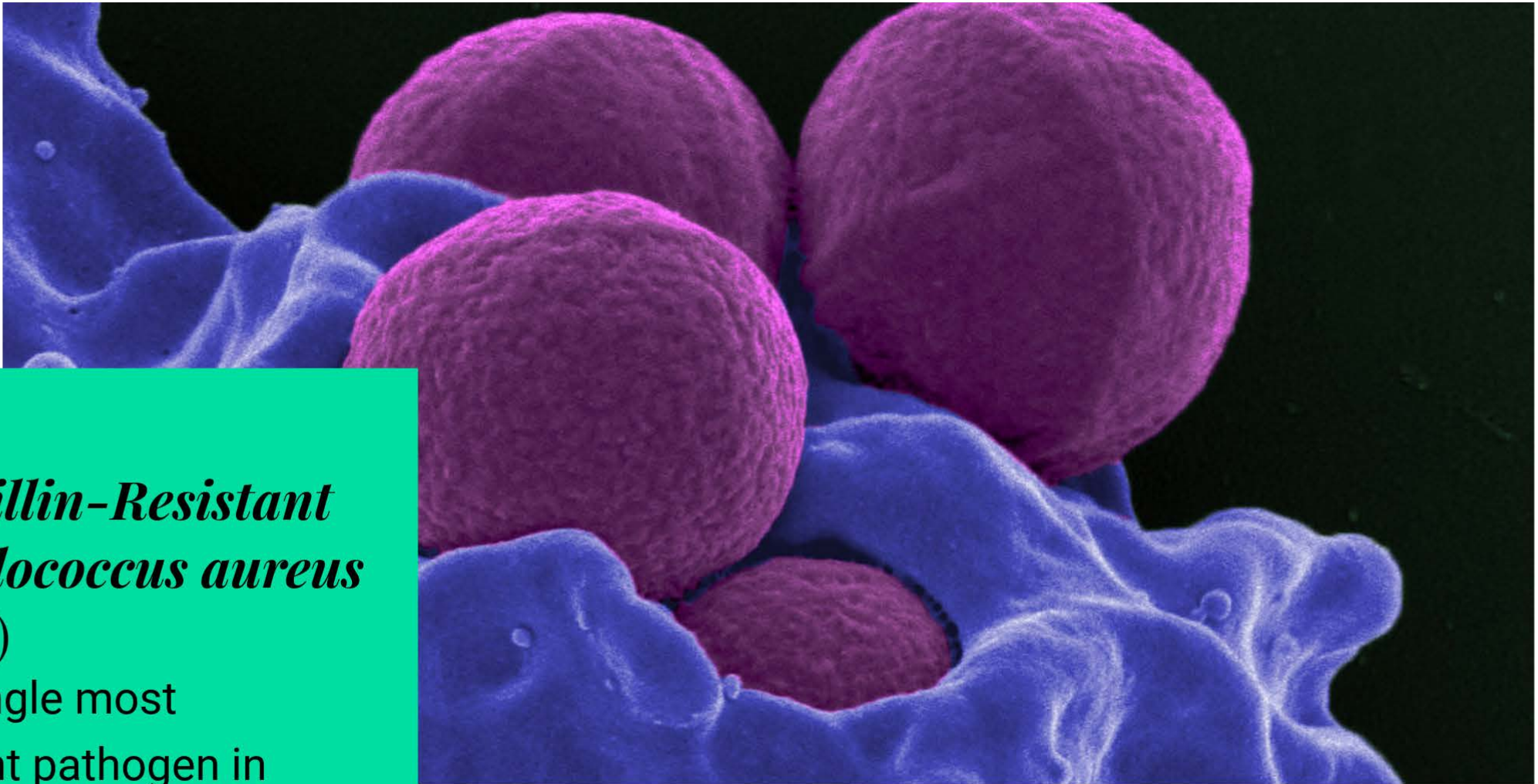


MRSA Strategies and Still Learning

Jackie Morton, Director
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***Methicillin-Resistant
Staphylococcus aureus
(MRSA)***

is the single most
important pathogen in
health care-associated
infection.

