

# HQIC Community of Practice Call

---

## Successful Strategies for CLABSI Prevention

March 9, 2023

This material was prepared by The Bizzell Group (Bizzell), the Data Validation and Administrative (DVA) contractor, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS) specific. Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. 12SOW/Bizzell/DVA-0996 02/02/2023



# Introduction

---



Welcome!

**Shaterra Smith**

Social Science Research Analyst  
Division of Quality Improvement Innovation  
Models Testing  
iQuality Improvement and Innovations Group  
Center for Clinical Standards and Quality  
Centers for Medicare & Medicaid Services

# Agenda

---

- Introduction
- Today's topic: **Successful Strategies for CLABSI Prevention**
- Speakers
  - **Guthrie Corning Hospital**
    - Cynthia Whitaker, Vice President/Chief Nursing Officer
  - **Jamaica Hospital Medical Center**
    - Dr. Regina Guevarra, Network Director, PI Measures & Analytics
    - Ilder James Casimiro, Director of Infection Prevention and Control
- Open discussion
- Closing remarks

## As You Listen, Ponder...

---

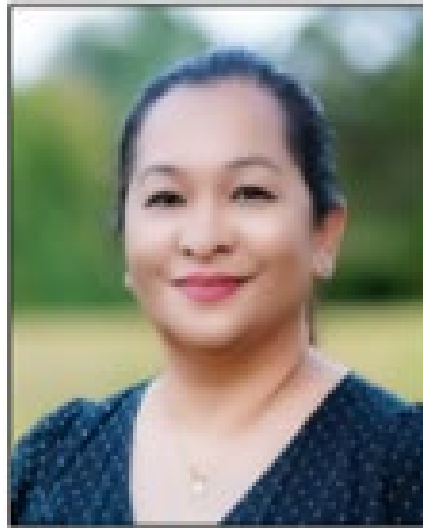
- What impactful actions can you take as a result of the information shared today?
- How are you able to increase engagement within your facilities to ensure a true change in patient safety?
- Based on what you heard today, what activities do you currently have underway that can leverage immediate action over the next 30, 60 or 90 days?

# Meet Your Speakers – Jamaica Hospital Medical Center

---



**Cynthia Whitaker, MSN, RN**  
*Vice President/Chief Nursing Officer  
Guthrie Corning Hospital*



**Regina Guevarra, MD**  
*Network Director, PI Measures & Analytics  
Jamaica Hospital Medical Center*



**Ilder James Casimiro, MSCIC,  
BSN, MIH(c), DIH, CIC**  
*Director of Infection Prevention  
and Control  
Jamaica Hospital Medical Center*

# A Huddle a Day Keeps the Microbes Away

Cynthia Whitaker MSN, RN,

Lora Bouton CPHQ, CLT, LSSGB, & Patricia Butray-Frey MT, NCA, MPS

1/19/2023



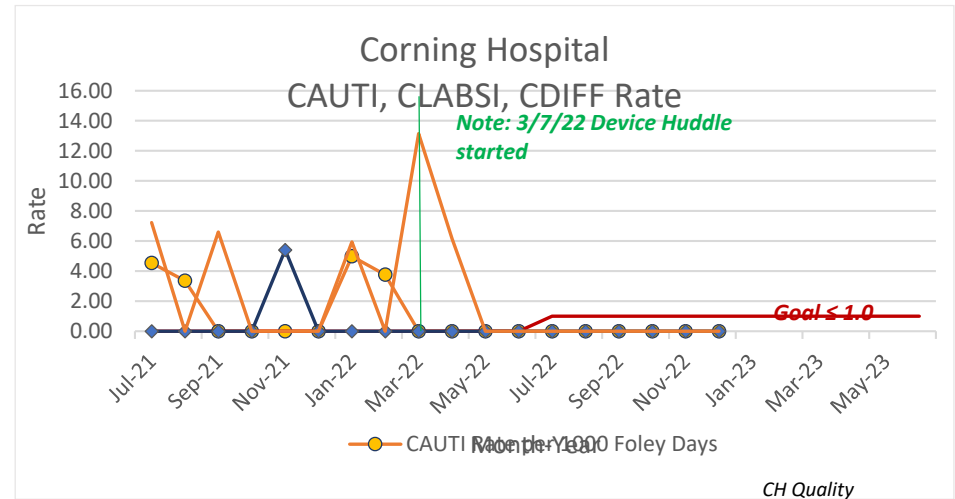
# Guthrie Corning Hospital

- Guthrie is a 4-Hospital System
  - Robert Packer Hospital-Sayre, PA
  - RPH, Towanda Campus –Towanda, PA
  - Troy Hospital-Troy, PA
  - Cortland Medical Center-Cortland, NY
- Corning Hospital
  - 65 Bed not-for-profit Community Hospital
  - Located in Upstate New York, near PA border
- ED Visits
  - ~28,000/year
- Wound Care Center
- Cancer Treatment Center
- Ambulatory Surgery Center
- Healthworks Outpatient Therapy
- Leapfrog Safety Grade A Hospital
- Journey to Level 3 Trauma Designation



