

# INFECTION PREVENTION AND HEALTHCARE EPIDEMIOLOGY

New Provider Information and Expectations

# MercyOne Infection Prevention Team

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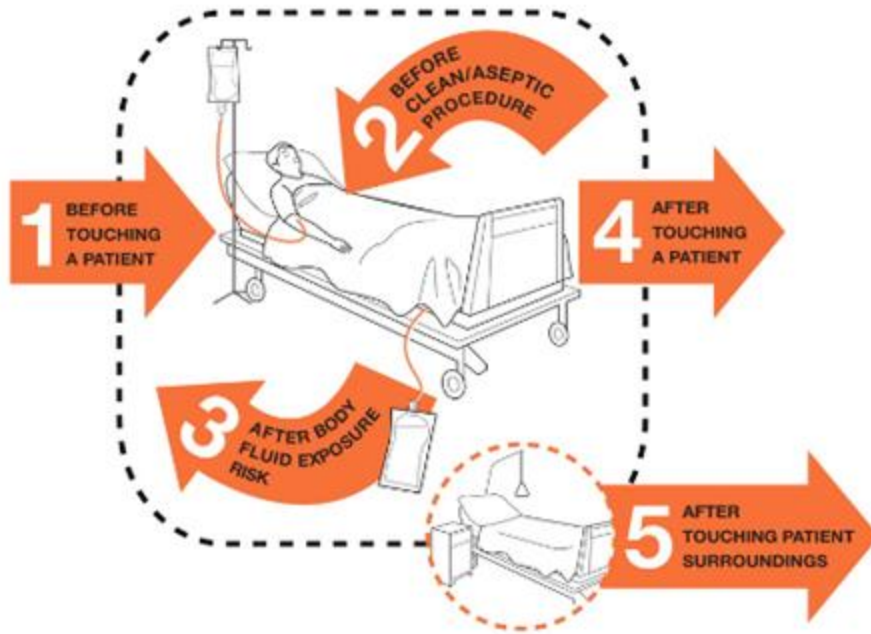
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# Hand Hygiene Saves Lives

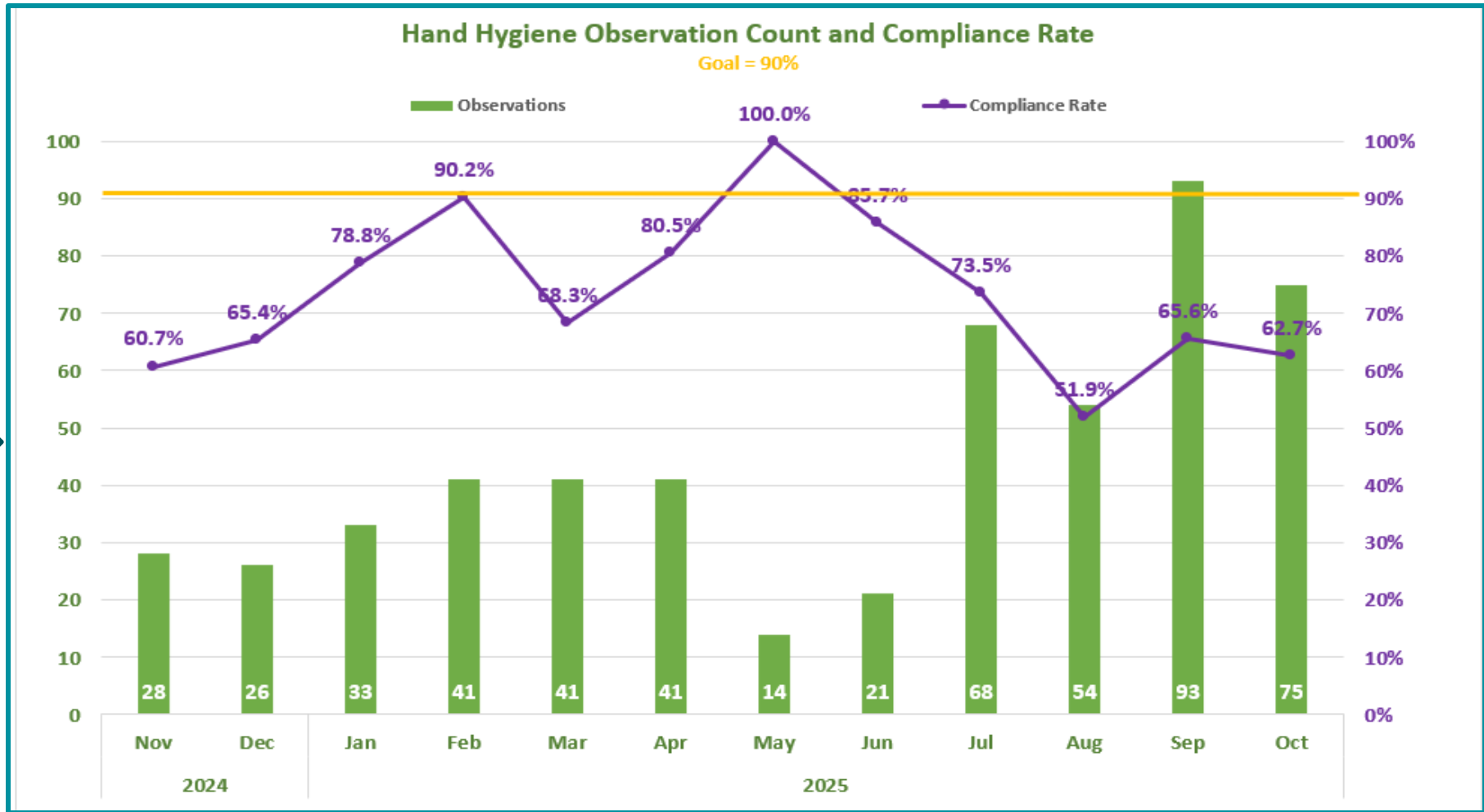
## Your 5 Moments for Hand Hygiene






**GOAL=90%**

Practitioner  
Specific  
Data  
(MD, DO,  
ARNP, PA,  
Medical  
Resident)



 **Please wash your hands every time you enter and exit a patient's room.**  
Even if you're only speaking with the patient, hand hygiene is essential—you never know when care or an assessment may be needed. Set the example for others and, most importantly, help keep our patients safe!

# Importance of Handwashing

*Cultured petri dishes show bacteria on hands*



*Unwashed hand*



*Rinsed hand*



*Fully-washed hand*

# Disinfecting Contaminated Surfaces and Objects

## SANI WIPES



### Sani-Cloth Best Practices

**Preferred Cleaning Method:** Use Sani-Cloths to disinfect multi-patient equipment such as stethoscopes, PAPR hoods, and ID badges.

**Know the Dwell Time:** The surface must remain visibly wet for the full dwell time to ensure proper disinfection.

- Tip: Check the product label—this is a common Joint Commission question.