**Methodist Le Bonheur Healthcare is WORSE
than national median for MRSA bacteremia.**

Objectives

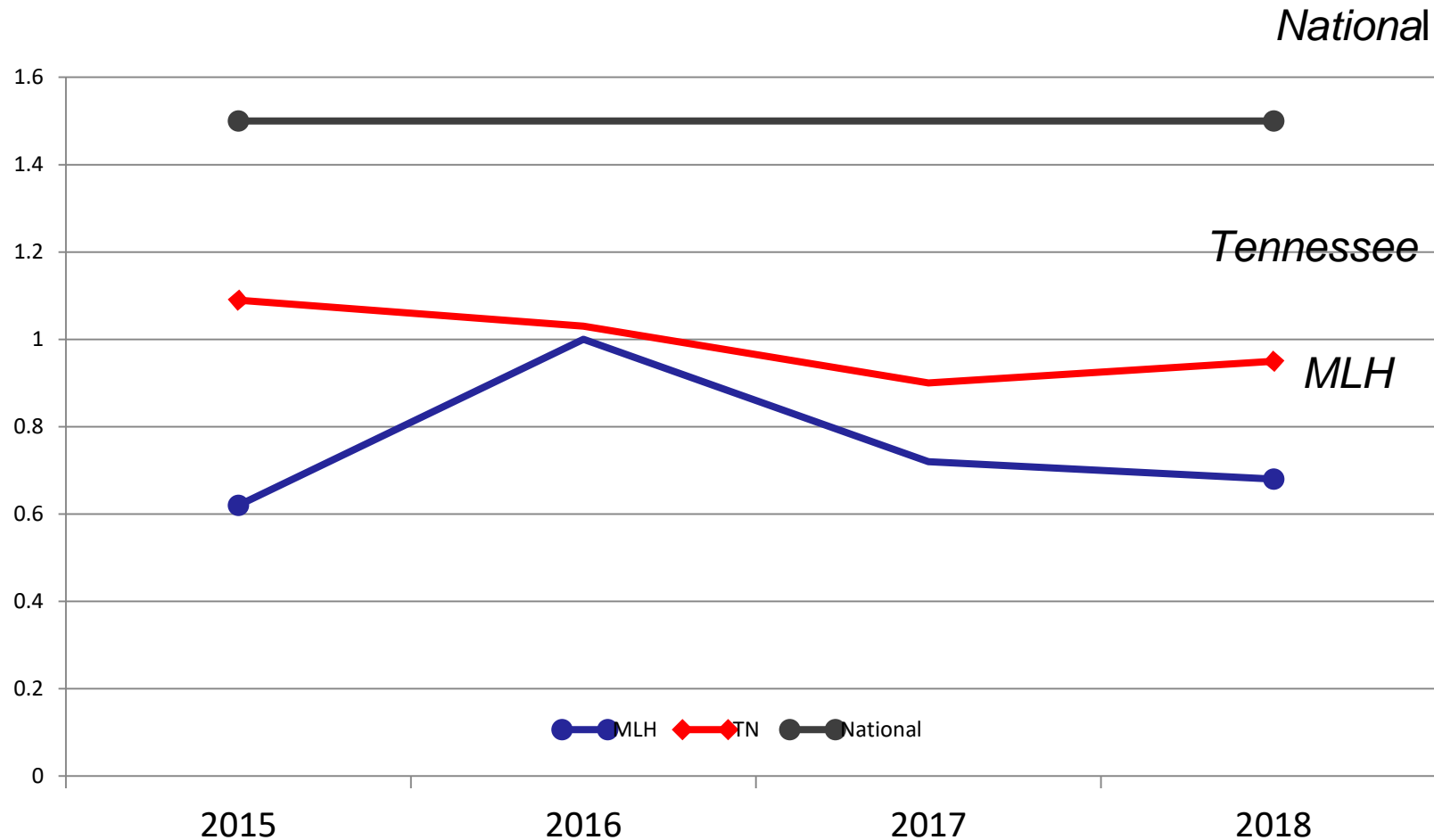
- Understand the implementation challenges for MRSA strategies.
- Identify considerations to tailor your strategies to your hospital needs
- Identify key team players for successful implementation of strategies
- Identify lessons learned with implementation of MRSA strategies
- List education and supporting documents helpful to MRSA strategies.

