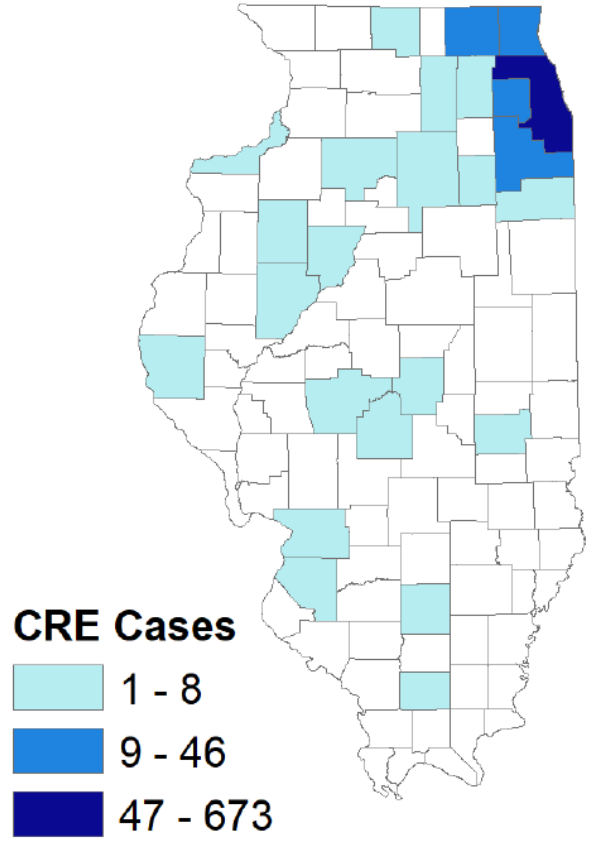
- Roommate combinations
  - Multiple organism and mechanism combinations
  - Gender along with organism and mechanism combinations
  - Social/interpersonal concerns
  - Acuity/ventilated resident
- Limited private rooms
  - Triple and quadruple rooms
  - Jack and Jill bathrooms
- Facilitating moves
  - Housekeeping support for terminal cleaning
  - Resident belongings
  - Buffer zones

IDPH
Illinois Department of Public Health

Cohorting Considerations and Challenges

- Update the maps after each point prevalence screening (PPS)
  - Delay between PPS and results
- Hierarchy of cohorting
  - Private room
    - *Clostridioides difficile*
    - Novel mechanisms of resistance
    - Organisms of concern previously not identified in the facility, jurisdiction, or geographic region
  - Multi-bed rooms
    - All occupants infected or colonized with *Candida auris*
    - *Candida auris* and carbapenemase producing organisms/carbapenem resistant Enterobacterales (CRE) co-colonization based on mechanism of resistance

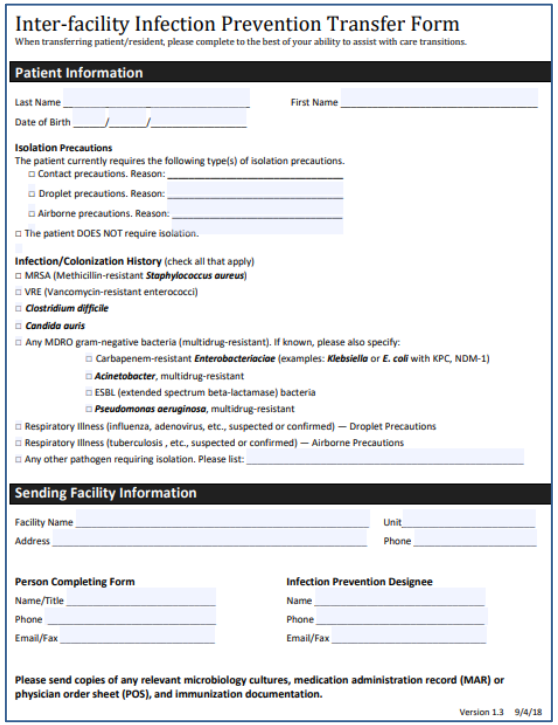
CRE cases by county, 2020 (N=841).



http://www.healthcarereportcard.illinois.gov/files/pdf/CRE_2020Report_FINAL.pdf

IDPH
Illinois Department of Public Health

Communication



Inter-facility Infection Prevention Transfer Form

When transferring patient/resident, please complete to the best of your ability to assist with care transitions.

Patient Information

Last Name _____ First Name _____

Date of Birth ____/____/____

Isolation Precautions

The patient currently requires the following type(s) of isolation precautions.

- ☐ Contact precautions. Reason: _____
- ☐ Droplet precautions. Reason: _____
- ☐ Airborne precautions. Reason: _____
- ☐ The patient DOES NOT require isolation.

Infection/Colonization History (check all that apply)

- ☐ MRSA (Methicillin-resistant ***Staphylococcus aureus***)
- ☐ VRE (Vancomycin-resistant enterococci)
- ☐ ***Clostridium difficile***
- ☐ ***Candida auris***
- ☐ Any MDRO gram-negative bacteria (multidrug-resistant). If known, please also specify:
  - ☐ Carbapenem-resistant ***Enterobacteriaciae*** (examples: ***Klebsiella*** or ***E. coli*** with KPC, NDM-1)
  - ☐ ***Acinetobacter***, multidrug-resistant
  - ☐ ESBL (extended spectrum beta-lactamase) bacteria
  - ☐ ***Pseudomonas aeruginosa***, multidrug-resistant
- ☐ Respiratory Illness (influenza, adenovirus, etc., suspected or confirmed) — Droplet Precautions
- ☐ Respiratory Illness (tuberculosis , etc., suspected or confirmed) — Airborne Precautions
- ☐ Any other pathogen requiring isolation. Please list: _____

Sending Facility Information

Facility Name _____ Unit _____

Address _____ Phone _____

Person Completing Form

Name/Title _____

Phone _____

Email/Fax _____

Infection Prevention Designee

Name _____

Phone _____

Email/Fax _____

Please send copies of any relevant microbiology cultures, medication administration record (MAR) or physician order sheet (POS), and immunization documentation.

Version 1.3 9/4/18

[Inter-facility Patient Transfer Form (chicagohan.org)]

- Facility signage
- Extensively Drug Resistant Organism (XDRO) Registry
  - Interfacility communication
  - Manual query function
- Local Health Department bridging the gaps
- Interfacility transfer information

XDRO registry

https://www.xdro.org/

IDPH
Illinois Department of Public Health

EVS | Cleaning and Disinfection

- It is most important to make sure that cleaners and disinfectants being used are:
  - The right product at
  - The right dilution, for
  - The right pathogen(s)—i.e., kill claim, for
  - The right length of time—i.e., contact time, using,
  - The right PPE
- Follow the instructions for use.
- The EPA website is the best resource for determining which products can be used for the pathogen that is being targeted.

IDPH
Illinois Department of Public Health

Know the Difference between Cleaning, Sanitizing, and Disinfecting

Action	What does it do?	Does EPA regulate the product?
Cleaning	Cleaning removes dirt and organic matter from surfaces using soap or detergents.	EPA regulates cleaning products only if they sanitize or disinfect. Learn more about EPA's role.
Sanitizing	Sanitizing kills bacteria on surfaces using chemicals. It is not intended to kill viruses.	Yes, EPA registers products that sanitize.
Disinfecting	Disinfecting kills viruses and bacteria on surfaces using chemicals.	Yes, EPA registers products that disinfect. To find disinfectants for use against SARS-CoV-2 (COVID-19), see List N.

Source:
https://www.epa.gov/coronavirus/whats-difference-between-products-disinfect-sanitize-and-clean-surfaces

IDPH
Illinois Department of Public Health

Diversey

Cleaning/Sanitizing/Disinfecting

Know the difference!

