

Minimizing Isolation: Re-screening inpatients for MRSA infection

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Background

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a leading nosocomial infection transmitted via skin-to-skin contact. Some hospitals, including Boston Medical Center (BMC), have implemented policies to isolate MRSA-colonized patients under “contact precautions.” At BMC, this means that providers must wear a gown and gloves with each patient contact, and that patients must be in a single-patient room. Although many patients become colonized with MRSA, an estimated 30% of these patients clear the infection¹. At BMC, there is no procedure for re-screening patients for clearance of MRSA colonization.

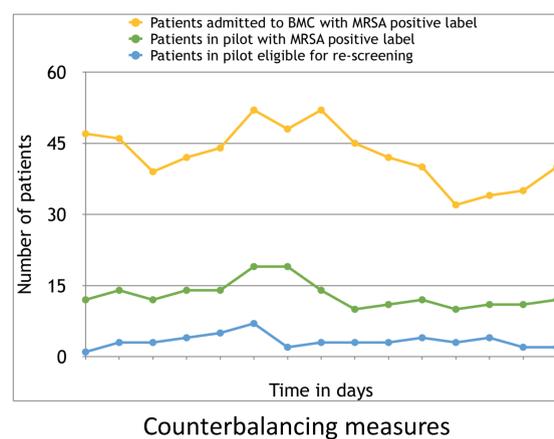
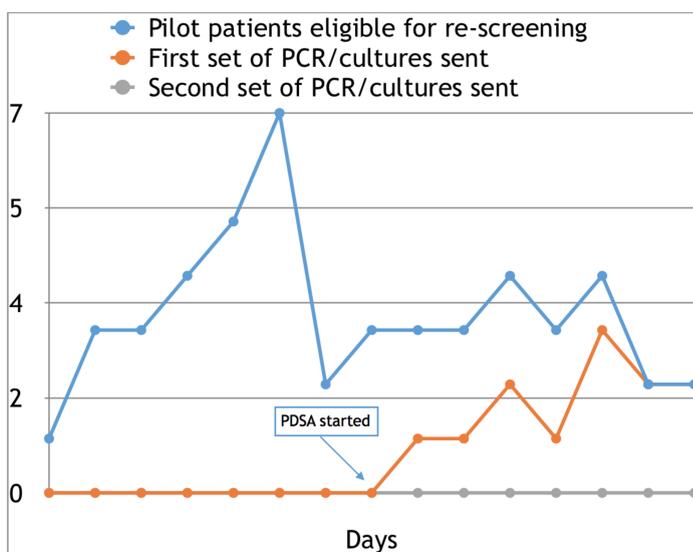
30% of MRSA labels at BMC are incorrect

Opportunity cost from inappropriate isolation: \$6.4 million²

Aim: To re-screen 100% of eligible inpatients on MRSA precautions at BMC by May 2019

Pilot Intervention: PDSA No. 1

A diverse team of physicians, nurses, and infection control staff assembled to achieve our stated aim. We began with a proof-of-concept intervention on the Internal Medicine inpatient teaching services. For two weeks, patients were manually reviewed for eligibility. Re-screening orders were placed manually if appropriate.

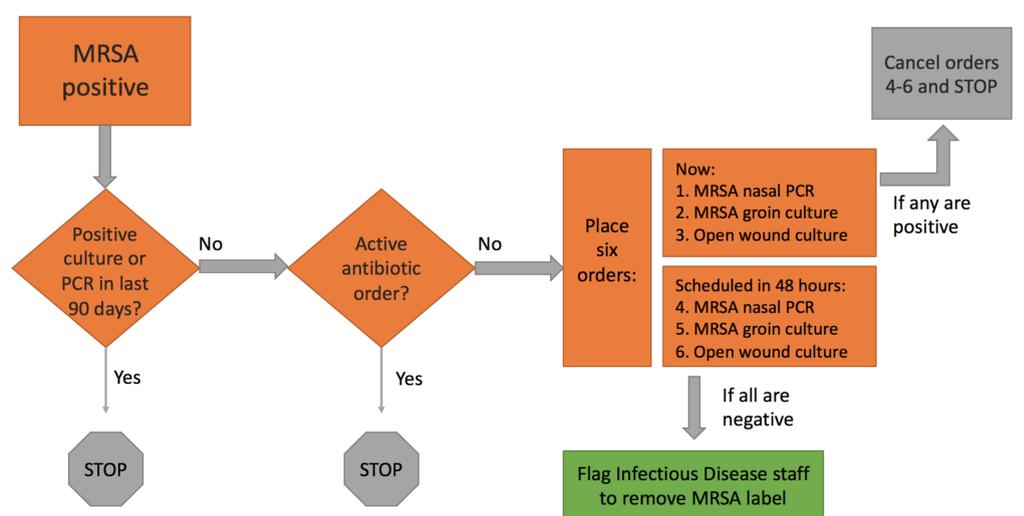


What We Learned

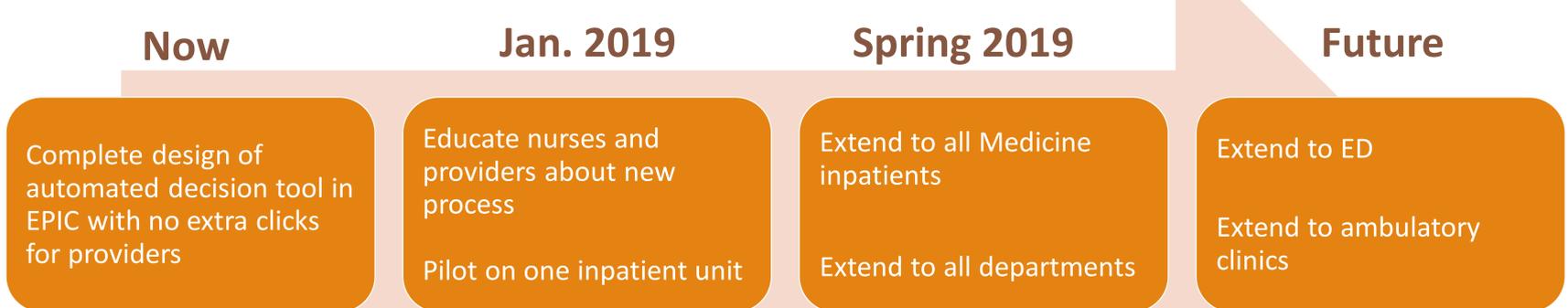
Even with physicians manually placing orders according to hospital policy, not a single patient underwent the full re-screening protocol. Feedback from housestaff and nursing staff included:

- Second set of tests were assumed to be duplicates
- Second set of tests appeared at midnight
- Housestaff unaware that two sets of tests were needed
- Manual ordering process time-consuming

We used this information to design an algorithm to guide an automated decision tool using the electronic medical record.



Next steps



¹ Shenoy, et al. Natural history of colonization with methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant *Enterococcus*(VRE): a systematic review. BMC Infectious Diseases 2014 14:177.

² Calculated using per-diem billable charges for a hospital bed at BMC, and BMC data on average per-diem number of MRSA positive patients