

APIC Great Lakes: 2024 Educational Webinar Series

Member's Poster Presentations from National APIC 2024

August 20, 2024

Housekeeping

- Please mute your line
- Have questions for our speaker? Drop it in the chat to be asked!

Continuing Education (CE)

- There are no CEUs for today's presentation

Announcements

MDHHS & MHA Project Firstline: [IP Training](#)

- Acute & Long-Term Care IP
 - Modules 1, 2, and 6
- Staff (Direct care, housekeeping & food service)
 - Modules 3, 4, and 5

New [Microlesson](#) posted
on the APIC-GL
YouTube Channel

**APIC Great Lakes Microlearn:
Updating APIC Setting to Engage
in our Chapter Online
Community**

NEW! APIC-GL Peer-to-Peer Mentorship Roundtable

- WHAT:
 - A facilitated time following APIC-GL monthly education webinars where members will have the opportunity to share challenges, ask questions, and seek advice from fellow member IPs.
- WHO:
 - All APIC-GL members can participate and benefit.
- HOW:
 - Submit questions anonymously through [Google Forms](#). Questions/situations will be presented to the group for discussion.

The logo for APIC 24 features the letters "APIC" in a large, blue, sans-serif font. To the right of "APIC" is a red shield-shaped icon containing the white number "24".

APIC 24

ANNUAL CONFERENCE & EXPO

JUNE 3-5 SAN ANTONIO

A blue, starburst-shaped graphic containing the white text "#APIC24".

#APIC24

A red banner with a white border, containing the white text "ANNUAL.APIC.ORG".

ANNUAL.APIC.ORG

Growing and Developing the Infection Prevention Workforce: APIC's Strategic Efforts

Rebecca Bartles, DrPH, CIC, FAPIC

Angel C. Mueller, MPH, CIC, FAPIC

Zach Boren

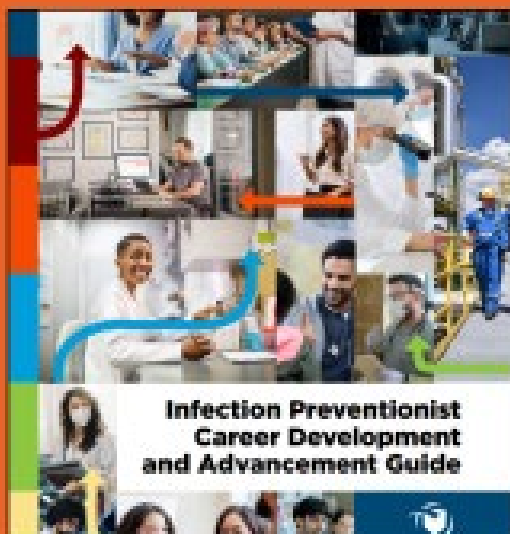
June 5, 2024

Building an Effective Workforce



APIC Strategic Efforts

#APIC24



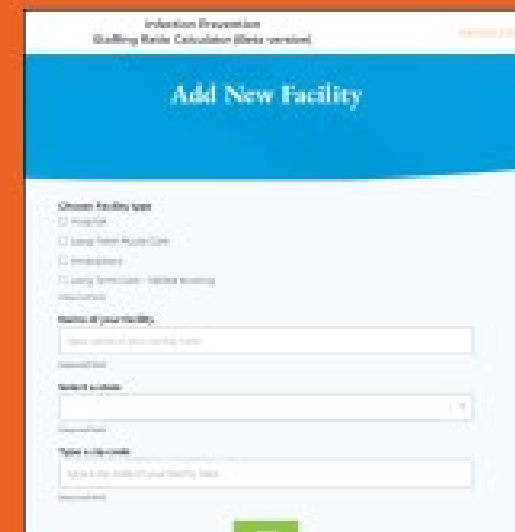
**IP Career
Development and
Advancement
Guide**



**IP Academic
Pathway**



**Department of
Labor
Apprenticeship
Program**



**IP Staffing
Calculator**

Infection Preventionist Career Development and Advancement Guide

- Comprehensive resource to support:
 - ✓ Recruitment
 - ✓ Retention
 - ✓ Promotion
- Framework for implementation of the APIC IP Competency Model
- Direction for career entry and progression
 - ✓ Expanding career stages
 - ✓ Additional practice settings



IP Academic Pathway – Degree and Certificate Curriculum

- Validation study currently underway, including:
 - Academic survey
 - Professional survey
 - Curricular standards and guidelines review of existing programs
- Estimated completion by end of 2024



How is the IP Apprenticeship Organized?



Excerpt of On-the-Job Learning: 9 Job Functions

- **#1 Conducts risk assessments** and develops surveillance plans for epidemiologic investigation
- **#2 Investigates outbreaks** and exposure
- **#3 Analyzes and interprets data** and builds infectious
- **#4 Prevents and controls** the transmission of infectious agents and healthcare-associated infections

Excerpt of the Coursework (Classroom)

- Organizational Structure and Function in Health Care Facilities
- Microbiology for Infection Prevention and Control
- Epidemiology and Statistics for Infection Prevention and Control
- Health Care-Associated Infections and the Protection of Patients
- Occupational Health and Safety

IP Mentorship & Teaching

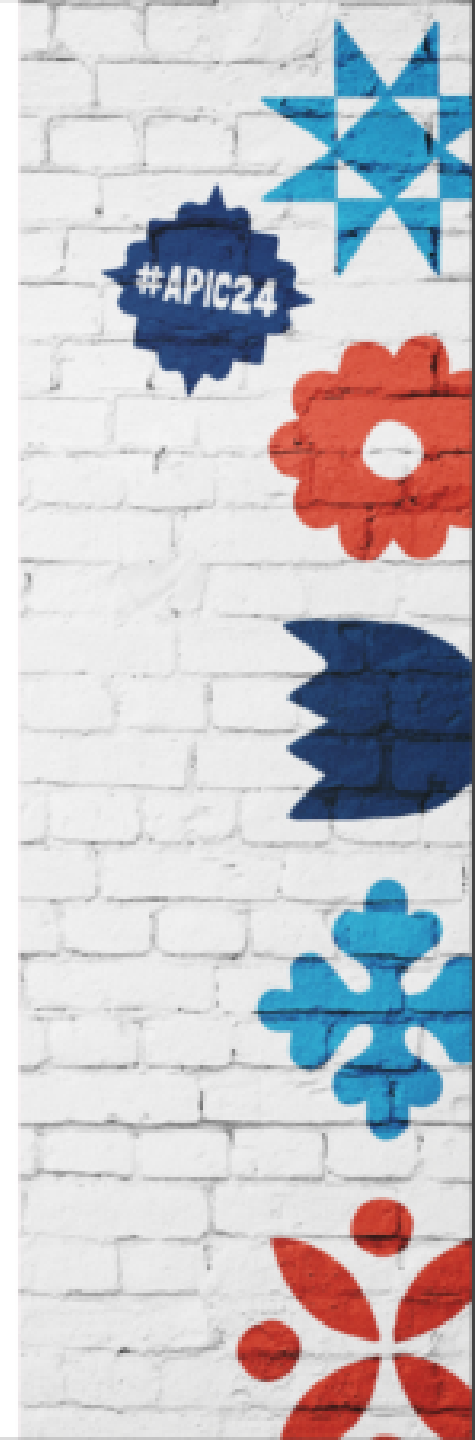
- **Technical Competence** – How to do the work well
- **Personal Competence** – How to be a good IP & have a productive career
- **Social Competence** – How to work well in an organization
- **Problem Solving & Critical Thinking** – How do to work that is not routine

IP Staffing Calculator



Key Properties:

- Multifactorial and multidimensional – taking into account many different factors that require IP resources
- Individualized for the specific care setting and organization – taking into account the unique characteristics of each facility
- Easily calculated with readily accessible data
- Tied to outcomes
- Considered credible in the eyes of the c-suite
- Includes routine publication of summary data to allow for comparisons based on specific facility characteristics



IP Staffing Calculator Sneak Peek

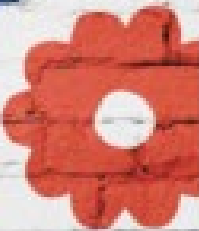
Facility type (N = 473)	N (%)
Hospitals	374 (79.1)
Ambulatory	72 (15.2)
Long term care	7 (1.5)
Long term acute care	20 (4.2)



IP Staffing Calculator Sneak Peek

Perception of staffing is significantly associated with current staffing ratio

	Inadequate (n = 33)	Kind of adequate (n = 50)	Adequate (n = 39)	Resource d (n = 11)	Highly resourced (n = 7)	P-value
Current staffing ratio (median/IQR)	160 (79.1)	148.2 (82.7)	125 (51.0)	90 (56)	114.1 (99)	p <0.003

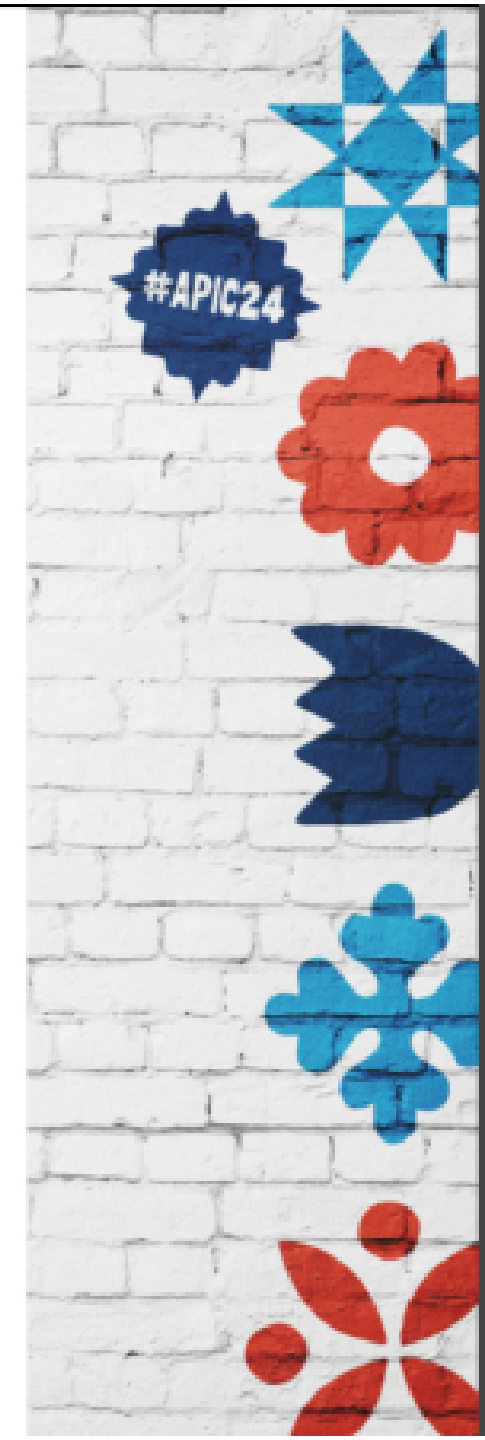


IP Staffing Calculator Sneak Peek

CLABSI and SSI SIRs are significantly higher in understaffed hospitals

*Excluded: Hospitals <25 beds were excluded from this analysis

	Understaffed (SIR)	Overstaffed (SIR)	p-value
CLABSI SIR	0.78	0.56	0.03
CAUTI SIR	0.69	0.67	0.87
SSI SIR	0.91	0.70	0.02