**Color Matters:** Different lid colors indicate different dwell times.

 **LOOK HERE!!**

Purple Top

2 Min



Dwell/Wet time =time the object has to remain **WET!**  
All multi-patient use equipment are wiped down with Sani-Cloths regardless of isolation status.

Gray Top

3 Min



If in doubt, check it out!  
(It's on the Container!)

OxyCide

5 Min



Do not mix with Bleach!

EVS USE ONLY!

Daily and terminal cleans are performed with OxyCide by EVS. If you have a soiled item, contact EVS for cleaning assistance.



# Safe Care Starts Here: Isolation Standards

## MERCYONE POLICY





**wash your hands and  
wear PPE when indicated.**


Even brief entry into an isolation room  
requires full PPE.


**Do the right thing!**



 **PPE:**  
Gown and gloves required upon entry.

 **Common Conditions:**  
*C. difficile (C-diff)*  
*Multi-Drug Resistant Gram Negatives (MDRGNs)*  
*Candida auris*

 **Hand Hygiene:**  
For **C. diff**:  
Use hand sanitizer after glove removal.  
If hands are visibly soiled, wash with soap and water.

 **Important:**  
Remove PPE inside the patient room before exiting.



# Contact Isolation Precautions



**STOP** **CONTACT PRECAUTIONS**  
(USE IN ADDITION TO STANDARD PRECAUTIONS)

**EVERYONE ENTERING THIS ROOM MUST WEAR:**

	<b>Gloves</b>	<ul style="list-style-type: none"><li>• Change after contact with potentially infective material</li><li>• Remove when exiting room</li></ul>
	<b>Gowns</b>	<ul style="list-style-type: none"><li>• Wear isolation gown for any contact with:<ol style="list-style-type: none"><li>1. Patient</li><li>2. Environmental surfaces</li><li>3. Other items in patient room</li></ol></li></ul>
	<b>Hands</b>	<ul style="list-style-type: none"><li>• Wash hands with soap and water or apply hand sanitizer</li></ul>
	<b>Transport</b>	<ul style="list-style-type: none"><li>• Notify receiving department of precautions</li><li>• Transporter to wear clean gown and gloves during transport</li><li>• Patient drainage/secretions must be contained</li><li>• PPE removed at patient destination</li></ul>
	<b>Other</b>	<ul style="list-style-type: none"><li>• Limit supplies and personal items taken to room</li><li>• Clean all reusable items with hospital approved disinfectant before removing from room</li><li>• Masks indicated if respiratory illness</li></ul>

# Droplet Isolation Precautions

## ☀ PPE: Surgical Mask

☀ **When used as PPE:** Discard after each patient encounter.

**When used for source control:** May be worn for multiple patient interactions but must be discarded after leaving any isolation room.

## ☀ Examples:

Influenza

If you suspect a respiratory pathogen and are testing, apply isolation precautions until results confirm it is negative.





### DROPLET PRECAUTIONS

(USE IN ADDITION TO STANDARD PRECAUTIONS)

EVERYONE ENTERING THIS ROOM MUST WEAR A:

 <b>Mask</b>	<ul style="list-style-type: none"><li>• Standard surgical mask</li><li>• Remove and discard when exiting room</li></ul>
 <b>Hands</b>	<ul style="list-style-type: none"><li>• Use soap and water or alcohol-based hand gel</li><li>1. Immediately before and after all patient contact</li><li>2. Anytime personal protective equipment is changed or removed</li></ul>
 <b>Transport</b>	<ul style="list-style-type: none"><li>• Notify receiving department of precautions</li><li>• Limit patient transport to essential purposes only</li><li>• Patient to wear surgical mask when leaving the room</li></ul>
 <b>Other</b>	<ul style="list-style-type: none"><li>• Door can remain open (droplets generally travel 3 feet or less)</li><li>• Limit supplies and personal items taken into room</li><li>• Clean all reusable items with hospital approved disinfectant before removing from room</li></ul>



# Airborne Isolation Precautions

## PPE:

Fit-tested **N95** or Powered Air-Purifying Respirator (**PAPR**)

N95s are single-patient use and must be discarded after each patient interaction.

## Examples:

Tuberculosis (TB)

Varicella (Chickenpox) – if not vaccinated or has not had the disease


Multi-dermatomal or disseminated herpes zoster (shingles)

## Important:

The patient must be placed in a negative airflow (airborne isolation) room.





Keep the door closed at all times.



**AIRBORNE PRECAUTIONS**  
(USE IN ADDITION TO STANDARD PRECAUTIONS)

VISITORS MUST CHECK WITH NURSE BEFORE ENTERING THIS ROOM.

HOSPITAL PERSONNEL ENTERING THIS ROOM MUST WEAR:

 <b>Respiratory Protection</b>	<ul style="list-style-type: none"><li>Powered air purifying respirator (PAPR) or N95 mask</li><li>N95 user must be fit tested annually</li></ul>
 <b>Hands</b>	<ul style="list-style-type: none"><li>Use soap &amp; water or alcohol-based hand gel</li><li>1. Immediately before and after all patient contact</li><li>2. Anytime personal protective equipment is changed or removed</li></ul>
 <b>Transport</b>	<ul style="list-style-type: none"><li>Notify receiving department of precautions</li><li>Limit patient transport to essential purposes only</li><li>Patient wears a surgical mask when leaving room</li></ul>
 <b>Other</b>	<ul style="list-style-type: none"><li>Keep door closed except to enter/exit into room</li><li>Limit supplies and personal items taken into room</li><li>Clean all reusable items with hospital approved disinfectant before removing from room</li><li>Check room for negative pressure daily when in use</li></ul>

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# Enhanced Droplet Isolation Precautions (COVID-19)

**PPE:**  
Fit-tested **N95** or Powered Air-Purifying Respirator (**PAPR**)  
If wearing an N95 respirator, **eye protection** is also required. N95s are single-patient use and must be discarded after each patient interaction.

**Examples:**  
COVID-19


**Important:**  
A negative airflow room is not required, but the door must remain closed at all times.

**\*\*Update (November 2025):**

Contact isolation is no longer required for COVID-19.

A gown may be worn as indicated by standard precautions.










