



Assessing Interventions for Overcoming Perceived Barriers in Nursing Best Practice: Methicillin-resistant *Staphylococcus aureus* Infection Control

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Introduction

MRSA is a strain of *Staphylococcus aureus* that is resistant to many antibiotics frequently used to treat staphylococcal infections. MRSA, a relatively common hospital pathogen, is recognized as a public health concern internationally. Patients colonized and infected with MRSA are found to have worse outcomes. Identifying risks to patient safety remains a quality improvement priority, with prevention of healthcare-associated infections high on the top of the list.

PICO Question

P: nursing/ patient populations
I: Acknowledging barriers to MRSA infection transmission and examining best practices
C: different methods for reducing MRSA acquisitions
O: reduced number of MRSA transmissions in hospital setting
Question: What are the best practices to prevent MRSA transmissions and how can nursing help implement such practices.

Methods

A literature review was conducted using the following research databases: PubMed, CINAHL, EBSCOhost. Search terms included: *Methicillin-resistant Staphylococcus aureus*, MRSA, infection control, nursing implementation. Inclusion Criteria: article within 10 years, inpatient hospitals. The initial search yielded 26 articles, 6 articles were included for this project.

Article	Major Findings
Climo, et al. [1]	Daily bathing with chlorhexidine washcloths significantly reduced the risks of acquisition of MRSA and development of hospital-acquired bloodstream infections.
Currie et al [2]	MRSA screening is broadly acceptable according to patients. Patients did not feel they were given enough information before, during, and after their screening specifically involving the implications of a positive result.
Kundrapu et al [3]	Daily disinfection of high-touch surfaces in rooms of patients with MRSA colonization reduced acquisition of the pathogens on hands after contacting high-touch surfaces and reduced contamination of hands of healthcare workers caring for the patients.
Minhas et al [4]	Patients who tested positive for MRSA on admission are highly likely to have a history within the past year of intravenous antibiotic usage, previous hospital admission, or long-term patient care, immunocompromised health status, hemodialysis, or be a prior MRSA carrier.
Mishal et al [5]	By placing patients colonized with MRSA on "contact isolation" (which included the use of gloves and a gown, hand washing before and after treatment of a patient, and isolation of patients' personal belongings), the acquisition of MRSA by other patients was decreased; found hand hygiene and contact isolation to be effective.
Schroeder [6]	Using alcohol-based hand foam to clean hands and stethoscope heads reduces MRSA bacterial counts on hands and stethoscopes.

References

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- [6] Schroeder, A, Schroeder M.A., & D'Amico F. (2009), What's growing on your stethoscope? And what you can do about it. *J Fam Pract.*, 58, 404-9.

Discussion

Our review of the literature uncovered several practices to reduce the number of MRSA transmissions. Standard interventions including hand hygiene, the use of barrier precautions in the care of colonized and infected patients, the use of dedicated equipment for these patients, and active screening for the infection. Better patient education concerning MRSA, how it is transmitted, and how it is detrimental to the patient population.

Conclusion

The members of the healthcare team that work most directly with patients are nurses. As such, nurses are in a position to initiate change and implement more effective methods to prevent MRSA transmissions. Based on these findings, recommendations for better practice include examining how education on MRSA is presented to patients, as well as implementing specific disinfectant techniques to prevent MRSA transmissions.