# Overview

- Observed increase in hospital acquired infections (HAI)
  - Regional area impacted by COVID pandemic surge in 2021
  - Hospital challenges
    - With staffing due to surge in patients
    - Increase in patient complexity



CAUTI = Catheter Associated Urinary Tract Infection  
CLABSI = Central Line Associated Blood Stream Infection  
CDIFF = Clostridium difficile Infection  
FY = Fiscal Year (i.e. FY2022 = July 2021 to June 2022)



# Aim

## To decrease

- CAUTI rate per 1,000 catheter days to  $\leq 1.00$  from FY 2022 baseline of 1.41
- CLABSI rate per 1,000 central line days to  $\leq 1.00$  from FY 2022 baseline of 0.69
- CDIFF rate per 10,000 patient days to  $\leq 3.00$  from FY 2022 baseline of 3.11

## To reduce device utilization rates

# Plan

Our hospital implemented a daily 15-minute Device Huddle which includes the review of catheters, central lines, and CDIFF orders.

## Huddle Leaders

- **The Chief Nursing Officer (CNO)**
- **Infection Prevention Manager**
- **Quality Improvement Specialist**

## Core Participants

- **Hospital President**
- **Chief Medical Officer (CMO)**
- **VP of Operations**
- **Nursing Unit Leaders**
- **Patient Safety Program Manager**

# Prepare

Developed reports to monitor continuous improvement.

- **Daily Reports:**
  - **Active Foleys**
  - **Active Lines**
  - **Open CDIFF orders**

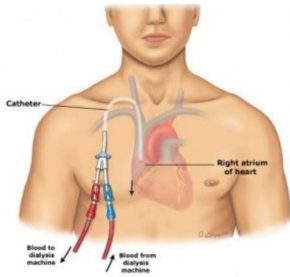
Each Manager receives a daily active foley and line reports to review. These reports are reviewed at unit level huddle with clinical nurses to identify:

- Indication for device
- A plan to remove or change to a more appropriate device
- Cancel CDIFF order if not clinically indicated
- **Monthly Reports:**
  - **CAUTI, CLABSI, CDIFF, Device Utilization**
  - **Nurse Driven Protocol Orders**
  - **Chlorhexidine (CHG) bathing**

# Device Huddle Details

## A. Catheters:

- Indication for catheter
- # of days since placement
- Opportunities to remove
- Consider external catheter alternatives
- Chronic foleys are replaced on admission
- Catheter hygiene care completed
- Double assist catheter insertion compliance
- Nurse Driven Protocol catheter orders placed



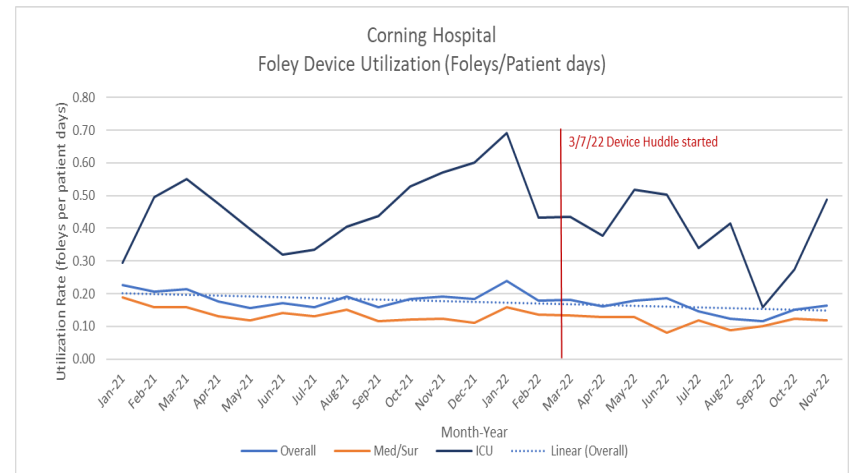
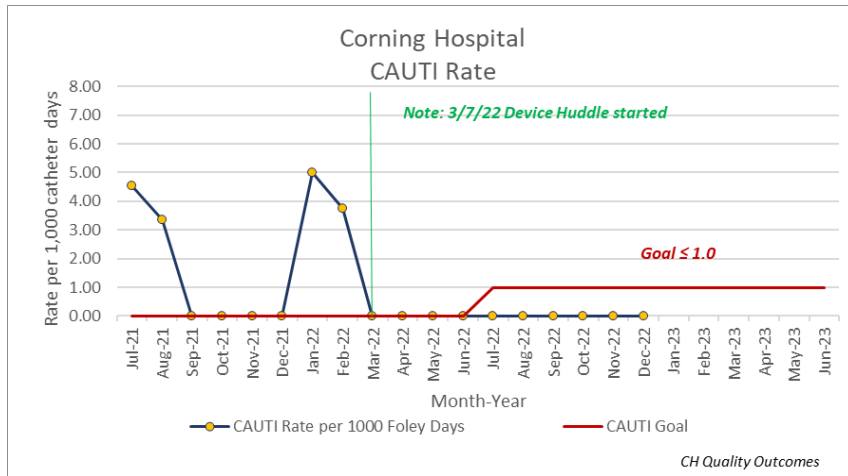
## B. Central Lines