Cleaning

- **Removes** germs, dirt and impurities from surfaces or objects
- Works by using cleaning products and water to physically remove germs from surfaces

Sanitizing

- **Reduces** the number of germs on surfaces or objects to a safe level, as judged by public health standards or requirements
- Works by using sanitising products to lower the risk of spreading infection from surfaces and objects

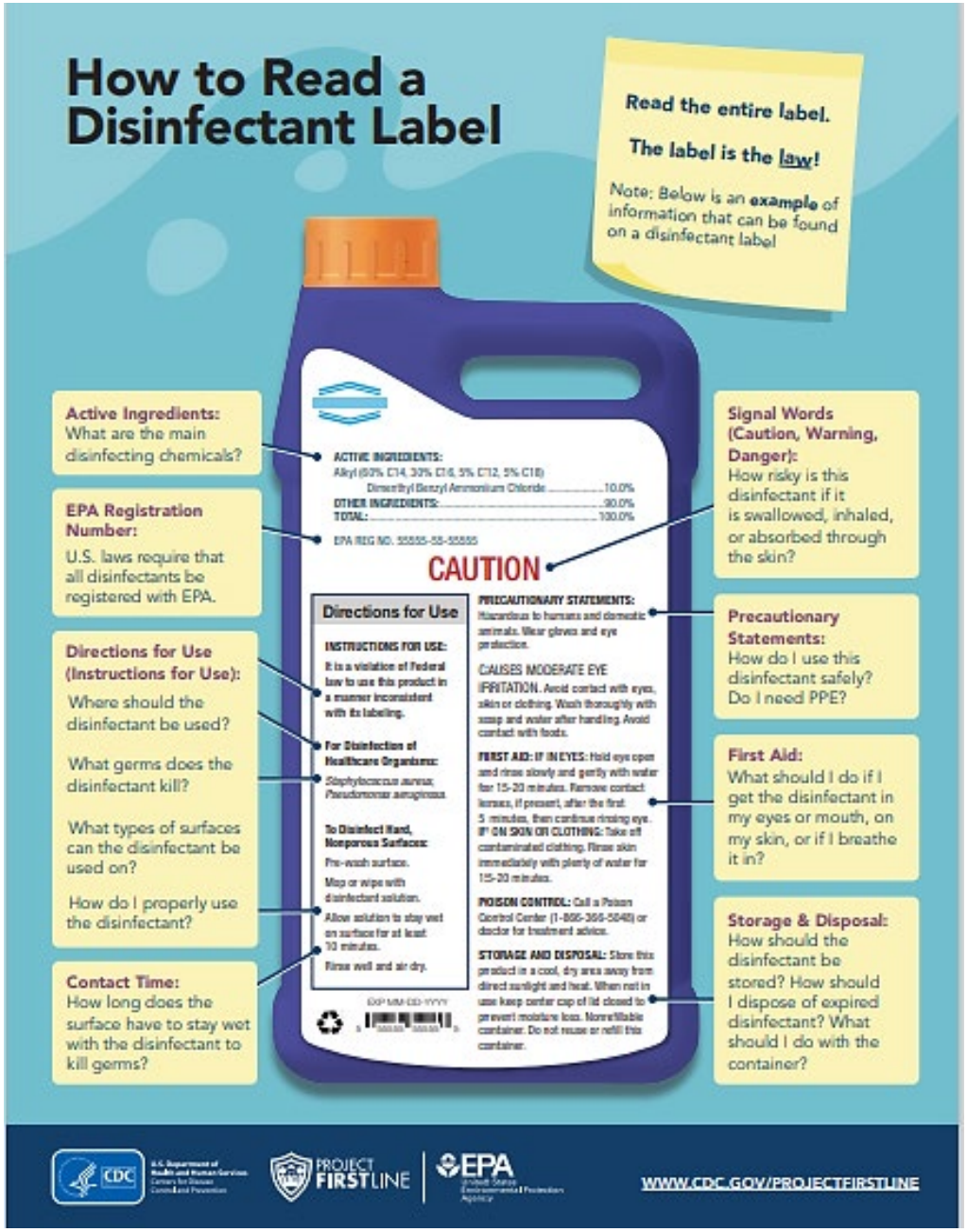
Disinfecting

- **Kills 99.99% - 99.999%** of germs on surfaces or objects
- Works by using disinfectant products to kill germs on surfaces or objects

www.diversey.com

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

How to Read a Product Label



[How to Read a Disinfectant Label (cdc.gov)]

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Navigating the EPA Website

- There are a couple of ways to navigate the information needed to determine if a disinfectant is EPA registered.
- The main EPA page can be found here: Selected EPA-Registered Disinfectants | US EPA
  - Consider bookmarking the site for easy access in the future
- This page provides all the lists by organism claim.
- Use this link to check your current products.

- List A: Antimicrobial Products Registered with the EPA as Sterilizers
- List B: Antimicrobial Products Registered with EPA for Claims Against *Mycobacterium tuberculosis* (TB)
- List C: EPA's Registered Antimicrobial Products Effective Against Human HIV-1 Virus
- List D: EPA's Registered Antimicrobial Products Effective Against Human HIV-1 and Hepatitis B Virus
- List E: EPA's Registered Antimicrobial Products Effective Against *Mycobacterium tuberculosis*, Human HIV-1 and Hepatitis B Virus
- List F: EPA's Registered Antimicrobial Products Effective Against Hepatitis C Virus
- List G: Antimicrobial Products Registered with EPA for Claims Against Norovirus (Feline calicivirus)
- List H: EPA's Registered Antimicrobial Products Effective Against Methicillin-resistant Staphylococcus aureus (MRSA) and/or Vancomycin Resistant Enterococcus faecalis or faecium (VRE)
- List J: EPA's Registered Antimicrobial Products for Medical Waste Treatment
- List K: Antimicrobial Products Registered with EPA for Claims Against Clostridium difficile Spores
- List L: Disinfectants for Use Against Ebola Virus
- List M: Registered Antimicrobial Products with Label Claims for Avian Influenza
- List N: Disinfectants for Use Against SARS-CoV-2
- List O: Disinfectants for Use Against Rabbit Hemorrhagic Disease Virus (RHDV2)
- List P: Antimicrobial Products Registered with EPA for Claims Against Candida Auris
- List Q: Disinfectants for Emerging Viral Pathogens (EVPs)

IDPH
Illinois Department of Public Health

Performance Measures – Auditing

- 2 Types of Auditing:
  - Covert Monitoring
  - Overt Monitoring

EVS Auditing

Facilities should monitor EVS cleaning and disinfection performance (every shift, every unit, for all EVS staff, each month)

Record a minimum of 30 observations per unit each month

Track and share cleaning and disinfection compliance with frontline staff

Auditing can be done Tide® marking and a UV light

IDPH
Illinois Department of Public Health

Tide Marking – Patient Room

ROLES AND RESPONSIBILITIES - WHO CLEANS AND DISINFECTS THESE DAILY?

AREA	EVS	FREQ	NURSING	FREQ	OTHER (Specify)	FREQ
Patient Room						
Bed rail/controls						
Bedside cabinet and other furniture						
Blood Pressure Cuffs/Sphygmomanometer						
Call box/button and cords						
Computer monitor, mouse, keyboard, and cart (if present)						
Corridor railing						
Data Scope						
Dispensers for towels, soap, sanitizer, etc.						
Door knob/handle and push plates (inside and out) to room						
Glove box and gown holders						
Heart Monitor						
Infusion Pumps and control						
ISO Holder						
IV Poles						
Light Switch						
Multi module monitor Controls						
Multi module monitor touch screens						
Multi module monitor wires and cables						
Nurse Server						
Overbed tray table/drawer						
Oxygen Device						
Oxygen Probe						
Patient and visitor chairs (both arms and seats)						
Portable commode (if present)						
Pulse Monitor						
Remote Control						
Room light switch						
Room sink (if present)						
Sharps Container						
Sleep surface and pump						
Suction canister						
Telephone						
Ventilator control panel						
Wall area behind toilet, toilet base and floor near toilet						
Wall mounted hand soap/sanitizer dispensers (if present) and brackets						
Walls - spot cleaned for visibly soiled						
Waste recepticals						
Wires and cables to pumps						

IDPH
Illinois Department of Public Health

Tide Marking – Bathroom

ROLES AND RESPONSIBILITIES - WHO CLEANS AND DISINFECTS THESE DAILY?