Vision of the Plan

1. Acknowledge the problem
 - MRSA data
 - HO vs. CO MRSA
 - MRSA data analysis
2. Select strategies based on evidence – CDC Core strategies vs supplemental
3. Solicit executive support
4. Team engagement
5. Action plans with responsible person and target dates
6. Review action plans, review action plans, review action plans, review action plans
7. Stagger implementation of strategies
8. Over-communicate implementation dates
9. Immediately validate electronic triggers –expect mistakes
10. Support documents
11. Validate actions (audits)
12. Track progress

Is Your Community Rate the Problem?

**MRSA Community
Prevalence Rates**



- Community
- Schools
- Prison
- Gyms
- Athletes
- National Prevalence

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Risk Assessment

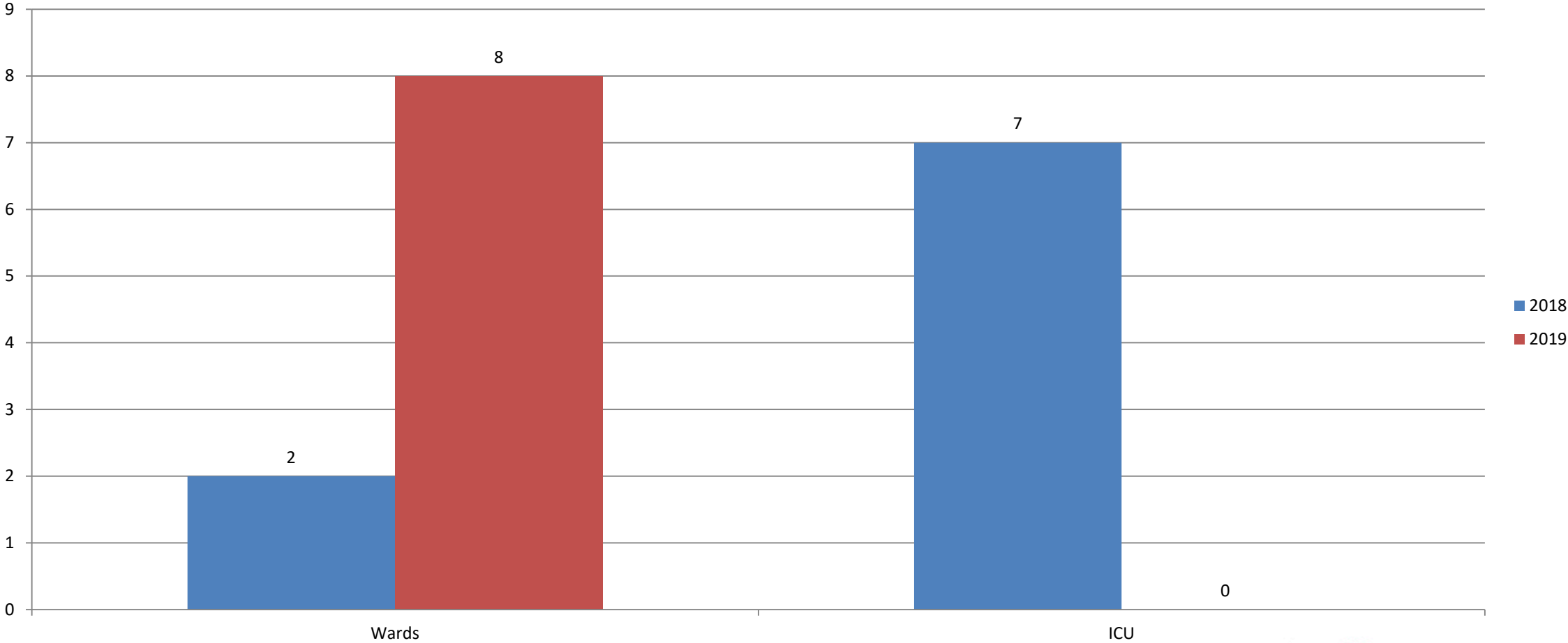
	HO MRSA	Numerator Prev adm (last 6 mo)	Numerator of CL present with HO MRSA	Numerator for Dialysis	Numerator for Surgery or Inv. Procedure	Numerator of MSSA on Day 1-3	MRSA - addtl site(s)	Numerator MRSA hx (previous)	Numerator In ICU	Numerator Ward	Numerator antibiotics prior to MRSA	Numerator Skin or soft tissue defect (pressure ulcer, wound, graft infection)	Numerator Pressure Ulcer	Numerator HIV +	Numerator Injection Drug Use	Numerator Incarceration	Death
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	3	1	3	1	2	0	1	0	0	3	3	1	0	0	0	0	1
Apr	3	1	2	0	2	0	1	0	0	3	1	2	1	0	0	0	1
May	2	0	0	0	1	1	3	0	0	2	2	1	1	0	0	0	1
Jun	1	0	0	0	1	0	0	0	0	1	1	1	1	0	0	0	1
Jul																	
Aug																	
Sep																	
Oct																	
Nov																	
Dec																	
YTD	9	2	5	1	6	1	5	0	0	9	7	5	3	0	0	0	4
		22%	56%	11%	67%	11%	56%	0%	0%	100%	78%	56%	33%	0%	0%	0%	44%

