

Keeping our Babies Safe: Reducing Methicillin Resistant *Staphylococcus aureus* Incidence in an Infant Special Care Unit

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Background

- 44-bed level III Infant Special Care Unit (ISCU) in metro-Chicago
- Cohorted setting – 6 patients/room
- Patients surveilled weekly for Methicillin resistant *Staphylococcus aureus* (MRSA) colonization
- 2021 MRSA cluster necessitated outbreak investigation and intervention
- Phenotypic analysis of the 5 cases in cluster showed the strains were not related, indicating independent introduction of MRSA to the unit.

Objectives

Reduce MRSA incidence in ISCU by executing the Plan-Do-Study-Act (PDSA) cycle for managing change by:

- Investigating current state to identify opportunities
- Assembling multi-disciplinary team to construct solutions
- Designing and implementing interventions
- Evaluating impact using data
- Revising interventions, re-evaluating data (repeat the PDSA cycle)
- Creating a sustainable plan

Methods

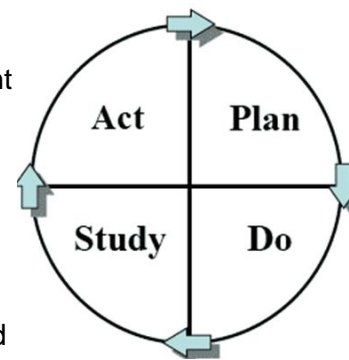
Timeline: August 2021-July 2022

- First step: solicited feedback on current state from nursing and Parent Focus Group via virtual survey

PDSA #1:

Environmental cleaning:

- Monthly rounding: EVS, facilities, clinical leadership, and inf. control
- Fluorescent marking – items cleaned by EVS vs. clinical team
- Institution of biannual deep clean



PDSA #2:

Hand hygiene

- Optimization of scrub-in process upon entry to the unit for all staff and visitors
- Employed surgical hand antisepsis upon entry

Visitor education

- Signage in two languages with clear wording and pictures
- Leveraging technology to link education to patient EMR interface



Results

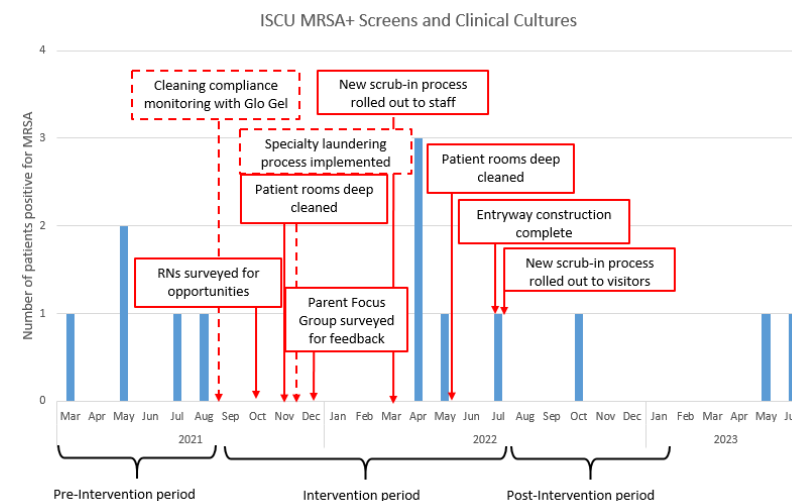


Table 1. Positive MRSA surveillance screens and clinical cultures.

Conclusion

- 80% decrease in MRSA incidence in 6 months post-intervention compared to 6 months pre-intervention.
- Using the PDSA cycle to implement infection prevention strategies is successful.
- Results indicate value of multidisciplinary and multifaceted approach to MRSA reduction in neonatal setting.
- Continued endemic incidence indicates there is more work to do!

References

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