**Infectious Diseases, Infectious Diseases-Foodborne**

**Houston Health Department, Bureau of Epidemiology, Division of Disease Prevention & Control**

Houston, Texas

**Assignment Description**

Fellow will be placed as an Epidemiologist within the Bureau of Epidemiology, Division of Disease Prevention and Control. Fellow will be included in one of the teams conducting epidemiological investigations and surveillance activities within the city of Houston.

**Day-to-Day Activities**

Fellow will be trained and assigned infectious disease cases reported by healthcare providers to investigate and enter into electronic disease database. The Fellow will also be part of team to investigate outbreak and cluster investigations.

**Potential Projects**

**Surveillance Activity Infectious Disease Surveillance**

Infectious Disease cases are reported from across the city limits to Houston Health Department (HHD) by the healthcare providers including hospitals, physicians, CBOs and labs. A number of hospital systems are connected to HHD through Electronic Laboratory Reporting (ELR) System. All these case reports are created in Houston Electronic Disease Surveillance System. These cases are assigned to individual Epidemiologists and Surveillance Investigators to investigate, complete the required forms for different disease conditions and report to State Health Department.

**Surveillance Evaluation Timeliness and Completeness of The Cases**

Surveillance System evaluation includes two components. The first component is the timeliness of the cases investigated. This includes if the high priority and low priority disease cases are investigated and reported to the State Health Department within the assigned time period. The State health department has specific timelines for the notifiable conditions to be reported. The surveillance system runs reports to evaluate if the cases are reported within the specified time. Data quality and completeness of the cases is the second component of the surveillance system evaluation. The State health department has designated a number of variables to be complete for different conditions before reporting. The evaluation system determines if the case reports are complete and all the required fields in the report forms are filled before submission.
Major Project  Influenza Surveillance

The fellow will conduct the Influenza Surveillance activities which includes sampling, recruiting, maintaining, evaluating and interacting with sentinel providers to promote influenza active surveillance in Houston. The other responsibilities include:

- Conduct site visits and give presentations to health care providers, facilities and in community.
- Monitor and investigate abnormal increase in flu-like illnesses.
- Work with biostatisticians on ESSENCE respiratory syndromic surveillance for respiratory related events.
- Ensure timely transportation of specimens from partnering clinics/physicians to the HHD, Bureau of Laboratory Sciences.
- Analyze and publish surveillance project data.
- Correlate influenza report with biostatisticians using existing flu-like or respiratory syndrome surveillance data.
- Ensure reports/documentation are submitted to the CDC.
- Coordinate influenza activities with local, state and national agencies including CDC.
- Perform quality control of the database in any respiratory outbreak in Houston.
- Provide optimal support including logistic and influenza rapid test kits to the providers to ensure influenza surveillance is maintained throughout the year.

Surveillance Activity  Food-Borne Disease Surveillance Using PFGE

Conduct epidemiological investigations for food-borne diseases. A detailed interview will be conducted with the patient to investigate the food-borne illnesses which includes food history. Clusters will be identified by matching the PFGE patterns. PFGE patterns will be matched at the State and national level to identify the clusters at the State and national level.

Preparedness Role

Fellow will be rotated for some time within the Bureau of Public Health Preparedness in Houston Health Department. Fellow will be part of the rapid response teams responding to public health emergencies.

Additional Activities

Fellow will participate in public health activities conducted within the schools to gain experience working within the community.

Mentors

Primary  Salma Khuwaja, MD, DrPH, MPH
Division Manager

Secondary  Hafeez Rehman, MD, MPH, CPH
Epidemiologist Supervisor