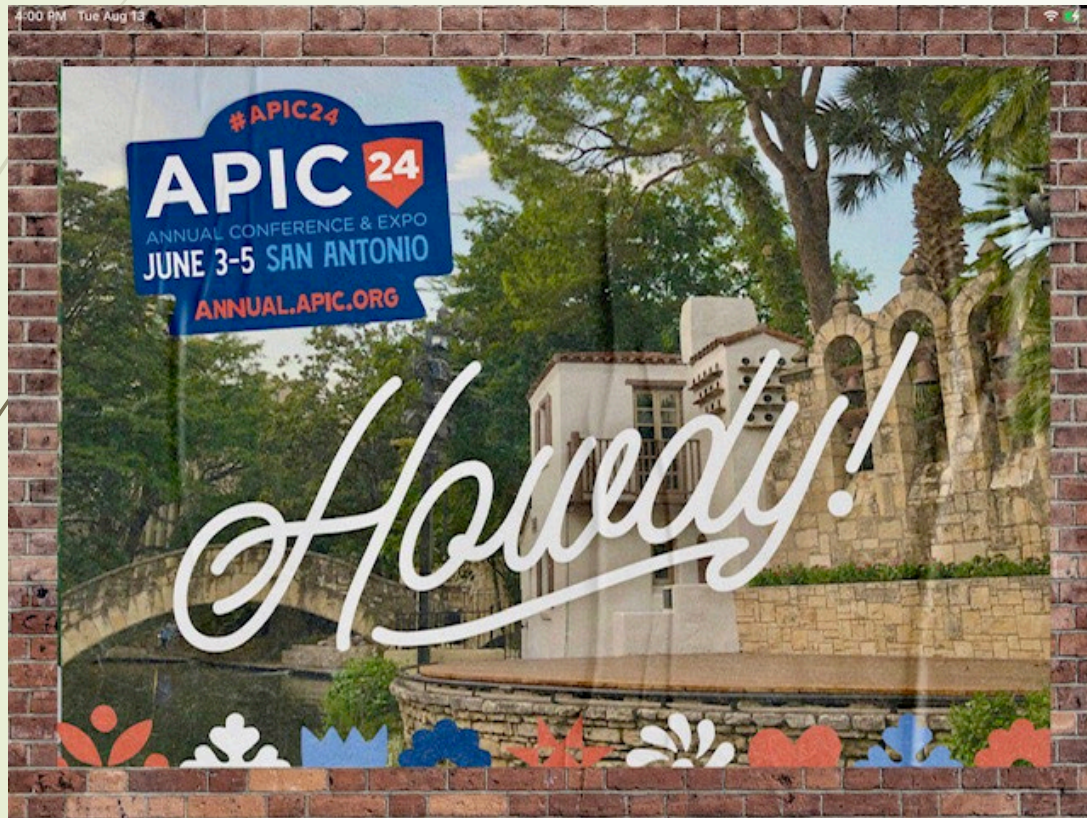


Key Optimizations for V2

- Acute care hospital stratification
- Ambulatory surgery center calculator
- System entry option (multiple facilities calculated together)
- Role stratification in FTE recommendations
- Minimum staffing requirement for smaller facilities
- Multiple additional risk factors
 - LTC focus groups will be used due to low numbers of completions
- New visualizations and facility comparisons
- Partnerships with other associations to increase validity and confidence in the calculator



National APIC 2024

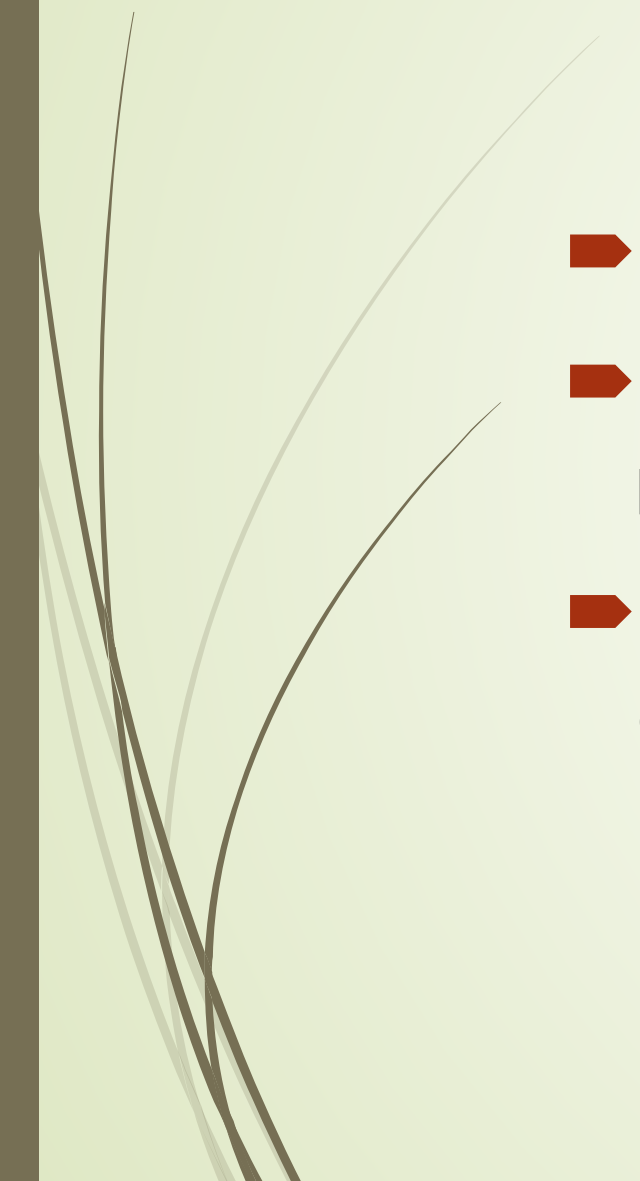


Dorine Berriel-Cass





Chapter Leadership Meeting

- Chapter Mentoring Program
 - APIC Research Center will publish staffing ratios for IP programs
 - “Infection Preventionist” is officially listed as a job with the Department of Labor
- 

James Moses, MD, MPH Healthcare Administrator of the Year!



Practice Guidance Committee



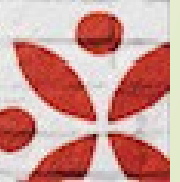
Practice Tools: Work in development



Stay Tuned

- Creating guidance specific to long term care setting in development
- Revision to APIC's position paper: Safe Injection, Infusion, and Medication Vial Practices in Health Care (2016)

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Implementation Guides Subcommittee

NEW Subcommittee for 2024



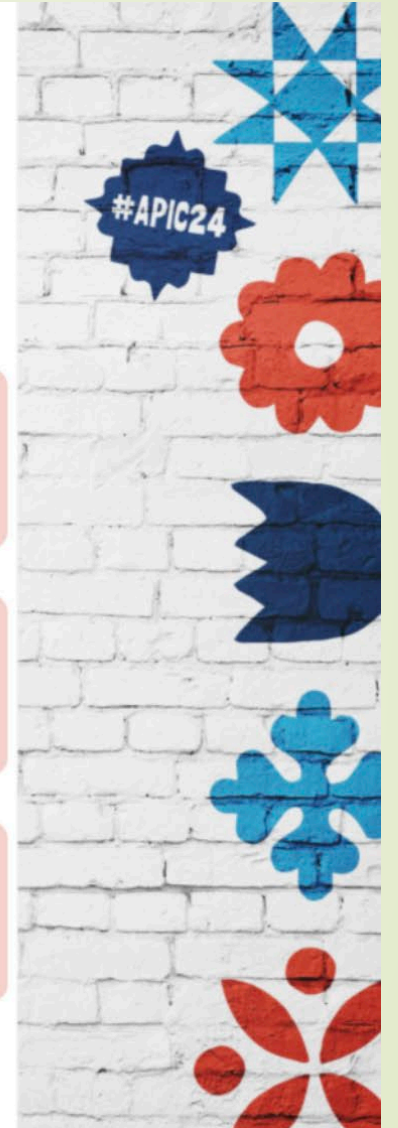
Completed review of SHEA compendiums vs. APIC Implementation guides (2023)



Based on 2023 review, PGC proposed a strategy for updating current implementation guides.



Goal is to create concise updated documents that primarily contain implementation information only.



2023 Liaison Roles

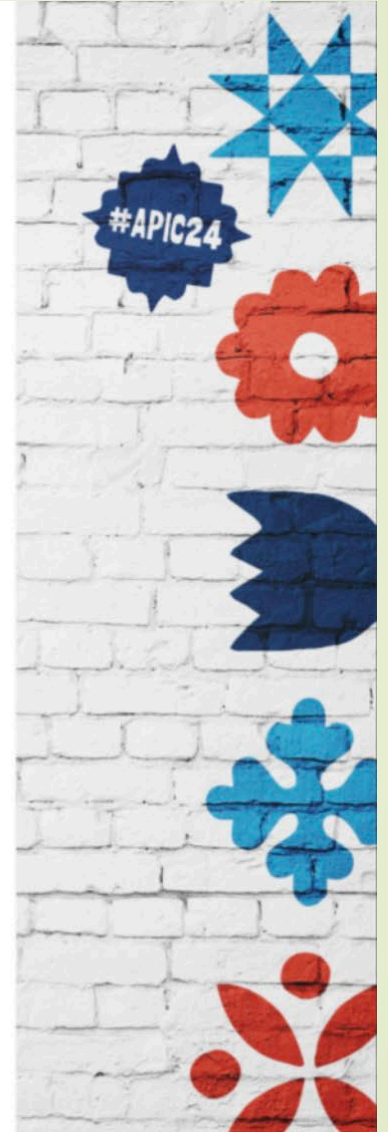
Purpose of PGC Liaisons to External Organizations



To stay engaged with organizations that influence practice guidelines, standards and recommendations that impact IPs



To be a voice on behalf of APIC to ensure infection prevention and control is considered when organizations are making guidelines, standards and recommendations that impact IPs



KEY SHEA UPDATES

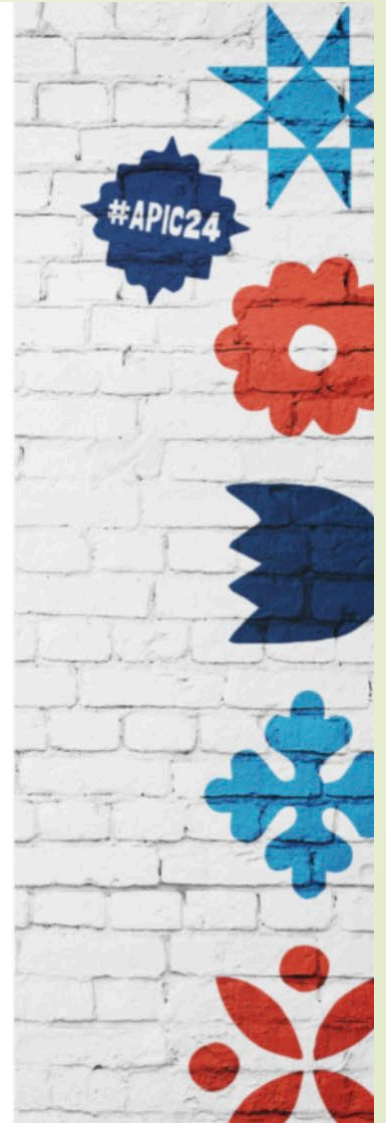


Previously Published Guidance Documents:

- Strategies to Prevent MRSA - 2023
- CDIFF 2023
- SSI 2023
- Hand Hygiene 2023
- CLABSI 2022
- VAP/VAE/NV-HAP- 2022
- NICU White Paper Series: CLABSI 2022

