A Technology-Assisted Approach for Discontinuing Contact Isolation

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Abstract

While contact isolation can be an effective tool in reducing the transmission of nosocomial methicillin-resistant Staphylococcus aureus (MRSA), it can increase costs and may decrease the quality of patient care. Therefore, it is important to insure that only patients who need contact precautions are isolated. We describe a simple automated report to help infection control practitioners pro-actively identify patients that may no longer need isolation.

Introduction

Evidence suggests that contact isolation can be an effective way of reducing the spread of methicillin-resistant Staphylococcus aureus (MRSA) when used as part of a comprehensive infection control program. However, contact precautions have been shown to increase the cost of care by as much as 40% when compared to a routine glove policy. Isolated patients also receive less contact time with healthcare providers, which may negatively impact the quality of patient care. As a result, steps should be taken to identify patients who no longer require isolation.

At Barnes Jewish Hospital, patients with MRSA are identified in the registration system as requiring contact isolation for subsequent admissions. We created an automated report that provides a focused culture history for admitted patients with past evidence of MRSA. By reviewing the report daily, infection control practitioners can quickly identify patients who either meet or nearly meet criteria that would allow for the discontinuation of isolation. For patients that nearly meet the criteria, the reviewer can order additional lab tests that may complete the requirements for removal.

Methods

Beginning with inpatient registrations from our clinical data repository, we generate a report of microbiology results captured by our electronic infection control surveillance application (GermWatcher™). This report includes positive and negative cultures from BJC hospitals that supply data to GermWatcher™, sorted by collection date. Viral, fungal, and other irrelevant culture types are filtered from the output. The report is generated as a tab-delimited file for use with Excel and is distributed via an automated report distribution system.

Results

A manual review of 20 inpatients admitted over a three-day period with a history of MRSA found that 18 were flagged for contact isolation in the registration system. Three of those nearly met the criteria for removal from contact precautions requiring only a single negative nares culture. One patient met all the requirements and was later taken off contact precautions as a result of the review. The automated report is currently in test mode with a limited number of infection control practitioners. We are working on an interface to capture the current contact isolation status. Until this is completed, users need to verify the contact isolation status manually.

Conclusion

Of twenty recent inpatients reviewed, the infection control practitioners were able to remove one patient from isolation and could have taken action to potentially remove three more. Given the negative impact patient isolation can have to the cost and quality of care, this approach seems promising. More thorough analysis of this intervention is forthcoming.

References