



Infection Prevention and Control Roundtable with Acute Care Facilities

12-1-23



ACHOO TEAM



Reach out to us!

Our team:

- Deputy Commissioner: Massimo Pacilli
- Medical Director: [Stephanie Black, MD](#)
[Do Young Kim, MD](#)
- Project Administrator: [Shane Zelencik](#)
- Project Manager: [Maria Bovee](#)
- Infection Preventionists (IP):
 - [Andrea Castillo](#)
 - [Karen Branch-Crawford](#)
 - Kim Goitia (Dialysis and FQHCs Settings)
- Public Health Administrator (PHA):
 - [Romualdo Chavez](#)
 - [Maggie Li](#)

Major role: Build infection control capacity across healthcare facilities in Chicago

ACHOO Email: cdphhair@cityofchicago.org

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Agenda

- **Important Updates**
- **Special Topics**
 - Collaborative Efforts in Management of *Candida auris* by Alison Peterson and Maggie Cavanaugh | RML Specialty Hospital
 - Journey to Zero HAIs by Mirza Ali | Saint Anthony Hospital
- **Discussion and Q&A**



Important Updates

- IDPH is in the process of implementing a **NEW** Electronic Disease Surveillance System (**EDSS**) to **replace I-NEDSS**.
- Be on the look out for the SIREN emails from IDPH on this topic
- Timeline of implementation:
 - Release 1: February 2024 (STIs and TB)
 - Release 2: July 2024 (All Other Diseases/Conditions)
- Following Release 1, all data for STIs and TB will be entered solely into EDSS. Users will not be entering data for these two disease types into both I-NEDSS and EDSS.
- Users who also enter data for all other diseases will continue to enter data into I-NEDSS until Release 2.



★ Important Updates



- In addition to timely reporting of reportable conditions, please also report cluster of epi-linked cases occurring in your facility that may indicate a public health concern.
- Reporting clusters can be done in many ways:
 - Email CDPH Healthcare Settings General Mailbox: CDPHHAIAR@cityofchicago.org
 - Email Maria Bovee at Maria.campos-bovee@cityofchicago.org
 - Email our HAI coordinator Hira.adil@cityofchicago.org
 - Call our general line: 312-744-1100
 - For more information visit: <https://www.chicagohan.org/programs/hai>
- We are working on the Acute Care IP&C Page on Chicago HAN site. Stay tuned.



How we can help during clusters/outbreaks

- **Provide investigation guidance**
 - Patient screening plan
 - Environmental screening plan
- **Provide epidemiological support**
- **Perform onsite Infection Control Assessments (ICARs)**
- **Help conduct a point prevalence survey (PPS)**
 - Specimen collection
 - Laboratory diagnostic testing and whole genome sequencing (WGS)
 - Results communication to facility management.





Important Updates

- As the year-end approaches, we would like to receive your feedback on this roundtable group. Please fill out this [survey](#) to let us know your thoughts!
- We will be sending out a new calendar invite for roundtables in 2024, so please be on the lookout for an email coming from ACHOO TEAM.
- **The new schedule for 2024 virtual roundtables is Thursday from 2-3 p.m.**
- Pending approval for this presentation 1 hour of CEU for today's presentation.
 - At the end of presentation, please complete the evaluation form.
 - Once the CEU is granted we will email the certificate to you.
 - Our goal is to provide CEUs for all roundtables in 2024



Advantages of ICARs



Non regulatory and non-punitive



Help bring facility departments together



Learning opportunity in areas of most need



Prep for Joint Commission survey



Help facility leaders to be more involved in and familiar with IP work



With every ICAR, we provide a report with recommendations

Infection Control Assessment Tools | HAI | CDC

Click on each Module below to open the tool in a fillable PDF document.

[Module 1 – Training, Audits, Feedback](#)

[Module 2 – Hand Hygiene](#)

[Module 3 – Transmission-Based Precautions \(TBP\)](#)

[Module 4 – Environmental Services \(EVS\)](#)

[Module 5 – High-level Disinfection and Sterilization](#)

[Module 6 – Injection Safety](#)

[Module 7 – Point of Care \(POC\) Blood Testing](#)

[Module 8 – Wound Care](#)

[Module 9 – Healthcare Laundry](#)

[Module 10 – Antibiotic Stewardship](#)

[Module 11 – Water Exposure](#)

Collaborative Efforts in Management of *Candida auris* in the Long-Term Acute Care Setting

Alison Peterson BSN RN &
Maggie Cavanaugh BSN RN

RML
SPECIALTY HOSPITAL
CHICAGO - HINSDALE

About us

Maggie Cavanaugh BSN RN

- RN for 9 years, IP for 2 years

Alison Peterson BSN RN

- RN for 4 years, IP for under a year

- Both have worked as relief clinical supervisor and high acuity unit nurse at RML
- Team of 2 for the Infection Prevention Department
- No disclosures



Objectives

- Name 4-5 facts about *Candida auris*
- Recognize the difference between the infection concerns in an acute care hospital versus a long-term acute care hospital.
- Identify some of RML's infection prevention protocols related to *Candida auris*

About us



Two locations: Chicago & Hinsdale

Programs: Medically-Complex, Wound, Ventilator

Average length of stay: 28 days

Specialties:

- medically complex conditions
- organ transplantation support
- stroke rehabilitation
- ventricular assist device (VAD)
- ventilator weaning
- wound management

About us

RML Hinsdale

115 beds

6 High acuity beds

109 LTCH beds

2022 Statistics

Average Daily Census: 84

524 admissions

319 Ventilator admissions

85 Dialysis admissions



RML Chicago

69 beds

6 High acuity beds

63 LTCH beds

2022 Statistics

Average Daily Census: 48

381 admissions

205 Ventilator admissions

53 Dialysis admissions

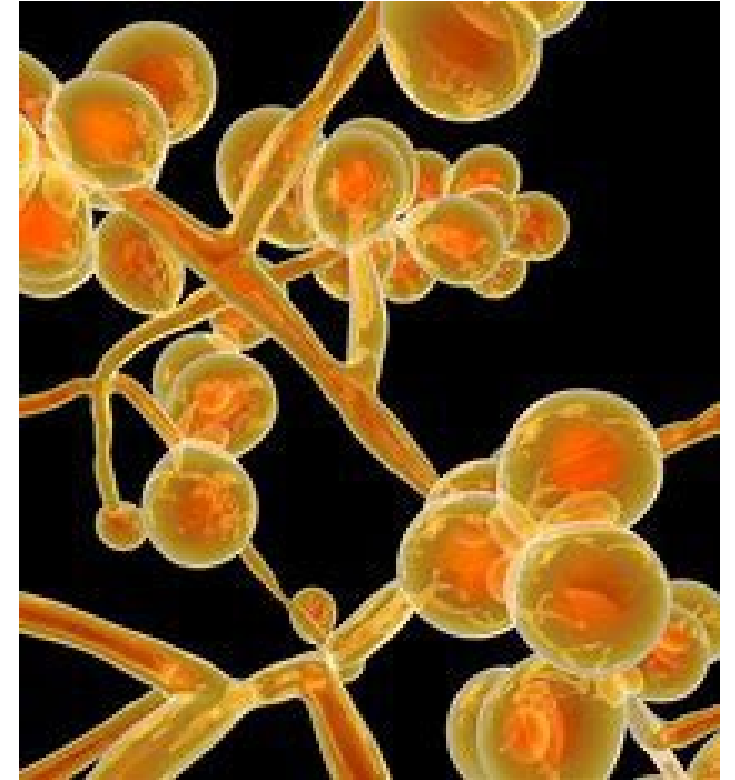


Key Terms

- MDRO: Multi-drug resistant organism
- Targeted MDRO: An organism resistant to most or all available antimicrobials and with the potential to spread widely.
Examples: Carbapenemase-producing carbapenem resistant Enterobacterales (CP-CRE), *Pseudomonas aeruginosa* (CP-CRPA), *Acinetobacter baumannii* (CP-CRAB); *Candida auris*
- Focus MDRO: The subset of targeted MDROs that are the focus of the MDRO Prevention Plan
- Biofilm: Thick layer of prokaryotic organisms that have aggregated to form a colony, creates a slime layer (example: dental plaque)
- CLABSI: Central-line associated blood stream infection
- CAUTI: Catheter associated urinary tract infection
- LTCH: Long-term acute care hospital