Recently Published Guidance Documents:

- CAUTI 2023
- NICU White Paper Series: Respiratory Infections - 2023



Other Published Guidance

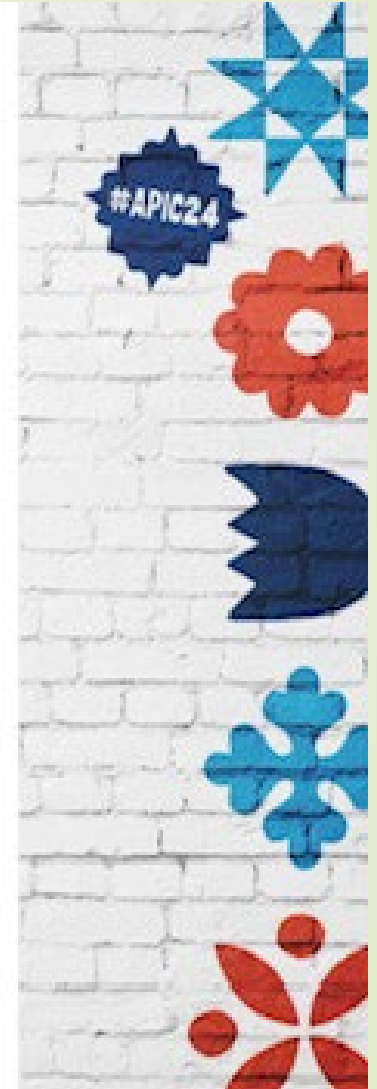
WHO – Guidelines for the prevention of bloodstream infection and other infection associated with the use of intravenous catheters

- Part 1: Peripheral catheters
 - Executive summary
 - Introduction
 - Methods
 - Recommendations and good practice statements
 - Implementation through care bundles and the WHO multimodal improvement strategy
 - Research needs
 - Monitoring and Evaluating

The new guidelines include 14 good practice statements and 23 recommendations on key areas for health workers, including:

- education and training of health workers
- techniques of asepsis and hand hygiene practices
- insertion, maintenance, access, removal of catheters, and
- catheter selection

[Source: Guidelines for the prevention of bloodstream infections and other infections associated with the use of intravascular catheters: part 1: peripheral catheters \(who.int\)](#)



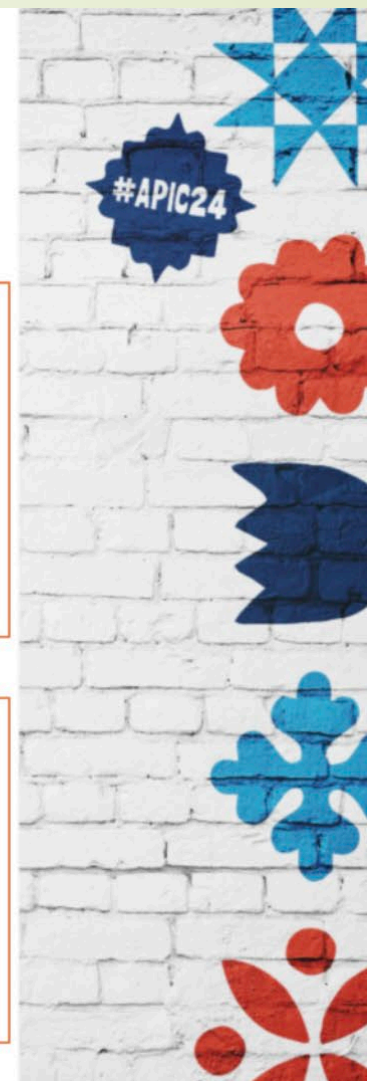
Coming Soon...

SHEA

- Guidance for High Level Disinfection & Sterilization
- Infection Prevention in the Long Term Care Facility
- Clinical practice guidelines for antimicrobial prophylaxis in surgery
- Necessary Infrastructure of Infection Prevention and Healthcare Epidemiology Programs
- Implementation Guide

AAMI:

- ST58: *Chemical Sterilization And High-Level Disinfection In Health Care Facilities*
- TIR 109: *External Transport of medical devices processed by healthcare facilities*
- TIR 119: *Guidance on Healthcare Implementation and Use of ANSI/AAMI ST108*



Air Quality Risk Assessment

Air Quality Risk Assessment Tool, Page 1

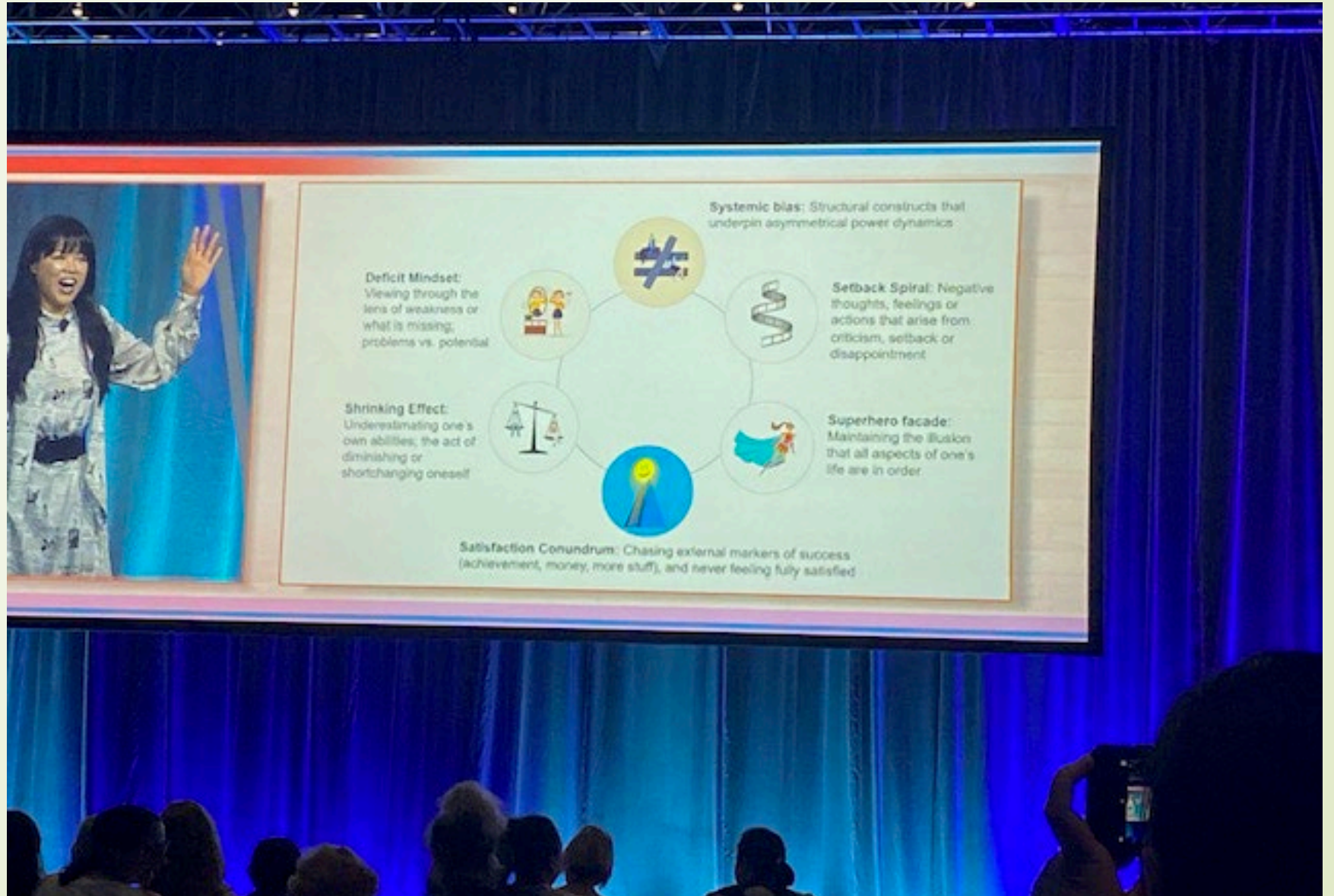
Air Quality Risk Assessment														
Location:														
	Score > 27: Urgent Action necessary to investigate and mitigate problem													
	Score 16-27: Requires specific improvement goals for the plan year													
	Score <16: Represents low risk items that do not require specific improvement goals for the plan year													
Frequent = >75% Occasional = 50-75% Uncommon = 49.99-25% Remote = <25%														
Risk Categories and Risk Factors	Probability of Occurrence				Potential for Negative Impact				Current Prevention and Control Systems				Score	Comments
	Frequent 4	Occasional 3	Uncommon 2	Remote 1	High 4	Moderate 3	Low 2	Never 1	Poor 4	Fair 3	Good 2	Excellent 1		
Ventilation System														
AHU System Description:														
IP is not informed of planned air handling unit shutdowns that do not have operational impact to Patient care due to AHU redundancy													0	
IP is not informed of planned air handling unit preventative maintenance that may have operational impact to patient care													0	
AHU 1st stage filters do not meet ASHRAE Std 170 requirements													0	
AHU Final stage filters do not meet ASHRAE Std 170 requirements													0	
AHU Finalstage filter bypass occurs													0	
Drain pans do not meet ASHRAE Std 62.1													0	
Outside air intake does not meet ASHRAE Std 170													0	
Emergency power is not supplied to AHU													0	
Any additives added to steam humidification systems does not meet FDA requirements.													0	
If present, air recirculation within room does not meet ASHRAE Std 170 filtration requirements.													0	
HEPA Filters located in terminal devices have bypass or leakage													0	
Accumulation of dirt is present on Supply air outlets.													0	
Accumulation of dirt is present on Return air grilles													0	
Accumulation of dirt is present on Exhaust air grilles													0	
Room pressure does not meet design or use intent													0	

Jennifer.Ormsby@childrens.harvard.edu

[illegible]

	Score > 27: Urgent Action necessary to investigate and mitigate problem													
	Score 16-27: Requires specific improvement goals for the plan year													
	Score <16: Represents low risk items that do not require specific improvement goals for the plan year													
Frequent = >75% / Occasional = 50-75% / Uncommon = 49.99-25% / Remote = <25%														
Risk Categories and Risk Factors	Probability of Occurrence				Potential for Negative Impact				Current Prevention and Control Systems				Score	
	Frequent	Occasional	Uncommon	Remote	High	Moderate	Low	Never	Poor	Fair	Good	Excellent		
	4	3	2	1	4	3	2	1	4	3	2	1		
Patient Room Cleanliness														
High horizontal surfaces contain dust or are visibly soiled													0	
Patient cabinets contain dust or are visibly soiled													0	
Medical supply cabinets and drawers contain dust or are visibly soiled													0	
Detailed discharge cleaning does not pass inspection													0	
Routine daily cleaning does not pass inspection													0	
If window blinds are present, the surfaces are visibly dusty or soiled													0	
Ripped, damaged, worn upholstery is present													0	
Neutral Patient room doors are not closed when corridor floors are cleaned													0	
PE Patient room doors are not closed when corridor floors are cleaned													0	
Unit Corridor Cleanliness														
Routine daily cleaning does not pass inspection													0	
Medical equipment stored in corridors have dust or are visibly soiled													0	
Unit Support Room Cleanliness														

Choosing Self Confidence-Lisa Sun







Thank You APIC-GL!

Transmission of New Delhi Metallo- β -lactamase Producing *Escherichia coli* through a Gastroscope from an Esophagogastroduodenoscopy Procedure

Jim Codman BSN, RN, CIC

AUGUST 20, 2024

Disclosures

Nothing to disclose

Objectives

- ☐ Identify potential sources of gastroscope contamination.
- ☐ List steps in an outbreak investigation related to gastroscopes.
- ☐ Consider ways to decrease risk of gastroscope contamination at your facility.

