

Infectious Disease-HAI

Information about the program area:

This position will be located in the Bureau of Epidemiology's Division of Infectious Disease Epidemiology (IDE), Healthcare Associated Infections and Antimicrobial Resistance (HAIAR) section. This section is responsible for conducting analyses and reporting information on the patterns of HAI's in Pennsylvania, and investigations of outbreaks in the healthcare setting. Reporting requirements are based on legislation passed in Pennsylvania in 2007 mandating reporting of all healthcare-acquired infections occurring in acute and long term care facilities in the state, as well as required screening for Methicillin-resistant *Staphylococcus aureus* and other multidrug resistant organisms. The legislation also mandates annual reduction targets in the rates of HAIs within an institution. No other state has as wide-ranging an HAI reporting requirement as Pennsylvania, and few other states have devoted the resources to implementing the requirements.

The IDE is also responsible for a broad range of disease surveillance and control activities in Pennsylvania. The Fellow will also work with IDE's Investigation, Surveillance and Preparedness Sections. Responsibilities of these sections include: interactions with six DOH regional offices and 10 County or Municipal Health Departments, outbreak and case investigations, surveillance of >50 infectious diseases, emergency preparedness epidemiology, data analysis, preparation of reports and educational materials for professionals and the public, and assisting in the development of public health policy and regulations related to infectious disease prevention and control.

In addition to working within the Bureau of Epidemiology, the Fellow will interact with other governmental and non-governmental stakeholders addressing HAIs in Pennsylvania. These include (1) DOH Quality Assurance program, (2) the Pennsylvania Patient Safety Authority (PSA) an independent agency (3) the Pennsylvania Healthcare Cost Containment Council (PHC4), which conducts cost analyses of HAIs (4) the Hospital Association of Pennsylvania, and others.

The Fellow's anticipated day-to-day activities:

The fellow will fully participate in the day-to-day activities conducted by IDE staff, including participating in disease investigations; conference calls with federal, local and regional partners; attend departmental meetings as well as local, regional and national conferences. The fellow will have a day-to-day role in the analysis and evaluation of the HAI data. This work will involve exploratory and descriptive analyses as well as the potential for statistical risk modeling. Reports will be issues of HAI data, and the fellow may also perform studies to assess the use and impact of the data in healthcare and public decision-making. Additionally, the fellow will have to opportunity to present at monthly Journal Clubs and all-day Department Quarterly Epidemiology meetings attended by 50-100 by field and state epidemiology staff.

Examples of potential projects that demonstrate opportunities for data analysis, outbreak field investigations, and opportunities to work on interdisciplinary teams.

TITLE OF PROJECT: Pennsylvania Health Care Associated Infections, evaluation of the implementation of a reporting system for healthcare associated infections.

BRIEF DESCRIPTION OF PROJECT:

The fellow will work with the HAIAR section, as well as with staff from other bureaus and state agencies, to examine the quality of the data reported by Pennsylvania into the NHSN as required by state legislation. This will include evaluating reported data and determine annual benchmark criteria for various types of institutions based on reporting. The fellow will also assist on developing reporting systems and benchmarking criteria for the nursing home setting.

Program or surveillance system evaluation component:

TITLE OF PROJECT: Pennsylvania Patient Safety Reporting System (PA-PSRS)

BRIEF DESCRIPTION OF PROJECT: The fellow will work with the Healthcare Infections and Antimicrobial Resistance section, as well as with staff from other bureaus and state agencies, to examine the quality of the data reported thru the Pennsylvania Patient Safety Reporting System (PA-PSRS) as required by Act 52.

Some of the tasks will include:

- a. Designing and implementing validation study of nursing home reporting.
- b. Development of Error and Verification report for nursing homes to inform them of potential problems with their reported data. This could include development of a database to track these problems and facility feedback as well as development of analysis for this data.
- c. Analysis and report development for selected HAI for nursing homes.
- d. Model building and risk analysis of nursing home HAIs.

Other potential projects include:

- Evaluation of MRSA screening practices at Pennsylvania acute care facilities, a comparison of these practices to MRSA prevalence data, and a cost effectiveness analysis of different screening approaches.
- Examination of HAI patterns in small (<50 bed) community hospitals in Pennsylvania
- Special analyses of healthcare acquired gastrointestinal infection reports and their relationship to C. difficile associated disease.

Assignment Location: Harrisburg, PA

Primary Mentor: P. Ann Loveless, MD, MS
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PA Department of Health

Secondary Mentor: Veronica Urdaneta, MD, MPH
State Epidemiologist
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