Candida auris: A Deadly Fungi

- Spore-producing fungi
- Can rapidly reproduce
- Creates a biofilm in the environment
- Easily transferred via contact
- Can live on surfaces for up to 2 weeks
- Can recolonize after cleaning within 4 hours, especially on items closest to the patient



Candida auris: A Deadly Fungi

- Patients with compromised immunity, on mechanical ventilation, those with lines/tubes/drains such as hemodialysis patients, and those with prolonged immobilization are at a heightened risk of both colonization and infection of *C. auris*
- Made nationally reportable in 2018 by the CDC
- 1 in 3 patients with invasive *C. auris* infections die (CDC)
- Difficult to identify
- Can be resistant to antifungals (e.g., echinocandins)

C. *Auris* in the LTCH setting

Patient population:

- Organ failure: trachs/ventilator, dialysis, LVADs
- Wound care: ostomy, wounds, fistulas, post-surgical complications
- Lengthy antibiotic courses/TPN/vasopressors, blood transfusions

Risk factors:

- Prolonged immobility/paraplegia
- Lines/tubes/drains (CVAD, Urinary catheter)
- Comorbidities such as DM, HTN, CHF, CVA, obesity, ESRD/AKI, COPD, acute on chronic respiratory failure
- Age, demographics

Acute Care vs LTCHs

Acute Care:

- Shorter length of stay, <25 days
- All levels of acuity
- Specialty services more readily available



LTACH:

- Longer length of stay, >25 days
- Medically complex/compromised patients
- Specific criteria for admission
- Bridge between ICU and SNF/Rehab/home

Risk Stratification

- LTCHs are influential
- High burden of focus MDROs
- Average length of stay: 28 days
- Case mix index (CMI) above national average:
 - RML-H 1.57
 - RML-C 1.45
 - National average: 1.23

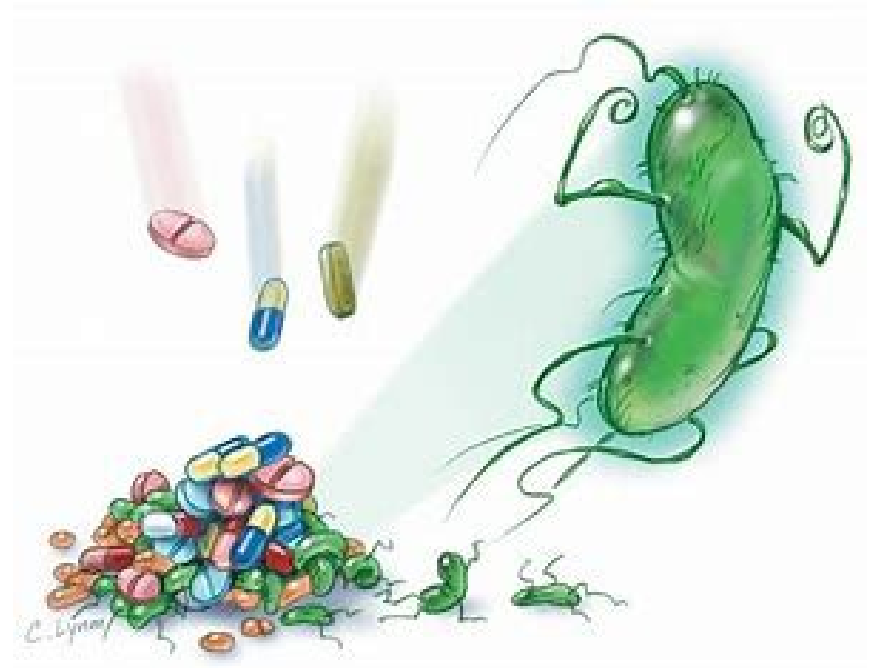
Facility categories	Characteristics	Examples of facility types
Influential	<ul style="list-style-type: none"> • Longer lengths of stay • Care for high-acuity patients/residents • Disproportionately influence regional MDRO prevalence relative to the number of patients/residents they serve • Can positively or negatively influence a region based on their efforts to both prevent and respond to MDRO threats 	<ul style="list-style-type: none"> • Long-term acute care hospitals (LTACHs) • Ventilator-capable skilled nursing facilities (vSNFs)
Highly connected	<ul style="list-style-type: none"> • Facilities that most frequently receive transfers from influential facilities • May play different roles in MDRO spread based on their characteristics: <ul style="list-style-type: none"> o Dispersal: Facilities that discharge patients at a higher rate and to many different facilities can expand the spread of MDROs across a region (i.e., movement of persons with MDROs to different facilities in a jurisdiction) o Collection: Facilities with longer lengths of stay that are at risk of frequent MDRO importation, providing opportunity for low but sustained MDRO transmission 	<ul style="list-style-type: none"> • Acute care hospitals (ACHs) • Critical access hospitals (CAHs) • Skilled nursing facilities that do not care for ventilated residents (SNFs)

Footnote:

Per CMS “The CMI reflects the diversity, clinical complexity, and resource needs of all the patients in the hospital. A higher CMI indicates a more complex and resource-intensive case load.”

Prevalence of *C. auris* & MDROs

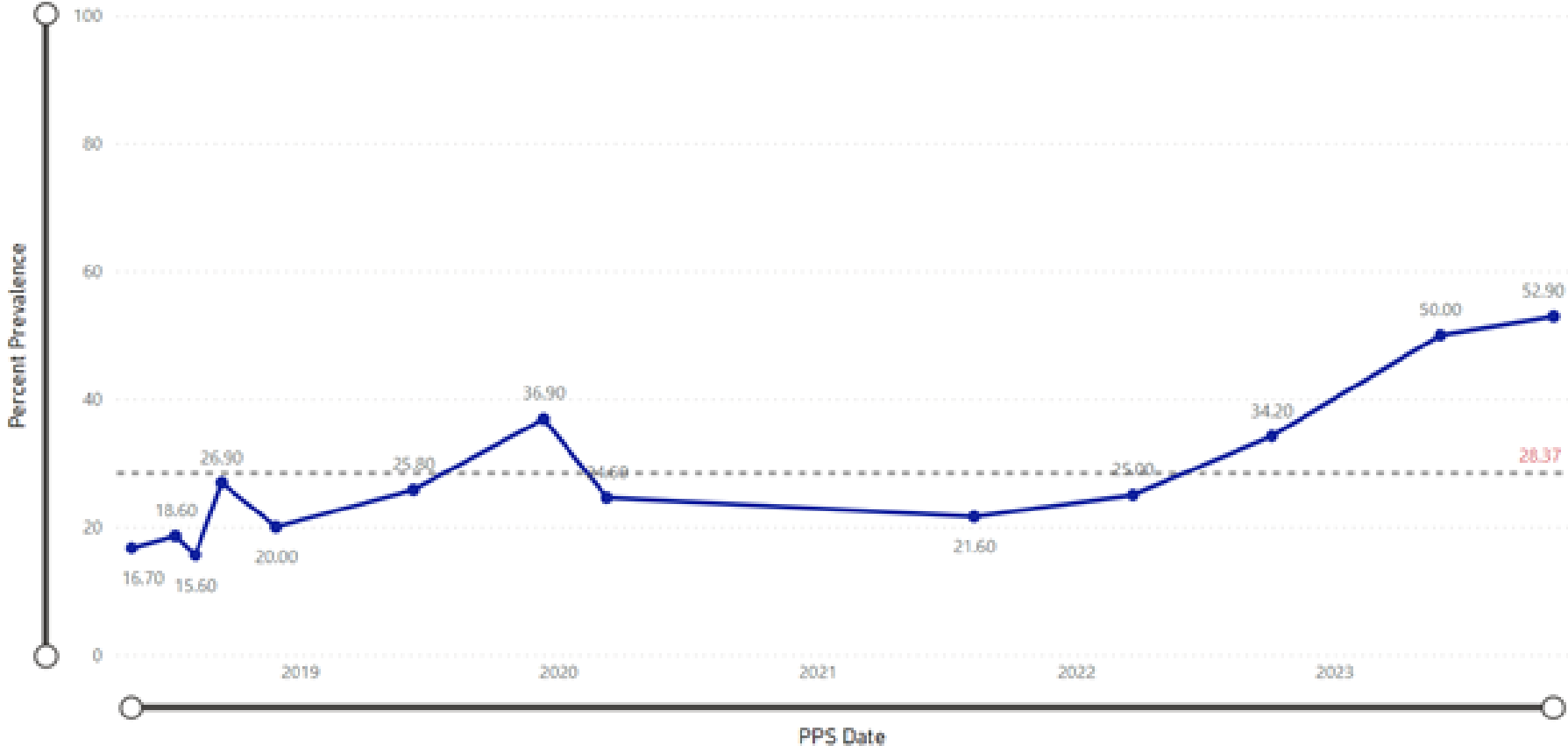
- Currently: 80% of patients have isolation/MDR history (MRSA, VRE, C.diff, C.auris, MDRs)
- Biannual Point Prevalence Study (PPS) with CCDPH, CDPH at both sites
- Admission screening at RML Hinsdale
- Many patients have multiple MDR organisms