BACKGROUND

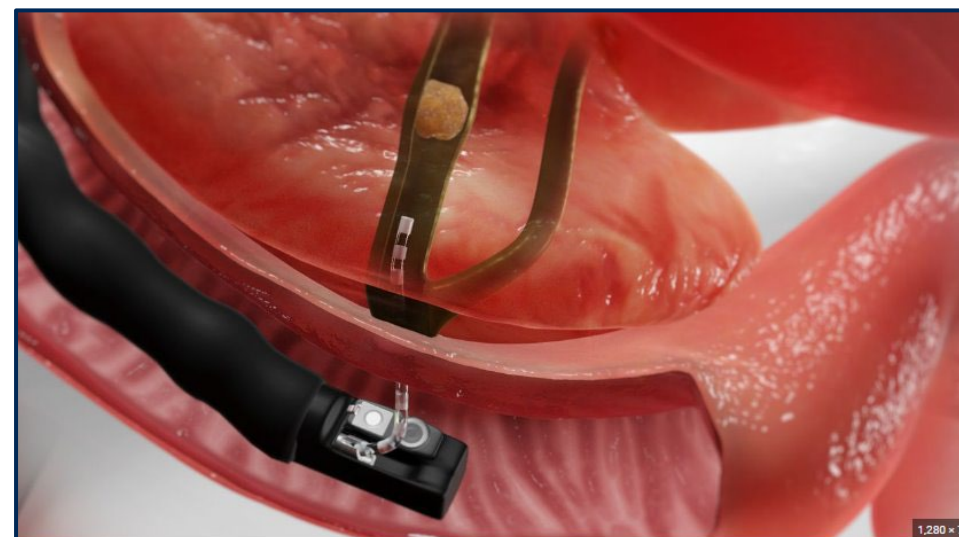
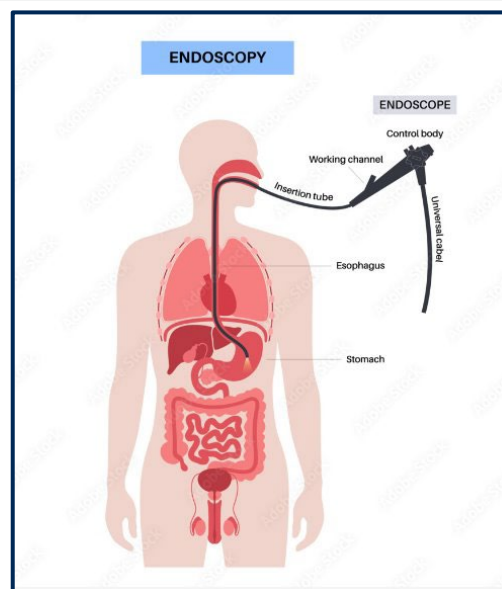
Transmission of multi-drug resistant bacteria, such as carbapenem-resistant Enterobacteriaceae (CRE) has been associated with duodenoscopes containing elevator channels. Published data on outbreaks associated with gastroscopes is rare.

OBJECTIVE

To investigate the transmission of New Delhi Metallo- β -lactamase producing *Escherichia coli* (NDM-E.coli) between two hospitalized patients to determine relatedness and potential sources of transmission including a common gastroscope

What is the difference between an endoscope and a duodenoscope?

	Endoscope for EGD	Duodenoscope for ERCP
Use	An endoscopy is a procedure where a special camera is used to inspect the gastrointestinal tract. An esophagogastroduodenoscopy (also called EGD or upper endoscopy) is a procedure that allows the doctor to examine the inside of the esophagus, stomach, and duodenum.	Duodenoscopes are specialized endoscopes that are used primarily for Endoscopic Retrograde Cholangiopancreatogram (ERCP). Duodenoscopes have a lever that is used to manipulate an elevator located at the tip of the endoscope.
Risk for infection	There are few published studies documenting risk of cross transmission.	In 2015, the FDA issued a Safety Communication to raise awareness among health care professionals that the complex design of ERCP endoscopes (also called duodenoscopes) may impede effective reprocessing.



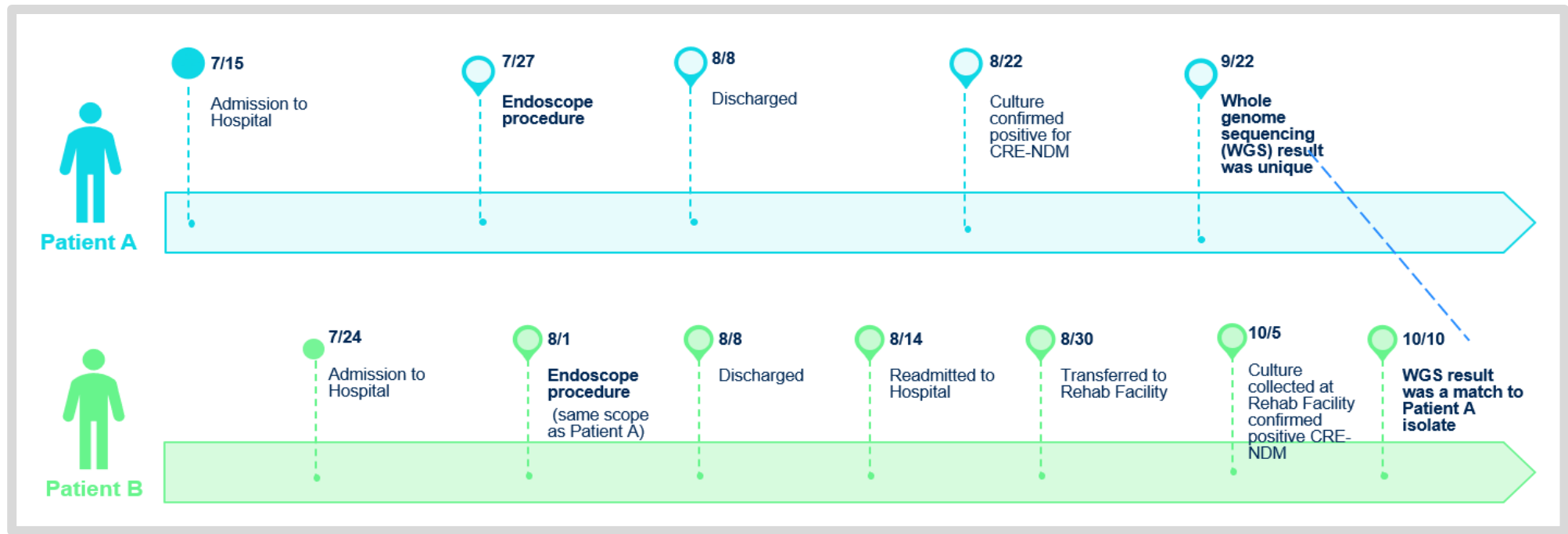
METHODS

Case study methodology was used and involved collecting the following datasets:

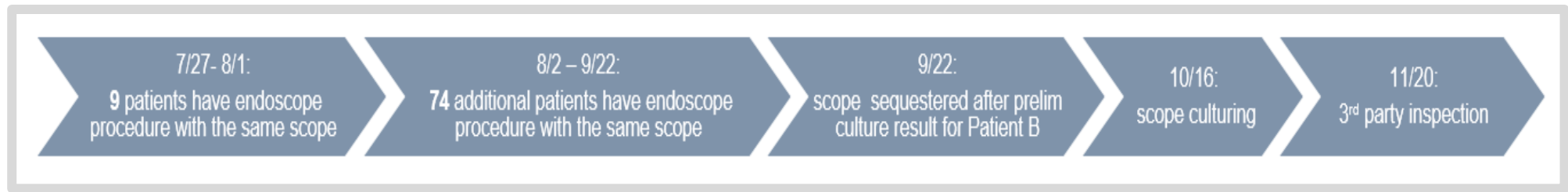
- ☐ Chart reviews to determine possible links between two cases occurring July 2023 – September 2023
- ☐ Whole genome sequencing (WGS)
- ☐ Unit-wide point prevalence screening
- ☐ Patient notifications of potential exposure and screening
- ☐ Infection Prevention audits on endoscope cleaning
- ☐ Scope culturing
- ☐ Scope inspection by a third party

RESULTS

Timeline of hospital encounters for CRE-NDM cases occurring from July 2023 through September 2023.

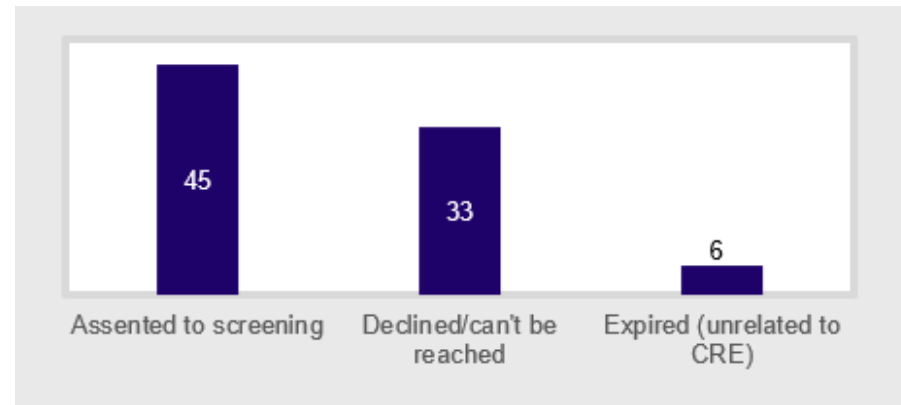


Timeline of patient exposures to the same endoscope and follow-up inspection and culturing of scope.



RESULTS

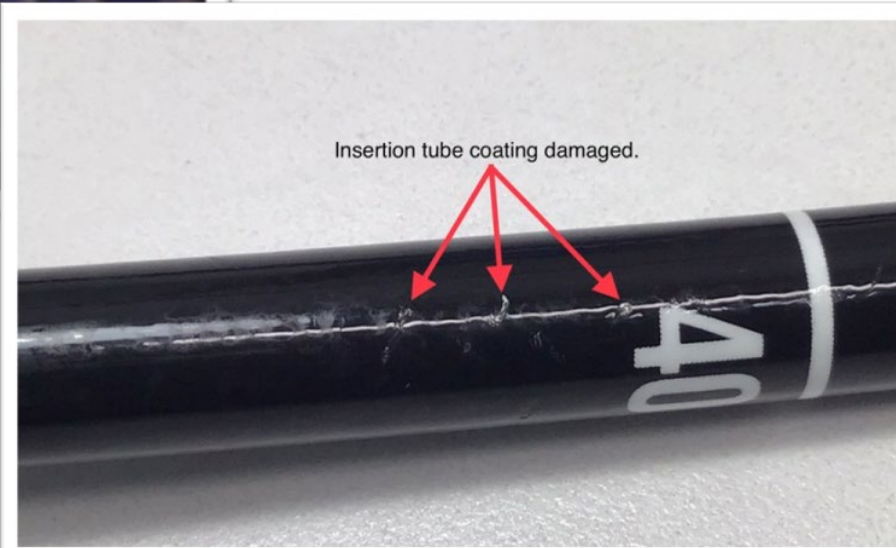
- ❑ Both patients had a common gastroscope used, five days apart.
- ❑ The same gastroscope was used on 83 patients prior to sequestering, 45 of whom assented to a screening test and were all negative.