AREA	EVS	FREQ	NURSING STAFF	FREQ	OTHER (Specify)	FREQ
Bathroom						
Bathroom call button or cord						
Bathroom door knob/handle						
Bathroom light switch						
Bathroom pull cord						
Bathroom sink, faucet and faucet handles, mirror, vanity, and exposed plumbing						
Bed pan cleaner						
Hand rails near toilet						
Shower/tub (if present)						
Sink Surround						
Toilet bedpan cleaner						
Toilet flush handle						
Toilet seat and bowl/booster						

Source: Diversey

IDPH Illinois Department of Public Health

What is Hand Hygiene?

- Hand hygiene is a way of cleaning one's hands that substantially reduces potential pathogens (harmful microorganisms) on the hands.[1]

Image retrieved from https://www.cdc.gov/handwashing/when-how-handwashing.html

Why is Hand Hygiene Important?

- According to the WHO, most HAIs are preventable through good hand hygiene practices – cleaning hands at the right times and in the right way. [1]
  - Cost-savings
- Hand hygiene promotes safe patient and resident care.
- It also keeps the healthcare worker (and their loved ones) safe.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
IDPH
PROTECTING HEALTH, IMPROVING LIVES

Hand Hygiene Monitoring

Facilities should monitor hand hygiene performance (every shift, every unit, for all caregivers, each month)

Record a minimum of 30 observations per unit each month

Track and share Hand Hygiene compliance with frontline staff

Auditing can be done using paper tools or electronic tools (e.g., iScrub® app)

IDPH
Illinois Department of Public Health

Electronic (App-based) Monitoring Tools

SpeedyAudit

Download on the App Store

GET IT ON Google play

https://www.speedyaudit.com/

iScrub

Download on the App Store

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
IDPH
PROTECTING HEALTH, IMPROVING LIVES

Paper Auditing Tools

- CDC (in conjunction with APIC)
  - Quick Observation Tools (QUOTs) for Infection Prevention | CDC
  - IP Observation Tools | » Observation Tools Library
- WHO
  - Monitoring tools (who.int)
- AHRQ
  - hand-hygiene-observational-audit-tool-tt.xlsx (live.com)

PPE Auditing

- Just like hand hygiene auditing, it is also important to perform PPE audits, for all staff members, on all units, and at all shifts.
- The interval of PPE auditing:
  - should take place at regular intervals as defined by the organization
  - it is also important to re-educate and audit whenever there is a change in equipment or supplies and if rates of HAIs are high or increasing.

Source: https://www.cdc.gov/infectioncontrol/pdf/strive/PPE104-508.pdf

IDPH
Illinois Department of Public Health

Why audit PPE?

- In order to improve practice it is important that the correct use of PPE be rigorously and consistently applied
- A recent study demonstrated that only half of healthcare personnel removed PPE correctly under normal conditions
- Audits can provide immediate feedback and identify gaps in practice

Source: https://www.cdc.gov/infectioncontrol/pdf/strive/PPE104-508.pdf

IDPH
Illinois Department of Public Health

Who Should Be Audited?

Anyone who has to use PPE in the course of their job duties. This includes:

- All licensed health care personnel
- All unlicensed health care personnel
- Physicians
- Volunteers
- Trainees

Source: https://www.cdc.gov/infectioncontrol/pdf/strive/PPE104-508.pdf

IDPH
Illinois Department of Public Health

What a PPE Audit should include:

Regular audits to monitor adherence to PPE should include:

- Appropriate selection
- Donning
- Doffing
- Hand hygiene
- Environmental contamination
- Evaluation of appropriate supplies and equipment
- Proximity of supplies to point of use

Aggregate data can be provided to identify opportunities for improvement.

Source: https://www.cdc.gov/infectioncontrol/pdf/strive/PPE104-508.pdf

IDPH
Illinois Department of Public Health

Tools for PPE Auditing

- The Agency for Healthcare Research & Quality has a well rounded PPE auditing tool that is geared toward COVID-19 which can also be customized for your use.
  - ppe-covid19-audit-tracking-tool-tt.xlsx (live.com)

IDPH
Illinois Department of Public Health

Importance of Feedback

- For all these levels of auditing, it is important to provide feedback to improve quality measures and performance.

- Feedback should be:
  - Specific – When a break in protocol is identified, it should be specific
  - Timely – immediate feedback is the most effective
  - Non-threatening – the feedback should be given in a manner that is non-threatening

Source: https://www.cdc.gov/infectioncontrol/pdf/strive/PPE104-508.pdf

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Types of Feedback

TPYE OF FEEDBACK	HOW IT WORKS	BENEFITS
Immediate Feedback	Feedback given at the time of occurrence	Can be given by anyone; including observers, managers, supervisors or peers
Planned Feedback	Feedback given at pre-determined intervals through a type of measurement system	Usually the responsibility of a designated department or assigned role

Source: https://www.cdc.gov/infectioncontrol/pdf/strive/PPE104-508.pdf

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

POINT PREVALENCE SCREENING (PPS)

Dr. Dawn Chinn-Flournoy, DrPH, MPH, sMBA, MLS(ASCP)CM

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

WHAT IS A RESPONSE POINT PREVALANCE SCREENING?

PPS is **NOT** a research survey or project.

A response PPS is performed after a patient/resident within a facility is identified as being colonized or infected with a Multi-Drug Resistant Organism (MDRO) to determine if other patients/residents are colonized.

A PPS is a surveillance method that involves –

- swabbing the axillary/groin to test for *Candida auris*.
- swabbing the rectum to test for carbapenemase-producing organisms (CPO).

Testing is a CDC-recommended public health measure to protect patients/residents from further spread.

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

WHY PERFORM COLONIZATION SCREENING?

Considerations for contacts at highest risk include factors related to duration and intensity of exposure to the known MDRO-positive resident, including the following:

Proximity to MDRO-positive resident;	Shared health care providers;	Intensity of nursing required;	Stool or urine incontinence;	Shared medical equipment or procedures; and	Length of stay.

We can expand the screening group on subsequent PPS's if initial testing reveals additional cases

It is important to screen roommates, even if already discharged. For roommates and other high-risk contacts that have been discharged, consider flagging charts to facilitate admission screening if these individuals are readmitted to the facility in the next six months. Other local factors may be considered, and admission screening or wider point prevalence surveys may be recommended. Each situation is unique, and the final approach will be based on discussions between LHD, IDPH and the facility.

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

WHY PERFORM A PPS?

Reasons for conducting a PPS are based on the CDC's Interim Guidance for a Public Health Response to Contain Novel or Targeted Multidrug-resistant Organisms (MDROs)and the region's or facility's epidemiology.

The goal is to prevent MDROs and antibiotic resistance from spreading.

A PPS provides data facilities need to ensure Infection Control Measures.

Prevent a minor issue from becoming a major outbreak.

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

WHEN TO PERFORM PPS?

- Follow CDC MDRO Containment Tiers
- For example, a single C. auris case identified in a skilled nursing facility in Central Illinois may warrant a PPS because they have no prior history of C. auris and are in a region with low prevalence.
- But a single C. auris case identified in a Cook County vSNF may not warrant a PPS if they have a consistently high baseline of C. auris, have been working with public health, and are following recommended infection prevention and control measures. They may have a higher threshold for conducting a PPS.

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

PPS PROCESS-DETERMINING NEED AND SCOPE

- Facility -> LHD -> IDPH
- Lab -> IDPH ->LHD -> Facility
- IDPH Epi Team, IPs, or LHD (local health department) — receive information about a facility that might suggest a PPS would be merited. Data should be collected via INEDSS or case report form (CRF) – usually the LHD should lead this
- LHD/IPs will contribute any information based on previous contacts with the facility (e.g., previous site visits). LHD/Facility/IDPH will look for previously reported cases/clusters at the facility.
- LHD, IDPH, Facility will assess the facility/situation and collaboratively discuss if a PPS is needed and, if so, what the scope of the PPS should be based on the CDC MDRO Containment Guidance. (This is part of the planning process, also).

