

Infectious Disease- Healthcare-associated infections (HAI)

Assignment Description

With funding support from the American Recovery and Reinvestment Act (ARRA), VDH launched its HAI Program in September of 2009. The VDH HAI Team is housed in the Office of Epidemiology, Division of Surveillance and Investigation (DSI) and is composed of a program coordinator, epidemiologist, health educator, nurse epidemiologist, and a CSTE HAI Fellow who work closely and collaboratively to identify and respond to infection prevention-related needs in Virginia's acute care and long-term care facilities.

Within the past year, the VDH HAI Team has initiated or completed several major projects:

- 1) conducted needs assessments in both the acute care and long-term care settings;
- 2) initiated a surveillance pilot study to measure the impact of adding surgical site infection surveillance measures to public reporting;
- 3) began a validation study of central line-associated bloodstream infections (CLABSI), the only healthcare-associated infection currently mandated to be reported to public health, to identify and communicate common data misclassification issues; and
- 4) planned educational and communication efforts to arm both the infection prevention community and the public with accurate and accessible information to decrease healthcare-associated infections.

VDH works continuously with its partners, who include the state hospital association, the infection preventionists' professional organization, long-term care organizations, and the state quality improvement organization, to ensure policies and activities are practical, useful, and beneficial to patients. Activities planned for the future include analysis and evaluation of pilot prevention and surveillance projects, participation in HAI outbreak investigations and translation of lessons learned into opportunities for improvement on a state level, development of HAI policies that not only increase mandatory reporting requirements but also create recommendations for infection prevention staff and administration support, and development of reference documents for hospitals, long-term care facilities, and consumers.

Overall, it is expected that the Fellow will acquire a range of practical public health skills and experiences useful in a wide variety of career paths. These activities may also lead to presentations, conference abstracts, and/or peer-reviewed publications. We expect that the Fellow will have the time and autonomy to develop projects of interest, while participation in the Office of Epidemiology's many activities will provide opportunities to acquire a broad range of skills and experiences. With the opportunity to work with experienced mentors, collaborate with a variety of organizations, and have flexibility in working on projects of interest, the Fellow will have a diversity of professional opportunities to develop desired skill sets.

Day-to-Day Activities

The Fellow's day-to-day activities will involve active participation as a team member within the Healthcare-Associated Infections (HAI) Program and the Division of Surveillance and Investigation (DSI). With support from VDH DSI staff, the Fellow will work on projects related to detecting, monitoring, and responding to communicable diseases of public health importance in Virginia. This may include collecting and analyzing epidemiologic data and reporting findings, creating information for the public and healthcare providers, and giving presentations on public health topics. The Fellow will participate in weekly division staff meetings, where current outbreaks, investigations, and special projects are

discussed. The Fellow will also participate in monthly statewide epidemiology conference calls, monthly journal club meetings, and semi-annual communicable disease training events. 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 to work on interdisciplinary teams:

- Participation in weekly internal HAI meetings to discuss VDH HAI activities
- Participation in monthly HAI Steering Committee calls, which operate in partnership with the Virginia Association for Professionals in Infection Control and Epidemiology (APIC-VA), VHQC (the Virginia Quality Improvement Organization), Virginia Health Care Association (long-term care organization), and Virginia Hospital and Healthcare Association (VHHA)
 - Participation in weekly epidemiology meetings with DSI staff where current outbreaks and investigations are discussed
 - Participation in VDH HAI Advisory Committee, which operates in partnership with VHHA Quality and Safety Advisory Group. Advisory committee members include VHHA, APIC-VA, VDH, infection preventionists, hospital epidemiologists, administrators, and consumers;
 - Partnership with Virginia Division of Social Services (DSS) and Office of Licensure and Certification (OLC) to increase the awareness of inspectors and owners of assisted living facilities (ALFs) and nursing homes regarding bloodborne pathogens standards, general infection control procedures, pathogens which commonly cause outbreaks in residential settings, and outbreak management
 - Partnership with APIC-VA 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
- Participation in DSI monthly journal club

Coordination, planning, and policy activities:

- Coordination with statistical staff to develop quarterly reports presenting HAI data
- Research into the development of HAI benchmarks through literature reviews, surveys of other states, and consultation with experts in the field
- Participation in discussion and development of future Virginia HAI policies
- Development of a model format for the reporting of HAI data; evaluation of the usefulness of the data report for consumers
 - Communication with hospitals that have 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 conference calls with CDC and the Council of State and Territorial Epidemiologists on HAI issues
- Coordination with the VDH Office of Licensure and Certification to keep hospital inspectors aware of facilities that have experienced an increase in HAI rates
 - Development of reference documents for long-term care facilities and hospitals addressing HAI issues including antimicrobial-resistant infections such as *Clostridium difficile*, vancomycin-intermediate/resistant *Staphylococcus aureus*, and carbapenem-resistant Enterobacteriaceae
- Assist the team in determining next steps and the future direction of the HAI program in Virginia

Opportunities will also exist for the Fellow to work on projects with other divisions within the Office of Epidemiology and with local health departments. Such opportunities will provide the Fellow with extensive practical experience and skills, a good understanding of the roles and responsibilities of state and local health departments, and access to significant projects related to the Fellow's interests and career goals.

Potential Projects

Opportunities for data analysis and outbreak investigations:

- Analysis of the central line-associated bloodstream infections (CLABSI) data, as well as any additional HAI measures that may be mandated by legislation, gathered through the National Healthcare Safety Network (NHSN)
- Evaluation of internal CLABSI surveillance via NHSN and presentation of results to partners
- Analysis of nursing home outbreak data reported to VDH by facilities
- Analysis of data collected through surveys of infection prevention strategies and organisms identified in hospital laboratories
- Outbreak field investigation: There are a multitude of opportunities to investigate a wide variety of outbreaks (in the community or in healthcare settings) with close supervision and support

Preparedness Role

The Office of Epidemiology plays a predominant role in emergency preparedness and response activities. Staff works closely with the VDH Office of Emergency Preparedness to conduct a wide range of activities, which the Fellow will have an opportunity to participate in, including: emergency preparedness exercises and drills, developing emergency response plans, creating educational resources and materials (e.g., fact sheets and provider guidance) for biological, chemical and radiological emergencies, and responding to public health emergencies

Assignment Location: Richmond, Virginia

Primary Mentor: Margaret Tipple, MD
DSI Medical Epidemiologist
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Secondary Mentor: Dianne Woolard, PhD, MPH
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