PPS History

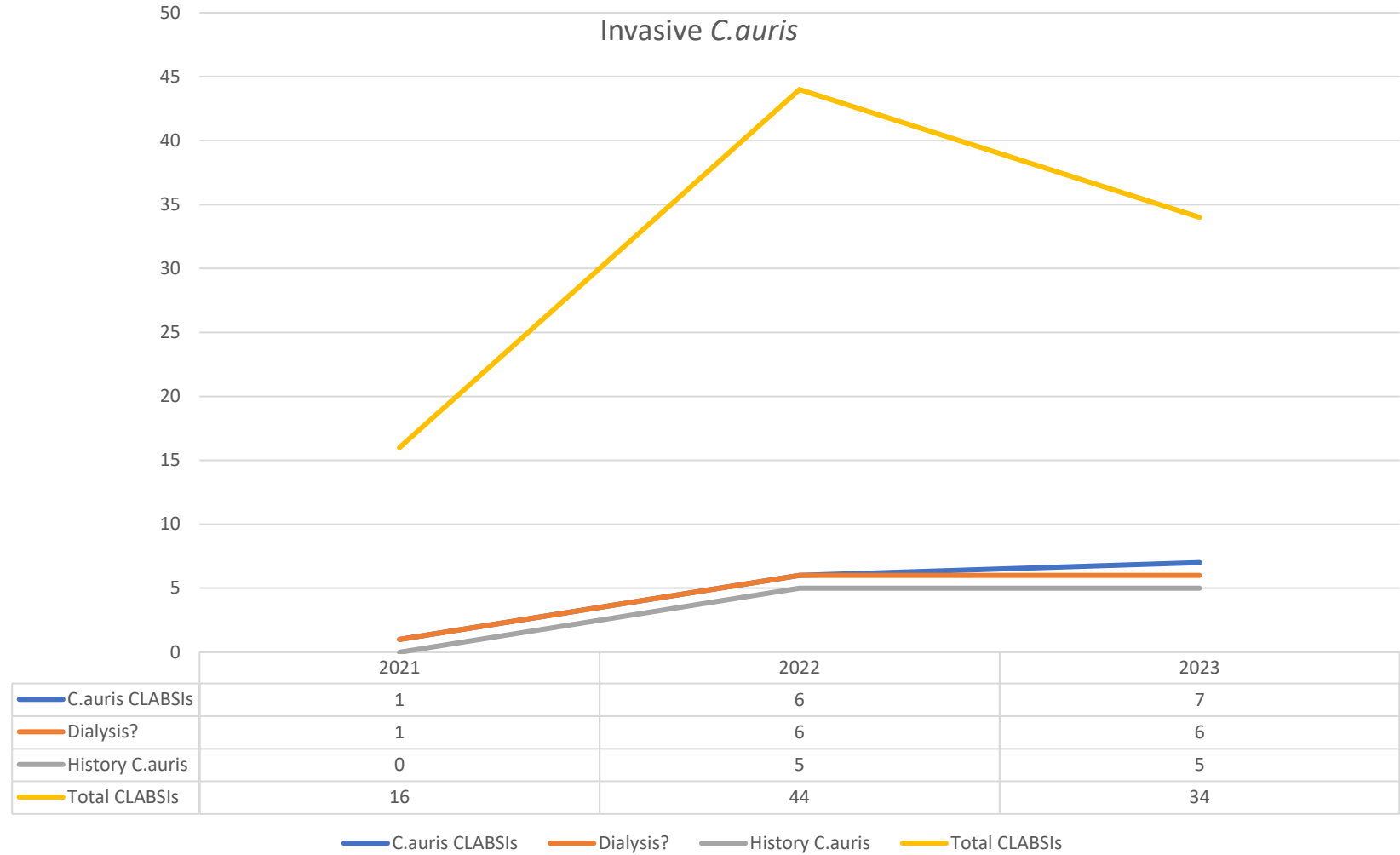
Of note, *Candida auris* colonization has trended upward since 2021

Candida auris Prevalence at RML-Chicago



C.auris HAIs

- Invasive *C.auris* values have increased
- Prevalence of colonization and HAIs have also increased