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

PPS PROCESS

Determine	• Determine the scope of the PPS
Plan	• Plan for PPS date with the facility
Arrange	• Arrange for testing with Wisconsin ARLN Lab
Organize	• Organize PPS training session
Collect	• Collect patient/resident information from facility

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Patient's Consent

- It is recommended that consent be obtained prior to the day of swabbing. This will expedite the process during the PPS.
  - In particular, if the patient is nonverbal, consent should be acquired from the family ahead of time. You may also refer to your facility's operating procedures for further instructions.

- Prior to swabbing, explain the procedure to the patient and obtain their verbal consent.
  - For example: "We are testing for certain germs. We will be doing two swabs – one of your armpit and groin, and the other of your rectum. Until we get the results back, we are taking extra precautions with gowns and gloves in case you have these germs to stop them from spreading."
- Please visit CDC's website if you would like more examples of verbal consent scripts.

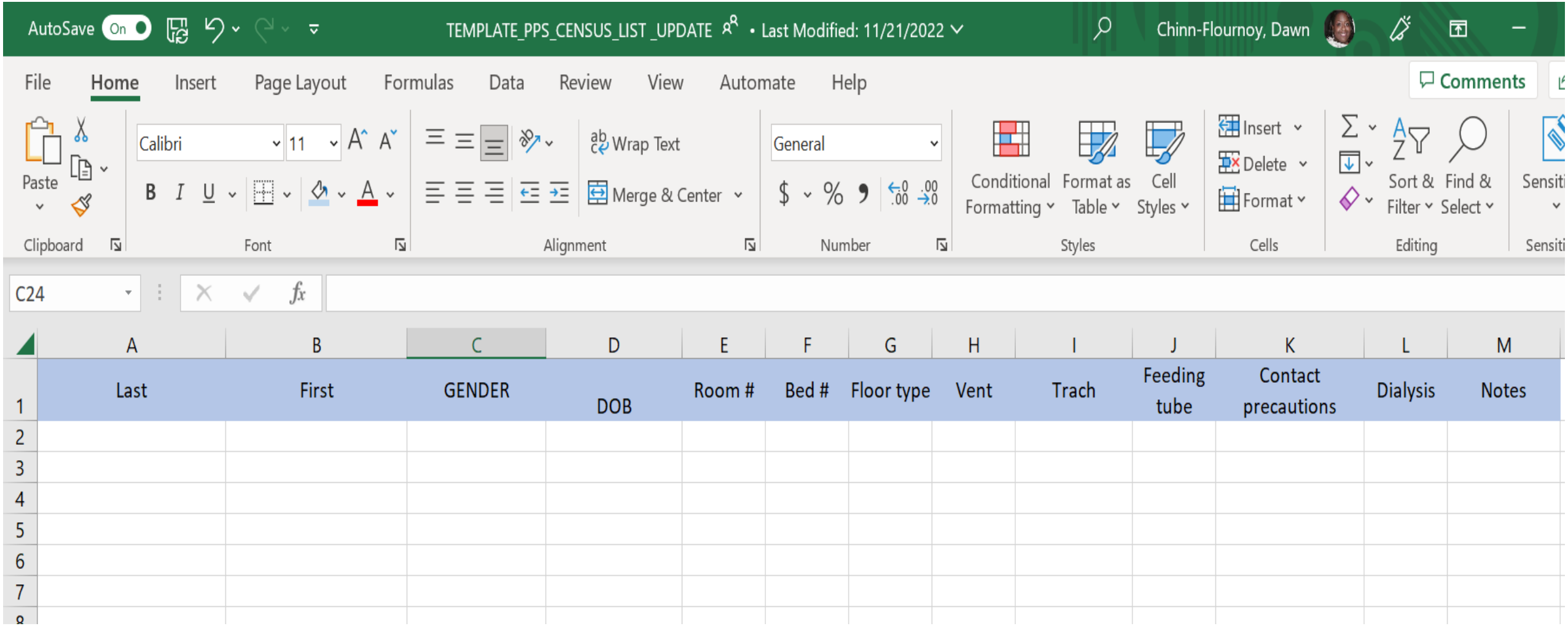
IDPH
Illinois Department of Public Health

PPS PROCESS

- After the confirmation of a PPS date, IDPH schedules an education/training session with the facility and LHD. (This can be skipped for facilities that have had multiple PPS and is comfortable with the process; LHD can also perform the training). A video and training materials are sent to all parties.
- Facility is also sent a census excel sheet to complete. This list is used to make labels and the line list needed for the PPS, and the summary sheet for the results
- It is recommended that the facility's nursing staff and/or IP will go into each room to perform the swabbing.
- Public health representatives will remain in the hallway and assist with specimen labeling and line lists as needed.
- After all patients/residents have been swabbed, reconvene to complete testing paperwork and package specimens for shipment.

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

CENSUS LIST SCREENSHOT



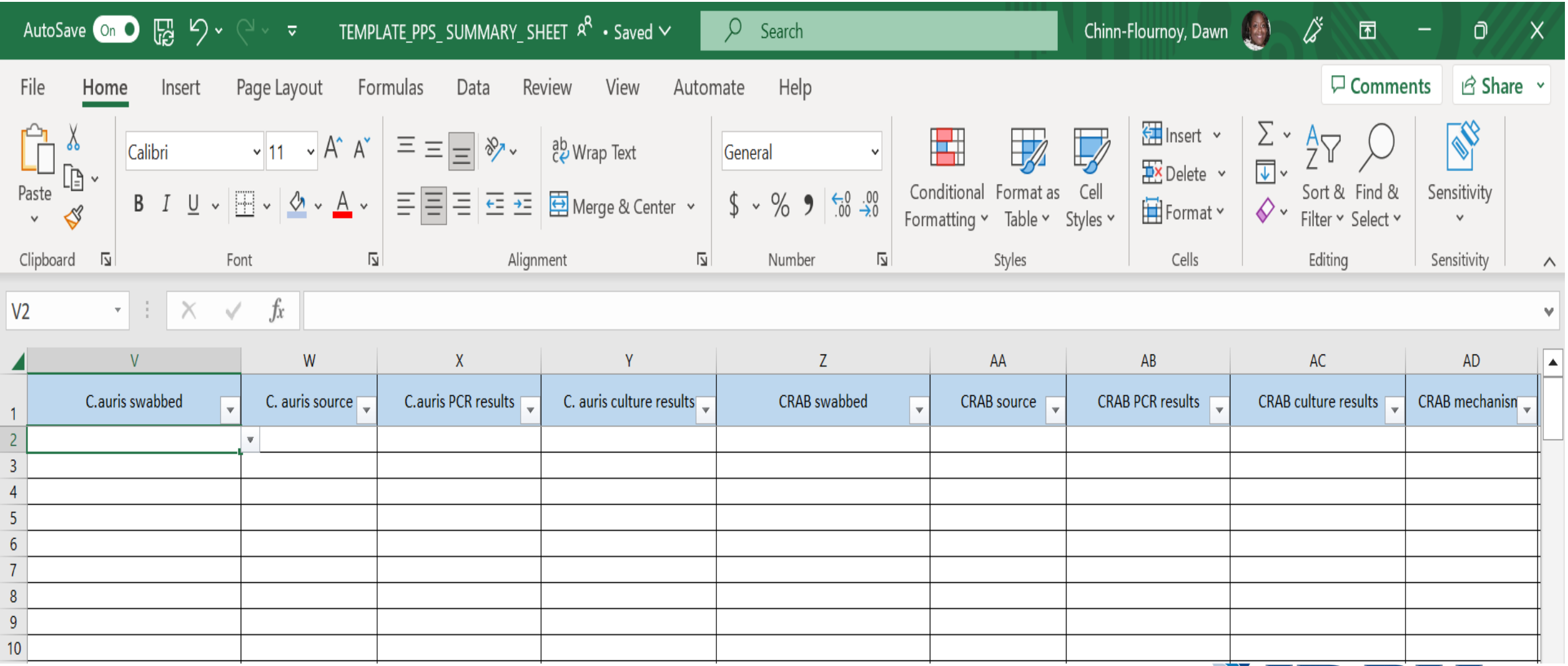
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Last	First	GENDER	DOB	Room #	Bed #	Floor type	Vent	Trach	Feeding tube	Contact precautions	Dialysis	Notes
2													
3													
4													
5													
6													
7													
8													

