Assignment Description

The CSTE Fellow would be assigned to DOCD under the mentorship of Dr. Viray and Mr. Chisty, primarily in the area of healthcare associated infection and infection control and prevention, including MDRO or HAI surveillance to evaluate such, enhance existing systems including developing and/or improving questionnaires, and analyze and interpret data collected. The Fellow would have the opportunity to participate in other areas of interest (e.g. participation in the annual school-located flu vaccination program, public health emergency preparedness activities) covered by the Disease Outbreak Control Division (DOCD) as long as his/her projects were progressing as agreed upon with his/her mentors. The Fellow would be required to develop working relations with healthcare facilities, infection preventionists, commercial laboratories, and physicians to work collaboratively to conduct surveillance and reduce HAIs. In addition, the Fellow would be expected to gain experience in managing and addressing public inquiries through occasionally being assigned to be the duty officer of the day; this responsibility would lead to sometimes investigating individual cases of infectious disease and potentially even being the lead investigator for a disease outbreak, especially for an HAI outbreak.

The mentors will meet regularly with the Fellow to introduce and integrate him/her into DOCD and ensure that the environment is and remains conducive to optimal professional development. Together, the mentors will commit to working closely with the Fellow and meeting with him/her as often as needed initially to help develop the Fellow’s plan and facilitate progress on his/her primary project as well as review data and questions related to other activities. Eventually, less frequent formal meetings will be established to evaluate progress and ensure that activities are appropriate and realistic with respect to achieving the Fellow’s broader goals. The mentors and relevant staff will also be available for consultation as needed.

The primary mentor will provide broad general guidance to the Fellow including regular overall review of the Fellow’s projects and activities to help guide their direction. She will offer advice and assistance to the Fellow with respect to his/her study approach and recommended training, provide assistance with respect to professional network development, and provide advice and support regarding the Fellow’s long term career plans. As the primary mentor regularly attends the annual CSTE conference, she would be available to support the Fellow at the conference as needed.

Day-to-Day Activities

The Fellow’s primary project would be his/her main focus. In addition, depending on the fellow’s initiative, efficiency, and interest, he/she may engage in other activities (e.g. minor involvement in a major project or another smaller project or investigation). The daily schedule would include time for background research and documentation. As part of the Fellow’s project, some days may include meetings with other staff and/or with outside stakeholders. Regarding formal meeting requirements, initially the Fellow would meet with the mentors weekly to discuss and review plans, project(s)/activities status, steps for progression, etc.; gradually, as the Fellow gained more confidence and experience and demonstrated steady progress in his/her activities, the number of
formal meetings with the mentors would be expected to decrease. Other formal meetings the Fellow would be expected to attend include the HAI Advisory Committee Meeting, the HAI Steering Committee, weekly meetings of the Field Investigators, and quarterly DOCD division meetings.

**Potential Projects**

**Surveillance**  National Healthcare Safety Network Activity
The CDC’s National Healthcare Safety Network (NHSN) is the national database used by healthcare facilities to track specific HAIs. As part of routine surveillance, the fellow would assist the HAI Coordinator in performing quarterly data completion checks and in providing technical assistance to facilities when needed. The fellow would also participate in preparation of the Annual State HAI Report.

Additionally, because of a state mandate, DOCD has access to all NHSN data submitted to fulfill Centers for Medicare and Medicaid reporting requirements. These data could be used by the Fellow to develop a focused project with his/her mentors. One potential project would be to perform a Targeted Assessment for Prevention (TAP) project, which would use NHSN data to determine which facilities increase or decrease the state standardized infection ratio (SIR) for a particular HAI. The results of this analysis can be used to generate facility-specific reports and facilitate implementation of targeted interventions.

**Surveillance**  Evaluation of MRSA data submitted to MAVEN’s “how useful is it?” Evaluation
Hawaii’s electronic laboratory surveillance system for reportable infectious conditions in the state (MAVEN) includes select drug-resistant organisms, including methicillin-resistant Staphylococcus aureus (MRSA). There are insufficient resources for an investigator to follow-up on each received MRSA report. Although data are submitted from the laboratories, the potential utility of these data depend on the completeness and the quality of the data. The CSTE HAI fellow would evaluate electronic laboratory surveillance for MRSA and determine what, if any, epidemiologic conclusions or trends can be drawn from available data.

