Infectious Diseases-HAI, Infectious Diseases
Ohio Department of Health, Bureau of Infectious Diseases
Columbus, Ohio

Assignment Description
The Fellow will be integrated into the TB/HAI Program located in BID. Our staff includes four nurses, two epidemiologists, one health services policy specialist and one supervisor. The TB/HAI Program’s priorities are to eliminate TB and reduce the risk of infectious diseases and complications of individuals receiving healthcare in Ohio. The HAI goals are three-fold:

- Prevent HAIs and outbreaks
- Use antibiotics wisely to prevent or minimize antibiotic resistance
- Provide technical assistance and education on infection control and prevention

Day-to-Day Activities
The Fellow will be integrated into the TB/HAI staff. The Fellow will be included in daily morning stand-up meetings, outbreak investigations, and infection prevention and control site visits. The Fellow will have opportunities to build relationships and network with partners such as OHA, HSAG and members of the HAI Advisory Group. Depending on the Fellow’s background and interest, he or she may anticipate travel to nursing homes twice a month for Infection Control Assessment and Response (ICAR) technical assistance site visits. Ample time will be available to complete assignments.

Potential Projects
Surveillance Activity Carbapenemase-producing Carbapenem-resistant Enterobacteriaceae (CP-CRE)
The Fellow will analyze the CP-CRE surveillance data and develop meaningful statistical reports for routine dissemination; identify key investigation information to collect from patient medical records or other sources; conduct healthcare investigations for positive individuals including screenings of potentially exposed and facility assessments; prepare and present findings on the first year of data collection to internal partners and external partners; work with the Antibiotic Stewardship Coordinator, other partners, facilities, and Ohio Department of Health Laboratory staff to expand and effectively use this new data to combat emerging infections.

Surveillance Evaluation National Healthcare Safety Network (NHSN) Validation
Validation is an important step toward assuring that reported NHSN data are actionable and motivate improved infection control efforts rather than strategies to avoid accounting for HAIs. Accurate, high quality NHSN data are important to infection prevention programs for setting priorities and measuring the impact of prevention efforts. Using the tools developed by CDC, the Fellow will create a plan to
validate CDI and MRSA bacteremia NHSN data. Working with his/her mentors, the Fellow will develop a sampling frame, train validators, conduct site visits, and disseminate results of validation findings.

**Major Project  Social Network Analysis**

Similar to social interactions among people, patient-sharing can have significant implications for disease and patient-demographic epidemiology (e.g., hospital-acquired infections) on the impact of disease control measures, patient education and prevention programs, and fiscal policies. The Fellow will work with ODH, OHA, Ohio Medicaid and CDC to obtain patient-level hospital discharge data and use social network analyses to understand how hospitals and nursing homes within central Ohio are interconnected. The TB/HAI Program will use the social network analysis to maximize program impact by providing infection control interventions to highly connected facilities.

**Additional Project  Standardized Hand Hygiene Observation Training for Local Health Departments**

In the past three years, onsite assessments have been conducted in 67 long-term care facilities in 40 of Ohio’s 112 local health jurisdictions and on-the-spot training has been provided to local health department staff. One area of concern has been establishing consistency between ODH staff and LHD staff in hand hygiene observations. LHD staff have consistently scored facility staff hand hygiene observations with a higher percentage of appropriate hand hygiene than ODH staff. If interested, the Applied Epidemiology Fellow would have an opportunity to develop a video for hand hygiene observation training that would serve both to train LHD staff and standardize recorded observations using the written hand hygiene tool performed as part of ICAR and MDRO assessment visits. The training will be posted to OhioTRAIN and a link sent to LHDs prior to ICAR and MDRO visits. Tests would be administered to ensure observers receive at least a 90% matching score before performing field observations. The Fellow would engage in all areas of this project, from conception to evaluation.

**Additional Project  Antimicrobial Stewardship Awareness Among Emerging Healthcare Professionals**

The Fellow would have the opportunity to engage healthcare professional schools (nursing, pharmacy, dentistry, medical) in designing a video competition promoting antibiotic stewardship in one of four care settings; outpatient, inpatient, dental clinics, and/or nursing homes. If interested, the Fellow could design the promotional materials, contest rules and work with ODH Communications/Social Media and our partners to promote and judge the contest. Winners would be announced during Antibiotic Awareness Week. The goal would be to establish standard operating processes for an annual event.

**Preparedness Role**

The Bureau of Infectious Diseases works closely with the Bureau of Health Preparedness on the Ohio Emerging Pathogens Coalition (OEPC). The OEPC is coordinated by OHA and includes members from hospitals (Frontline, Ebola Assessment Hospitals [EAH], and Ebola Treatment Center [ETC]), local public health departments, Regional Healthcare Coordinators (RHCs), Regional Public Health Coordinators (RPHC), local Emergency Medical Services (EMS), and state level agencies (ODH and Ohio EMS). The OEPC meets quarterly to coordinate planning, training, and exercise efforts across Ohio. There are four main work groups that are part of the OEPC: The Patient Care Work Group, the Public Health Work Group, the Transportation Work Group and the Training and Exercise Work Group (TEWG). The Fellow
would be a member of the TEWG Public Health Work Group and participate in planning and conducting exercises. The Fellow would also have opportunities to participate in disaster management/response and recovery at the Ohio Emergency Operations Center during statewide disasters (usually weather-related).

**Additional Activities**

Currently, ODH has multiple special initiatives including: mental health and addiction, combating prescription opioid abuse, and maternal and child mortality prevention. Depending on the Fellow’s interests and time, Dr. Hurst could facilitate a project in one of these areas.

**Mentors**

**Primary**

Mark Hurst MD  
Medical Director & Assistant Director for Health Programs

**Secondary**

Kim Quinn MS  
Chief of Tuberculosis, Healthcare-Associated Infections and Outbreak Response (THOR)