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ICU High Risks Prior to Strategies

HO MRSA by LOCATION



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MRSA Strategies

- Implement all CDC Core Strategies (not already implemented)
- Consider CDC supplemental strategies (based on analysis)
- Strategies approved
- Team began

MLH Implementation of CDC Core Strategies

- Daily CHG
 - ICU, Oncology, Central Lines, Lumbar drains, Midline
- CHG for surgery patients - day of and day before surgery5 days for high risks surgery patients, PAW patients receive prescription
- Nasal Decolonization
 - High risks surgeries (cardiothoracic, neuro, and ortho): Mupirocin x 5 days
 - All other surgery patients: povidone iodine day prior and day of surgery
- Screening – Pediatric and dialysis patients

Lessons Learned...Many

- General
 - MRSA problem not immediately owned
 - To screen, not to screen and/or rescreen?
 - Tailor CDC core strategies to your MRSA analysis
 - Dialysis patients
 - Oncology and Stepdown units added
 - Pediatric best practices -not well defined
 - Plan for when to stop isolation
 - The team is large!
 - Support documents are endless
 - Collaboration pays
- CHG
 - Importance of the Q&A
 - CHG wipes versus CHG shower
 - CHG and Nurse Support
 - Role of Wound Care Nurse
 - Devices – consider Foleys
- Surgery patients
 - Surgery patients enter the system many different ways
 - PAW and no LIP
 - Surgeon offices didn't educate
 - Surgery procedure codes
 - Brown nose was not a problem
- Nasal decolonization
 - costs and off-label
 - Nasal povidone iodine vs off-label?
 - Mupirocin intranasal vs off-label?
 - Plan for Mupirocin for discharge or transfers who have not completed regimen
 - Patients going home can't easily or "legally" take the tube of Mupirocin home

The Team Members....Many

Clinical

- Infection Prevention
- Administration
- Leaders
- Nursing
- Physicians – ID, surgeons, department chairs, dialysis
- Pharmacy
- Wound Care Team
- Dialysis Caregivers
- Dialysis in the community

Ancillary

- Education
- IT – lab, pharmacy, Cerner
- Materials Management
- Central Supply/Logistics
- Outpatient Manager for surgeon offices
- Lab
- Coding experts (surgery procedure codes)
- Quality

