Infectious Diseases-HAI, Infectious Diseases

Florida Department of Health in Orange County, Epidemiology Program
Orlando, Florida

Assignment Description

The prospective fellow will be a member of the Florida Department of Health in Orange County (DOH-Orange) Epidemiology Program. The EPI program totals 15 employees consisting of nurses, epidemiologists, and a fellow. DOH-Orange has a strong epidemiology function with a variety of experienced staff members. Placement within the EPI program will afford the fellow a busy, diverse and exciting opportunity to learn epidemiology with experienced and enthusiastic mentors to investigate a wide variety of public health issues, reportable disease cases, and outbreaks. The DOH-Orange biologic terrorism preparedness and response team works concomitant to epidemiology as an integral component of the section.

The assignee will receive hands-on experience, training, and supervision in successfully applying public health science and theory to the realities of building programs that protect and improve the public health. County and the City of Orlando Emergency Support Functions (ESF-8) have strong planning and exercise response relationships with the DOH-Orange. Orlando International Airport (OIA) with 37 million passengers per year is the second busiest airport in Florida. DOH-Orange has partnered with OIA for bioterrorism response drills in which the epidemiology team has played key roles. DOH-Orange has a strong association with area hospitals, walk-in clinics and medical concierge agencies who provide direct medical visitation, diagnosis and treatment for patients who stay in hotels. The assignee will be integrated into other program areas of the local county health department to get a holistic view of public health practice.

Opportunity to gain additional clinical skills (e.g., CPR, First Aid, Hepatitis screening) will be available. This assignment may include assistance to neighboring county health departments for special projects or investigative assistance upon request. The assignee will have the opportunity to participate in projects in collaboration with national partners, such as American College of Preventive Medicine (ACPM) and National Association of County and City Health Officials (NACCHO). Collaboration with DOH-Orange and the Florida Hospital Systems has also produce a series of public health projects in which the assignee may participate (e.g., Hospital Acquired Infections, Asthma Prevention, Evaluation of CDC Recommendations on HCV Screening). Opportunities to participate in unique field outbreak investigations will occur frequently. Notable investigations include Middle East Respiratory Syndrome Coronavirus (MERS Co-V), measles, pertussis, fungal meningitis, unknown GI illness outbreak at a local theme park, Serratia marcescens infections, and other HAI. Other projects may include participation in a DOH-Orange committees and participation in the DOH-Orange academic health department initiative.

Day-to-Day Activities

1. Conduct interviews with clients whose disease status has been reported to the Health Department under Rule 64D-3. The information collected is utilized for local, state, and national statistics. During interviews HAI assessment will be critical to determine necessary additional investigative steps (e.g., legionella incubation period).
2. Perform descriptive and analytic epidemiologic investigations, research and public health surveillance of disease outbreaks and other field epidemiologic investigations of public health importance.
3. Participates in training programs in infection control, informatics, biostatistics, and epidemiology.
4. Other activities to develop competencies in epidemiological process, communication, public health leadership and professionalism.

**Potential Projects**

**Surveillance Activity**

*Use of Healthcare Network Patient Movement Tool in HAI Outbreak Prevention*

As part of the current HAI work with our community healthcare partners, CDC, and NACCHO, DOH-Orange is completing a Healthcare Network Patient Movement Analysis. This analysis will help DOH-Orange understand how patients move between healthcare facilities in the Orange County area. The fellow will use this tool to conduct active surveillance to determine if identified HAI outbreaks have spread to facilities that commonly share patients. The fellow will also conduct timely infection control guidance and recommendations to these identified at risk facilities to prevent illness in the community and increase outbreak reporting.

**Surveillance Evaluation**

*Evaluation of ESSENCE-FL for HAI Surveillance*

Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE-FL) is the Florida Department of Health’s syndromic surveillance system. This system has multiple data sources including Vital Statistics records, Merlin reportable disease records, poison control consultation records, and emergency department/urgent care chief complaint and discharge diagnoses. Currently, this system is not being used to conduct HAI surveillance. The fellow will assess all aspects of the surveillance system for capability to use for HAI surveillance at the local level. In addition, if the surveillance system can be used, the fellow will develop surveillance queries and protocols for HAI surveillance and follow-up. The fellow will also provide presentations on their work and trainings on the ESSENCE-FL HAI surveillance assessment and potentially developed queries.

**Major Project**

*Community Antibiogram and Data Improvement Project*

Orange County, Florida currently does not have a community antibiogram. During the past 5 years the Florida Department of Health in Orange County (DOH-Orange) has been working with our three major healthcare systems to improve Electronic Laboratory Reporting. Currently, two of the three healthcare systems in Orange County are reporting ELRs and the third system is in the process of coming onboard. These data sources are captured in the Florida Department of Health reportable disease system, Merlin. The prospective fellow will work with all three hospital systems to understand and standardize each systems processes necessary to develop a community antibiogram (e.g., specimen susceptibility testing protocol, laboratory testing procedures, susceptibility/resistance definitions). The fellow will also conduct a data quality assessment and work with the facilities to improve the data being reported for using in the antibiogram. The fellow will write a final report to capture the methodology, results, and outcomes of the project and provide oral presentations to community partners and other public health entities.
Additional Project

Address Gaps Identified in HAI Needs Assessment and Strategic Plan

The Florida Department of Health in Orange County is currently working with Orange County healthcare partners, CDC, and NACCHO to conduct a community HAI needs assessment and formulate a strategic plan to address the gaps identified. This process will be finishing during June 2017. The future fellow will be pivotal to addressing these identified gaps and be part of future potential collaborations on other HAI projects with NACCHO and CDC.

Additional Project

Legionellosis Prevention: Healthcare Assessment of ASHRAE Implementation

As part of the current HAI work with our community healthcare partners, CDC, and NACCHO, DOH-Orange is completing a Healthcare Network Patient Movement Analysis. This analysis will help DOH-Orange understand how patients move between healthcare facilities in the Orange County area. The fellow will use this tool to conduct active surveillance to determine if identified HAI outbreaks have spread to facilities that commonly share patients. The fellow will also conduct timely infection control guidance and recommendations to these identified at risk facilities to prevent illness in the community and increase outbreak reporting.

Preparedness Role

The fellow will receive training in emergency preparedness and incident command systems. The fellow will be a member of the Region 5 Epidemiology Strike Team and thus will require to have completed trainings and competencies associated with serving on a strike team. The EPI program works collaboratively with the Emergency Operations program (EO) at DOH-Orange for surge capacity events, public health planning, and exercises. The fellow may have the opportunity to work in EO program assisting in the planning for a disaster event, table top exercise, or community preparedness assessment project.

Additional Activities

The fellow will have the opportunity to crosstrain and develop competencies in food and water safety, infection control, HIV, STI, hepatitis, rabies, and Tuberculosis. The EPI program conducts outreaches via community health fairs, community presentations and specifically targeted population outreach (e.g., homeless shelter) which the fellow will have the opportunity to participate in and provide health information.

Mentors

Primary

Kevin Sherin, MD, MPH, MBA
Health Officer and Director

Secondary

Benjamin Klekamp, MSPH
Interim Epidemiology Program Manager & Lead Epidemiologist