- Indication for central line placement
- #of days since placement
- Opportunities to remove
- Consider PICC or Midline catheter
- Chlorhexidine (CHG) bathing completed

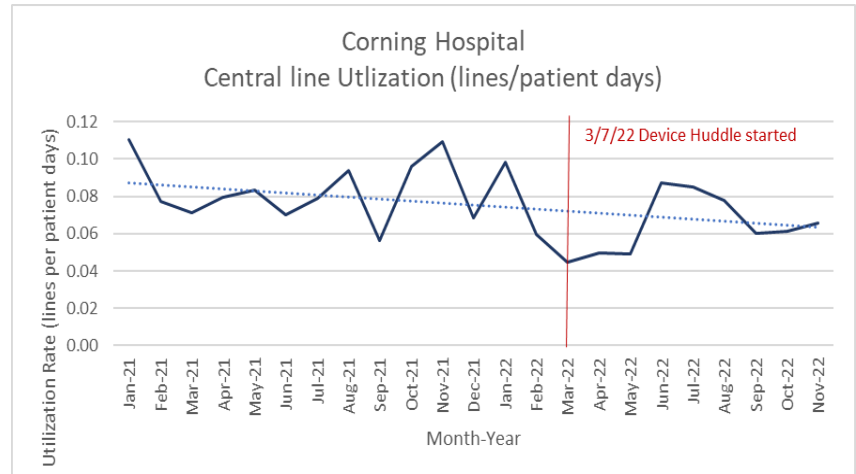
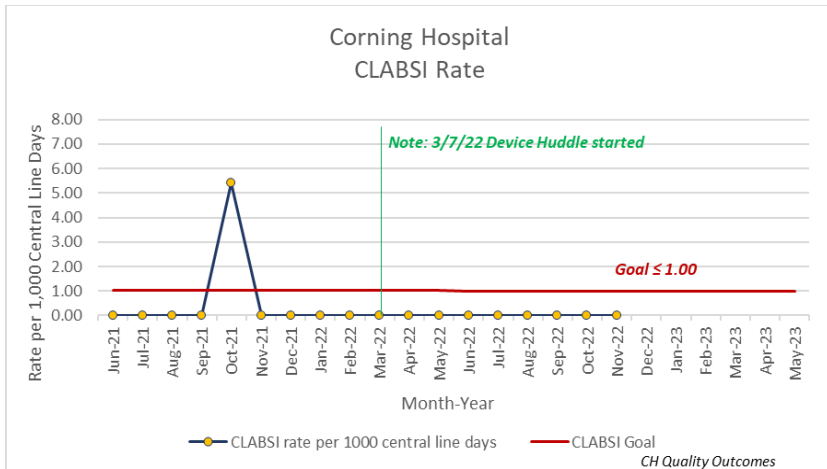
## C. Clostridium difficile Toxin Orders

- Review CDIFF algorithm to determine if patient meets criteria to test
- Nurse collaborates with provider to cancel order if criteria not met

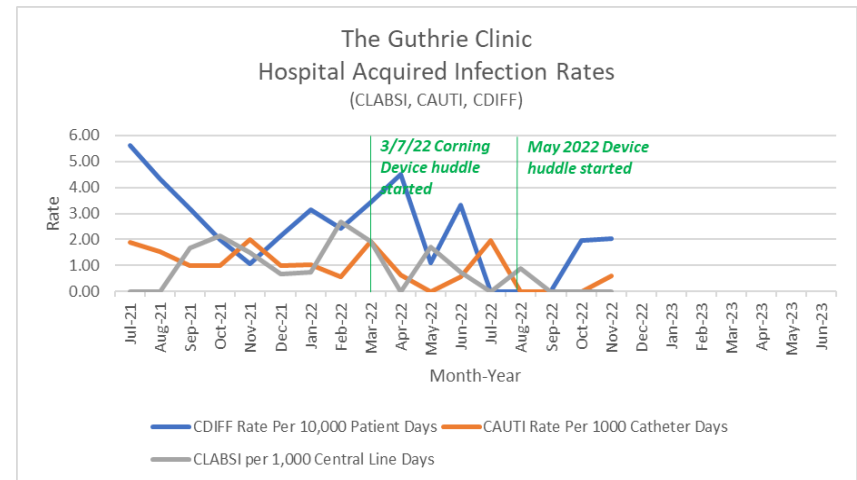
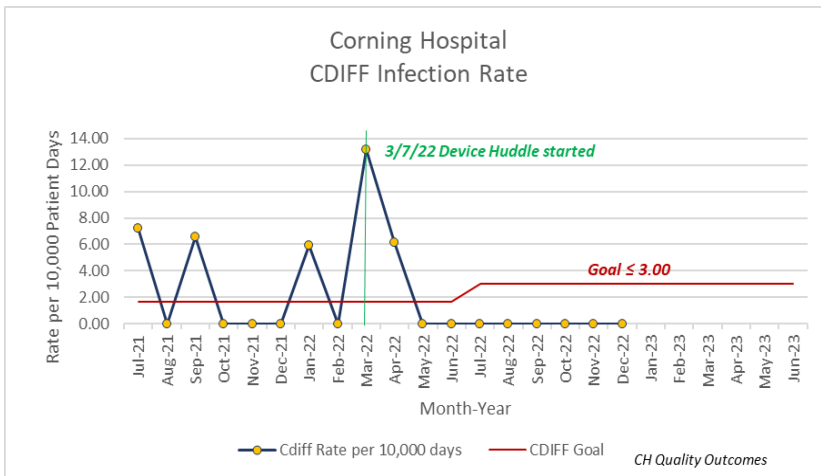
# Outcomes