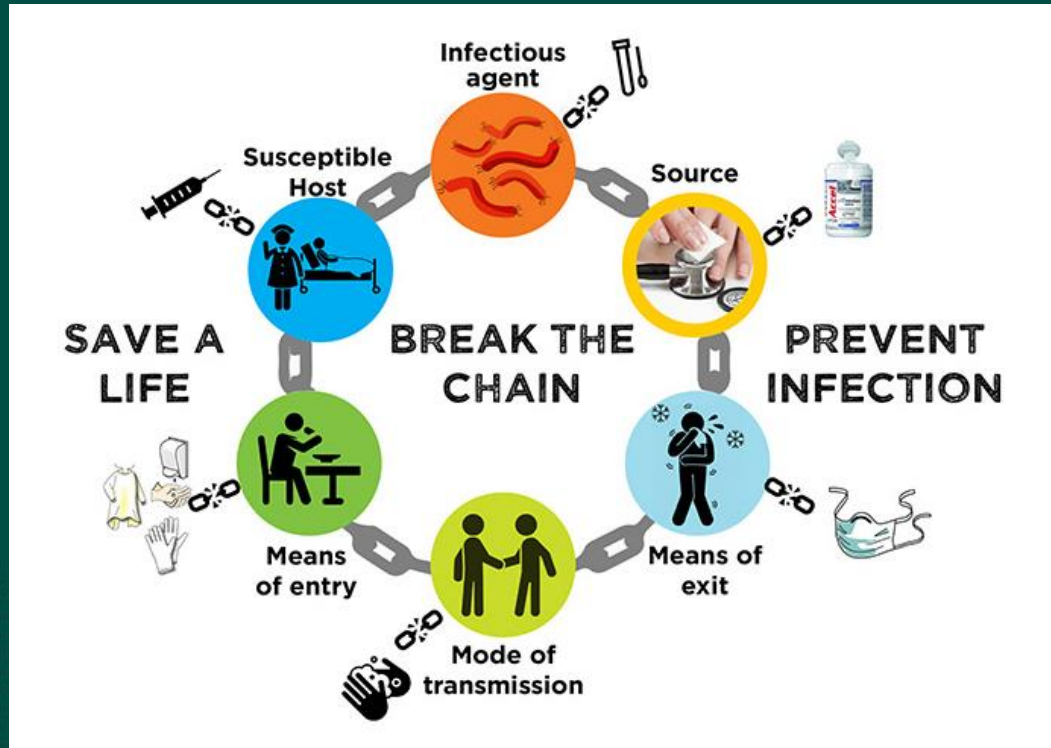
## ENHANCED DROPLET PRECAUTIONS

(USE IN ADDITION TO STANDARD PRECAUTIONS)

EVERYONE ENTERING THIS ROOM **MUST WEAR:**

 <b>Respiratory Protection</b>	<ul style="list-style-type: none"><li>• Powered air purifying respirator (PAPR) or N95 mask</li><li>• N95 user must be fit tested annually</li></ul>
 <b>Eye Protection</b>	<ul style="list-style-type: none"><li>• Must wear either face shield or goggles if using N-95</li><li>• Ensure face and mouth are covered at all times</li></ul>
 <b>Hands</b>	<ul style="list-style-type: none"><li>• Clean hands with soap and water or apply hand sanitizer</li></ul>
 <b>Transport</b>	<ul style="list-style-type: none"><li>• Notify receiving department of precautions</li><li>• Limit patient transport to essential purposes only</li><li>• Patient to wear surgical mask when leaving the room</li></ul>
 <b>Other</b>	<ul style="list-style-type: none"><li>• Keep door closed except to enter and exit</li><li>• Limit supplies and personal items taken into room</li><li>• Clean all reusable items with hospital-approved disinfectant before removing from room</li></ul>

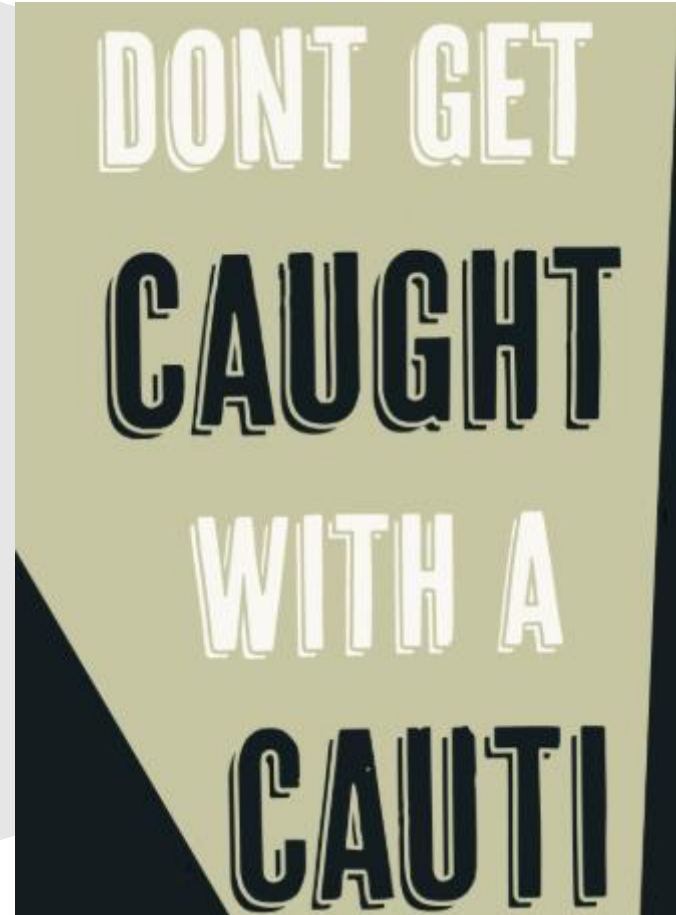
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## Breaking the Chain: Preventing Reportable Hospital Acquired Infections

- CAUTI
- CLABSI
- C.DIFF
- MRSA BSI
- COLO SSI
- HYST SSI
- Hand Hygiene

# CATHETER ASSOCIATED URINARY TRACT INFECTION (CAUTI) PREVENTION





# Indwelling Urinary Catheter: When Is It Really Needed?



- Acute urinary retention (sudden and painful inability to urinate) or bladder outlet obstruction
- To improve comfort for end-of-life care if needed
- Critically ill and need for accurate measurements of I&O (e.g. hourly monitoring)
- Selected surgical procedures (GU surgery/colorectal)
- To assist in healing open sacral or perineal wound in the incontinent patient
- Need for intraoperative monitoring of urinary output during surgery or large volumes of fluid or diuretics anticipated
- Prolonged immobilization (potentially unstable thoracic or lumbar spine, multiple traumatic injuries such as pelvic fractures)

# External Urinary Devices: Safer Solutions for Patients

## Male External Devices



Hooks to downward  
leg bag



## PureWick-Female

Hooks to wall suction  
and can provide  
accurate I&O's!