- ❑ 35 patients, admitted to inpatient units common to where the case had been previously hospitalized, were screened negative .
- ❑ Validation of cleaning and disinfection processes identified no breaches in practice.
- ❑ Scope culturing was negative.
- ❑ Third-party inspection found damage to the internal bio channel and insertion tube, suggesting potential causes of contamination.

Scope inspection findings

(Inspection photos provided by Endoscopy Repair Specialist Inc (ERS))



CONCLUSION

- ❑ WGS results with genomic linkage and the presence of a similar antimicrobial resistance gene points to a plausible epidemiological linkage to the shared endoscope.
- ❑ Per the Food and Drug Administration (FDA), a sampling and culturing study conducted on newer models of duodenoscopes found a 1.1% reprocessing failure rate with high concern organisms, indicating there will be an inherent risk of infection in procedures utilizing scopes.²
- ❑ Health systems must consider gastroscopes as a source of contamination and validate existing practices. Additional studies need to be performed to assess and decrease this risk.

REFERENCES

- ❑ Yang AF, Sherman A, Nazarian E. et al. 2023. Endoscopic Transmission of NDM producing Klebsiella pneumonia through a gastroscope without an elevator channel. Poster presented at 2023 ID week; Boston, Massachusetts.
- ❑ U.S. Food & Drug Administration: Medical Devices: Medical Device Safety: Safety Communication: Use Duodenoscopes with Innovative Designs to Enhance Safety FDA Communication. 2020 June 30. [accessed 2024 March 20]. <https://www.fda.gov/medical-devices/safety-communications/use-duodenoscopes-innovative-designs-enhance-safety-fda-safety-communication>.



Outbreak Investigation of Staphylococcal Scalded Skin Syndrome in the Neonatal Intensive Care Unit Using Whole Genome Sequencing



Ascension

Listening to you, caring for you.®

Staphylococcal Scalded Skin Syndrome

- Staphylococcal scalded skin syndrome (SSSS), also known as Ritter's disease is a blistering skin condition caused by *Staphylococcus aureus* (*S. aureus*).
- It usually occurs in infants and young children under the age of six.
- The main symptom of SSSS is a blister formation on the skin, which is caused by exfoliative toxins produced by *S. aureus*.
- The toxins can lead to a range of illnesses from localized blisters to severe exfoliation covering almost the entire body.
- This disease carries a significant mortality rate among neonates with secondary complications.

Staphylococcal scalded skin syndrome



Staphylococcal scalded skin syndrome

Staphylococcal scalded skin syndrome

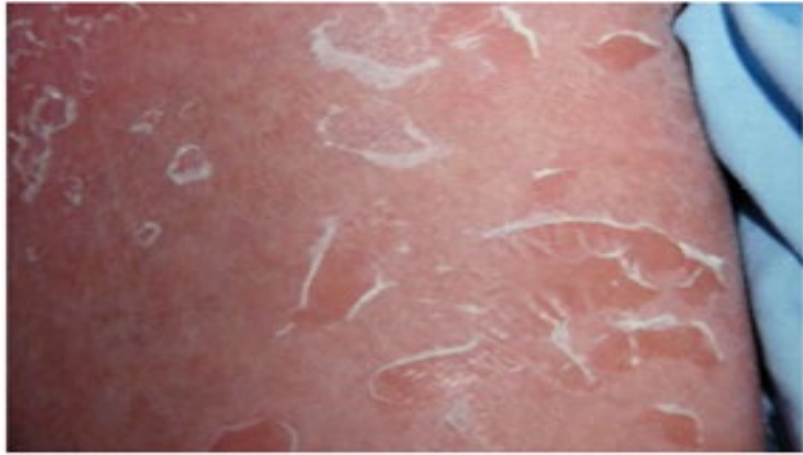


Staphylococcal scalded skin syndrome

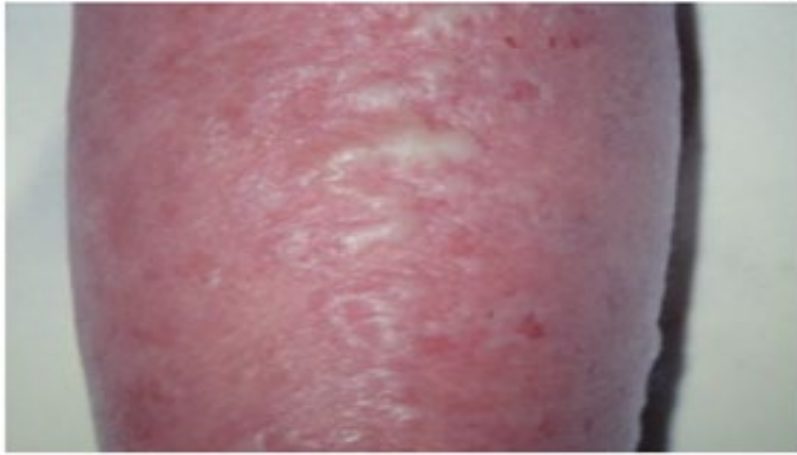
Staphylococcal scalded skin syndrome



Staphylococcal scalded skin syndrome



Staphylococcal scalded skin syndrome



Staphylococcal scalded skin syndrome



Staphylococcal scalded skin syndrome

SSSS Investigation

Case 1: On 2/18/23, a 7 day old infant was admitted from home via ED to the NICU with sepsis and a peeling rash. The infant expired on 2/19/23. Methicillin-susceptible *S. aureus* (MSSA) was isolated both from blood and wound cultures from the skin. The patient was noted to have peeling skin in the lower abdomen, scalp, fingernails, and toenails, along with erythema at extremities. The patient was diagnosed with SSSS.

Case 2: On 3/3/23, a second patient was identified with SSSS. This patient was admitted on 2/21/23 and shared the same room as the previous SSSS case. This was our first case of hospital-acquired SSSS at our facility.

SSSS Investigation

This led to a meeting with Infectious Disease, Infection Prevention and the clinical team in the unit (Nursing and Neonatologists). The decision was made to conduct baseline point prevalence testing of *S. aureus* in the NICU. We also scheduled a planned meeting with the Michigan Department of Health and Human Services (MDHHS) and Ascension Infection Control Leadership.

Case 3: Patient was admitted on 2/3/2023, and tested positive during first point prevalence screening on 3/13/23. The patient was placed on contact precaution and received nasal mupirocin. On 3/16/23, the patient developed skin lesions suspicious for SSSS. This became our second case of hospital-acquired SSSS.

SSSS Investigation

A point prevalence screening was performed between March 13, 2023 and May 8, 2023. The screening was performed weekly and on admission. Swabs were collected from the anterior nares in the majority of cases. Isolates with the same antibiogram were sent out for whole genome sequencing. Screening was performed until no new MSSA case with identical antibiogram was identified. Infection prevention collaboration conference calls were held weekly to evaluate the effectiveness of infection control measures.

Whole Genome Sequencing

Figure 1: Strains (according to MLST) recovered over time.

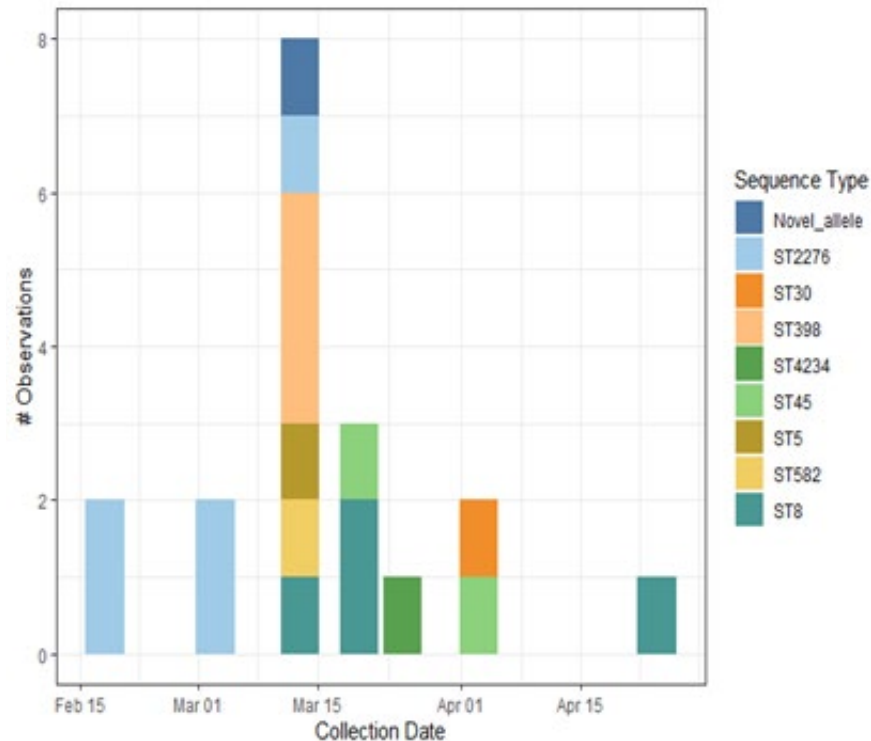


Figure 2: Overall phylogeny (Neighbor-Joining Mash Tree)



1. Figure 1: Multi-locus sequence typing. 21 isolates classified as 11 sequence types (ST) and one novel ST. No linkage analysis was performed on the novel ST because it was the only isolate of its kind.
2. Figure 2: Neighbor-Joining Mash Tree. Genomic analysis indicates isolates belonging to four different ST showed strong genomic linkages: 2 ST45 isolates, 2 ST8 isolates, 3 ST398 isolates and 3 ST2276 isolates.

Conclusion

There was evidence of transmission of SSSS in the NICU. Infection control measures to prevent transmission include environmental cleaning, hand hygiene, avoiding overcrowding, and isolation of positive patients in addition to decolonization with nasal mupirocin and chlorhexidine baths per gestation age. Whole-genome sequencing analysis are invaluable tools for epidemic investigation. When applying to surveillance and investigation in the clinical setting, this approach may provide measures for appropriate, and effective interventions.

References

1. Centers for Disease Control and Prevention. <https://www.cdc.gov/infectioncontrol/guidelines/nicu-saureus/>
2. Delaney et al., 2013
3. Patel et al., 2003 Staphylococcal Scalded Skin Syndrome



Two Years of Zero Harm: A Multi-Faceted Approach for Achieving Two Years Without a Catheter-Associated Urinary Tract Infection (CAUTI)

Alex Wells, MPH, CIC; Sarah Prascius, MPH, CIC;
Tatiana Assenova, RN, BSN, CMS-RN; Tricia Stein, MD

APIC 2024

Background

- Facility: 191-bed acute care hospital in Metro Detroit
 - Many nursing homes and skilled nursing facilities in the surrounding area
- In 2019 and 2020, CAUTIs on the rise despite weekly device audits and indwelling urinary catheter indication review

	Overall Count	CMS Reportable Count	Standardized Infection Ratio (SIR)
2019	5	4	0.69
2020	6	4	0.60

- Clinical team members were encouraged to use external urine collection devices when possible. However, available options had varying patient and caregiver satisfaction.