PPS PROCESS - POST

- IDPH creates summary sheet using the Excel line list
- IDPH sends the summary sheet, summary of results and recommendation to the facility, LHD, and IP's
- **IDPH IPs will examine results and consult the LHD to plan next IPC steps**
  - **IF EVIDENCE OF FURTHER SIGNIFICANT TRANSMISSION COMES TO OUR ATTENTION, OR TO ENSURE THAT TRANSMISSION HAS, IN FACT, BEEN INTERRUPTED, WE MAY REPEAT THE PROCESS AND PERFORM ADDITIONAL PPSs.**

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

SUMMARY SHEET



	V	W	X	Y	Z	AA	AB	AC	AD
1	C.auris swabbed	C. auris source	C.auris PCR results	C. auris culture results	CRAB swabbed	CRAB source	CRAB PCR results	CRAB culture results	CRAB mechanism
2									
3									
4									
5									
6									
7									
8									
9									
10									

WHAT IF WE RECEIVE PUSHBACK FROM FACILITY?

- LHD meets with Facility management, corporate (if applicable), and IDPH. Should be led by LHD. Include medical director, administrator, DON, and IP of facility.
- Present reasons for PPS: include data from all cases (dates, locations, risk factors for spread like vent, wound care, dialysis in building), floorplans, epi curve (if more than one case).
- Listen to the facility concerns and try to address (with follow-up meeting as needed).
- If needed, public health authority letter is available for LHDs to use. References administrative code.

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

PUBLIC HEALTH AUTHORITY

Illinois Administrative Code
Title 77 - PUBLIC HEALTH
Part 690 - CONTROL OF COMMUNICABLE DISEASES CODE
Subpart I - ISOLATION, QUARANTINE, AND CLOSURE

Section 690.1310 - Local Health Authority

Universal Citation: 77 IL Admin Code § 690.1310

Section § 690.30 - General Procedures for the Control of Communicable Diseases

A) Investigation

11.) **Investigations conducted by the Department or local health authority may include, but are not limited to:**

C) **'Medical examination and testing of persons, with their explicit consent'**

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

INFECTION CONTROL ASSESSMENT AND RESPONSE (ICAR)

Mary Alice Lavin, MJ, BSN, RN, CIC, FAPIC

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

What is an ICAR?

Infection Control Assessment and Response (ICAR)

- An assessment of infection prevention and control policies, procedures, and practices.
  - Consultative, nonregulatory, and at no cost to the facility
  - Participation is voluntary
  - Module based approach
- The assessment starts with demographic information provided by the facility prior to the visit.

https://www.cdc.gov/hai/prevent/infection-control-assessment-tools.html

IDPH
Illinois Department of Public Health

ICAR Process

- Onsite
  - Preferred
  - More complete
- TeleICAR
  - Initial remote assessment
  - Observations limited
- Prevention based
  - Proactive risk based
- Response driven
  - Reactive
    - Response to a point prevalence screening
    - Cluster or outbreak investigation

IDPH
Illinois Department of Public Health

Current Modules

- Training, Audits, Feedback
- Hand Hygiene
- Transmission Based Precautions
- Environmental Services
- High-level Disinfection and Sterilization
- Injection Safety
- Point of Care (POC) Blood Testing
- Wound Care
- Healthcare Laundry
- Antibiotic Stewardship

https://www.cdc.gov/hai/prevent/infection-control-assessment-tools.html
https://www.cdc.gov/dialysis/prevention-tools/audit-tools.html

IDPH
Illinois Department of Public Health

Current Modules

- Modules facilitate the discussion and assessment.
  - Definitions, examples, and resources
  - Probing questions and observations
- The Environmental Services supervisor is encouraged to participate in that module.
- Individual modules might help with cluster or outbreak investigations.

How to Utilize the Information

- Summarize the findings
  - Best practices
  - Opportunities
- Follow up after the summary is sent
  - 30 days
  - 60 days
  - 90 days

IDPH
Illinois Department of Public Health

Practical Tips

- Take notes
- Pictures may help with documentation and/or additional research
  - Ask before taking pictures
  - Ensure no patients/residents or protected health information is included in the pictures
- Request a floor map
- Complete the summary before another assessment

IDPH
Illinois Department of Public Health

ICAR Assistance

- Hektoen and IDPH Infection Preventionists as a resource
  - Overview for the local health department
  - Shadowing
  - Phone a friend

Summary

- Antimicrobial resistance is a growing problem.
- Containment is a team effort.
- Mitigation measures include basic infection prevention and control practices.
- Cohorting may be necessary and can be challenging.
- Auditing and feedback is integral to performance improvement.
- Point prevalence screenings can inform the burden of MDROs.
- ICARs can be beneficial in understanding facility specific infection prevention and control practices.

IDPH
Illinois Department of Public Health

MDRO RESPONSE SCENARIO

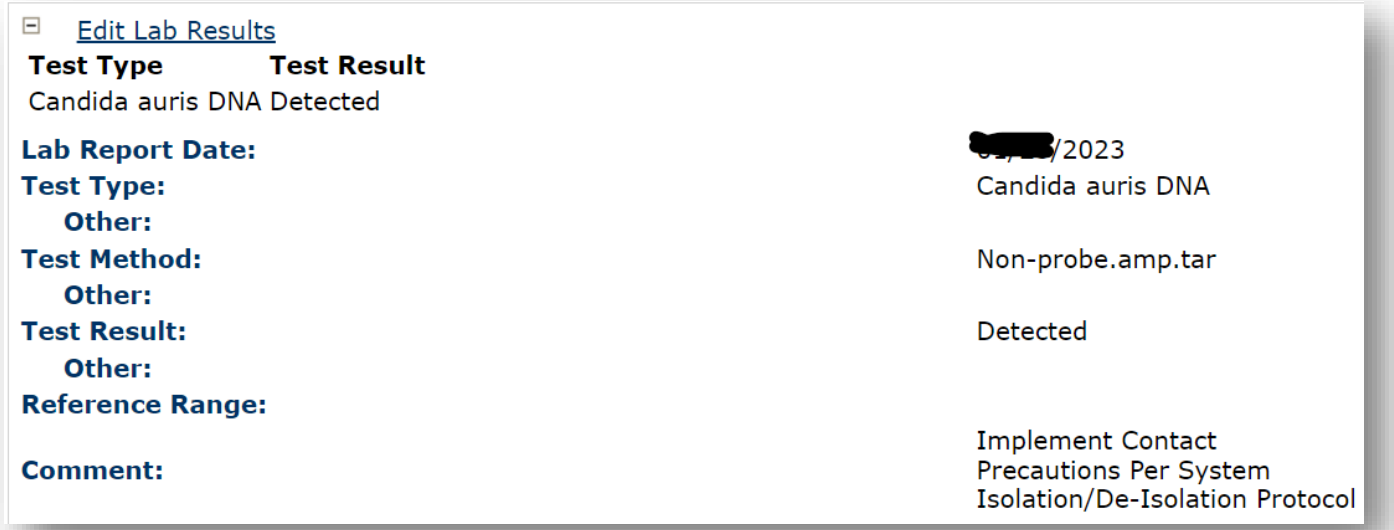
Angela Tang, MPH

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

C. auris Case Scenario – Identification

- While working in INEDSS, you see that a hospital lab submitted a *C. auris* result via ELR
  - The lab result says the specimen source is urine and it was collected on 3/9/23.
  - The person has no previous history of *C. auris* in INEDSS or the XDRO registry.