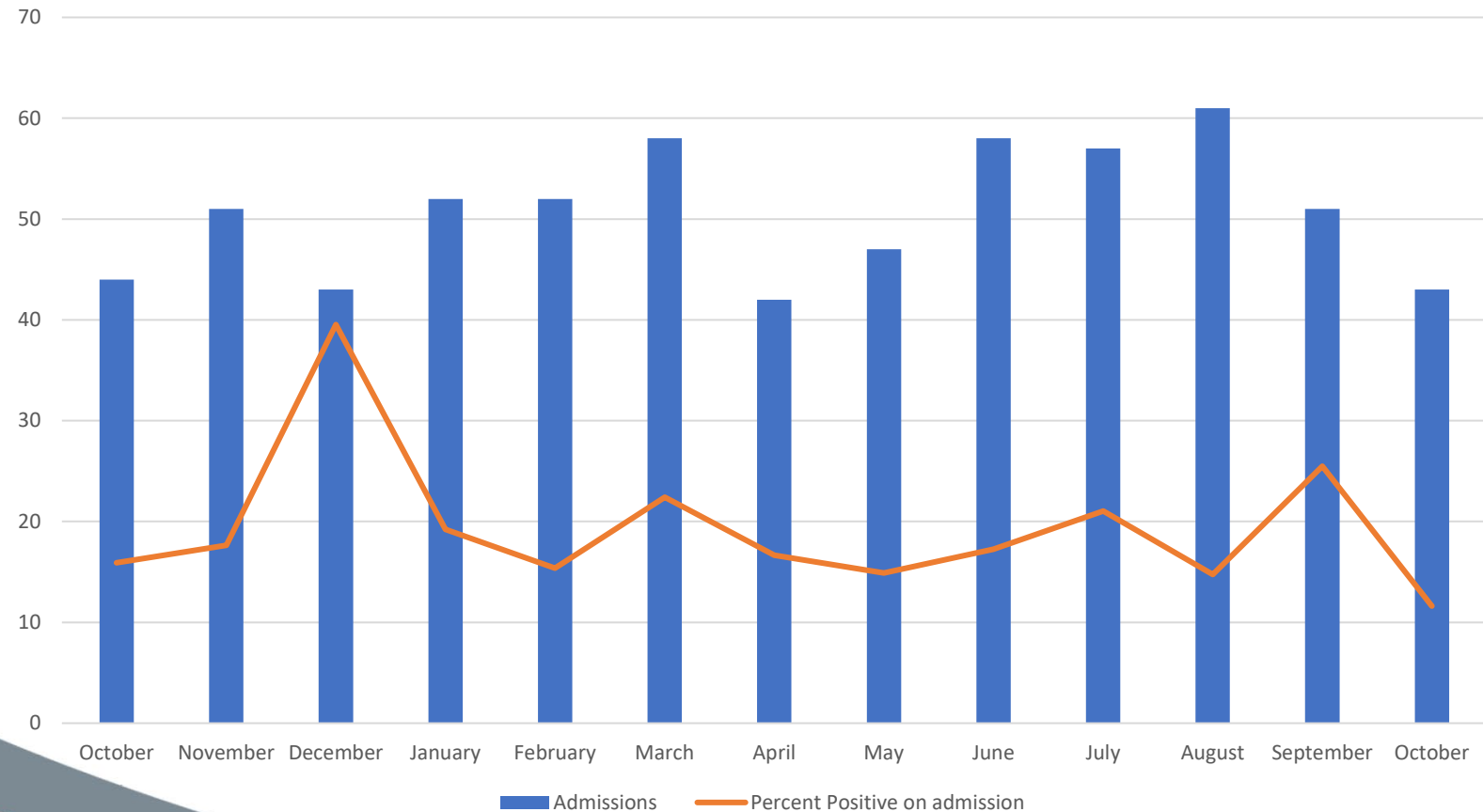


Admission Screening Results

In conjunction with IDPH:

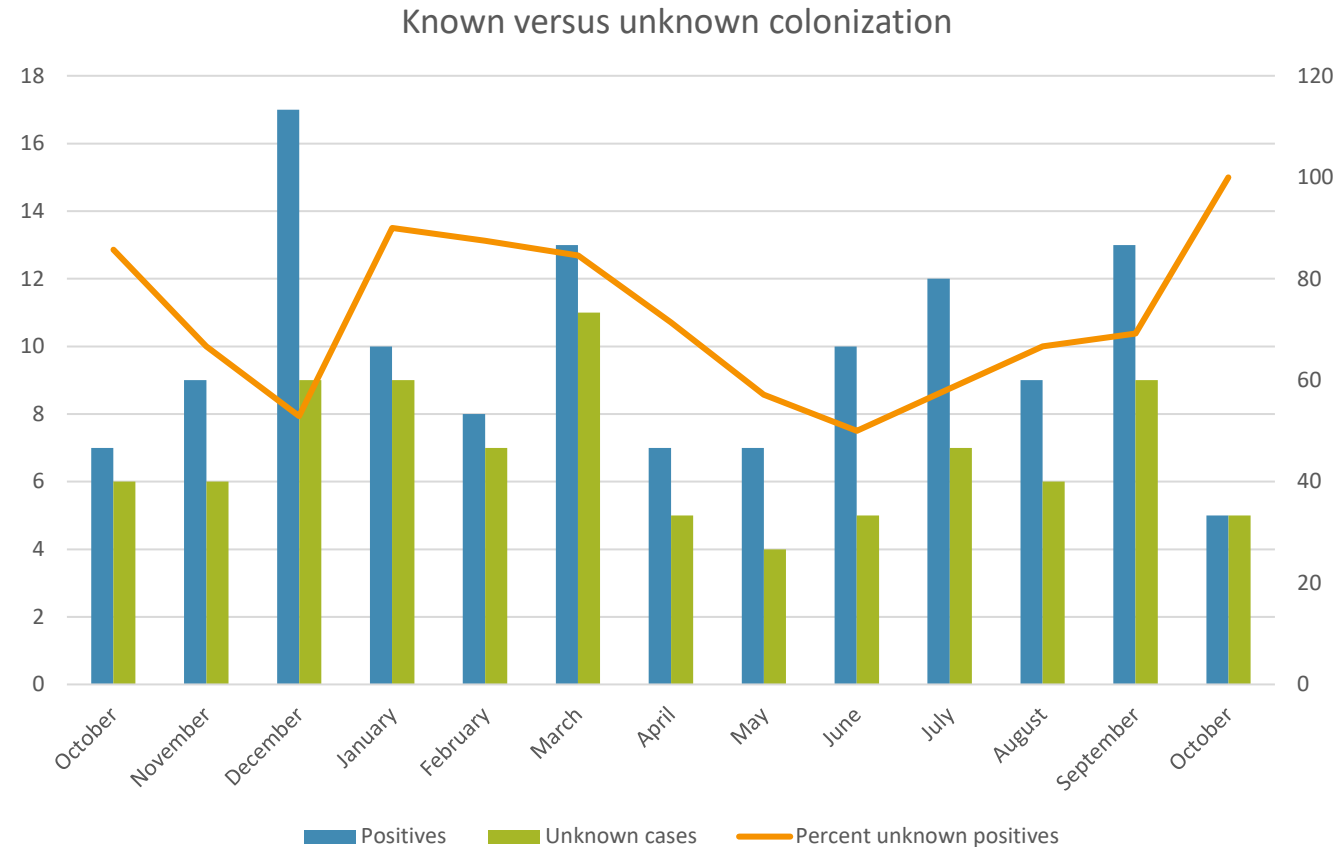
- All patients swabbed at admission for: CRE, CRAB, *C. auris*
- Began 10/22

Overall *C.auris* Positivity



Admission Screening Results

- Percent of *C.auris* cases have been more than 50% “unknown”
- Overall positivity has stayed around 20-25% of admissions



Transmission Based Precautions

- History of MDROs: Contact
- History or active *C. difficile* or *C. auris*: Contact Plus
- PPE (gowns & gloves) outside all isolation rooms
- Dedicated equipment, supplies, and appropriate disinfectant in room
- Single patient rooms



Admission Testing: Lessons learned

- ✓ Isolating upon admission
- ✓ Having RNs obtain specimens, provide fact sheets to patient/family
- ✓ Having a dedicated spreadsheet for logging steps (line list, result, refusals/history)
- ✓ Coding to auto-populate information from admission assessment (Collaboration with Quality and IS)
- ✓ Always double check XDRO history

Infection Prevention Protocols/ Risk Mitigation

- RN, PCT, RCP daily equipment cleaning
- All new employees/agency educated on this