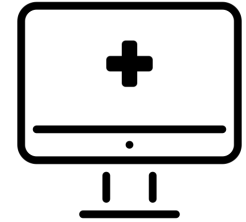
Objectives

1. Reduce the number of CAUTIs in a sustainable manner
2. Provide appropriate alternatives to indwelling urinary catheters (IUC)

Methods

Electronic Medical Record (EMR) Tools - *Spring 2021*

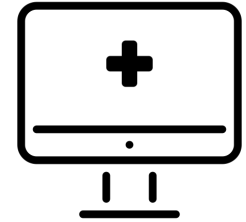
- Urine culture hard stop for patients with IUCs in place for >2 hospital days
 - If a urine culture is ordered and the patient has been on an inpatient unit for >2 calendar days and has had an IUC for >2 calendar days, the EMR will not permit the order
- Infection Control Medical Director or their designee must approve urine cultures for testing if clinically indicated despite the presence of the IUC (ex. signs of pyelonephritis)



Methods

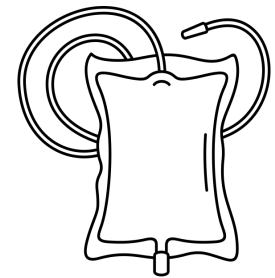
Electronic Medical Record (EMR) Tools - *Spring 2021*

- Urine culture hard stop for patients with IUCs in place for >2 hospital days
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Alternative Device Implementation - *Summer/Fall 2022*

- Introduction of new condom catheter kits
- Infection Prevention (IP) and Nursing co-led trial on male external urine pouches
- Product manufacturer educators performed on-site training and trial support



Methods (continued)

Education - *Ongoing*

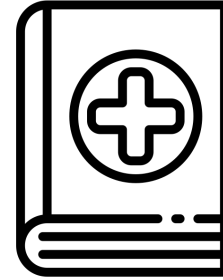
- Registered Nurse and Nurse Assistant skills fairs and orientations
 - Aseptic urine specimen collection
 - IUC maintenance bundles
- Collaboration with urine collection device manufacturer educators



Methods (continued)

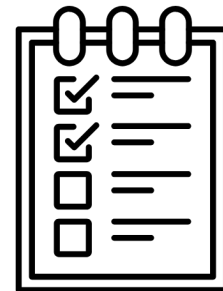
Education - *Ongoing*

- Registered Nurse and Nurse Assistant skills fairs and orientations
 - Aseptic urine specimen collection
 - IUC maintenance bundles
- Collaboration with urine collection device manufacturer educators



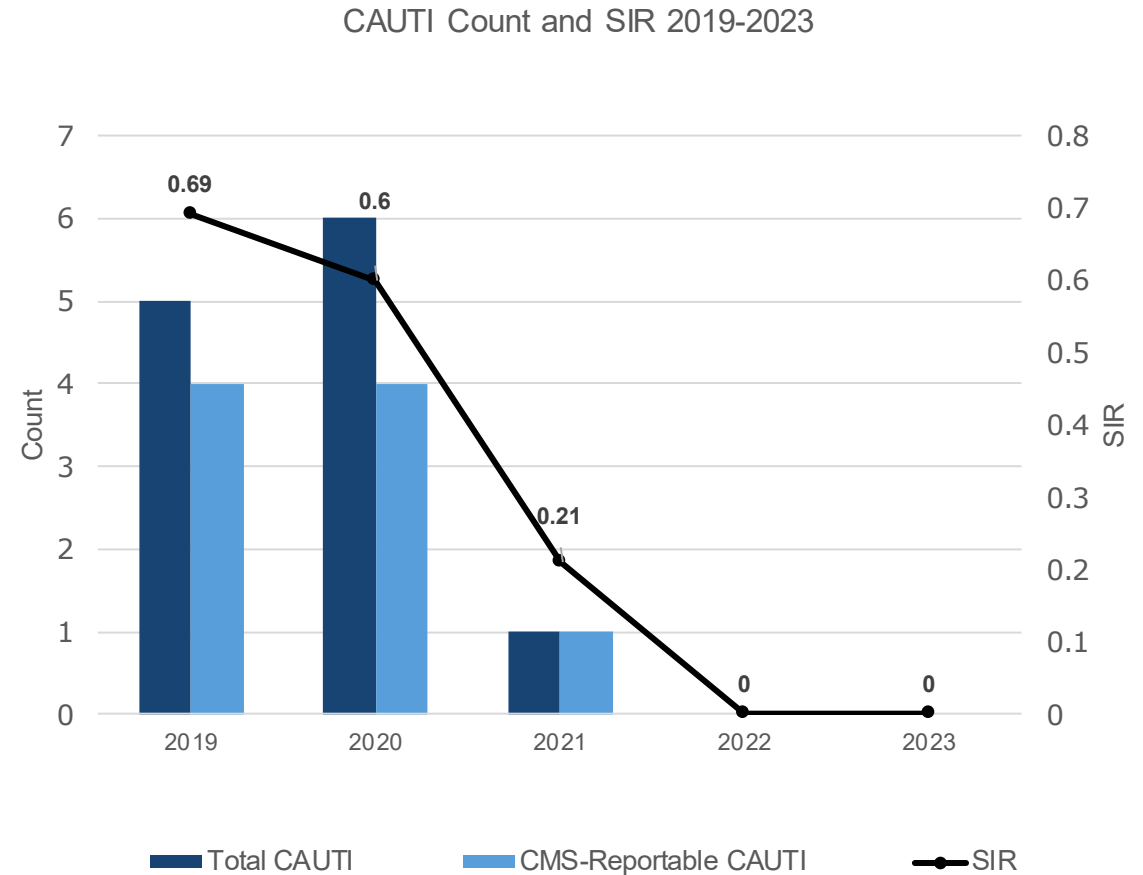
Weekly Indwelling Urinary Catheter Maintenance Audits - *Ongoing*

- Round with unit leaders to assess the following:
 - Seal between the catheter and drainage tubing present
 - Catheter secured to the thigh with appropriate device
 - No dependent loop in the tubing
 - Drainage bag below the bladder and off the floor
 - Drainage bag filled with <1000cc of urine
- Findings fixed in real time as much as possible
- Data sharing with key stakeholders – leadership and frontline team members



Results

- The total number of CAUTIs and associated SIR decreased dramatically, with a 2-year (and counting) sustenance
- Through collaboration between Infection Prevention, nursing, and supply chain, new male external urine collection devices were stocked in supply rooms through all inpatient, emergency, and observation departments for easy access



Conclusion and Future Directions

- The IP and nursing team credits the sustenance of zero CAUTI-related harm to the culture of high reliability created by the described interventions
- Team members providing direct patient care are aware of the expectations related to CAUTI prevention
- The facility plans to continue preventing placement of IUCs if another viable option exists, educate team members on IUC maintenance expectations, and ensure all urine cultures ordered when the IUC has been in place for more than two days are reviewed by the Infection Control Medical Director for appropriateness
- We plan to continue these interventions, continuously assess education and supply needs, and adjust our CAUTI prevention program as necessary



References

- CAUTI Guidelines. Centers for Disease Control and Prevention. November 5, 2015.
- Photos are from [Noun Project: Free Icons & Stock Photos for Everything \(thenounproject.com\)](http://thenounproject.com)

Two Years of Zero Harm: A Multi-Faceted Approach for Achieving Two Years Without a Catheter-Associated Urinary Tract Infection (CAUTI)

Alex Wells, MPH, CIC, CCSVP; Sarah Prascius, MPH, CIC; Tatiana Assenova, RN, BSN, CMS-RN; Tricia Stein, MD
Henry Ford West Bloomfield Hospital, West Bloomfield, MI

Abstract

After experiencing five catheter-associated urinary tract infections (CAUTI) in 2019 (standardized infection ratio [SIR] 0.69) and six in 2020 (SIR 0.6), a 191-bed acute care hospital was determined to find a sustainable way to reduce the number of infections. Several interventions were introduced to reduce the number of CAUTIs, consisting of education, alternative device implementation, and electronic medical record (EMR) tools. Registered nurses (RN) and nurse assistants (NA) were reeducated on the importance of aseptic urine specimen collection and indwelling urinary catheter (IUC) maintenance bundles at annual skills fairs. The infection prevention (IP) and nursing team explored alternative external male urine collection devices such as condom catheters and moisture-wicking urinary pouches. The IP team performed audits with nursing unit leaders on IUC maintenance bundle compliance and reported the data monthly to unit staff and leadership. Additionally, inappropriate urine cultures decreased through the implementation of a urine culture hard stop in the EMR to ensure urine specimens were ordered and sent only if truly indicated. After implementation of these interventions, the hospital had one reportable CAUTI in 2021. In 2022 and 2023, zero were reported. The standardized infection ratio (SIR) declined from 0.69 in 2019 to 0 in 2022 and 2023.

Objectives

- Reduce the number of CAUTIs in a sustainable manner.
- Provide appropriate alternatives to indwelling urinary catheters.

Methods

Education - Ongoing

- RN and NA Skills Fairs
- Aseptic urine specimen collection
- IUC maintenance bundles
- Collaboration with urine collection device manufacturer educators

Electronic Medical Record Tools - Spring 2021

- Urine culture hard stop for patients with IUCs in place for >2 hospital days
- Infection Control Medical Director must approve urine cultures for testing if meeting this criteria but clinically indicated (ex. signs of pyelonephritis)

Alternative Device Implementation - Summer/Fall 2022

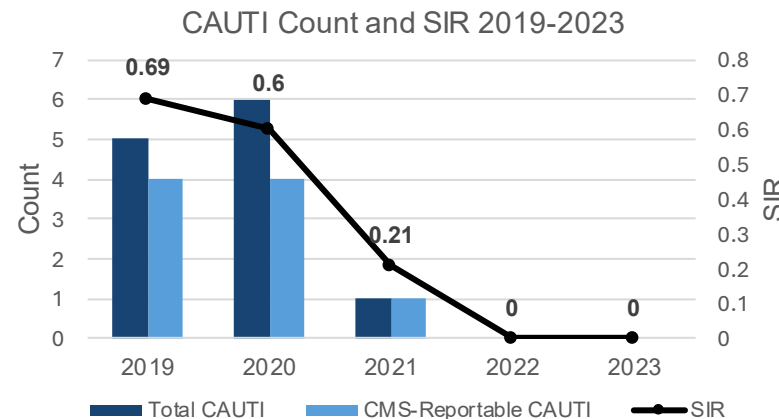
- Introduction of new condom catheter kits
- IP/nursing co-led trial on male external urine pouches
- Product manufacturer educators performed on-site trial and training

Weekly Indwelling Urinary Catheter Maintenance Audits - Ongoing

- Round with unit leaders to assess the following:
 - Seal between the catheter and drainage tubing present
 - Catheter secured to the thigh with appropriate device
 - No dependent loop in the tubing
 - Drainage bag below the bladder and off the floor
 - Drainage bag filled with <1000cc of urine
- Data sharing with key stakeholders

Results

- The total number of CAUTIs and associated SIR decreased dramatically, with a 2-year (and counting) sustenance.
- Through collaboration of IP, nursing, and supply chain, new male external urine collection devices were stocked in supply rooms through all inpatient, emergency, and observation departments for easy access.



Conclusion

The IP and nursing team credits the sustenance of zero CAUTI-associated harm to the culture of high reliability created by the described interventions. Team members providing direct patient care are aware of the expectations related to CAUTI prevention. The facility plans to continue preventing placement of IUCs if another viable option exists, educate team members on IUC maintenance expectations, and ensure all urine cultures ordered when the IUC has been in place for three or more days are reviewed by the Infection Control Medical Director for appropriateness. We plan to continue these interventions, continuously assess education and supply needs, and adjust our CAUTI prevention program as necessary.

References

CAUTI Guidelines. Centers for Disease Control and Prevention. November 5, 2015.

Disclosures

We have no financial interests or relationships to disclose.