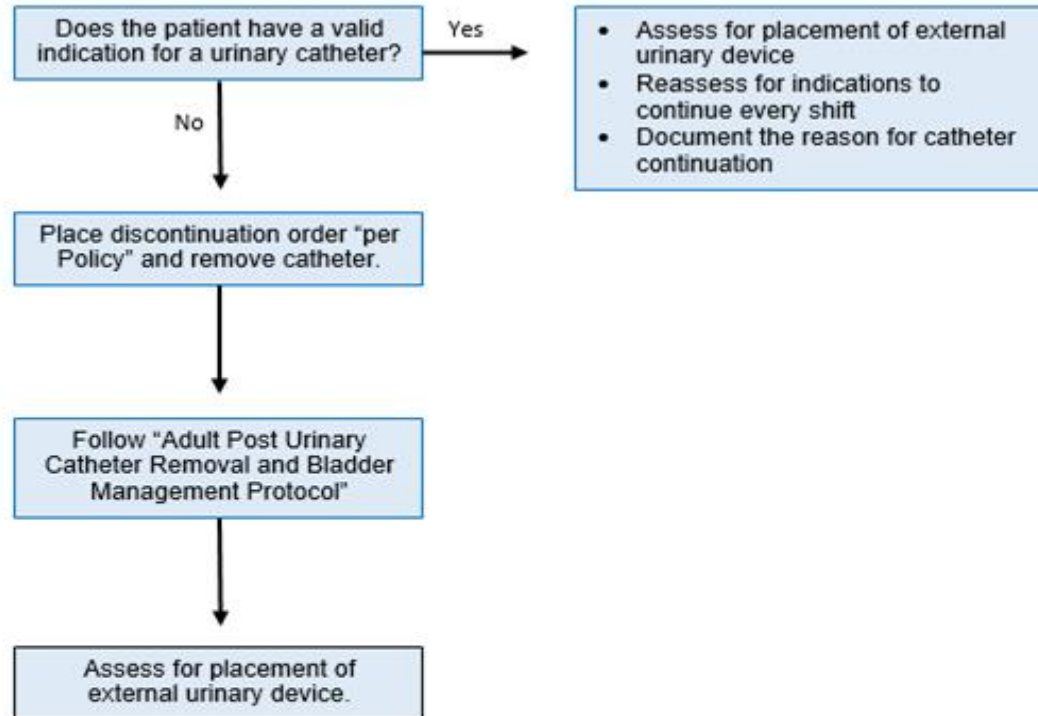


\* Female PureWick is approved only for patients in Critical Care and Stepdown Units

## Accelerating Foley Removal: Nurse-Driven Protocol

*Daily review of line necessity and prompt removal are essential for patient safety.*

All Surgeon and Provider post-op orders stating "Do Not Remove Foley" **override** this protocol.



Attached to every Foley insertion order

### Criteria for indwelling urinary catheter:

1. Urinary retention, obstruction or other urological procedures
  2. Accurate I/O for critically ill patient
  3. Periop use for urologic or GYN procedure
  4. Periop large volume infusion/diuretics
  5. Perineal/sacral wound and incontinence
  6. Immobilization due to trauma or surgery
  7. Comfort care at end of life
  8. Postop for select surgical procedures (major renal, urologic, pelvic, colorectal, or abdominal surgery)
- \*\*epidurals and diuretics are not an automatic indication for a urinary catheter

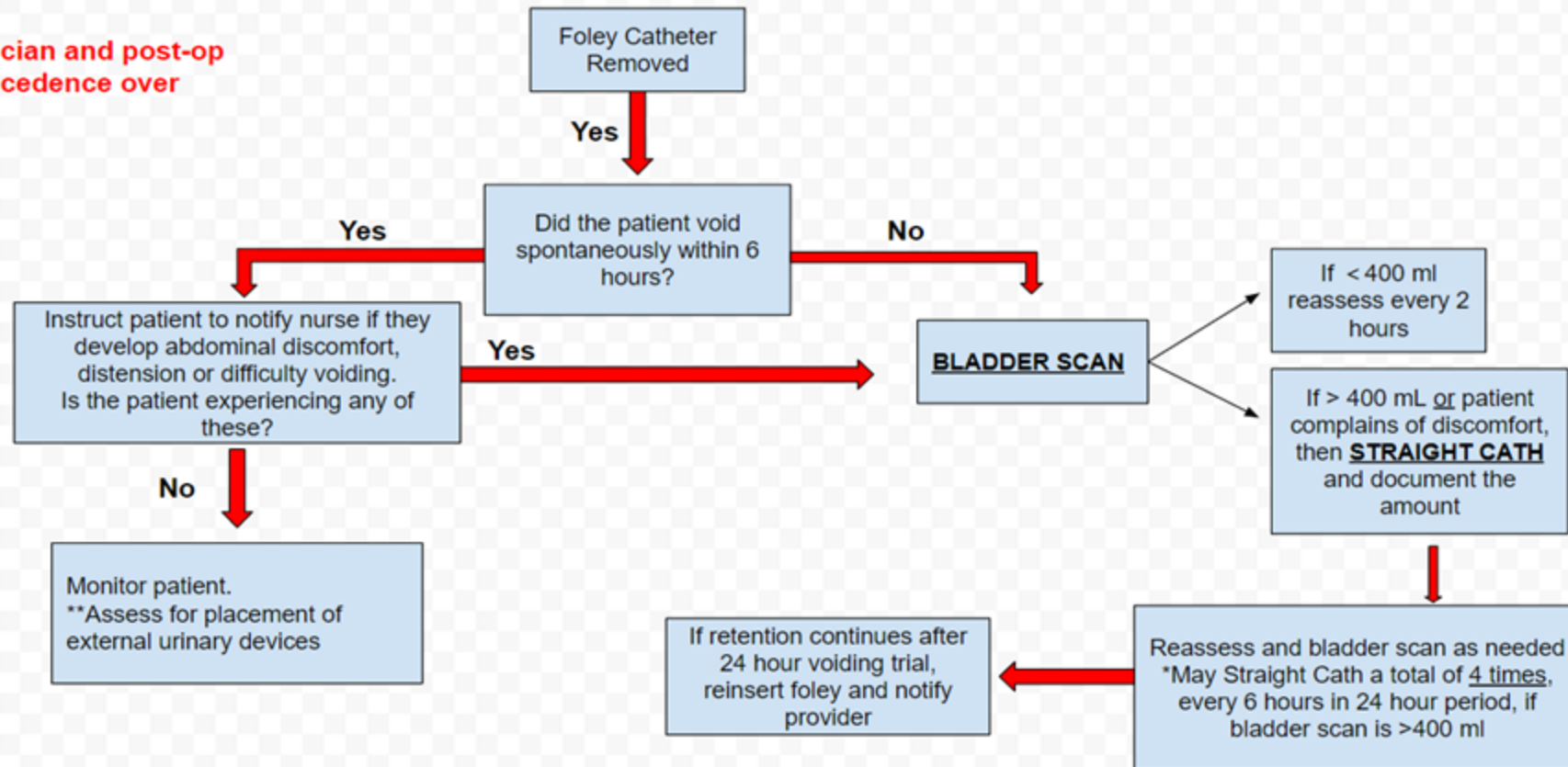


# Partner with Nursing!

## Post-Removal Algorithm: Evidence-Based Bladder Management

### Adult Post Foley Removal and Bladder Management Protocol

**\*\*All Specific Physician and post-op orders will take precedence over this protocol.**



Gray, M., Beeson, T., Kent, D., Mackey, D., McNichol, L., Thompson, D. L., & Engberg, S. (2020). Interventions post catheter removal (ipcare) in the Acute Care Setting. *Journal of Wound, Ostomy & Continence Nursing*, 47(6), 601–618.