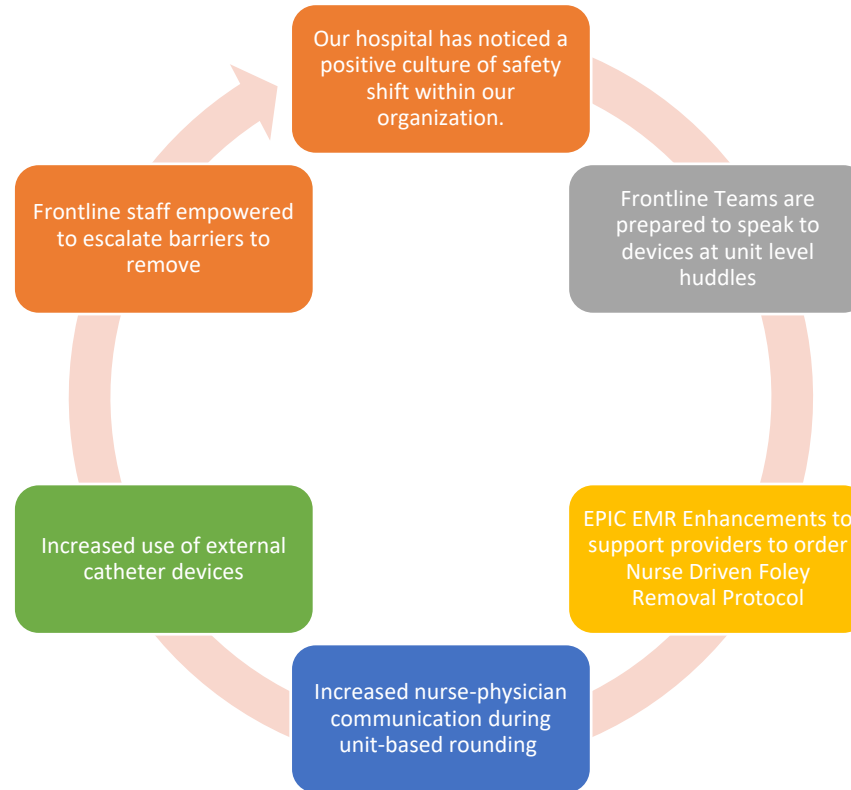
# Outcomes



# Outcomes



# Culture of Safety





# Conclusions

---

Device **Huddle** has effectively **reduced hospital acquired infections and positively changed** our hospital **culture of safety**. Corning Hospital is currently meeting our FY2023 HAI goals.

---

The outcomes of this project reduce harm and **keep our patients safe**. In addition, supports Corning Hospital to sustain a **Leapfrog Safety Grade A** and improve the future CMS Hospital Star rating.

---

**Device Huddle** was implemented in May 2022 across **the Guthrie System at all 4 entities**. Overall infection rates and utilization rates have decreased system-wide.

---

**C-Suite Leadership support** has demonstrated to be effective and necessary to improve our culture of safety within our organization.

---

Corning Hospital continues to focus improvement on empowering clinical nurses to follow the Nurse Driven Protocol and improve double assist catheter insertion documentation.



# CLABSI Reduction: Using a Variety of Methods to Plan the Journey Forward Post COVID-19

March 9, 2023



Presenters:

Ilder James Casimiro, MSCIC, BSN, MIH(c), DIH, CIC  
Director of Infection Prevention and Control

Regina Guevarra, MD  
Network Director, Performance Improvement Measures  
and Analytics

Patricia Stith MS,RN  
Network Director, Professional Development &  
Organizational Learning