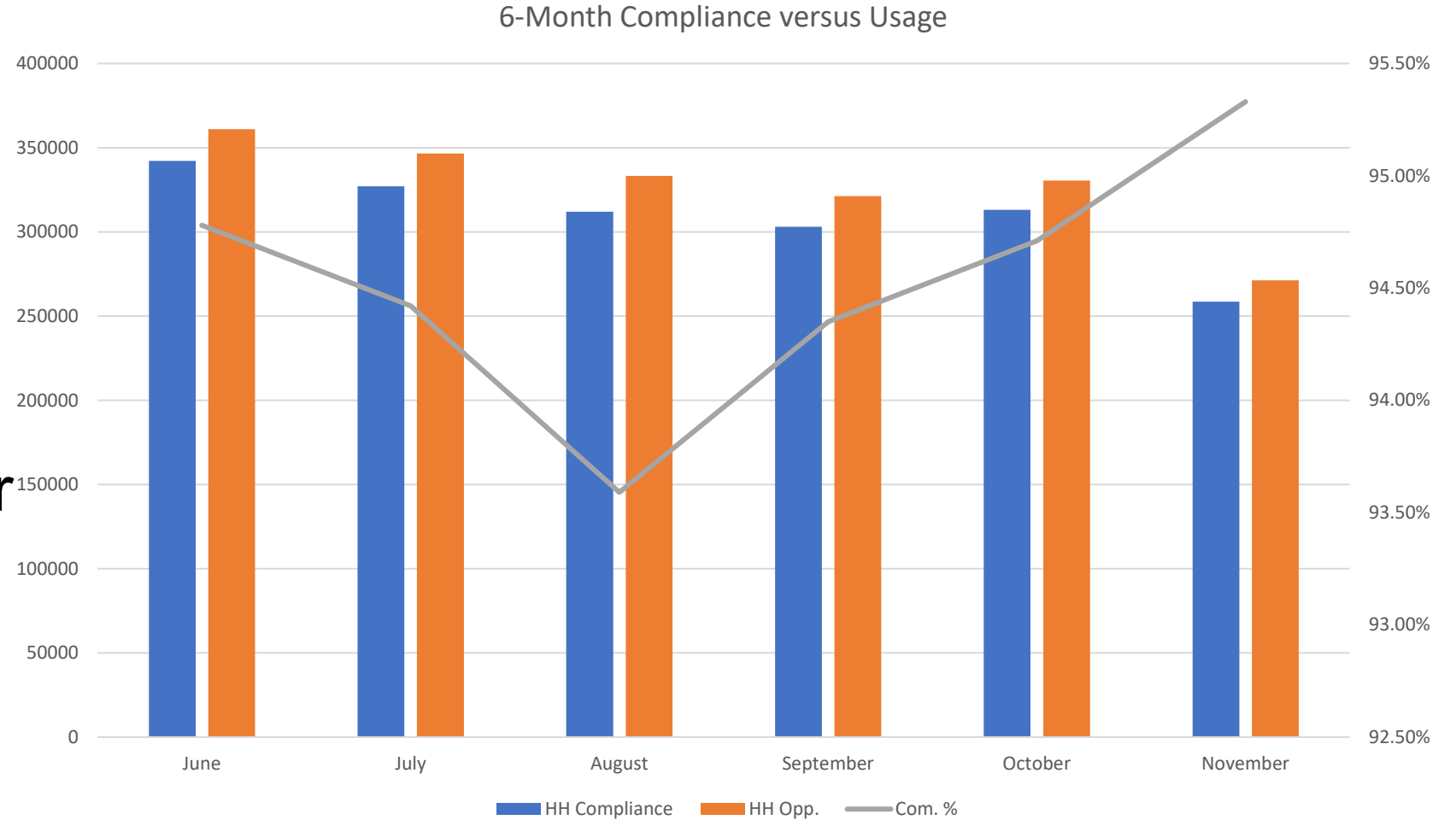
	RN	RCP	PCT	Secretary
Items to be cleaned	Over-bed table	Bedside table / night stand	Bed rails	All desktop computer keyboards, including MD charting rooms
	IV pump	Ventilator	Call light	All telephones at desk and in MD charting rooms, including Unit Sec mobile phone
	Tube feeding machine	RCP mobile phone	Blood pressure machine/cuff	All portable computers in halls
	RN mobile phone		Patient telephone	
	Medication cart		Mattress (when patient is out of bed for test/procedure/in cardiac chair)	
				PCT mobile phone

Infection Prevention Protocols/ Risk Mitigation

- **Infection Prevention Practices**
- Yearly & Just-in-time education for all staff including agency
- Isolation precaution, Foley, Central line, PPE audits
- Daily report on femoral lines from managers, *C. auris* and HAIs from IP
- Running log of all *C. auris patients*

Hand Hygiene: Biovigil

- Addition of handwashing compliance for *C. difficile* rooms contributed to change in August
- Education in September/October has increased compliance and usage



Infection Prevention Protocols/ Risk Mitigation

EVS:

- All isolation rooms cleaned 2x day
- Terminal cleans: #40L Disinfectant Cleaner (3 min. dwell) & 10% bleach (10 min. dwell) on all enhanced precautions rooms
- Also have bleach and hospital-grade wipes for equipment/surfaces as needed



Barriers to Success

- Spore-forming pathogens require longer contact time, more difficult to kill, easily transmissible
- Staff burnout/shortages across departments
- No way to decolonize individuals of *C. auris*
- *C. auris* can change “form,” creates a strong biofilm
- Increased acuity of patients/shift in infectious disease focus during pandemic
- Hand hygiene and PPE compliance

Collaborative Innovations

- Research and data collection with CCDPH/CDPH, IDPH, CDC, and SHEPHERD program:
 - XDRO registry
 - PPS
 - Air surveillance
 - Wastewater surveillance
 - Admission screening
- Hospital Leadership Communication

Collaborative Innovations

- Dry Hydrogen Peroxide/Air scrubbers:
 - Use humidity and oxygen to put positive molecules (oxidative) into the air; can disinfect at the molecular level throughout air and surfaces
 - Body naturally can “breathe out” H₂O₂, no patient harm in studies
 - Also utilizes HEPA/MURV filters, UVC bulbs
- UVC cleaning:
 - UV light removes pathogen at molecular level
 - Especially effective on spores
 - Room for human error, only in conjunction with appropriate disinfection

How does this affect Acute Care?

- Many patients testing positive on admission are unknown cases
- Preliminary data shows those “unknowns” are typically:
 - Coming to a hospital from the community for a life-altering event
 - Do not have an extensive medical/hospitalization history
 - Not being tested for *C. auris* at acute care
- What is being done at the acute care level?
- What changes will yield the greatest benefit at the acute care level?

Conclusion

- *Candida auris* is a stubborn fungi that can cause harm to patients that are already very sick
- Enhanced disinfection, collaborative interventions, and staff education are important to decrease transmission
- LTCHs have an increased prevalence of MDROs
- Increased length of stay, organ failure, indwelling lines, and immobility pose increased risk factors for acquiring *C. auris*
- Many patients come to secondary facilities with unknown colonization of *C.auris*

References

Candida auris. APIC. (2023, May 24). <https://apic.org/candida-auris/>

Case mix index. CMS.gov. (n.d.). <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Acute-Inpatient-Files-for-Download-Items/CMS022630>

Centers for Disease Control and Prevention. (2023, March 6). *Public health strategies to prevent the spread of novel and targeted multidrug-resistant organisms (MDROs)*. Centers for Disease Control and Prevention. <https://www.cdc.gov/hai/pdfs/mdro-guides/Health-Response-Prevent-MDRO-508.pdf>

Centers for Disease Control and Prevention. (2023, February 14). *Tracking candida Auris*. Centers for Disease Control and Prevention. <https://www.cdc.gov/fungal/candida-auris/tracking-c-auris.html>

Editors, B. (2017, August 6). *Biofilm - definition, function and structure*. Biology Dictionary. <https://biologydictionary.net/biofilm/>

Questions?