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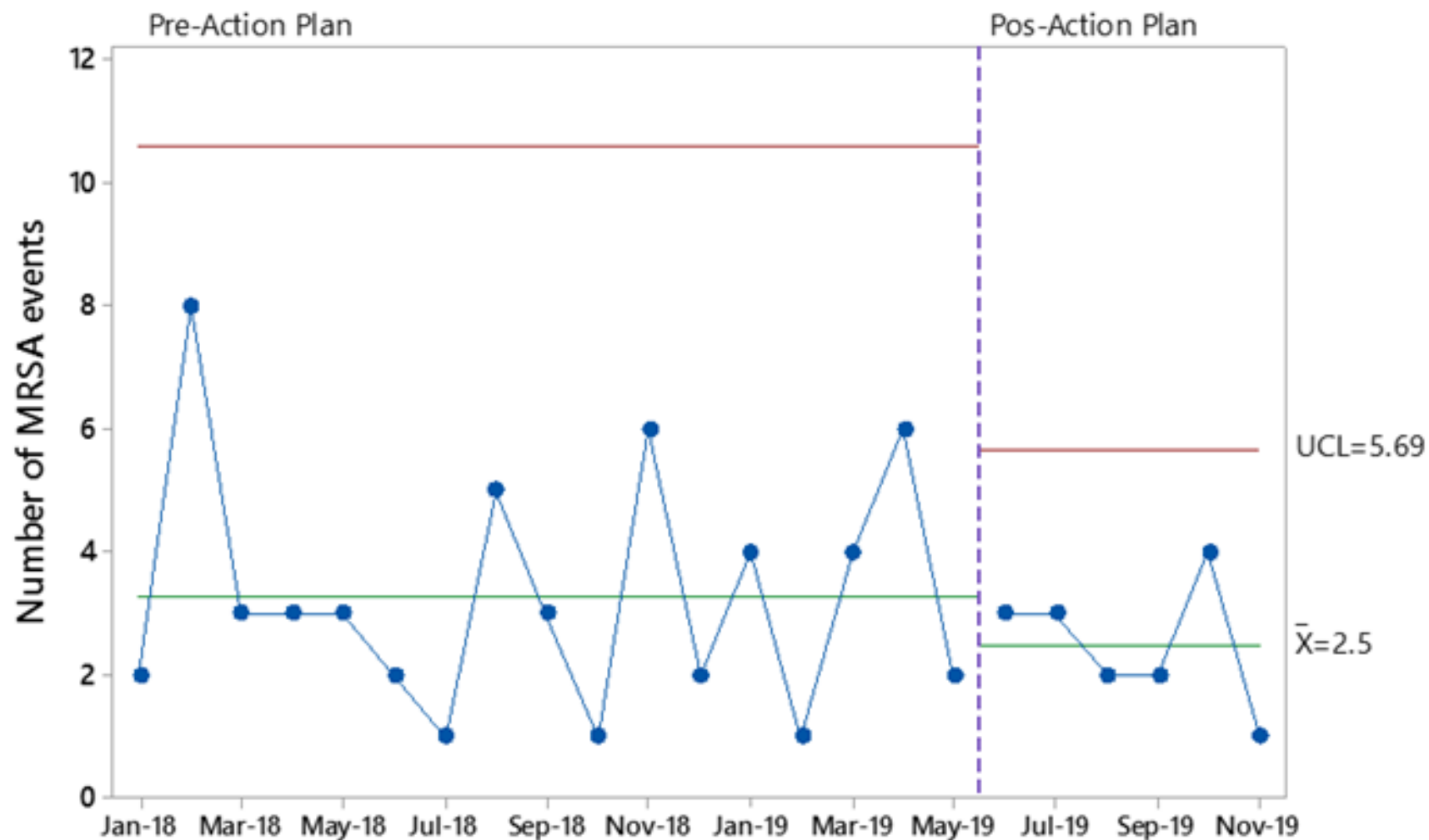