Sharon L. Narducci DNP, APRN-BC  
Chief Quality Officer

# Jamaica Hospital Medical Center

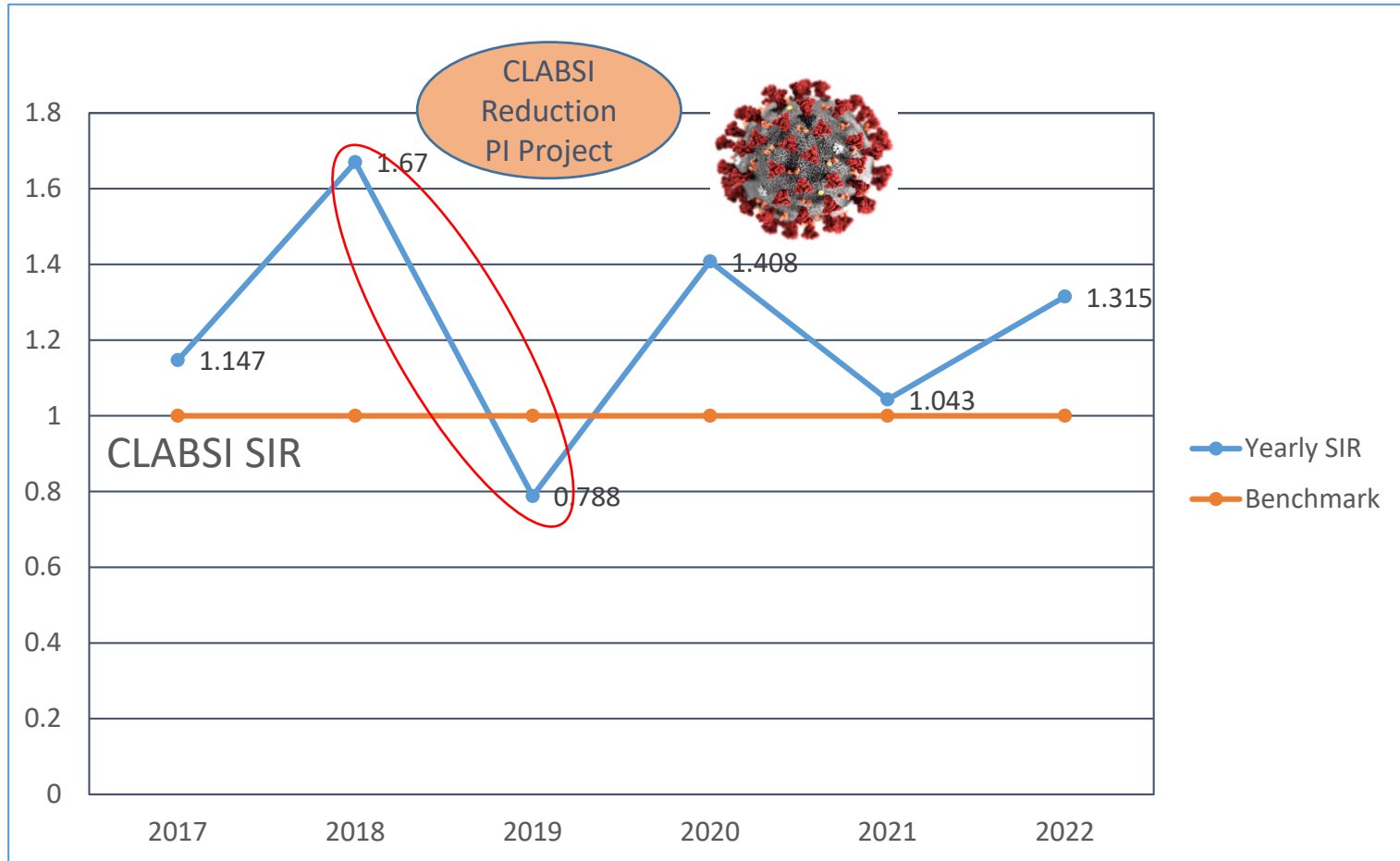
- 431-bed, not-for-profit teaching hospital
- Located in Jamaica, NY near two major airports
- Level-1 Trauma Center, ~1700 activations/Yr
  - *Only trauma center in S. Queens*
  - *Busiest in NYC & five boroughs 2020*
- ED Visits ~120,000/Yr (13% Admitted)
- Ambulatory Care Visits ~500,000/Yr
- Newborn Deliveries ~ 1,500/Yr
- Surgical Cases - ~5000/Yr