- Saint Anthony Hospital is a Chicago based urban, 151-bed, safety net, acute care community hospital serving neighborhoods on the West Side and Southwest Side of Chicago including Little Village, North Lawndale, Brighton Park, Garfield Park, Back of the Yards, McKinley Park, Archer Heights, Pilsen, Austin, Chinatown and suburban Cicero.
- Saint Anthony offers quality services close to home, caring for people regardless of their nationality, religious affiliation, and financial status

- We offer services that include, but are not limited to –
- Maternity Services
Pediatrics
Family Medicine
Surgical Services
Rehabilitation Services
Dialysis
Behavioral Health
Community Wellness

- Increase in Catheter Associated Blood Stream Infections (CLABSI)
- Increase in Catheter Associated Urinary Tract Infections (CAUTI)
- Increase in Device utilization rates (urinary catheter and central line)
- Uptick in Surgical site infections (SSI)
- Extended length of stay
- Inappropriate, unnecessary use of broad spectrum antibiotics

- Healthcare-associated infections (HAIs) are **preventable causes** of morbidity and mortality in hospitalized patients - Centers for Disease Control and Prevention (CDC)
- CDC, Infectious Diseases Society of America (IDSA) and Society of Healthcare Epidemiology of America (SHEA) have published evidence-based recommendations for the prevention of these nosocomial infections.
- Widespread implementation of these guidelines and strategies, along with increased awareness of human and financial cost of HAIs, have led to a decline in incidence of HAIs

To address this, we implemented various interventions including, among other initiatives:

- Alerts
- Huddles
- Awareness
- Education
- Electronic Medical Records hard stops
- Daily Surveillance Rounds
- Daily assessments

Hospital wide Daily Interdisciplinary Safety Huddle (DISH) with infection control and device components.

- The aim of this project was to evaluate the impact of interventions on DURs and infection rates for indwelling urinary catheters (IUC) and central venous catheters (CVC).
- IUC and CVC usage is reported and the infection preventionists reviews indications and plans for removal.
- All interventions including, but not limited to, culture stewardship, education, awareness, signage, unit rounds/huddles and leadership support, were successfully implemented.
- Nurse driven Foley removal policy
- Urine culture stewardship

- All the above brought about a clear and properly directed culture shift, lasting change and increased awareness.
- This resulted in significant reduction in device utilization rates, CAUTI/CLABSI
- Significant reduction in SSI.
- Reduction in C. diff rates

UNIT	BED	COMPLAINT	ADMIT SOURCE	ADMIT DATE	ALERT
UNKNOWN_LOCATION	UNKNO WN_BED	bi-lateral rib pain	Non health care facility point of origin	11/28/2023 00:46	No Alert
Intensive Care	ICU-09	ESRD w volume overload	Non health care facility point of origin	11/28/2023 03:30	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	sob fever	Non health care facility point of origin	11/28/2023 04:27	No Alert
3 EMS	0339-02	Intractable vertigo	Non health care facility point of origin	11/28/2023 05:05	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	stomach pain	Non health care facility point of origin	11/28/2023 06:25	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	back pain , sore throat	Non health care facility point of origin	11/28/2023 06:49	No Alert
4 PSYCHIATRIC	0451-02	schizophrenia	Non health care facility point of origin	11/28/2023 07:20	No Alert
4 PSYCHIATRIC	0452-02	depression	Non health care facility point of origin	11/28/2023 07:25	No Alert
Labor & Delivery	0503-01	induction	Non health care facility point of origin	11/28/2023 07:45	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	Hypertensive crisis	Non health care facility point of origin	11/28/2023 08:04	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	catheter pain	Non health care facility point of origin	11/28/2023 08:14	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	injury due to fall	Non health care facility point of origin	11/28/2023 08:24	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	R ear pain	Non health care facility point of origin	11/28/2023 08:29	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	sore throat swollen tonsils	Non health care facility point of origin	11/28/2023 08:33	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	loose bowels x2 weeks	Non health care facility point of origin	11/28/2023 08:40	No Alert
Labor & Delivery	0501-01	induction	Non health care facility point of origin	11/28/2023 08:55	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	possible uti	Non health care facility point of origin	11/28/2023 09:05	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	back pain x3 days	Non health care facility point of origin	11/28/2023 09:12	No Alert
UNKNOWN_LOCATION	UNKNO WN_BED	body ache chills fever missed period	Non health care facility point of origin	11/28/2023 09:17	No Alert

Daily Temperature Report

VISIT ID	ADMIT DATE	BED	TEMP	TEMP TAKEN TIME
202547862	11/26/2023 23:20	0732-01	99.4	11/28/2023 06:37
202546782	11/20/2023 09:52	0735-02	99.5	11/28/2023 13:36
202547369	11/22/2023 21:03	0734-02	99.5	11/28/2023 13:36
202547522	11/24/2023 14:20	0737-01	99	11/28/2023 13:38
202548129	11/27/2023 18:35	0737-02	99	11/28/2023 13:39
202547674	11/25/2023 15:37	0353-02	100.6	11/28/2023 20:00
202548122	11/27/2023 19:40	0334-02	99.6	11/28/2023 20:00
202542784	11/03/2023 18:41	ICU-03	99.5	11/28/2023 20:00
202547108	11/22/2023 03:40	0355-02	99	11/28/2023 20:00
202548022	11/27/2023 18:20	0354-02	100	11/28/2023 20:00
202548037	11/27/2023 14:20	ICU-08	99.3	11/28/2023 20:00
801007663	11/28/2023 03:30	ICU-09	99	11/28/2023 20:00
202545016	11/27/2023 06:07	0355-01	101.2	11/29/2023 00:00
202547887	11/27/2023 12:00	0350-01	100.1	11/29/2023 00:14
202546751	11/20/2023 14:35	0337-02	99.2	11/29/2023 04:00
202547818	11/26/2023 16:30	0351-02	102.6	11/29/2023 04:17

All positive Wound Cultures

Gender	Age	Date of Birth	Admit Date	Collected Location Room Bed	Specimen Source Category	Observation	Organism
			11-22-2023 15:36:00	ED	wound	RSLT#1 Mixed skin flora	-
			11-27-2023 00:46:00	3 EMS 0333 01	gi	[[GS]] MODERATE:WBC	-
			11-23-2023 22:14:00	SURGERY SURG 10	wound	[[GS]] Few white blood cells.	-
			11-23-2023 22:14:00	SURGERY SURG 10	wound	[[GS]] Many gram positive cocci.	-
			11-23-2023 22:14:00	SURGERY SURG 10	wound	RSLT#1 Beta hemolytic Streptococcus, group B Scant growth Penicillin and ampicillin are drugs of choice for treatment of beta-hemolytic streptococcal infections. Susceptibility testing of penicillins and other beta-lactam agents approved by the FDA for t	Streptococcus agalactiae (Group B)
			11-23-2023 22:14:00	SURGERY SURG 10	wound	RSLT#2 Prevotella bivia Scant growth Studies at LabCorp Holdings have confirmed the observations of others who have demonstrated that Prevotella, Porphyromonas and Bacteroides species other than Bacteroides fragilis group are routinely susceptible to Cef	Prevotella bivia (Bacteroides bivius)
			11-23-2023 22:14:00	SURGERY SURG 10	wound	RSLT#1 Anaerococcus prevotii Scant growth	Anaerococcus (Peptostreptococcus) (Peptococcus) prevotii
			11-26-2023 19:00:00	ED	wound	[[GS]] Many gram negative rods.	-
			11-26-2023 19:00:00	ED	wound	RSLT#1 Gram negative rods Heavy growth	-



DOES YOUR PATIENT HAVE A FOLEY? IF YES, DON'T COLLECT SAMPLE YET.