Approved by Medical Executive Committee 12/2022

# Order Urine Cultures Only When Clinically Indicated



Avoid unnecessary antibiotic use, which can lead to superbugs and antibiotic resistance

## Do NOT culture urine for these reasons:

- ❌ Urine appearance (color, odor, sediment, turbidity) – not signs of infection
- ❌ Routine screening (on admission or before non-urologic surgery)
- ❌ Standing orders for urinalysis or cultures without UTI symptoms
- ❌ “Pan” culturing without sepsis or clear infection source
- ❌ Pyuria in asymptomatic patients
- ❌ Asymptomatic elderly or diabetic patients (common bacteriuria)
- ✅ **Key Takeaway:** Culture only when symptoms or clinical suspicion of UTI

# When Should You Order Urine Cultures?

## Symptoms & Signs of Infection

- Costovertebral angle pain/tenderness
- Dysuria
- Urgency
- Suprapubic pain tenderness



## High-Risk Populations

- Kidney transplant recipients
- Neutropenic patients
- Recent genitourinary surgery
- Urinary obstruction



## Avoid Excess Urine Cultures

Avoid unnecessary urine cultures and do NOT treat asymptomatic bacteriuria.



# MercyOne Des Moines CAUTI Trends

- FY2025:19
- FY2024:30
- FY2023:37



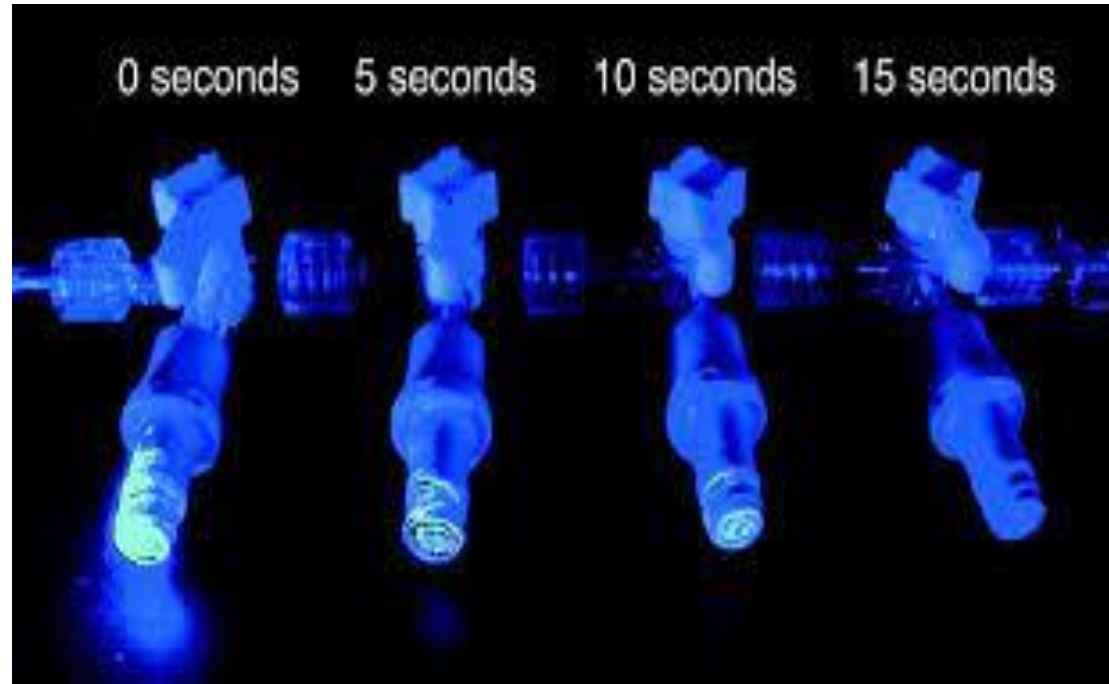
# CENTRAL LINE ASSOCIATED BLOODSTREAM INFECTION (CLABSI) PREVENTION



# CLABSI PREVENTION

## SCRUB THE HUB

Catheter hub is a known source for catheter related BSIs and needless connectors are sources for microbial contamination.



☀ Per MercyOne policy, a disconnected cap means the central line must be removed and assessed for replacement.