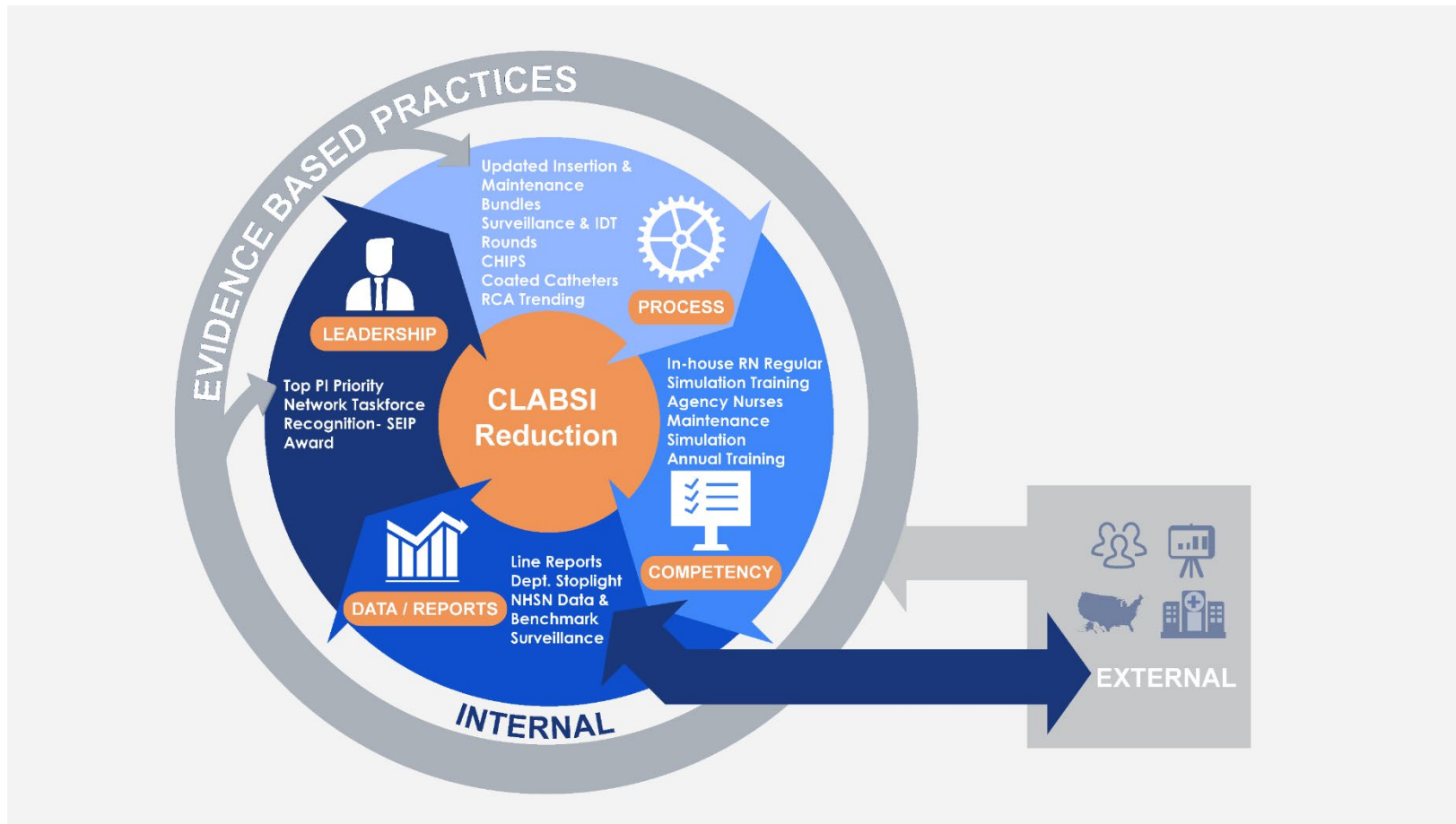
# Introduction

- The impact of the COVID-19 pandemic on HAIs, especially CLABSI, is well documented in several publications.<sup>1,2,3</sup>
- In a multi-center study, it was observed that HAIs increased as COVID-19 burden increased, producing 60% more CLABSI.<sup>4</sup>
- With Quality Improvement work disrupted, traditional care processes were affected.<sup>5</sup> Bundle care, the compliance of which is associated with HAC reduction,<sup>6</sup> was also affected significantly during the pandemic.
- Jamaica Hospital has performed preventive analysis utilizing different methods before establishing specific intervention methods prior to the pandemic.

# NHSN CLABSI: Before, During and After COVID-19



# Prior to COVID-19: CLABSI Reduction PI Project



# Back to the Drawing Board: Planning the Way Forward in 2022 & 2023





# CDC's TAP Feedback Report

Overall score: 76% (Leading results >75%)

Response rate – 64% (61/96) Physicians, Nurses and RTs

## Top Opportunities for Improvement

I. General Infrastructure, Capacity, and Processes 74%	II. Appropriate Use of Central Venous Catheters 76%	III. Insertion Practices for Central Venous Catheters 80%	IV. Maintenance Practices for Central Venous Catheters 75%
Feedback on central line device utilization ratios (DUR)	No items in domain met criteria for lagging items, however, there may be opportunity for improvement relating to:	No items in domain met criteria for lagging items, however, there may be opportunity for improvement relating to:	No items in domain met criteria for lagging items, however, there may be opportunity for improvement relating to:
	Central lines with the minimum number of ports or lumens used	Use of sutureless securement devices to hold central lines in place	Use of CHG-impregnated dressings for short-term, non-tunneled lines in patients ≥ 18 years of age

\* Items displayed are select questions with a frequency of >75% Yes or >75% for the sum of Often + Always

† Items displayed are select questions with a frequency of >33% Unknown, >50% No + Unknown, or >50% for the sum of Never + Rarely + Sometimes + Unknown

‡ Items displayed are based on questions within each domain with a frequency of >33% Unknown, >50% No + Unknown, or >50% for the sum of Never + Rarely + Sometimes + Unknown



