Subject Area: Infectious Disease-HAI

Assignment Description

The Fellow would be integrated into the Epidemiology and Laboratory Capacity (ELC) and Emerging Infections Program (EIP) HAI grant activities at the New Mexico Department of Health. EIP is a collaboration between the Centers for Disease Control and Prevention, state health departments, and academic partners. EIP activities provide the opportunity to experience epidemiology projects from conception to publication.

Though assigned primarily to the HAI program, the Fellow will have very broad exposure and opportunities. The Infectious Disease Epidemiology Bureau (IDEB) is a integrated group of two dozen epidemiologists and support staff. Short term special projects (e.g., legislative bill analysis, health status analysis) arise which require application of epidemiology data and practice to a variety of issues. Bureau epidemiologists participate in responding to reported infectious disease cases, clusters, and outbreaks statewide and to answering related questions from the public.

IDEB has worked with fellows from a variety of federal programs and will evaluate regularly, in collaboration with the Fellow, the need for modification or addition of activities in order to assure the Applied Epidemiology core competencies are fulfilled.

Specific Fellow assignment areas would include:

1. National Healthcare Safety Network (NHSN) data quality assurance and analysis, interpretation, and reporting of surveillance data to internal and external stakeholders

2. Evaluation of NM facilities' NHSN HAI surveillance data validation activities

3. Participation in EIP HAI and antimicrobial use prevalence surveys

4. Participation in EIP population-based surveillance

5. Participation in IDEB day call team and core surveillance team activities

Day-to-Day Activities

Within the projects mentioned below, the day-to-day activities would include:

Work closely with HAI Program staffs to learn the NHSN surveillance database, definitions, and analysis functions. The Fellow would eventually take primary responsibility for monitoring data quality and for related facility communications. The Fellow will statistically analyze and interpret data for health risk communication to various audiences. This includes preparation of an annual NM HAI surveillance and prevention public report and periodic HAI Advisory Committee reports which would include graphic presentation of data.

Maintain relationships with infection preventionists at healthcare facilities and other key stakeholders necessary for maintaining surveillance systems and communications.

Participate in EIP prevalence survey planning, protocol and data collection form development, institutional review board (IRB) approvals, facility recruitment, data collection, data analysis, data interpretation, verbal and written dissemination of findings, and the publication process.

Conduct special project(s) as a NM EIP team member, while applying principles and practices of population-based surveillance to understand issues such as laboratory testing practices or vaccination uptake.

As a member of the IDEB 'day call' team, the Fellow would receive guidance and support in ‘day call’ in which the Fellow would rotate with the rest of IDEB. Day call staffs provide consultation to a variety of callers from medical providers to institutions to members of the general public. IDEB medical epidemiologist ‘back-up’ is always available real time. Through day call the Fellow would gain knowledge of the state stakeholders, public health practice, disease surveillance, epidemiology, and investigation of notifiable conditions and outbreaks, including zoonotic conditions. This activity provides opportunities for skill development related to health risk communication to those seeking assistance. Epidemiologic investigations would require collection of health data from a variety of sources (e.g., case interviews, medical records, laboratory or pathology reports), interpretation of health data, and analysis of epidemiologic findings to recommend control measures and public health interventions. Field investigation reports are prepared on each outbreak.

There would also be the opportunity for the Fellow to learn basic functions and duties of the core notifiable conditions surveillance team.

Potential Projects

1. Analysis of National Healthcare Safety Network (NHSN) HAI surveillance data. The Fellow would be given training in NHSN data submission processes and surveillance definitions. The Fellow would review and modify, as needed, data analysis and validation methods as HAI indicators change and/or reporting methods evolve. The Fellow would use statistical analysis software (e.g., SAS, STATA), with necessary support, to perform data analyses and prepare facility-specific and public reports, and recommend targeted prevention initiatives. The Fellow would help determine effective means to communicate the data with stakeholders including healthcare facility administration and quality personnel as well as the general public. The Fellow will contribute to program implementation and policy development related to HAI surveillance.

2. Evaluation of NM healthcare facilities' internal NHSN data validation activities. This would include design of a questionnaire and other relevant data collection tools, data collection, analysis, and development of recommendations based on findings.

3. Collect and analyze data for the anticipated 2015 EIP nursing home HAI and Antimicrobial Use Prevalence Survey. This would be a large-scale, statewide point prevalence survey in certified nursing homes. This would include distinguishing between public health research and public health practice, and preparation and submission of appropriate IRB documents.

4. Work with EIP Active Bacterial Core surveillance (ABSs)staff to conduct a special project. Potential projects include: 1) analysis of ABCs laboratory practices in NM to evaluate and improve the EIP ABCs surveillance system; 2) design a web-based questionnaire to assess MCV4 vaccination rates among NM college students, implement and analyze results; and 3) design a study to assess knowledge, attitudes, and practices among NM physicians related to Legionnaires' disease.

5. Special projects as determined by interest of Fellow related to surveillance system evaluation, for example IDEB core surveillance, NM HAI surveillance, or outbreak surveillance. This could also include designing an epidemiologic study to address an HAI issues using NHSN data, NMEDSS data, and/or EIP data. Through this the Fellow will learn about basic types of study design and limitations, manuscript preparation and submission, and study presentation.

Preparedness Role

The CSTE Fellow will be provided opportunities to plan, participate in, and evaluate bioterrorism/emergency preparedness and response exercises.

The Fellow will have opportunities to:

1) evaluate and revise/update point of distribution (POD) plans related to mass dispensing of chemo-/immuno-prophylaxis in communities; 2) plan and evaluate emergency preparedness exercises, such as tabletop training and mass vaccination (e.g., influenza clinics); and 3) participate in joint NMDOH/local committees for emergency preparedness community activities (e.g., safety committees). Access will be provided to relevant training courses available online and in-person.

Assignment Location:	New Mexico Department of Health Santa Fe, New Mexico
Primary Mentor:	Joan Baumbach, MD, MS, MPH Deputy State Epidemiologist New Mexico Department of Health
Secondary Mentor:	Chad Smelser, MD Medical Epidemiologist

New Mexico Department of Health