# Mastering Central Line Insertion

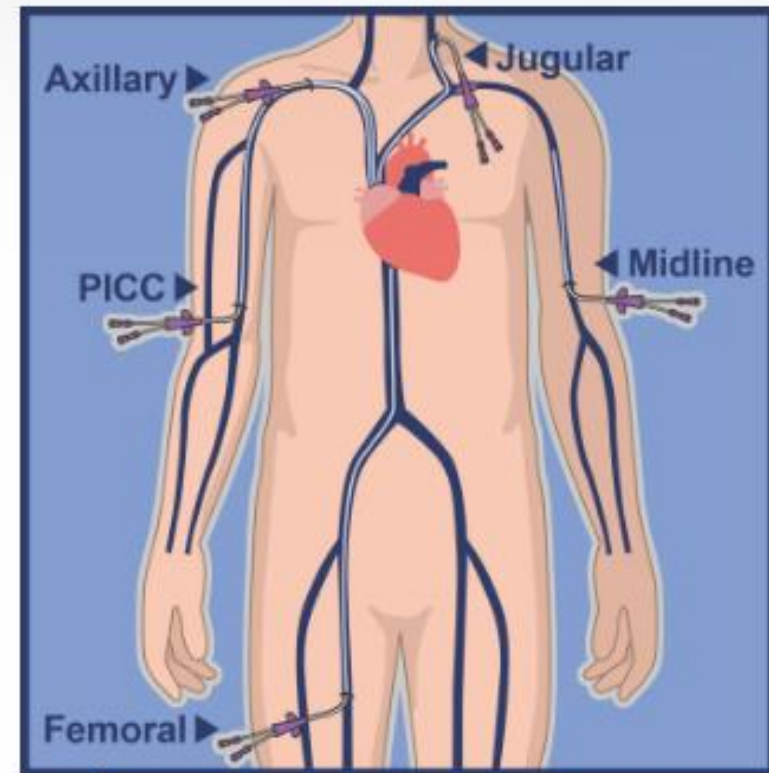


PICC Team available



## Insertion Best Practices

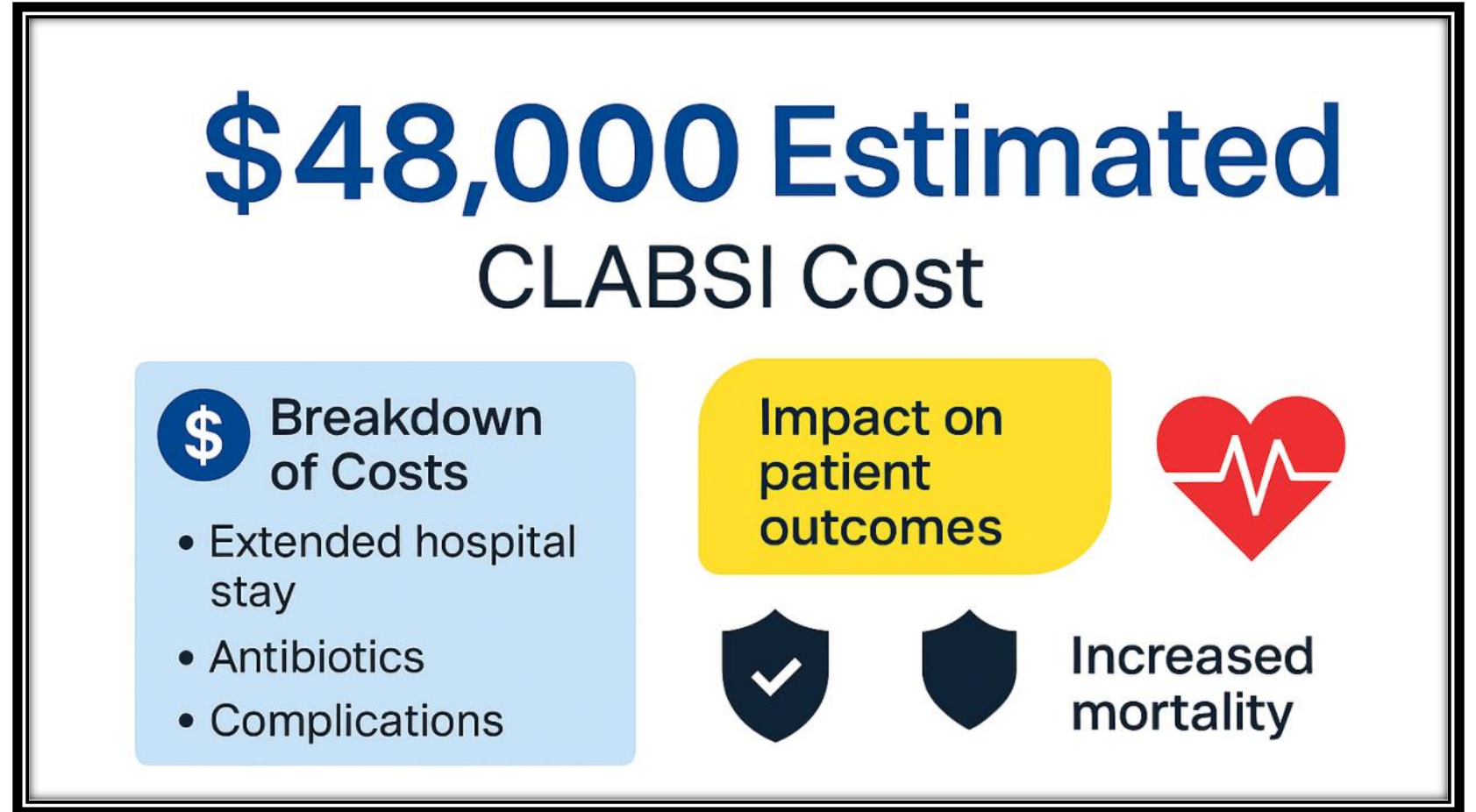
- Choose least number of lumens
- Maintain sterility of kit and procedure
- Label dressing with date
- Remove when no longer indicated or switch to a midline