# CLABSI Tracer: External Consultant



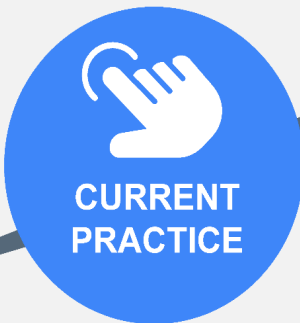
## 1-day tracer

- Document review: Policies, data and RCAs. Interviews with interdisciplinary team: RNs, Attendings, Residents, Ancillary Support and Leadership
- Observation of simulated CVL care by RNs
- Remote individual patient tracers via iPad: Insertion site dressing, tubing, administration set, end-caps (Curos)
- Briefing, debriefing and written reports

# Gap Analysis and Validation on Recommended Interventions

- ✓ DAILY CHG BATH FOR ICU PATIENTS
- ✓ SUBCLAVIAN SITE PREFERRED
- ✓ ULTRASOUND GUIDANCE DURING INSERTION
- ✓ USE ALCOHOLIC CHG ANTISEPTIC FOR SKIN PREP

- ✗ ANTIMICROBIAL OINTMENT FOR HEMODIALYSIS CATHETER INSERTION SITES
- ✗ VASCULAR ACCESS TEAM



- ✗ USE ANTIMICROBIAL LOCK THERAPY FOR LONG-TERM CVCS
- ✗ USE AN ALL-INCLUSIVE CATHETER CART OR KIT
- ✗ USE OF SUTURELESS SECUREMENT DEVICES



- SURVEILLANCE DATA
- DAILY LINE REPORTS
- TRACERS
- RCA

# Impact Analysis: Quality of Evidence vs. Cost



**IMPACT**

HIGH  
MODERATE  
LOW

<p>ANTIMICROBIAL OINTMENT FOR HEMODIALYSIS CATHETER INSERTION SITES</p> <p>REMOVE NON-ESSENTIAL CATHETERS</p>	<p>Limit use of float nurses (agency RN simulation training)</p>	<p>USE ANTIMICROBIAL LOCK THERAPY FOR LONG-TERM CVCS</p> <p>(Commercially Not available)</p>
	<p>USE AN ALL-INCLUSIVE CATHETER CART OR KIT (Blood Culture Kit)</p> <p>USE OF SUTURELESS SECUREMENT DEVICES</p> <p>Dressing change if loose or damp (adhesive remover and skin barrier prep and agglomerate dressing)</p>	

