**Infectious Disease- HAI**

Assignment Description

The CSTE Fellow will assist the state in laying important groundwork for the state's HAI prevention efforts. The CSTE Fellow will also serve as the primary epidemiologist for a new program basesd around infection control issues by collecting, analyzing and reporting data to drive decisions for the program. While the fellow will interact closely with staff members in a new program, there are strong experienced mentors available in DIDE. Established meeting schedules and ongoing learning activities contribute to a continuous learning environment in the division. In order of importance, the fellow will: 1) work on specific projects, such as development of a project proposal to validate CLABSI data; 2) rotate with other epidemiologists to cover on-call (< 4 days per month) and outbreak (approximately 1-2 months per year) responsibilities; and 3) participate in ongoing meetings and learning activities.

Day-to-Day Activities

Similar to the EISO and other DIDE epidemiologists, the CSTE Fellow will rotate responsibility to cover on-call (< 4 days per month) and outbreak responsibilities (approximately 1-2 months per year). This will give the epidemiologist experience in responding to public inquiries and managing infectious disease outbreaks in healthcare and community settings. The primary responsibilities of the CSTE fellow will be driven by the projects he/she undertakes (see 'potential projects,' below). However, the assignment also offers exposure to other infectious disease activities going on in DIDE. At our weekly surveillance meeting, consultations, surveillance data, new issues in the literature, and new programmatic developments are discussed. A monthly laboratory-epidemiology meeting offers interaction with the state public health laboratory. A biweekly staff meeting enables participants to understand activities undertaken by the regional epidemiologists. A monthly journal club meeting offers exposure to epidemiology activities in all areas of public health, including chronic disease and maternal and child health. The Bureau for Public Health is currently undertaking an evaluation of the epidemiology workforce, based on the CDC/CSTE applied competencies for epidemiology. Based on this assessment, any identified gaps will be identified and prioritized, and training is planned to help epidemiologists improve their skills. All epidemiology staff and trainees will be able to participate in this training, proposed for the summer of 2011. The Division of Infectious Disease Epidemiology (DIDE) also holds quarterly trainings for local health departments and other stakeholders. All epidemiology staff (including trainees) collaborates to deliver the training material. These trainings are well-received by local health staff, and the trainings serve to enhance the skills of the epidemiologists in DIDE because they must learn the material in order to teach it. In addition, all DIDE staff travel to these trainings and learn from each other. In the past, EIS Officers and other trainees have participated in these trainings. Preparation for the training follows a strict timeline. PowerPoint presentations must be turned in one month before the presentation and all trainers must participate in practice training. The State Epidemiologist regularly takes trainees to the legislature when she goes so that they can see the legislative process first-hand. This aids in understanding of public health laws and regulations. This variety of organized activities contributes greatly to the learning environment in DIDE and in the agency as a whole.

Potential Projects

Potential projects include:

1) Validation of CLABSI surveillance. This activity is extremely important, since West Virginia began data collection to support mandatory public reporting of CLABSI data in July, 2009. The CSTE fellow will develop a protocol for validation and conduct a pilot study. The purpose of the pilot study will be to test the protocol and quantify the resources needed to do a full validation. DIDE

will identify nursing staff to do data abstraction and will work with the CSTE Fellow to train these staff in chart review and data collection.

2) Evaluation of outbreak reporting and response in nursing homes in West Virginia. Currently, most healthcare outbreaks are reported from nursing homes in our state, especially outbreaks of gastroenteritis or respiratory illness. The proposed evaluation would focus on respiratory outbreaks and facility-based practices for identifying, reporting and controlling outbreaks of influenza. In addition, the evaluation could also focus on the use of diagnostic testing for respiratory pathogens and/or use of antibiotics for upper respiratory illness.
3) Evaluation of office-based injection safety practices. During 2009, DIDE conducted an investigation of an outbreak of invasive methicillin-sensitive Staphylococcus aureus related to a pain clinic. Multiple infection control breaches were identified, including poor injection practices. As part of an educational campaign to promote injection safety, DIDE proposes that the CSTE fellow conduct a survey of office-based physicians to evaluate self-reported injection safety practices. The fellow will be responsible for analyzing and summarizing the data for publication.
4) Needs assessment. The West Virginia HAI plan proposed an annual needs assessment, based on findings from outbreak investigations during the previous year and a survey of infection preventionists in the state. The CSTE fellow would be able to conduct at least one of these annual needs assessments to determine the overall scope of activities for the HAI program. Specific activities would include determining the scope of the assessment, designing the study or studies, designing the data collection forms, and analysis of collected data. DIDE will identify staff to support mailing surveys and data entry.
5) Development of outbreak investigation toolkits. West Virginia has developed a number of simple "outbreak toolkits." For example, see the variety of toolkits posted on the outbreak page: http://www.wvidep.org/AZIndexofInfectiousDiseases/OutbreaksorClustersofAnyIllness/tabid/1535/Default.aspx After gaining some experience, the fellow should be able to draft outbreak toolkits for facilities to use in investigation of healthcare-associated outbreaks. These toolkits are very well-received by local health departments, facilities and other stakeholders, because they offer simple, straightforward guidance in the face of a perceived emergency.
6) DIDE is working with Terrie Lee, RN, MS, MPH, CIC at Charleston Area Medical Center to identify hospital-based surveillance projects that the fellow could participate in or lead. Experience working in a hospital environment could greatly enhance the skills of the fellow, and would benefit hospital and health department alike.

Preparedness Role

The Division of Infectious Disease Epidemiology (DIDE) and the Center for Threat Preparedness are co-located in the same organizational unit. Senior staff in DIDE split responsibility for threat preparedness planning related to epidemiology response. All staff in DIDE rotate responsibility for outbreak response. Outbreaks are an excellent model for infectious disease emergencies and serve as excellent training for emergency response. During the recent pandemic, all staff and trainees were involved in pandemic response. The fellow will also be encouraged to participate in any trainings or tabletops related to threat preparedness. In the past, trainees have participated in training and tabletops on pandemic influenza and avian influenza.

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| Assignment Location: | Charleston, WV |
| Primary Mentor: | Danae Bixler, MD, MPH<br>Director, Division of Infectious Disease Epidemiology<br>West Virginia Bureau for Public Health |
| Secondary Mentor: | Loretta Haddy, PhD<br>State Epidemiologist<br>West Virginia Bureau for Public Health |