Support Documents.....Many

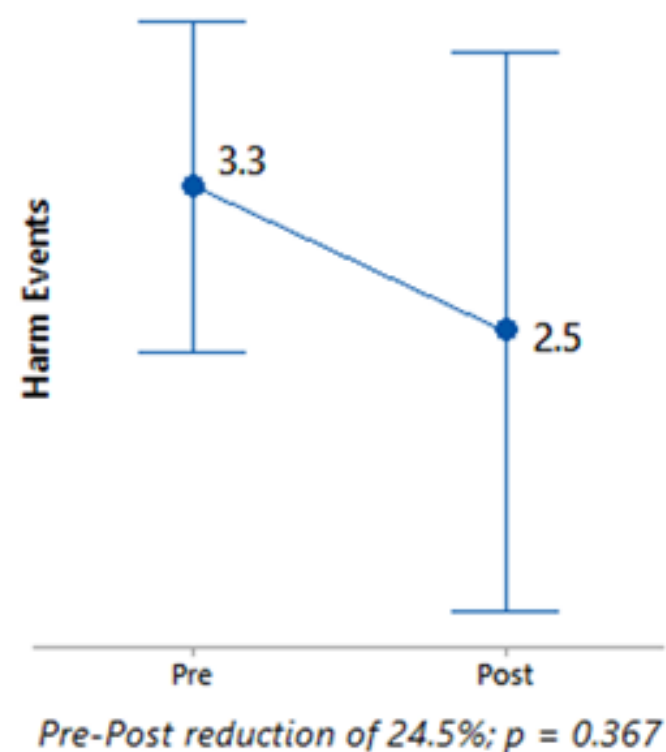
- Policy Impact
 - MRSA Strategy Policy
 - CHG Policy
 - Surgery Policy
 - Isolation Policy
- MRSA Pediatric Plan
- Physician communication
- Leader communication
- Nurse education
- Patient education
- Pharmacist education
- Lab education
- CHG Q&A
- Mupirocin administration

MRSA Bacteremia Trending

Number of MRSA Harm Events



Hospital Onset MRSA Events



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Sample Documents: CHG

ADULT CHG SKIN APPLICATION

- Chlorhexidine (CHG) replaces routine bathing. Avoid eyes, ear canal and mouth.
- Your enthusiasm helps patients understand the need for CHG instead of bath.
- DO NOT use soap. Soap can inactivate CHG.
- DISPOSE of all cloths in the trash. Do NOT flush.
- Only use CHG compatible lotion (Remedy Calmocare, Nutrashield and Skin Repair)

APPLY CHLORHEXIDINE WITH FIRM MASSAGE TO REMOVE BACTERIA

INCONTINENCE:

- Clean bulk in normal fashion
- Do NOT use soap
- If skin is raw also apply barrier cream followed by CHG

Tips:

- Air dry; do not wipe off
- Clean 5 inches of lines, drains and tubes
- Apply CHG over dressings
- CHG is safe on face and perineum

After application to each body site, clean dressing, tubes and drains.



Chlorhexidine (CHG) Skin Application

Purpose: CHG wipes are antiseptic (germ killing) cloths to wash the skin and decrease infection risks.

General Information:

- Use for the following patients:
 - Daily for all ICU, stepdown or oncology units;
 - Daily for patients with an indwelling device including:
 - central venous catheter (examples, portacath, triple lumen, PICC, or vascath)
 - midline
 - lumbar drain
 - Preoperative patients
 - Night before surgery when possible.
 - Day of surgery
 - High risks surgery patients should receive CHG skin application for 5 days prior to surgery when possible. High risk surgeries include:
 - Cardiothoracic procedures
 - Orthopedic procedures
 - Neurosurgical procedures
 - Other patients as identified by physician.
- Do not use for:
 - Child less than 2 months (gestational) age,
 - Premature or low birth weight babies,
 - Infants receiving phototherapy, or
 - Patients with an allergy to CHG.
- CHG skin application replaces a regular bath.
- Only use CHG compatible lotion (Remedy Calmocare, Nutrashield and Skin Repair)
- Dispose of all cloths in the trash. Do not flush.
- CHG cloths remain in the warmer no longer than 84 hours.

Equipment: One package of pre-moistened bath cloths. One package contains six cloths.

Procedure (Essential Steps):

1. Provide education to patient about infection prevention benefits of CHG treatment.
2. Warm the cloths before use.
3. Remove the cellophane film and discard.
4. Open one package at a time. (3 total packages)
5. Use all cloths contained in the packages.
 - Cloth 1: Face, neck, shoulders and chest. Do not allow this product to contact eyes.
 - Cloth 2: Both arms and hands.