- What disease classification should this case be assigned in INEDSS? (Poll #1)



Edit Lab Results

Test Type	Test Result
Candida auris DNA	Detected

Lab Report Date:	[redacted]/2023
Test Type:	Candida auris DNA
Other:	
Test Method:	Non-probe.amp.tar
Other:	
Test Result:	Detected
Other:	
Reference Range:	
Comment:	Implement Contact Precautions Per System Isolation/De-Isolation Protocol

IDPH
Illinois Department of Public Health

C. auris Case Scenario – Investigation

- *C. auris* cases are rare in your region of the state.
- You notice that
  - the case has a resident address that belongs to a SNF in your jurisdiction.
  - the positive specimen was collected on admission to the hospital.

- What would your next steps be to respond to the case? (Poll #2)

IDPH
Illinois Department of Public Health

C. auris Case Scenario – Investigation (cont.)

- Check XDRO registry data in BusinessObjects to see whether previous cases have been reported at the SNF or hospital

- Contact the hospital IP to
  - Determine whether the case is still admitted
  - Provide IPC recommendations
  - Ask IP to fill out INEDSS 'C. auris, clinical' module, conduct micro lookback

- Contact the SNF IP re: IPC recommendations, case report form, micro lookback

IDPH
Illinois Department of Public Health

C. auris Case Scenario – Investigation (cont.)

- **Hospital IP** reports that the *C. auris* case is still admitted

- Per the INEDSS module:
  - The case was admitted from the SNF on 3/9/23
  - They also had several previous admissions from the SNF, but no previously positive cultures for *C. auris*
  - The case has been on transmission-based precautions since being admitted and does not have any roommates

IDPH
Illinois Department of Public Health

C. auris Case Scenario – Investigation (cont.)

- **Hospital IP** reports that the *C. auris* case is still admitted
- Per the INEDSS module:
  - The case was admitted from the SNF on 3/9/23
  - They also had several previous admissions from the SNF, but no previously positive cultures for *C. auris*
  - The case has been on transmission-based precautions since being admitted and does not have any roommates

- **SNF IP** reports that they have never had a *C. auris* case and doesn't know what that is
- Per the CRF:
  - The current case stayed on the 2nd floor, had one roommate, and was on transmission-based precautions due to CRAB
  - They also received wound care

IDPH
Illinois Department of Public Health

C. auris Case Scenario – Response

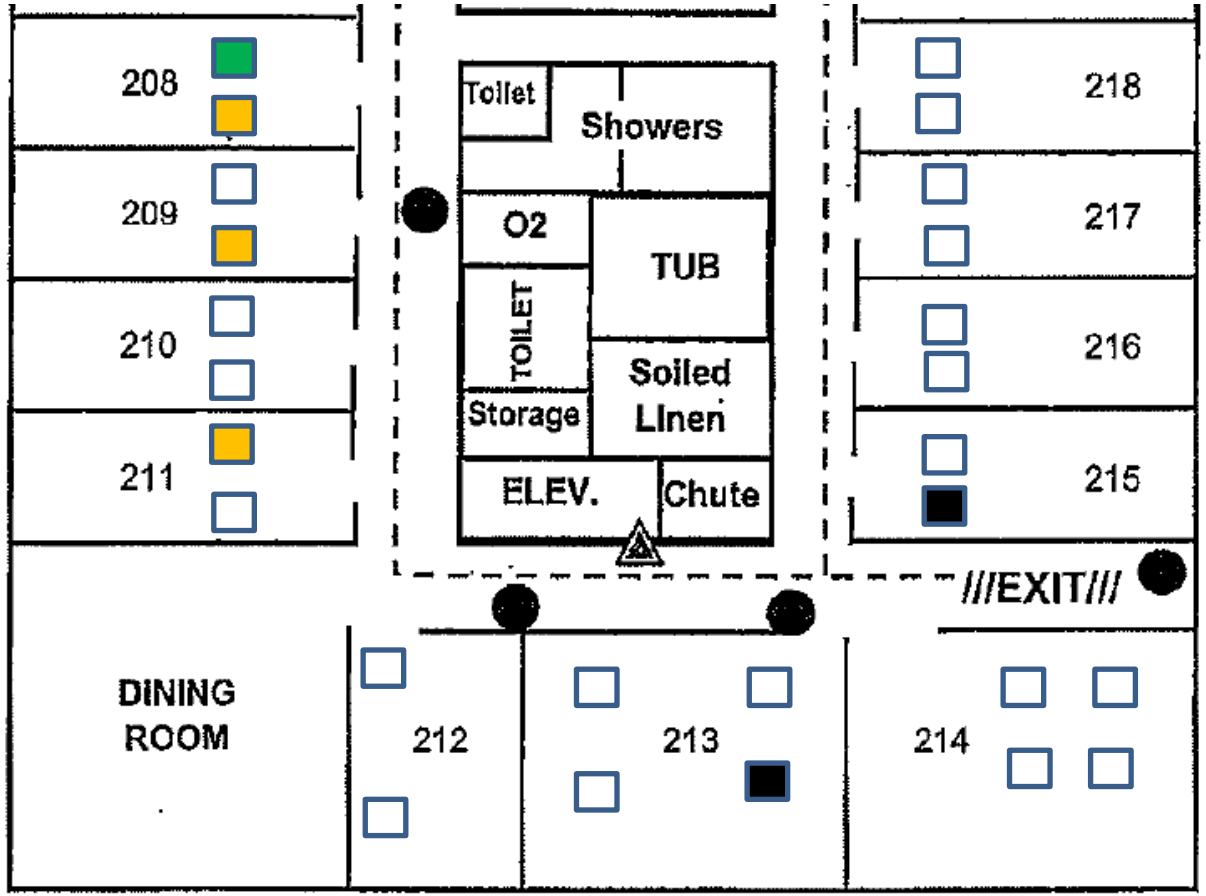
- Would you consider doing a PPS at the hospital or SNF?

  (Poll #3)
- If so, which patients/residents would you screen?

IDPH
Illinois Department of Public Health

C. auris Case Scenario – Response (cont.)

- You arrange to conduct a PPS at the SNF for the 2nd floor and any resident who received wound care
- The PPS detects **three** more cases on the unit
- What would you do now?



Index case
New case
Declined screening
Tested negative

IDPH
Illinois Department of Public Health

C. auris Case Scenario – Response (cont.)

- Review cohorting/TBP strategy and IPC measures with facility
- Conduct on-site ICAR with observations of IPC practices

IDPH
Illinois Department of Public Health

C. auris Case Scenario – Response (cont.)

- During the ICAR, you observe the following:
  - Facility does not have XDRO registry access
  - Facility staff are not familiar with *C. auris* and CPOs
  - Alcohol-based hand rub is readily available in the hallways, but not in the resident rooms
  - Use of List N products for COVID-19 instead of List P for *C. auris*

- What would some of your recommendations be to the facility? What resources or tools could you provide?

IDPH
Illinois Department of Public Health

C. auris Case Scenario – Next steps

- **ICAR:** 30, 60, 90 day follow-up to ensure IPC recommendations implemented

- **PPS:** Follow-up PPS until transmission is controlled.
  - Per CDC, "Control is generally defined as two consecutive point prevalence surveys with no new MDRO cases identified, or, in facilities with high colonization pressure (i.e., >30%), substantially decreased transmission."

- **Prospective surveillance:** SNF and Hospital should monitor for additional cases for at least 3 months after the last case was identified and report to public health

IDPH
Illinois Department of Public Health

EDUCATION AND RESOURCES

Jessica Ledesma, M.Ed, MPH

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

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

Introduction

What is Project Firstline?