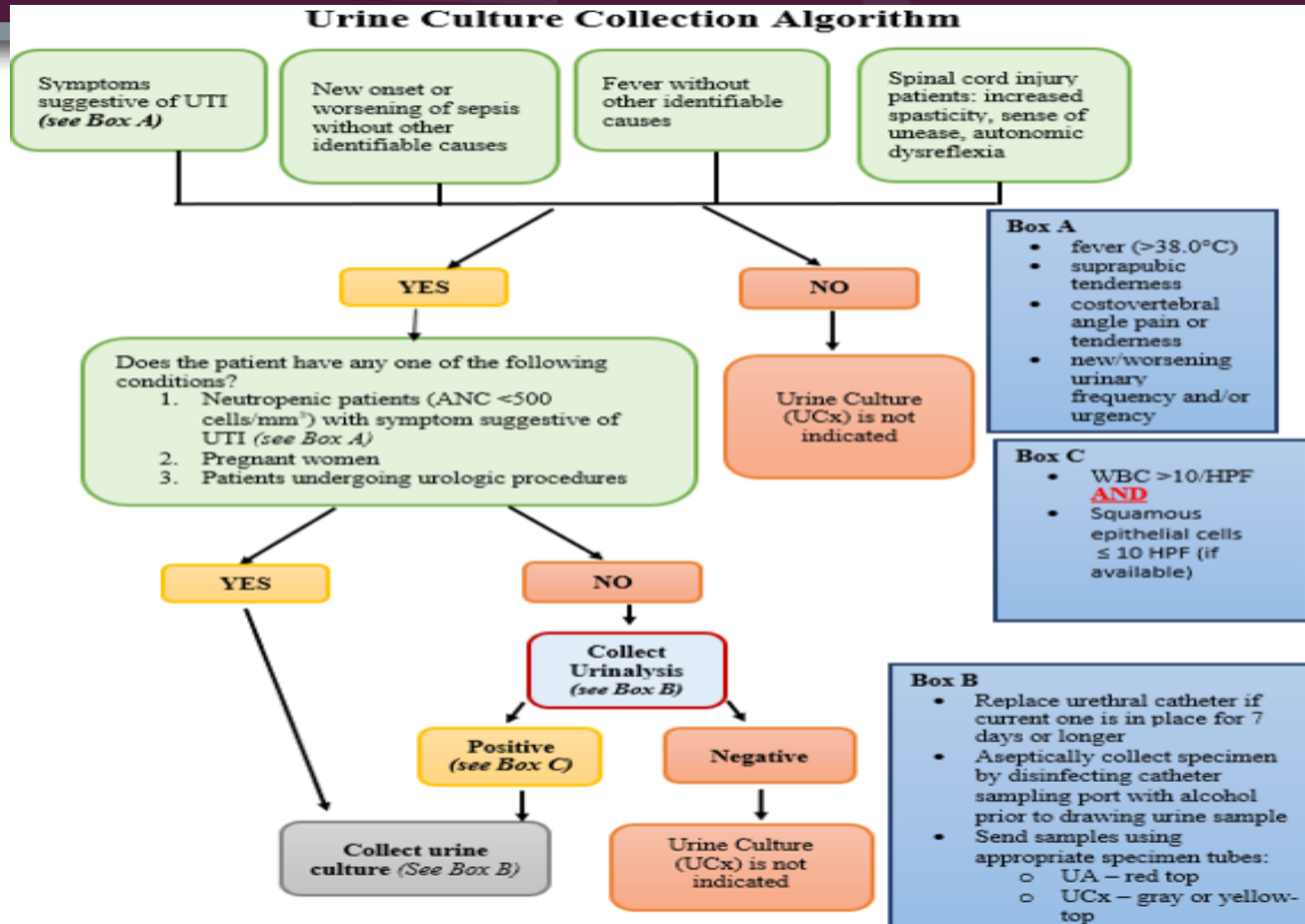
CONTACT DR. [REDACTED] VIA TEXT MESSAGE. HE WILL REVIEW THE CASE AND DISCUSS APPROPRIATENESS WITH PHYSICIANS.

Help us stop unnecessary cultures: indiscriminate cultures may lead clinicians down the wrong diagnostic path and promote extended length of stay and excess antibiotic use. For more information, ask Dr. [REDACTED] or read the memo in the nursing station.

Indications for inserting a Urinary Catheter

1	Urinary retention/obstruction (verified with bladder scan)						
2	Neurogenic bladder diagnosed pre-operatively						
3	Strict temporary output measurement in ICU patients – consider external catheter pre/post Foley placement						
4	Select Urology/Nephrology/Gynecology indications*						
5	Improve comfort at end of life						
6	Movement intolerance (hemodynamic instability)						
	Initials						

*Perioperative use for selected surgical procedures, such as urologic surgery or surgery on contiguous structures of the genitourinary tract; prolonged surgery; large volume infusions or diuretics during surgery; intraoperative monitoring of urine output needed.



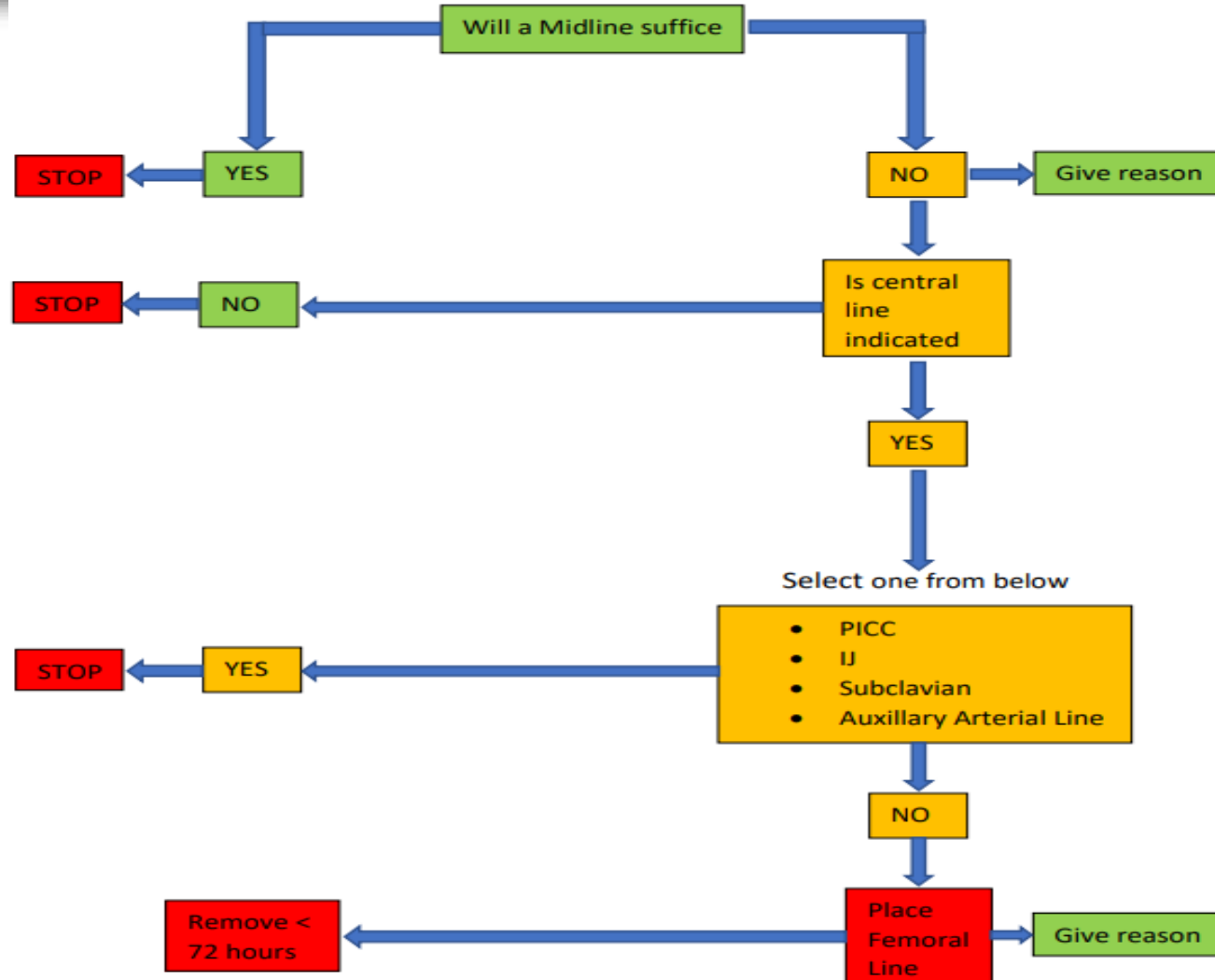
- DISH – open forum attended by representatives from all disciplines where unit census, device data, isolations and much more, are shared
- Daily Multi-disciplinary ICU rounds where device data, indications, plans for removal are shared
- Promote use of external urinary catheters where possible
- Checklist for indications to place Indwelling Urinary Catheter (IUC) built in EMR
- Promote use of midlines where possible
- Algorithm in place for placing Femoral (as last option)
- Checklist for placing midline/central line built in EMR
- Testing and culture stewardship
- Involve senior leadership if barriers exist to device removal
- Active support and involvement of senior leadership