**Major Project**  Facilitating the first steps in antibiotic stewardship outside the hospital.
Emerging antibiotic resistance is a growing problem in the United States, and Hawaii is no exception. The overuse of antibiotics is one of the leading factors leading to antibiotic resistance. Working with his/her mentors, the Fellow would develop a pilot project looking at antibiotic stewardship in one of two non-acute care settings:

Outpatient clinics: studies have evaluated antibiotic prescribing attitudes and practices in clinicians to identify areas to improve judicious antibiotic use. We would be interested in looking at antibiotic prescribing and stewardship knowledge, attitudes, and perceptions in a selected sample of outpatient physician settings to evaluate whether our physicians have similar attitudes and practices.

Long term care facilities (LTCFs): alternatively, the fellow/HDOH could partner with a selected number of LTCFs to perform an assessment of antimicrobial stewardship capacity and/or antimicrobial stewardship activities within facilities.
Both projects provide beneficial information as HDOH looks to engage with LTCFs and outpatient physician settings to improve the judicious use of antibiotics. Findings of this project could be used to tailor interventions or education for outpatient practices or facilities. Additionally, the Fellow may choose in coordination with his/her mentors to expand this project more broadly throughout the state.

Additional Project: Attitudes and behaviors regarding influenza vaccine in healthcare facility employees’“trends over time
In 2013, facilities were required to report their healthcare personnel (HCP) influenza vaccination rates to NHSN for the first time, and vaccination rates in Hawaii’s facilities were lower than anticipated (overall rate 67% for the 2013/2014 influenza season). The graduating CSTE HAI fellow conducted a survey assessment that identified knowledge, attitudes, and behaviors regarding influenza vaccination in healthcare facility employees in two Hawaii acute care facilities. Questions included a query regarding their feelings on mandatory influenza vaccination. The new Fellow would repeat the survey assessment at regular intervals (potentially subtracting/adding questions as needed) to trend attitudes and perceptions with regards to influenza vaccination and mandatory vaccination policies over time.

Additional Project: Statewide Antibiogram Project
HDOH has been creating a statewide antibiogram since 2013, in collaboration with the state public health laboratory (State Laboratories Division), the major clinical laboratories, and some private hospitals. The antimicrobial susceptibility test data from each laboratory and private hospital is aggregated to create the antibiogram, in accordance with national standards. In addition to ensuring the accuracy and completeness of submitted data, the fellow will also need to look at the aggregated data for concerning findings and analyze data longitudinally from prior years through the current year to evaluate for trends over time. [http://health.hawaii.gov/docd/dib/antimicrobial-resistance/antibiogram/]

Preparedness Role
DOCD includes the Public Health Preparedness Branch, which plans preparedness exercises and often recruits participants from elsewhere in the Department as well as outside stakeholders. The CSTE Fellow would be welcome and encouraged to participate in these exercises. Times of increased surveillance (e.g., monitoring for the influenza A [H1N1] virus during the 2009 pandemic), responding to statewide disease outbreaks, or preparing the state to respond to the threat of a potential emerging pathogen (e.g., Ebola virus disease response) require assistance from everyone division-wide. At critical times such as this, the CSTE Fellow would be expected to lend his/her full support to the division.

Additional Activities
While HDOH and in particular the HAI Collaborative Coordinator have built close ties with the infection control providers in acute care hospitals, the need to understand and facilitate improvement in infection control activities in healthcare facilities beyond acute care has become increasingly evident. Alongside the Deputy State Epidemiologist and the HAI Collaborative Coordinator, the CSTE HAI fellow would assist in ongoing efforts to expand our understanding, build relationships, identify gaps or needs, and assist in facilitating the mitigation of those gaps/needs.
The Fellow would be expected to gain experience in managing and addressing public inquiries through occasionally being assigned to be the duty officer of the day; this responsibility would lead to sometimes investigating individual cases of infectious disease and potentially even being the lead investigator for a disease outbreak, especially for an HAI outbreak.

**Mentors**

| Primary | Melissa Viray, MD  
|         | Deputy State Epidemiologist; Deputy Chief, Disease Outbreak Control Division |

| Secondary | Zeshan Chisty, MPH  
|           | HAI Collaborative Coordinator |