

Infectious Disease

Background

Within the last year two years in Virginia, two regulations have gone into effect requiring the reporting of: (1) invasive methicillin-resistant *Staphylococcus aureus* (MRSA) by the directors of laboratories, and (2) hospital-associated infections (HAIs) to the Virginia Department of Health (VDH).

In 2005, the legislature passed a law requiring acute care hospitals in Virginia to report information about healthcare-associated infections (HAI) to the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) and to release the data to VDH. The law went into effect July 1, 2008. The infections to be reported, hospitals required to report, and patient populations were prescribed by regulation. The Virginia regulations specify that: (1) acute care hospitals with adult intensive care units report central-line associated bloodstream infections and central-line days to NHSN according to CDC protocols, and (2) hospitals authorize VDH to have access to the data. VDH produces a quarterly report that is published on the VDH web page, summarizing infection rates by hospital. Additionally, VDH was recently directed by the Virginia Governor's office to re-examine existing legislation and determine whether or not additional outcome or process measures to assess HAIs are indicated. VDH is currently working with an advisory group to explore this directive from the Governor's office.

The MRSA reporting requirement was passed on October 24, 2007, through an emergency regulation and later finalized through an update to Virginia's reporting regulations. Invasive MRSA infections are the third highest frequency reportable condition, behind chronic hepatitis and *Chlamydia trachomatis* infection.

VDH also expects to apply for federal stimulus funds to enhance its HAI program. Activities planned under that program include conducting assessments of HAI rates and infection prevention strategies in place in Virginia hospitals, understanding the structure and functions of HAI programs in other states, tracking organisms and resistance patterns in hospital laboratories, funding and evaluating pilot prevention and/or surveillance projects, and developing an HAI monitoring and prevention plan for Virginia.

Activities

The CSTE fellow will have substantial input in determining the projects that are pursued. Activities will include work on analytic projects, outbreak investigations, and coordination, planning and policy related activities. Potential activities are noted below:

Opportunities for data analysis and outbreak investigations

- Analysis of the central line associated blood stream infections (CLABSI) data gathered through the National Healthcare Safety Network (NHSN) as part of the new legislation mandating reporting of healthcare associated infections
- Analysis of invasive MRSA data reported to VDH by directors of laboratories
- Analysis of nursing home outbreak data reported to VDH by facilities
- Analysis of acute hepatitis B and hepatitis C data
- Outbreak field investigation: There are a multitude of opportunities to investigate a wide variety of outbreaks (in the community or healthcare associated) as the lead epidemiologist, with close supervision and support.

- Analysis of data collected through surveys of infection prevention strategies and organisms identified in hospital laboratories.

Opportunities to work on interdisciplinary teams:

- Participation in weekly epidemiology meetings with DSI staff where current outbreaks and investigations are discussed;
- Participation in VDH HAI Advisory Work Group, which operates in partnership with the Virginia Hospital and Healthcare Association (VHHA) Quality and Safety Advisory Group. Advisory committee members include VHHA, Virginia Association for Professionals in Infection Control (APIC), VDH, infection preventionists, hospital epidemiologists, and consumers;
- Participation in conference calls with the Virginia Health Quality Center (VHQC) Quality Improvement Project, which is measuring MRSA infection rates in selected Virginia hospitals and nursing homes in cooperation with the Center for Medicare and Medicaid Services;
- Partnership with Virginia Division of Social Services (DSS) to increase the awareness of inspectors and owners of assisted living facilities (ALFs) of: bloodborne pathogens standard; general infection control procedures; pathogens which commonly cause outbreaks in assisted living facilities, and outbreak management; and
- Partnership with the Virginia Association for Professionals in Infection Control and Epidemiology (APIC) chapter to review training needs and coordinate implementation of at least one training via web conference, conference call, or in-person meeting for hospitals entering HAI data into NHSN.

Coordination, planning, and policy activities:

- Coordination with statistical staff to develop quarterly reports presenting HAI and MRSA data.
- Monitoring of hospital compliance in entering data into NHSN and review of data quality and validity;
- Research into the development of HAI benchmarks through literature reviews, surveys of other states, and consultation with experts in the field;
- Development of a model format for the reporting of HAI and MRSA infection data; evaluation of the usefulness of the data report for consumers;
- Contacting hospitals with increased HAI rates or compliance issues. Discussion of strategies to reduce rates and/or improve compliance with the hospital epidemiologist, infection control practitioner, and/or other key staff. Development of a list of best practices for the reporting and monitoring of HAI data;
- Participation in monthly conference calls with CDC and the Council of State and Territorial Epidemiologists on HAI and MRSA;
- Promotion of enrollment of acute care hospitals in NHSN and serving as a resource to enrolled hospitals;
- Coordination with the VDH Office of Licensure and Certification to keep hospital inspectors aware of reporting facilities with increased HAI rates;
- Development of reference documents for nursing homes and hospitals addressing antimicrobial resistant infections, including *Clostridium difficile* infections and Vancomycin-Intermediate/Resistant *Staphylococcus aureus*;
- Expansion of the current VDH MRSA website to include information on other antimicrobial resistant infections and HAIs.

Assignment Location:

Richmond, Virginia

Primary Mentor:

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Secondary Mentor:

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