Sample Documents: Q & A

Q & A CHG Skin Treatment

- 1. Why is Methodist Le Bonheur Healthcare adopting the enhanced protocol to apply Chlorhexidine (CHG) skin treatments?**
The results of the "REDUCE MRSA Trial" provide strong evidence in support of universal decolonization to reduce MRSA and other pathogens. The trial involved 43 hospitals, 74 ICUs, and over 75,000 ICU patients. It resulted in a 44 percent reduction in all-cause bloodstream infections.
- 2. How does CHG work?** CHG interrupts the cell wall and kills the bacteria and fungus in 30 seconds. And, it continues to work for up to 24 hours.
- 3. Is my patient really clean without using soap and water to bathe?**
CHG actually works better than standard soap and water for removing bacteria from the skin. Do not use as a top coat. CHG skin treatment is most effective when given by itself and not in combination with another soap.
- 4. What are risks of CHG skin treatment?** 2% cloths well were tolerated in over 1 million bath trials. Mild rash and irritation in less than 1%.
- 5. What should I tell patients and their families when decolonization products are applied?**
Associates should provide the same information they would provide for any applied skin product. For example, it would be reasonable to say, "This bathing cloth is routinely used for bathing patients. It has a skin cleanser, which is antibacterial and will keep bacteria away for several hours. It is much better at removing bacteria than regular soap. It also has moisturizers in it and should not be rinsed off."
- 6. Why are we using CHG on the face?**
The average person touches his/her face over 200 times per day. Touching your face increases contamination and risks of bacteria on face. Ensuring the face is decolonized offers our patients extra protection against MRSA and other germs.
- 7. Is it safe to apply CHG to the face?**
CHG is an over the counter soap. The risk is if CHG comes in direct contact with nerves, as may be the case with a perforated eardrum or with direct contact with the eyes. If CHG enters the patient's eyes or ears, it is important to rinse promptly and thoroughly with water.
- 8. Is it safe to apply CHG to the external vagina and penis areas?**
Yes. The concentration of CHG in the wipe is 2%. The American College of Obstetricians and Gynecologists (ACOG) supports use of CHG 4% as a surgical prep for the vagina.
- 9. For what types of wounds is CHG application safe?**
CHG can be applied to occlusive dressings, any superficial wound, including stage 1 and stage 2 decubitus ulcers, closed surgical incisions, friable skin/rash, and superficial burns.
- 10. Will CHG be absorbed if I put it on a wound?**
There is minimal to no systemic absorption when using CHG on a superficial wound. In addition, the CHG may be particularly important to eliminate bacteria in an open wound.
- 11. Should I be concerned about CHG having a stinging effect on patients with wounds?**

- No. Antiseptic over-the-counter products often contain alcohol and will sting when applied to wounds. CHG cloths do not contain alcohol and will not sting. In fact, CHG cloths contain moisturizers and actually have a soothing effect on the superficial wound area.
- 12. Why do we wipe devices with the CHG cloth after we cleaned the patient skin?**
Contaminated devices increase risks of infection to the patient. By wiping our devices with CHG, we decrease infection risks to our patients. CHG kills by disrupting the cell membrane. CHG can kill nearly 100% of Gram-positive and Gram-negative bacteria within 30 seconds. Unlike povidone-iodine, chlorhexidine is not affected by the presence of body fluids such as blood. However, it is okay to fold the wipe when wiping the device.
 - 13. Which devices do I clean with CHG wipes?**
After application to each body site, clean tubing from Foleys, drains, G-tube/J-tubes, rectal tubes, EKG leads, chest tubes within 6 inches of the patient.
 - 14. Does the new process require the use of more wipes for devices?**
No. Consider extra wipes for obese patients or patients who are extremely dirty. Use additional CHG bathing cloths, if necessary, to thoroughly cleanse the body. The study included over 75,000 patients. More wipes may be needed for obese patients.
 - 15. What if my patient has a wound vac?** Apply CHG over any semi-permeable or occlusive dressings. This includes wound dressings that meet that criteria, as well as wound vacs. CHG can also be applied over sutured or stapled wounds. If the dressing is permeable (for example, gauze), then use CHG up to the dressing.
 - 16. What do I do if my patient refuses the CHG bath?** Escalate this safety event first to the patient's nurse. If the patient still refuses escalate this concern to the PCC, Clinical Director and, if needed, to the physician. Education on the benefits of CHG can help the patient understand the importance to accept CHG skin treatment.
 - 17. What are the areas most often missed during CHG skin treatment?** Neck, shoulders, skin folds, back of knees and between fingers
 - 18. Why does the neck have more bacteria than groin?** Healthcare workers commonly recognize groin as dirty and high risks for contamination. Rarely, we forget to clean the groin area. However, the neck is often a forgotten area during the bathing process.