Diverse collaborative designed to provide engaging, innovative, and effective infection control training to more than 6 million healthcare personnel (HCP) in the United States

Empowering

- Core Training
- Practical Tools

Immersive

- Engagement
- Mentorship

Lasting

- Public Health Capacity
- Innovation

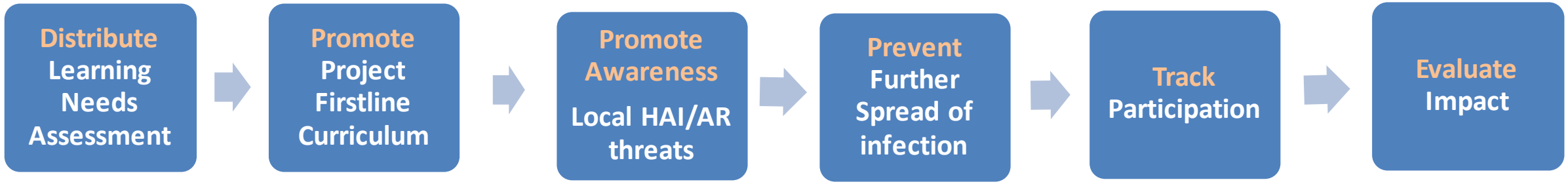
IDPH
Illinois Department of Public Health

Who is Project Firstline for?

- All HCP in all settings:
  - Hospitals
  - Outpatient clinics
  - Dialysis centers
  - Nursing homes
  - LTCF
- For all education levels

IDPH
Illinois Department of Public Health

IDPH Role in Project Firstline



IDPH
Illinois Department of Public Health

LNA survey results

Which of the following infection control topics would you like to receive additional training in?

Topics	Count (N=322)	Percent
Outbreak management	180	56%
Antibiotic Stewardship	141	44%
COVID-19	116	36%
Environmental cleaning	112	35%
Sanitizing, disinfecting, and sterilizing	110	34%
Device-associated infections	104	32%
Respiratory protection	92	29%
Standard and transmission-based precautions	85	26%
Screening	76	24%
Personal protective equipment	63	20%
Source control (e.g. wearing a mask, social distancing, etc.)	55	17%
Hand hygiene	40	12%
Other	8	2%

Project Firstline Curriculum

This Photo by Unknown Author is licensed under CC BY-NC

- Project Firstline curriculum is expanding everyday
  - Results of LNA are incorporated

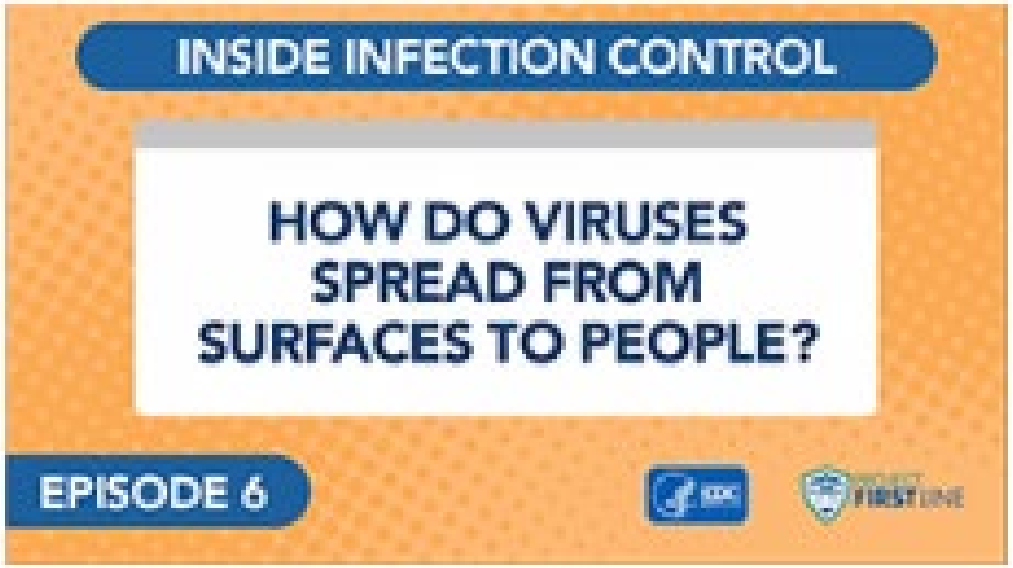
- IDPH will offer a variety of IC training to supplement curriculum:
  - In-person
  - Self-paced/on demand
  - Team based
  - Webinars

IDPH
Illinois Department of Public Health

Customizable Curriculum

- Training sessions focused on basic infection control topics including:
  - Concept of Infection Control
  - Basic Science of Viruses
  - Review of Transmission
  - Personal Protective Equipment

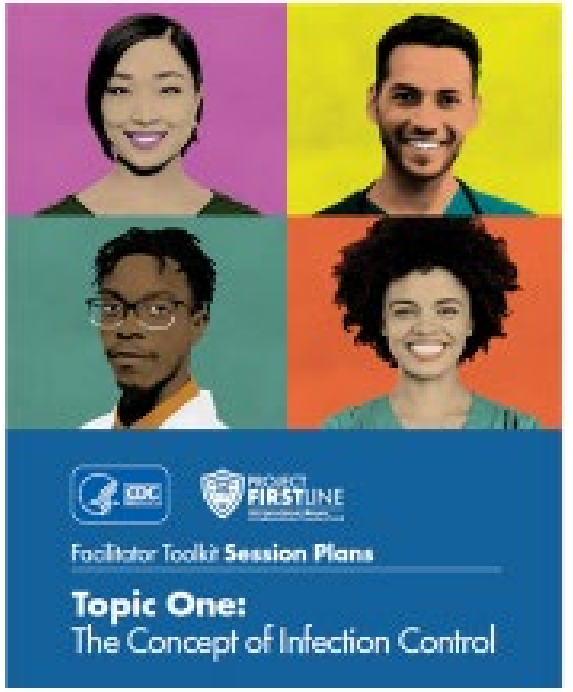
- Multitude of delivery methods:
  - Short Videos (5-10min)
  - Facilitator led Training Sessions:
    - 10 min
    - 20 min
    - 60 min



IDPH
Illinois Department of Public Health

Session Plans

- PowerPoint Presentations
- Facilitator Toolkits
- Participant Booklets
- Facilitator Self-assessment
- Participant Feedback Forms