**Recommendation Matrix**

- High Priority
- Moderate Priority
- Low Priority

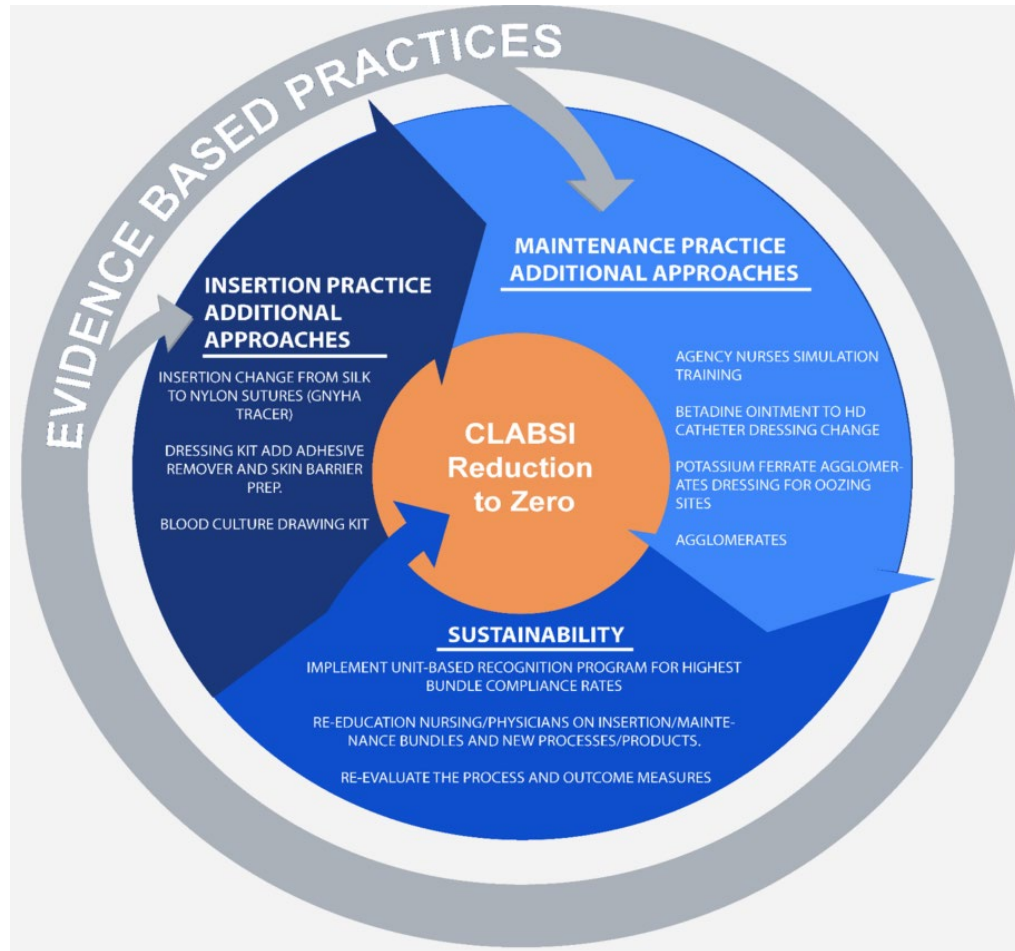
LOW

MODERATE

HIGH

**COST** \$

# Journey Forward. . .



# References:

1. Lastinger, L., Alvarez, C., Kofman, A., Konnor, R., Kuhar, D., Nkwata, A., . . . Dudeck, M. (2022). Continued increases in the incidence of healthcare-associated infection (HAI) during the second year of the coronavirus disease 2019 (COVID-19) pandemic. *Infection Control & Hospital Epidemiology*, 1-5. doi:10.1017/ice.2022.116
2. Sonali D Advani, Emily Sickbert-Bennett, Rebekah Moehring, Andrea Cromer, Yuliya Lokhnygina, Elizabeth Dodds-Ashley, Ibukunoluwa C Kalu, Lauren DiBiase, David J Weber, Deverick J Anderson, for the CDC Prevention Epicenters Program, The Disproportionate Impact of Coronavirus Disease 2019 (COVID-19) Pandemic on Healthcare-Associated Infections in Community Hospitals: Need for Expanding the Infectious Disease Workforce, *Clinical Infectious Diseases*, 2022;, ciac684, <https://doi.org/10.1093/cid/ciac684>
3. Baker MA, Sands KE, Huang SS, Kleinman K, Septimus EJ, Varma N, Blanchard J, Poland RE, Coady MH, Yokoe DS, Fraker S, Froman A, Moody J, Goldin L, Isaacs A, Kleja K, Korwek KM, Stelling J, Clark A, Platt R, Perlin JB; CDC Prevention Epicenters Program. The Impact of Coronavirus Disease 2019 (COVID-19) on Healthcare-Associated Infections. *Clin Infect Dis*. 2022 May 30;74(10):1748-1754. doi: 10.1093/cid/ciab688. PMID: 34370014; PMCID: PMC8385925.
4. Reinhart RM, Fink A, Bhattarai S, Cheng JJ, Saha A, Worten K, Cronin J, Shah R. Engagement and Bundle Compliance during COVID-19: A Virtual Strategy. *Pediatr Qual Saf*. 2022 Mar 30;7(2):e540. doi: 10.1097/pq9.0000000000000540. PMID: 35369421; PMCID: PMC8970075.
5. Foster AA, Stack AM. Quality improvement in a pandemic. *Pediatr Qual Saf*. 2020;5:e321.
6. Resar R, Griffin FA, Haraden C. Using care bundles to improve health care quality. IHI Innovation Series white paper. Institute for Healthcare Improvement; 2012.
7. Buetti, N., Marschall, J., Drees, M., Fakhri, M., Hadaway, L., Maragakis, L., . . . Mermel, L. (2022). Strategies to prevent central line-associated bloodstream infections in acute-care hospitals: 2022 Update. *Infection Control & Hospital Epidemiology*, 43(5), 553-569. doi:10.1017/ice.2022.87
8. Yamamoto AJ, Solomon JA, Soulen MC, Tang J, Parkinson K, Lin R, Schears GJ. Sutureless securement device reduces complications of peripherally inserted central venous catheters. *J Vasc Interv Radiol*. 2002 Jan;13(1):77-81. doi: 10.1016/s1051-0443(07)60012-8. PMID: 11788698.
9. Riccoboni, A. and Ali, S., 2011. Central Venous Line Securement Technique. *Journal of the Intensive Care Society*, 12(1), pp.52-52.

## Discussion

---

- What impactful actions can you take as a result of the information shared today?
- How are you able to increase engagement within your facilities to ensure a true change in patient safety?
- Based on what you heard today, what activities do you currently have underway that can leverage immediate action over the next 30, 60 or 90 days?

# Final Thoughts

---

# Join Us for the Next Community of Practice Call!

---



Join us for the next  
Community of Practice Call on April 13, 2023  
from 1:00 – 2:00 p.m. ET

We invite you to register at the following link:

[https://zoom.us/webinar/register/WN\\_ASI\\_I3p\\_TEyX\\_VY\\_YYFFeA](https://zoom.us/webinar/register/WN_ASI_I3p_TEyX_VY_YYFFeA)

*You will receive a confirmation email with login details.*



# Thank You!

---



*Your opinion is valuable to us. Please take 4 minutes to complete the [post assessment](#).*

*We will use the information you provide to improve future events.*