The Role of Cleaning and Disinfection in the Prevention of Ongoing *Candida auris* Transmission in a Surgical Intensive Care Unit

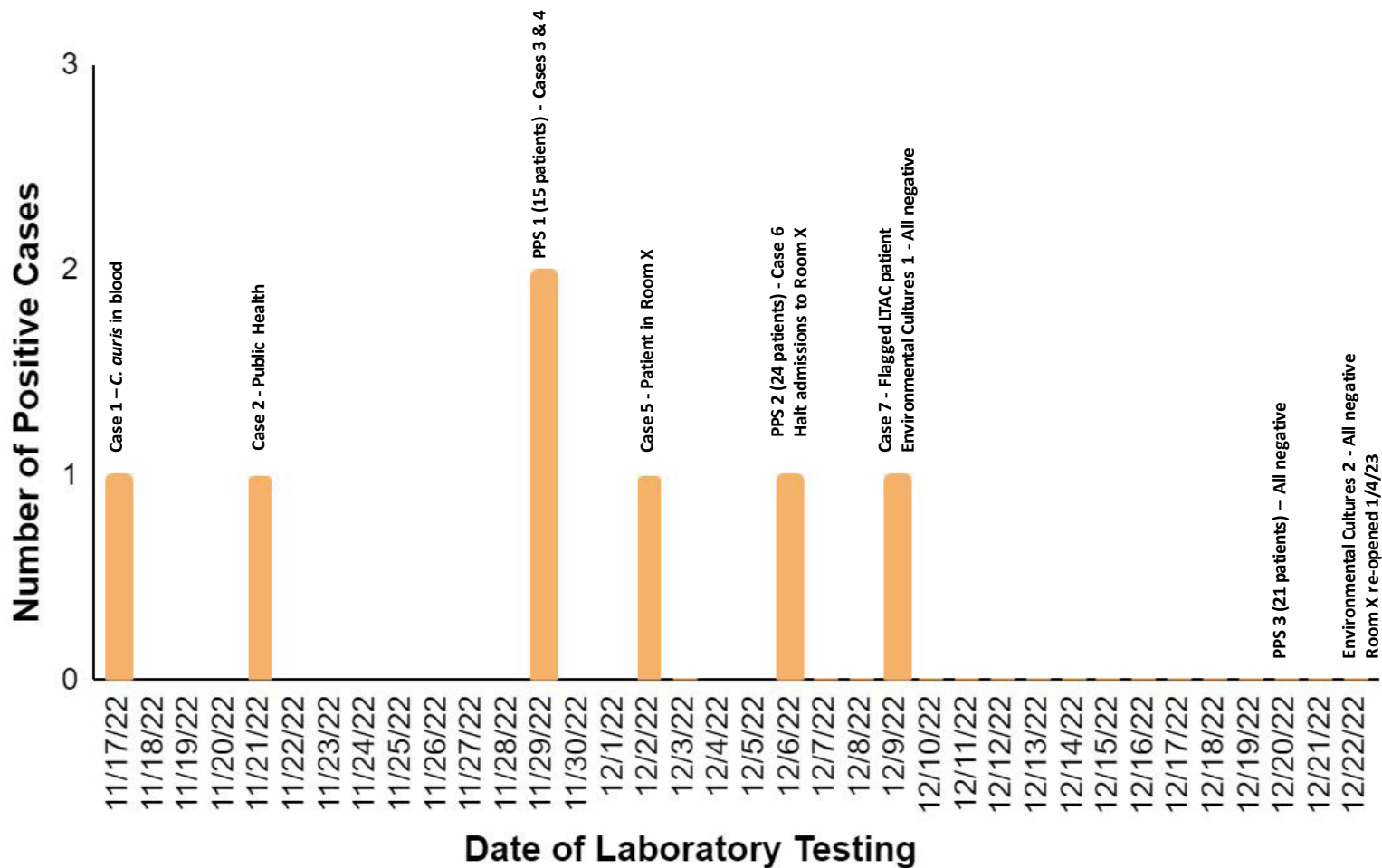


Jennifer A. Madigan, MPH, CIC; Mamta Sharma, MD, FACP, FIDSA, FSHEA; Tamika N. Anderson, MT (ASCP)cm, MPH, CIC;
Debi A. Hopfner, RN, MSN, CIC; Alysia Stewart, RN; Nicole Nomides, MT(ASCP), MS, CIC, FAPIC; Lisa K. Sturm, MPH, CIC, FAPIC

Infection Prevention and Control, Ascension St. John Hospital, Detroit, MI, US

- 
- *Candida auris* (*C. auris*) is an emerging multidrug-resistant fungal pathogen that spreads easily between hospitalized patients.
 - Research shows that *C. auris* can contaminate the environment and survive on hospital surfaces for over two weeks.
 - **On November 20, 2022, a hospital acquired *C. auris* infection was identified.**
 - An investigation was conducted to limit spread and curb transmission of *C. auris* in a surgical intensive care unit (SICU).

- 3 rounds of point prevalence screening (PPS) were performed on potentially exposed patients (3 positive patients out of 60 screened).
- Medical record was flagged for discharged patients that had contact with a *C. auris* case or potentially contaminated room to alert staff to screen upon readmission.
- 3 cases were identified via Public Health, flagged charts, or link to SICU Room X. In total, 6 additional colonized patients were implicated in the outbreak investigation with 5 consecutive patients linked to one SICU room.
- Line list displaying room locations and risk factors was created.
- Admissions to SICU Room X were halted.



Further transmission was avoided after educating all staff on proper cleaning and disinfection methods to prevent environmental contamination and spread of *C. auris*.

- appropriate signage
- removal of all disposable items
- disinfection using an Environmental Protection Agency List P disinfectant
- use of an electrostatic sprayer
- changing cubicle curtains upon discharge

Candida auris Guidelines

Candida auris (*C. auris*) can cause severe infections such as bloodstream and other invasive diseases, particularly in hospital and nursing home patients with multiple comorbidities. Over 1 in 3 patients die within a month of being diagnosed with an invasive *C. auris* disease. *C. auris* is often multidrug-resistant and antifungal medications commonly used to treat other *Candida* infections usually don't work. It is becoming more common that *C. auris* isolates are resistant to all three major classes of antifungal medications. *C. auris* was only discovered in 2009. However, over the last decade, the numbers have drastically increased and it is now reported in dozens of countries. ASJH has seen a rise in the number of patients colonized (not active disease) with *C. auris*. Whether patients have active disease or colonization, they are handled using the same infection prevention measures.

C. auris guidelines MUST be strictly adhered to during a patient's entire admission:

- Place patient in **Contact Precautions** and enter isolation order in eCare.
- Place **Contact Precautions sign and orange triangle flag** on patient's door
- **Contact Infection Prevention** (x.36881) for any newly diagnosed *C. auris* patient or patient admitted with *C. auris* history (no matter how remote). Use PerfectServe if after hours.
- Ensure all employees follow **strict contact precautions** (gown & gloves) upon entering patient's room.
- If going for a procedure or imaging, ensure all departments are aware of isolation precautions.
- **Limit use of shared equipment.** If unavoidable, ensure all equipment within the room is thoroughly disinfected with purple top Sani-Cloth or bleach. Allow equipment to remain wet for entire dwell time.
- **Store essential items** only in patient's room. Avoid storing excessive supplies because they will need to be discarded upon discharge.

When the patient is discharged or transferred to a new room:

- **Communicate isolation precautions** when providing nurse-to-nurse report.
- Nursing staff **remove all disposable items** from the room including packaged supplies that may be stored in carts, drawers, shelves, or countertops. Supplies must be discarded even if in a peel pouch.
- **Discard** glove boxes and disinfectant canisters.
- **Discard** wires/cords, suction canisters, or other supplies that can be disposed of and later replaced.
- After removal of all supplies, **notify Touchpoint** to perform a terminal clean using Oxivir 1 and the electrostatic sprayer. Touchpoint will remove and replace the cubicle curtain.

Contact Precautions
In addition to standard precautions:

- **Hand hygiene**
 - Perform hand hygiene using alcohol-based hand sanitizer or soap and water after every patient contact.
- **Patient placement**
 - Place patient in a room with other patients with *C. auris* if available.
- **Personal protective equipment**
 - Wear gown and gloves when entering the room.
- **Patient transport**
 - If patient must be transported, ensure all equipment is properly disinfected.
- **Patient-care equipment**
 - Limit use of shared equipment.

Downloaded: Call Infection Prevention and Control Services
Please have appropriate staff wear face mask and eye protection.





Thank you!

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Reforging relationships and infection prevention outreach amid high facility staff attrition

“New IP. Who dis?”

Christine White, MPH, CIC, LTC-CIP & Ruben Juarez, MPH

Infection Prevention Unit

Division of Emerging Infectious Diseases

Michigan Department of Health and Human Services



Reforging relationships and infection prevention outreach amid high facility staff attrition.

Christine White, MPH, CIC, LTC-CIP & Ruben Juarez, MPH

Infection Prevention Resource & Assessment Team
Michigan Department of Health and Human Services | Division of Emerging Infectious Diseases

IPRAT(est. Oct. 2020)

Infection Prevention Resource and Assessment Team (IPRAT) Program:

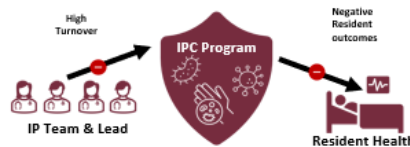
- Free
- Consultative
- Non-regulatory IPC guidance & support
- For congregate care settings throughout Michigan

Program includes providing support for LTC IPs & DONs to offer:

- IPC Program Assessments
- Staff Education
- Policy Review
- Infection Preventionist Mentoring

IP Turnover: A Cause for Concern

Staff turnover contributes to a breakdown in infection prevention practices, including a loss of resources and knowledge of the IPC initiatives and education that had been implemented by their predecessor.



Basic characteristics of IPs in nursing homes is unknown, and gaining knowledge in this area will help programs like IPRAT identify and assist facilities with IPC programs experiencing loss of institutional knowledge through IP attrition.

Goals

To understand the landscape of IPC professionals in nursing homes, IPRAT disseminated a survey inquiring about:

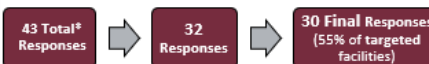
- Number of IPs at facility since January 2020
- Current Infection Preventionist
- The Hand-off Process

Survey Methods

A Qualtrics pilot survey inquiring about current infection preventionist at nursing homes was sent to contacts at 55 nursing homes in Michigan in mid-November 2023, with a 2-week collection period.

The target audience were IPs and Directors of Nursing (DONs) who could speak to facility's IPC program since January 2020. Two potential contacts were reached out to via email per facility.

Excel was used to perform descriptive statistics.



*11 responses excluded due to duplicate responses from some facilities. Two responses were excluded due to incomplete surveys.

Snapshot of IP Professionals in Sample Facilities



2.3 IP Leads per Facility since 2020
(min = 1; max = 5)

IP Lead Characteristics



60% Part-Time IPs

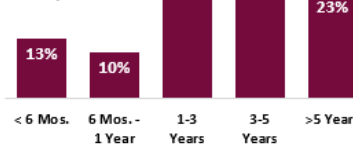


60% IPs are DONs



30% No other assigned roles

IP Experience



80% CDC or CMS IP Education
Module Series Training

33% of Facilities had >1 Person
Responsible for IP Duties

Facility IP Team & Perception

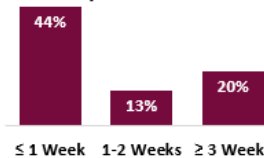
87% respondents stated number
of IP team roles as being adequate

Hand-off Process Between Prior & Current IP



No Hand-Off at
37% of facilities

Time Spent on Hand-Off



53% held a partial
review of IPC Risk
Assessment

All areas of
concerns outlined



Areas of concerns
not outlined



Unaware of any
areas of concern



73% reviewed recent surveys
& findings with new IP upon
hire

Conclusion

As one respondent stated in their written comments:

"Being an IP in LTC/SNF is a very challenging and stressful position."