Illinois Landscape Assessment

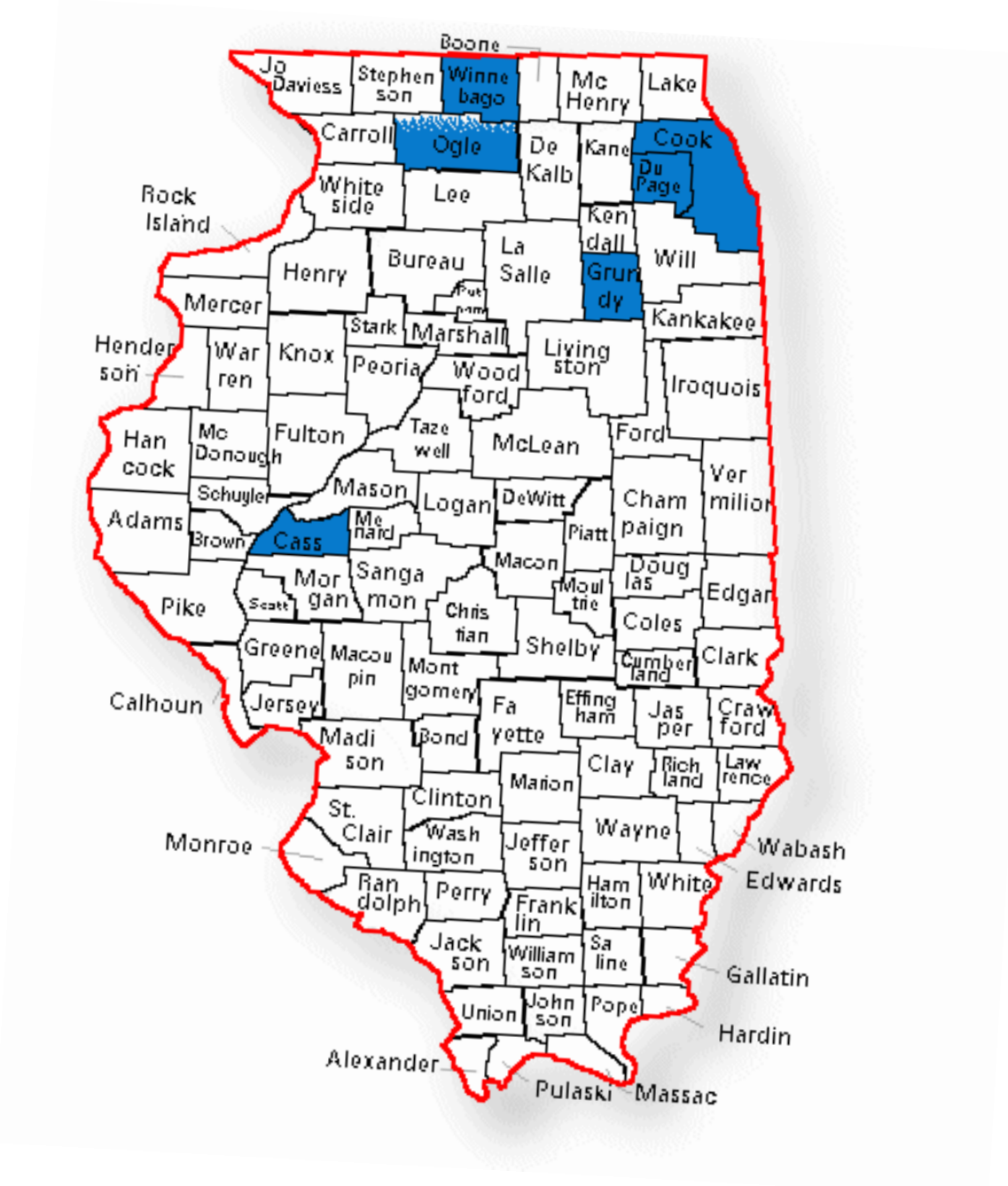
Purpose:

- Learn IPC training initiatives currently being carried out in Illinois
- Identify opportunities to better support healthcare worker IPC training
- Develop a resource directory

IDPH
Illinois Department of Public Health

Illinois Landscape Assessment Preliminary Findings

- 7 organizations plan to promote or host PFL trainings.
- Targeting SNFs, LTCFs, ACF
- Geographical focus
- Data



Promote Awareness of local HAI/AR threats

IDPH ACCESS TO DATA HOSPITALS	IDPH ACCESS TO DATA LTCF
• **HAI's** • XDRO registry data • COVID-19	• COVID-19 • XDRO registry data

IDPH
Illinois Department of Public Health

Local Health Department Access to HAI data survey

In order to promote awareness and understanding of local Healthcare Associated Infections and Antimicrobial Resistance (HAI/AR) threats in your jurisdiction and to prevent further spread of infection, the Illinois Department of Public Health (IDPH) would like to know what data you would find beneficial to have access to.

The survey asks about your organization's interest in accessing your jurisdictions Healthcare Associated Infection (HAI) data via CDC's National Healthcare Safety Network (NHSN) and Illinois' Extensively Drug-Resistant Organism (XDRO) Registry.

This survey also includes several questions regarding your interest in joining the MDRO taskforce and any additional MDRO topics that haven't been covered in the 3-part series .

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

What Can You Do?

1

Spread the word about Project Firstline

2

Recruit HCP in your network to take the Project Firstline Curriculum

3

Complete the survey from this presentation

IDPH
Illinois Department of Public Health

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Questions?

For more information email:

DPH.DPSQ@Illinois.gov

Open Q&A

Submit questions via Q&A pod to **All Panelists**

Please do not resubmit a single question multiple times

Slides and recording will be made available on the IDPH CD SharePoint after the session.

Resources Appendix

Centers for Disease Control and Prevention

Centers for Disease Control and Prevention. 2022 Special Report COVID-19. U.S. Impact on Antimicrobial Resistance. Available at: https://www.cdc.gov/drugresistance/pdf/covid19-impact-report-508.pdf Accessed March 5, 2023.

Centers for Disease Control and Prevention . Antimicrobial Resistance. 2019 AR Threats Report. Available at: https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf Accessed March 3, 2023.

Centers for Disease Control and Prevention. A Complex Web: Everything is Connected Healthcare Facilities. Available at:: Title - CDC Fights Antibiotic Resistance (AR) in Healthcare Accessed March 10, 2023.

Centers for Disease Control and Prevention. Vital Signs. Containing Unusual Resistance. April 2018. Available at: https://www.cdc.gov/vitalsigns/pdf/2018-04-vitalsigns.pdf Accessed March 10, 2023.

Centers for Disease Control and Prevention. Project FirstLine. How to Read a Disinfectant Label. Available at: https://www.cdc.gov/hai/pdfs/HowToReadALabel-Infographic-508.pdfp Accessed March 10, 2023.

Centers for Disease Control and Prevention. Division of Scientific Education and Professional Development. Lesson 3: Measures of Risk. Available at: Principles of Epidemiology | Lesson 3 - Section 2 (cdc.gov) Accessed March 10, 2023.

Centers for Disease Control and Prevention. Infection Control. Standard Precautions. Available at: https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html Accessed March 10, 2023.

Centers for Disease Control and Prevention. Infection Control. Transmission-Based Precautions. Available at: https://www.cdc.gov/infectioncontrol/basics/transmission-based-precautions.html Accessed March 10, 2023.

Centers for Disease Control and Prevention. Healthcare-Associated Infections (HAIs). Implementation of Personal Protective Equipment in Nursing Homes to Prevent Spread of MDROs. Available at: https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html Accessed March 10, 2023.

Resources Appendix

Illinois Department of Public Health

Webex webinar recording: Hand Hygiene and Performance Measures. Recording link:
https://illinois.webex.com/illinois/lsr.php?RCID=d935f65d455f5ae38340269b805304bc

Webex webinar recording: Transmission Based Precautions, Personal Protective Equipment, and Resident Placement. Recording link:
https://illinois.webex.com/illinois/lsr.php?RCID=970f7df86d46fa7d42fde547e5a5995c

Webex webinar recording: LTC Enhanced Barrier Precautions -09232022
Recording link: https://illinois.webex.com/illinois/lsr.php?RCID=947bcef17f36574d3a8d8acee86d8e58

Other

Pacilli M, Kerins JL, Clegg WJ, Walblay KA, Adil H, Kemble SK, et al. Regional Emergence of Candida auris in Chicago and Lessons Learned from Intensive Follow-up a 1 Ventilator-Capable Skilled Nursing Facility. Available at: Regional Emergence of Candida auris in Chicago and Lessons Learned From Intensive Follow-up at 1 Ventilator-Capable Skilled Nursing Facility (nih.gov) Accessed March 10, 2023.

Chicago Department of Public Health. Inter-Facility Infection Control Transfer Form. Available at: https://www.chicagohan.org/inter-facility-infection-control-transfer-form Accessed March 10, 2023.

Murray CJ, Ikuta KS, Sharara F, Swetschinski L, Aguilar, GR, Gray, A, et al. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. Available at: https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2902724-0 Accessed March 10, 2023.

Resources Appendix

CDC Regional Containment Series

- Recorded webinars with CE credit offered for select presentations
- https://www.vdh.virginia.gov/hai ar/mdro-containment-webinar-series/

C. auris and CPO Colonization Screening 101 (CE CREDITS AVAILABLE) +

Enhanced Barrier Precautions in Skilled Nursing Facilities (CE CREDITS AVAILABLE) +

Role of Hand Hygiene in Limiting the Spread of MDROS (CE CREDITS AVAILABLE) +

Healthcare Facility Environmental Cleaning and Disinfection (CE CREDITS AVAILABLE) +

Simplifying Carbapenem Resistant Organisms +

From Plumbing to Patients: Outbreaks and Water Management Programs in Healthcare Settings +

IDPH
Illinois Department of Public Health