Sample Document: How to administer Intranasal Mupirocin

1. Place the patient's bed at 30 degrees if tolerated.
2. Place ½ inch (about the size of a grape) medication inside surface of the nostril and repeat the process for the second nostril.
3. Gently press nostrils together to spread the ointment throughout the nose for 60 seconds.
4. Do this twice a day for 5 days.
5. Avoid contact with eyes and other intranasal products.
6. If nasal devices are in place (e.g., nasal intubation, NG tubes), place Mupirocin around tubing and massage gently to distribute ointment.

Sample Document: LIP Education

Our action plan is based on the CDC recommended strategies for MRSA prevention. One piece of this plan is MRSA nasal decolonization for certain patient populations including all patients admitted to the ICU, dialysis patients, and patients undergoing high risk surgeries. These patients will receive an application of mupirocin ointment to the nares BID for 5 days.

Who?

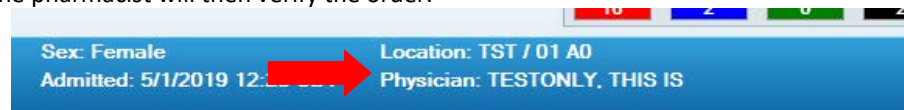
- 1) All patients transferred to the ICU at MNH, MSH, MOBH, and MGH. Methodist University is currently piloting another product in their ICUs and will not be using mupirocin in their ICU patients at this time.
- 2) Dialysis patients at all adult facilities who have a positive MRSA nasal screen
- 3) High risk surgery patients (i.e. cardiothoracic, orthopedic, neurosurgery) will receive mupirocin ointment for 5 days prior to surgery (or as soon as possible).

What?

- 1) When a patient is transferred to the ICU, an order for mupirocin ointment will automatically generate for all patients.
- 2) Dialysis patients will receive a nasal screen for MRSA. When a patient has a positive nasal screen, an order for mupirocin ointment will automatically generate for that patient.
- 3) An order for mupirocin ointment will be automatically generated for patients undergoing certain surgical procedures.
- 4) If a patient does not complete the 5 days during the hospital, the LIP should send the patient home with a prescription for Mupirocin.

The order will generate for the **mupirocin 2% topical ointment 22gm** with instructions to apply twice daily via intranasal route for 5 days.

NOTE: The ordering physician field will read “System, S” and the pharmacist must change this to the prescriber’s name that is listed as the **Attending Physician** in the electronic medical record (shown in the banner bar in PowerChart). The pharmacist will then verify the order.



When?

1. ICU patients receive Mupirocin (MNH, MSH, MOBH, and MGH) on **June 4, 2019**.
2. Dialysis patient with positive nasal screen will receive Mupirocin on **June 11, 2019**.
3. Highrisk surgery patients receive Mupirocin on **June 18, 2019**.

Additional Information:

- If patients are transferred out of the ICU sooner than 5 days, continue Mupirocin for the full five days.

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Sample Document: THA Commitment Letter



THA MRSA Reduction Campaign

Methodist Le Bonheur Healthcare commits to the THA MRSA reduction initiative and agrees to the following actions in support of the goal to reduce hospital-onset MRSA bacteremia infections by 50% by December 2020.

- a. Identify an executive leader to champion the project and a project team leader.
- b. Conduct an infection prevention risk assessment using the CDC guidance to identify opportunities to strengthen the facility overall infection prevention program and MRSA specific interventions.
- c. Adopt universal decolonization practices for all adult intensive care units including daily chlorhexidine baths and nasal decolonization protocols.
- d. Adopt decolonization practices for high-risk surgeries (cardiothoracic, orthopedic and neurosurgery) including preoperative chlorhexidine baths and nasal decolonization protocols.

CEO Signature _____

Date: 8/16/2019



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