IPC leads in long-term care facilities deserve full support, starting at the very beginning of their role.

Almost 40% of IPs in this survey did not have any form of hand-off prior to being primary IPs.

When possible, a hand-off process should involve the outgoing IP and consist of:

- 1) a full review of the facility's risk assessment,
- 2) a clear outline of all areas of concern,
- 3) provides all recent facility surveys, and
- 4) last at minimum one week.
- 5) sharing external IPC support contacts (e.g., LHD or services like MDHHS's IPRAT Team)

Limitations

Limitations to data included uncertainty of recipient list reflecting present staff at each nursing home.

Next Steps

Distribute survey to all 437 skilled nursing facilities in Michigan to understand the landscape of IPC professionals in nursing homes and the true magnitude of IP attrition in these settings to help bring more awareness regarding the severity of the IP staffing crisis and the need for a routine, comprehensive hand-off process.



Contact Information

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About the MDHHS IP Unit

Infection Prevention Resource and Assessment Team (IPRAT):

- Free
- Consultative
- Non-regulatory IPC guidance & support
- Assists congregate care settings throughout Michigan

Program Mission: Provide support to long term care Infection Preventionists (IPs) and Directors of Nursing (DONs).

This support includes:

- IPC Program Assessments
- Staff Education
- Policy Review
- Infection Preventionist Mentoring

IP Turnover: A Cause for Concern

Through facility outreach, IPRAT discovered a disturbing trend in a number of LTCs:

The IP which we had worked with previously had left the facility and a new IP had taken over the role.



2.3 IP Leads per Facility since 2020
(min = 1; max = 5)

Negative Outcomes from IP Staff Turnover



**Loss of
resources
and
institutional
knowledge of
IPC initiatives**

**Breakdown
in infection
prevention
practices**



**Negative
health
outcomes
for residents**



Project Goals

To better understand the landscape of IPC professionals in nursing homes.



**Number of IPs at facility since
January 2020**



The Hand-off Process



Current Infection Preventionist

Survey Methods

Goal: 1 response per facility from the IP lead.

Target Audience 	IP / DON / Admin at 55 Nursing Homes
Collection Period 	2 weeks in Nov 2023
Platform 	Qualtrics

**Final Valid
Responses:**

30

Survey Results



60% Part-Time IPs



60% IPs are DONs

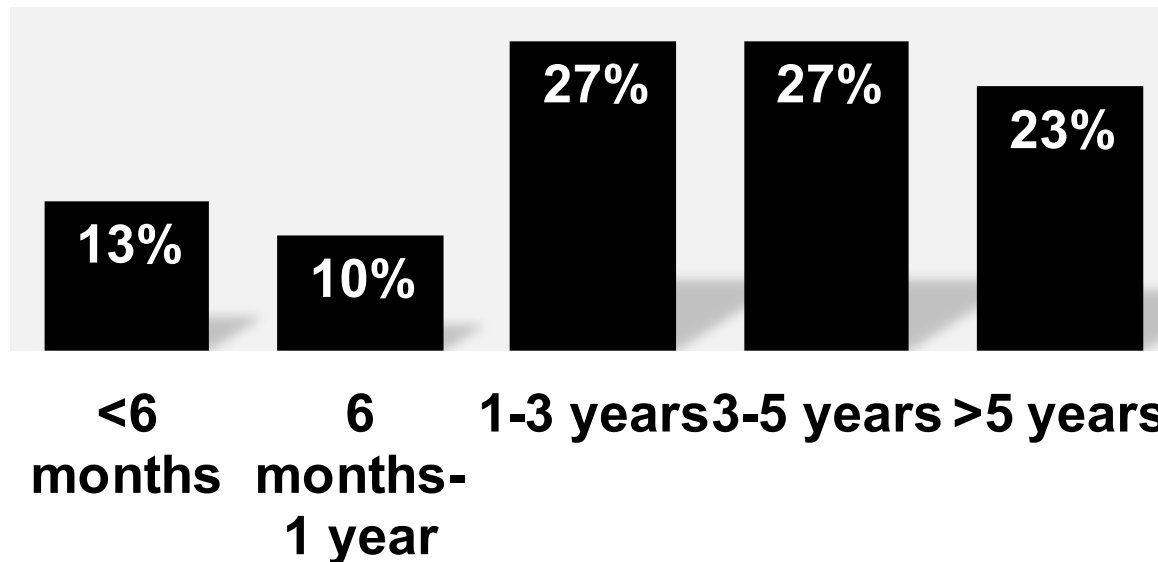


30% No other assigned roles



**33% of Facilities had >1
Person Responsible for
IP Duties**

Years of IP Experience

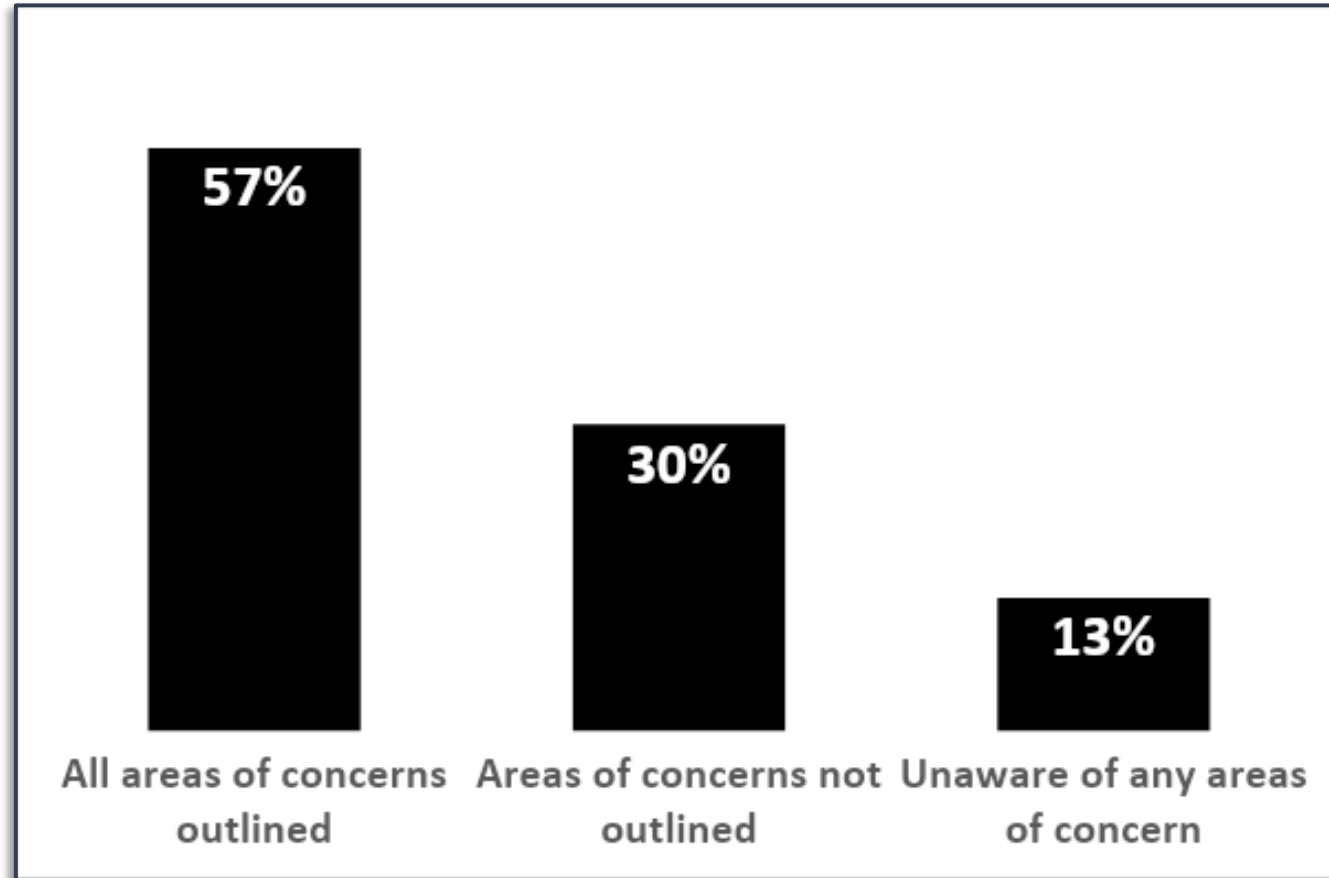


**80% Completed CDC or CMS IP
Education Module Series Training**

Hand-off Process Between Prior & Current IP



53% conducted a partial review of IPC Risk Assessment



73% reviewed recent surveys & findings with new IP upon hire

Conclusion

Almost 40% of IPs in this survey did *NOT* have any form of hand-off prior to serving as the primary IP.

A hand-off process should involve the outgoing IP and consist of:

1. A full review of the facility's risk assessment
2. A clear outline of all areas of concern
3. Provide all recent facility surveys
4. At minimum last one week.
5. Sharing of external IPC support contacts (e.g., LHD or services like MDHHS's IPRAT Team)

“Being an IP in LTC/SNF is a very challenging and stressful position.”



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Epidemiologist

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Upcoming Events

October 10th – APIC-GL Fall Conference!

“You Have Friends in IP”

To register, click or scan the QR code:

[2024 APIC Great Lakes Fall Educational Conference \(givebutter.com\)](https://givebutter.com/2024-APIC-Great-Lakes-Fall-Educational-Conference)



November 19th - TBD

Please note this schedule is subject to change. All changes and additional event details will be communicated via email, once confirmed.

Please direct questions to **Kelsey Ostergren, Chau Nguyen, or Denise Parr**

Session Recordings NOW AVAILABLE!

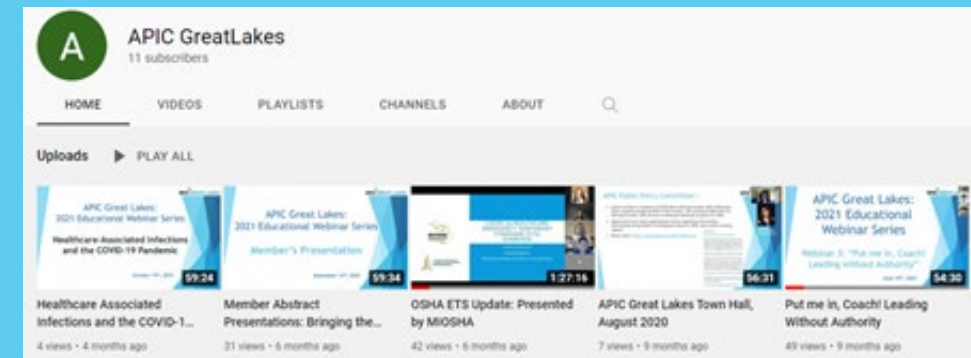
APIC-GL site – webinar slides

[Our Events - APIC Chapter 077 - Great Lakes](#)

YouTube channel– webinar recordings

[APIC Great Lakes - YouTube](#)

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Job Postings

If you have an open position you would like to post to the APIC-GL webpage, please email our web master Rebecca Battjes (apicgreatlakes@gmail.com)

[Link](#) to job board

Thank you for joining us today!

