

Improved Evidence-Based VRE Surveillance for Immunocompromised Patients
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Problem:

Active surveillance to prevent transmission of Vancomycin Resistant Enterococcus (VRE) was not being implemented consistently on the Transplant Intensive Care Unit (TICU). Data gathered manually may provide opportunities for human error.

Evidence:

Evidence was gathered through literature review and appraised based on magnitude of input and feasibility. Best practices chosen for implementation were improving education, improving accuracy of data by automating surveillance, and feedback of data to staff.

Strategy:

An electronic database was developed to import data from microbiology records and generate surveillance reports automatically. Education regarding transmission of VRE, active surveillance, and isolation precautions was done through a ten minute in-service with nursing staff individually, along with pre-test. Data were shared with TICU staff monthly.

Practice Change:

The changes included implementation of admission screening for VRE, shifting surveillance screening day to reflect census on unit. Data collection changed from manual to automated method. Feedback to the staff through data was done monthly.

Evaluations:

Evaluation of the program was done through measuring compliance with screening cultures at admission and weekly, as well as monthly prevalence and acquisition rate of VRE.

Results:

Compliance with admission screening improved from 0 to 45%, and weekly screening from 35% to 85% over a 12-month period. Monthly prevalence of VRE decreased from 44% to 7%, whereas acquisition rate improved from 8 per 100 risk-days to 1 per 100 risk-days over the 12-month period. Improvements were also noticed in compliance with hand hygiene and environmental hygiene.

Recommendations:

We recommend use of automated databases for surveillance of nosocomial pathogens, continued efforts to control VRE, and monitoring of incidence and acquisition. Multidisciplinary education and multiple strategies are key for success. This model could serve as a process improvement model for other areas in Infection Control.

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