# MercyOne Des Moines CLABSI Trends

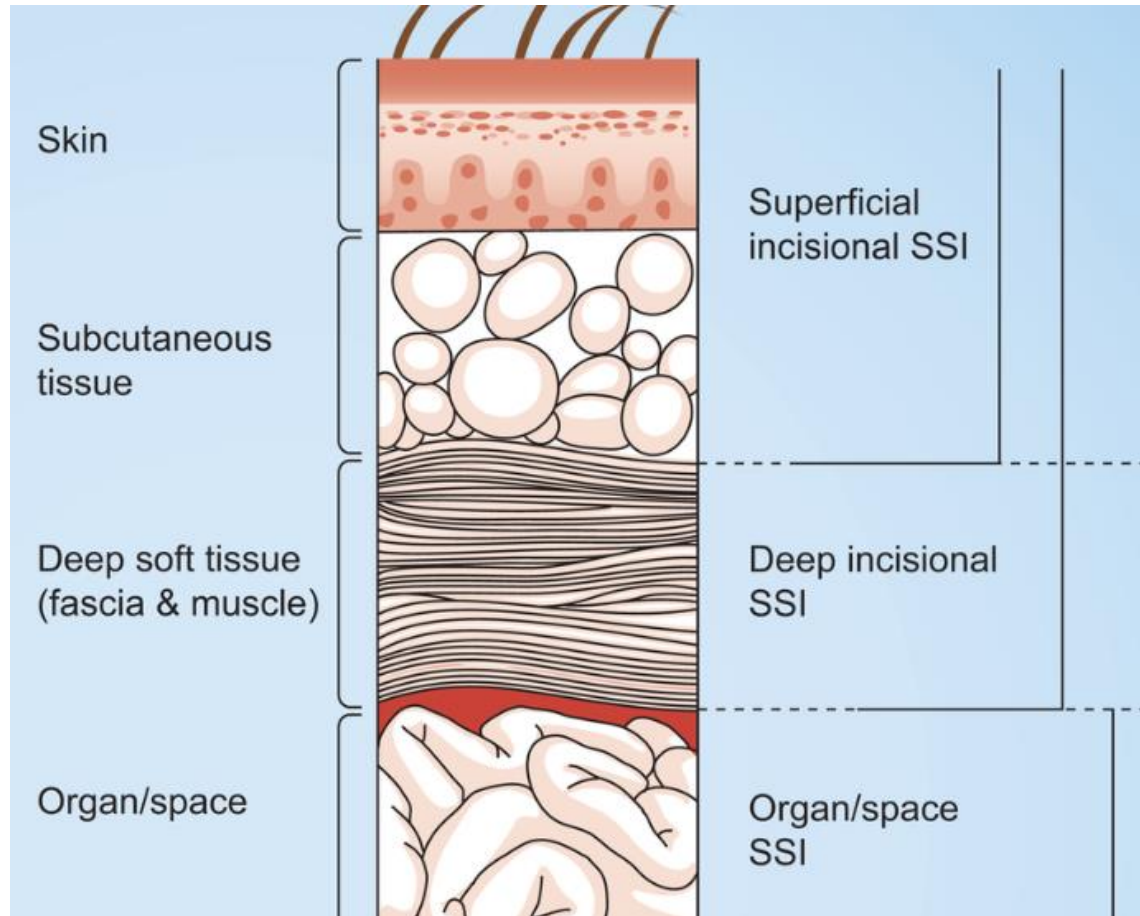
- FY2025: 17
- FY2024: 17
- FY2023: 13



# SURGICAL SITE INFECTION (SSI) PREVENTION



# Targeted Surveillance



## General Surgery:

- Colon Procedures

## Orthopedic:

- Total & Partial Knee replacement
- Total & Partial Hip replacement

## Gynecology:

- Abdominal Hysterectomy



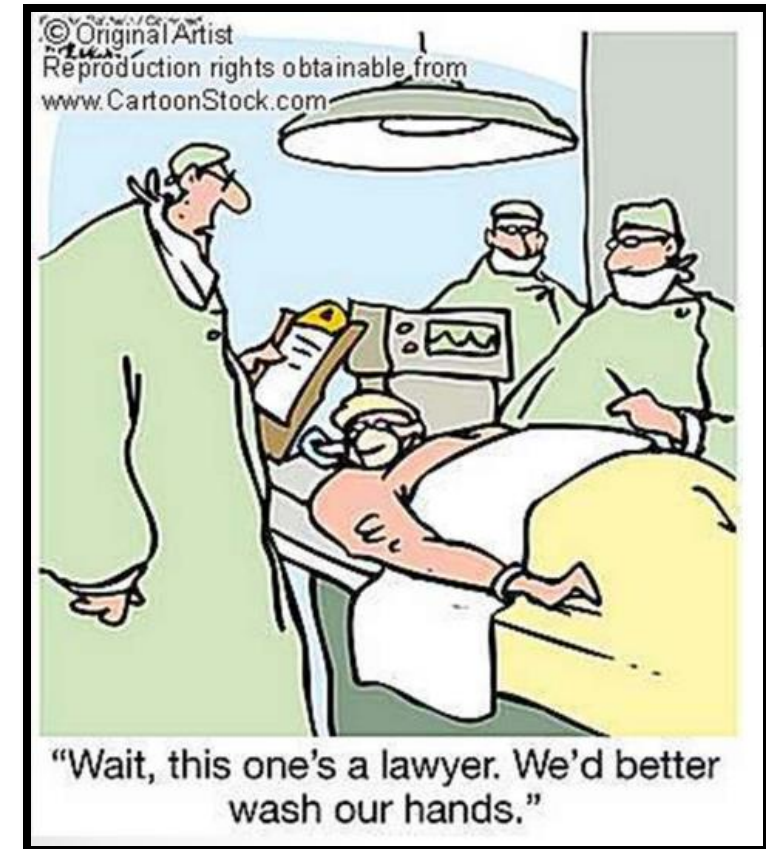
# SSI Prevention

## Prevention measures in place:

- Glucose monitoring protocol
- Intraoperative SSI checklist of best practices for prevention
- Review of SSI to identify any similar organisms or contributing factors

## Sustainability:

- Ongoing auditing for SSI prevention best practice compliance
- Surgical team leadership to support and enforce compliance
- Quarterly SSI Infection Prevention Committee



# Surgical Site Prevention Bundle



## Pre-Surgical Decolonization Protocol

### Applicable for:

Elective hip and knee replacements  
Cardiovascular open-chest surgeries

### Steps:

**2 days prior to surgery:** Begin **Chlorhexidine (CHG)** treatments

### Pre-op:

Full CHG treatment

**Nasal decolonization** with Nozin

### Post-op:

Continue daily CHG treatments during hospitalization

Nozin nasal application (up to 10 doses)

### Goal:

Reduce skin and nasal bioburden to minimize the risk of **self-inoculation from natural skin flora**.

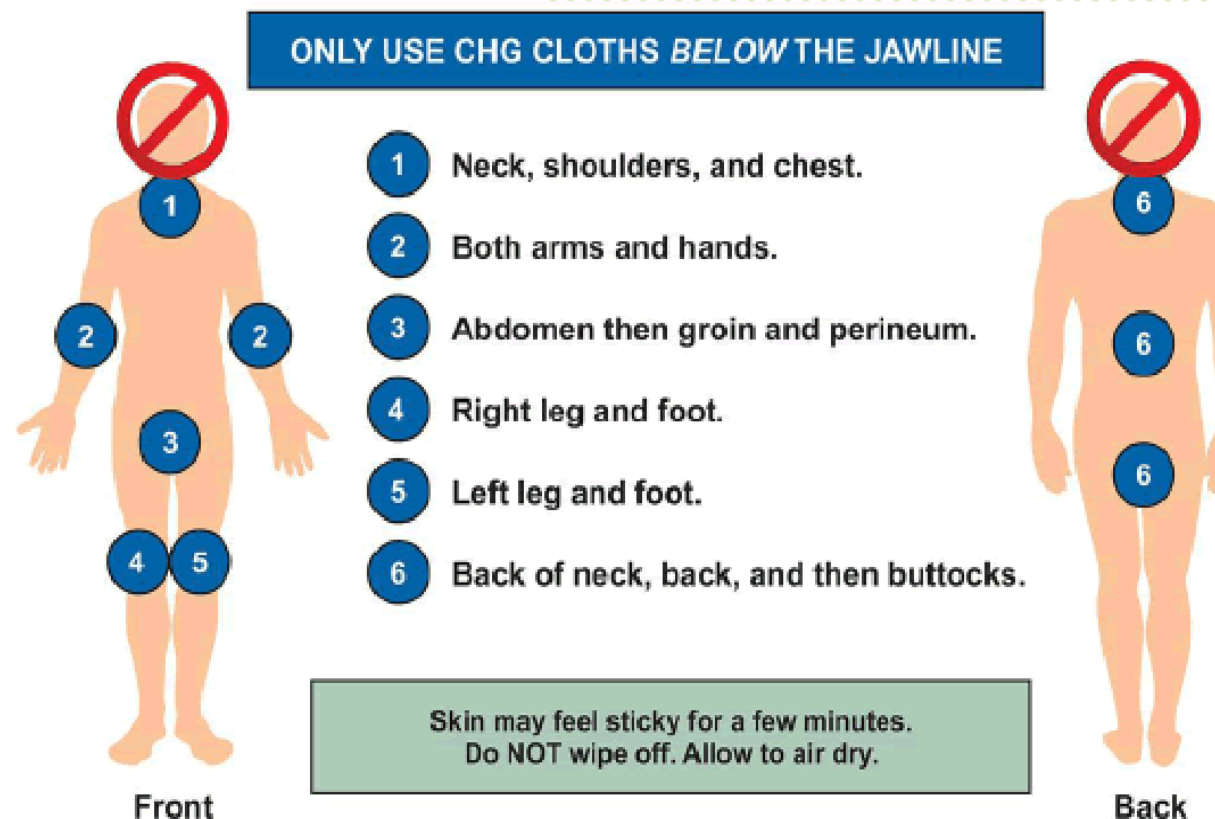
# How to help prevent Hospital Acquired Infections

**Daily CHG Bath: A Safety Standard**  
At MercyOne DM and WDM, every patient receives a CHG bath each day during hospitalization.

## ✓ Why it matters:

This is not just hygiene—it's a **treatment designed to reduce infection risk and keep patients safe.**

Encourage patients to view this as part of their care plan for better outcomes.