Date		11/27/23												
PATIENT DEMOGRAPHICS						CENTRAL/MIDLINES			FOLEYS			VENTS		ISOL
patient name	Room/ Bed #	MRN	Age/Se x	adm date	isol. type	Placement date	Type/Site	centr al line days	Placement date	Reason	FOLE Y DAYS	Intubation date	Comment	Isol. reason
	ICU-1	3205538		11/24/23	drop/cont									covid
	ICU-3	3298114		11/3/23	contact							11/3/23	distress	mrsa(nose)
	ICU-7	2579371		11/24/23					11/25/23	I/O	3			
	ICU-10	3299141		11/26/23					11/26/23	I/O	2			
	336-1	3151431		11/7/23		11/07/23	permacath	21						
	349	2894079		11/23/23	drop/cont									covid
	348-2	3107136		10/14/23					10/14/23	retention	44			
	334-1	3299060		11/22/23	contact+									h/o C. auris
	335-1	3289200		11/22/23	contact+									roommate

Interventions		
Central Line Checklist Q1HX1		✓
Assessments		
Central Line Checklist		✓
PRE-Procedure & Time Out		
Obtain Consent for Procedure (Signed & Witnessed)	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Perform Patient ID Using Two Identifiers	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Announce the Procedure to be Performed	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Mark/Assess Site	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Confirm Hand Washing/Sanitizing Immediately Prior	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Insertor/Assistant Wearing Hat, Mask, Sterile Gown & Gloves; Others in Room: Hat & Mask	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Skin Prep	<input type="radio"/> Chloraprep (Preferred; 30 second scrub/dry time) <input type="radio"/> Povidone Iodine (allow to dry) <input type="radio"/> Alcohol (If allergic to other options) <ul style="list-style-type: none"> • 2-minute scrub/dry time for femoral site 	
	Skin should be completely dry at time of skin puncture • Dry Skin: Allow 30 seconds to dry • Moist Skin: Allow 2 minutes to dry	
Use Large Sterile Drape to Cover Entire Patient Head to Toe	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Label All Medications, Solutions and Syringes	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
DURING Procedure		
Maintain Sterile Field	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Use Sterile Ultrasound Cover	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Aspirate Blood from Each Lumen	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
	<ul style="list-style-type: none"> • To avoid air embolism and ensure intravascular placement 	
Sterile Caps Applied	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
POST-Procedure		
Clean Blood from Site Using Antiseptic Agent	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Biopatch Applied Around Catheter (Blue Side Up)	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Sterile Dressing Applied	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Securement Device Used	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Dressing Dated	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Sutures Used	<input type="radio"/> Yes <input type="radio"/> No	
	<ul style="list-style-type: none"> • The use of sutures is discouraged due to increased risk of infection at the insertion site 	
Placement Verified By	<input type="radio"/> 3CG <input type="radio"/> CXR <input type="radio"/> Fluoroscopy	
Patient/Family Education		
Patient/Family Education Provided & Documented	<input type="radio"/> Yes	
	<input type="radio"/> Other:	
Insertion Indication		
Reason Femoral Site Used	<input type="radio"/> No Other Site Available <input type="radio"/> Emergent	
Procedure	<input type="radio"/> Elective <input type="radio"/> Emergent <input type="radio"/> Exchange <input type="radio"/> Re-Position	
CHECKLIST COMPLETED		
Checklist Completed	<input type="radio"/> Yes	
Comments		
Checklist Comments		

- Provider to attempt IJ/subclavian access.
- If not, give reason and place femoral.
- Once femoral placed, IP to send email to senior leadership, medical providers.
- Discussion at daily ICU rounds re femoral removal < 72 hours.
- If any barriers, escalate to senior leadership, CMO for action and follow-up.

Prior to gaining vascular access, please assess patient for co-morbidities (CHF, DM, HTN)



	CAUTI (<i>n</i>)	Rate	CLABSI (<i>n</i>)	Rate
Before	9	1.27/1000 IUC days	13	3.66/1000 CVC days
After	1	0.16/1000 IUC days	1	0.16/1000 CVC days

Table 5. Hospital Acquired Infection Rates

Year	CAUTI	IUC days	Cauti/IUC x 1000
2014	9	1903	4.72
2015		1418	0
2016	1	1424	0.7
2017		1614	0
2018		1065	0
2019		1492	0
2020		2394	0
2021		1657	0

Device utilization rates in ICU

	YEAR	IUC Device Days	Patient Days	IUC Utilization Rate	CVC Device Days	Patient Days	CVC Utilization Ratio
Before	2011	2429	3531	0.69	1103	3531	0.31
	2012	2074	3513	0.59	1016	3513	0.29
	2013	1458	2685	0.54	772	2665	0.29
	2014	1151	2594	0.44	669	2594	0.26
After	2015	754	2010	0.38	658	2010	0.33
	2016	934	1915	0.49	648	1915	0.34
	2017	1022	2907	0.35	731	2907	0.25
	2018	636	3277	0.19	472	3277	0.14

Device utilization rates in non-ICU units

	YEAR	IUC Device Days	Patient Days	IUC Utilization Rate	CVC Device Days	Patient Days	CVC Utilization Ratio
Before	2011	2429	7561	0.32	1103	7561	0.15
	2012	2074	6470	0.32	1016	6470	0.16
	2013	1458	6006	0.24	772	6006	0.13
	2014	1151	5740	0.2	669	5740	0.12
After	2015	1200	6695	0.18	1308	6695	0.2
	2016	490	5587	0.09	547	5587	0.1
	2017	592	6854	0.09	796	6854	0.12
	2018	429	7587	0.06	517	7587	0.07

Thank you!
Questions?



Thank you for participating!
Next Roundtable (Teams):
Thursday, January 18th from 2-3 p.m.



Interested in CEUs?

Acute Care Roundtable CEU Request

<https://redcap.link/achsurvey>





Additional Slides/Resources

(not presented during the meeting)





Our Services

Our team consists of Infection Prevention Specialists, Epidemiologists, a Project Manager, a Projects Administrator, and Medical Directors who provide the following assistance:

- IP&C Guidance and Training
- Infection Control Assessments and Responses (ICARs)
- Epidemiology Support
- IP&C Roundtable
- Our partnerships and site visits are meant to be educational, constructive, non-regulatory, and non-punitive
 - We work with you to resolve any identified opportunities
 - These services are not in response to citations or complaints



Reporting Case Report (CRF) Forms

CDPH requires additional epidemiologic information for certain cases in addition to the reporting requirement. By providing this information to CDPH, it allows us to have a better understanding of this patient and how to limit the spread of further transmission for certain multi-drug resistant organisms.

For MDRO Reporting training (have a new IP? need a refresher?) questions and CRF completion requirements, please contact:

cecilia.pigozzi@cityofchicago.org