# SSI FY Overview

\*ALL – All SSIs (only exclusions are those present at time of surgery (PATOS))

\*CMS – SSIs subject to CMS penalty (excludes PATOS SSIs and Superficial Incisional SSIs)

## COLO:

- FY 2023
  - ALL 14
  - CMS 7
- FY 2024
  - ALL 15
  - CMS 4
- FY 2025
  - ALL 17
  - CMS 9

## HYST:

- FY 2023
  - ALL 1
  - CMS 1
- FY 2024
  - ALL 5
  - CMS 4
- FY 2025
  - ALL 3
  - CMS 2

## HPRO:

- FY 2023
  - ALL 4
- FY 2024
  - ALL 4
- FY 2025
  - ALL 3

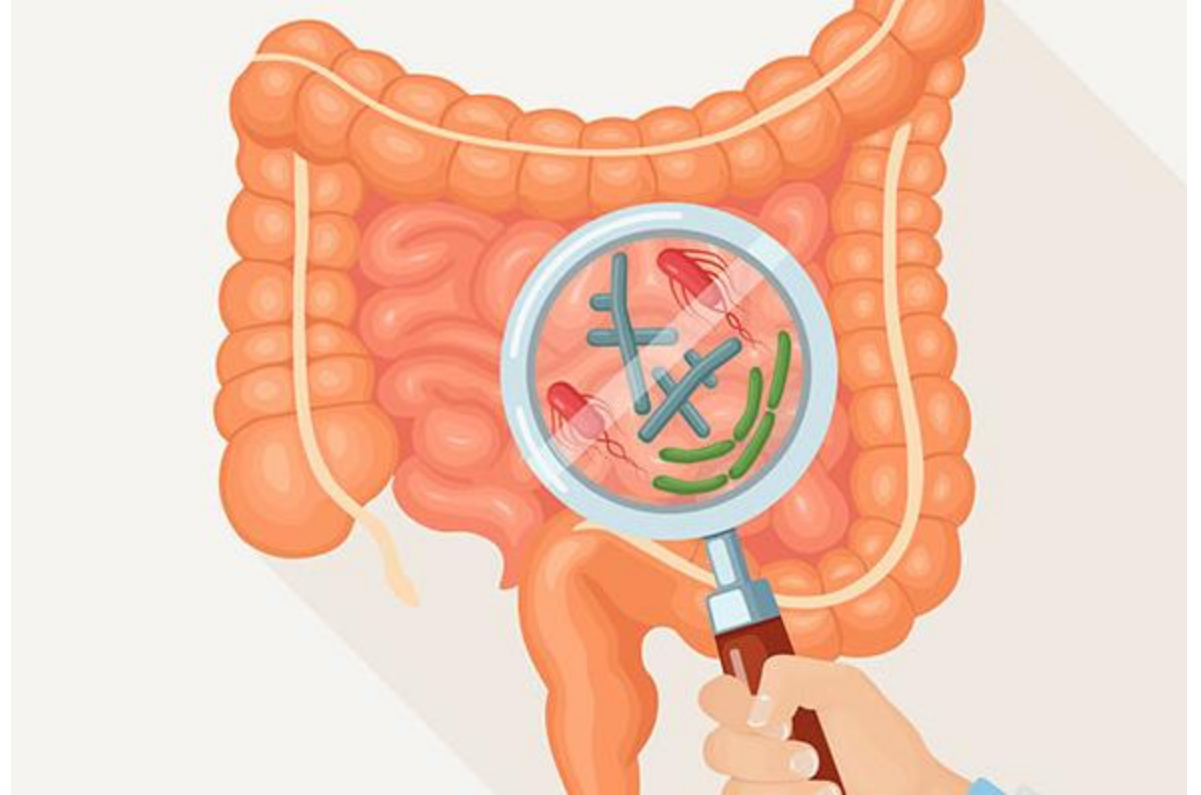
\*HPRO is voluntarily reported, CMS is not applicable

## KPRO:

- FY 2023
  - ALL 4
- FY 2024
  - ALL 4
- FY 2025
  - ALL 2

\*KPRO is voluntarily reported, CMS is not applicable

# C.DIFF PREVENTION



# C.Diff (CDI) OVERVIEW and REMINDERS

## **MercyOne DSM Hospital-Onset CDI Trends:**

- FY2025: 24
- FY2024: 22
- FY2023: 29

Hospital-Onset = positive on or after hospital day 4

## **CDI Burden:**

- >450,000 infections in the U.S. each year
- Increases hospital LOS by 2.8 to 5.5 days
- \$34,000 attributable cost per case
- About 1 in 6 people who get C. diff infection will get it again in the subsequent 2-8 weeks

## **Keys to Prevention:**

- Contact Isolation
  - Wear gloves and gowns *every* time enter the room
  - Maintain until discharge
- Hand Hygiene
  - Use soap and water if hands visibly soiled
- Clean Equipment
- Antimicrobial Stewardship



# Colonization vs. Infection: Multi-Step Testing

1. **NAAT Testing: Two Orderable Options.** A positive result confirms colonization (i.e. patients are considered "excretors" who may present an infection control risk but may not require treatment)

## **CDI Toxin by PCR**

- Individual, standalone orderable test

## **Gastrointestinal pathogens molecular study**

- Test for multiple GI pathogens

2. **If NAAT testing is positive, testing will reflex to a stool EIA for CDI toxin assay.**

- Presence of the toxin confirms active infection.
- If active toxin production is not confirmed, use clinical judgement and alternative diagnosis should be considered if diarrhea is present.

**\*\*Note: If EITHER test (NAAT or EIA) is positive, contact precautions are required\*\***

If EIA is positive (and collected on or after Hospital Day 4), then it is reportable to NHSN as a hospital-onset infection. Always order/collect as soon as suspected!

# CDI ISOLATION

Epic automatically adds some infections based on lab orders or lab results.

- If CDI testing is ordered, a GI Rule-Out infection is automatically added to the storyboard and Contact Isolation is required.

Infection: Gastrointestinal Rule-Out

Isolation: Contact

- If testing returns negative, the GI Rule-Out infection will resolve automatically.
- If testing returns positive, the Infection will be changed to C.difficile.

Infection: C. difficile

Isolation: Contact

**\*Note: Providers cannot add or resolve infection status. They can initiate and discontinue isolation. Please contact Infection Prevention through Secure Chat to manage infection status.\***

MercyOne **protocol for discontinuation of isolation** after positive testing:

Symptomatic Patient:

- 15 days after positive test AND
- Treatment is complete AND
- Symptoms have resolved (returned to baseline) for 48 hours.

Asymptomatic patient and untreated:

- Discontinue isolation after 15 days.


Must also transfer patient to a clean room when isolation is discontinued.



## Infection Prevention Team

**Office Hours:** 6:30 AM – 5:00 PM

 **Phone:** 515-247-4457

 **EPIC Secure Chat:** *MercyOne Infection Prevention Opt-In*