

Epidemiology and Laboratory Capacity (ELC) Application

Abstract

Funding period: August 30, 2009 – December 31, 2011

Proposed Connecticut application budget: Personnel (97.6%): Planning: \$126,138; Surveillance: \$1,049,046; Prevention Collaboratives: \$493,703; Supplies etc. (2.4%): \$39,184; Total \$1,668,887

Planned Connecticut job creation: Seven new 24 month full-time equivalent (FTE) durational positions at the Connecticut Department of Public Health (DPH): two Health Program Associates to plan and work with hospitals, other healthcare facilities, and private sector healthcare organizations to build healthcare associated infection (HAI) prevention collaboratives, three nurse surveillance technicians to help hospitals track HAIs, and two infection prevention data validators/trainers to improve the quality of tracking and prevention programs.

Background: The aim of this funding opportunity is to build HAI programs, and in particular, it encourages building state health department infrastructure through staffing. DPH will use the Activity A (planning) resources to hire staff to build capacity to develop a state plan consistent with the federal Department of Health and Human Services plan (there is no comprehensive state plan at this time), to develop more detailed planning to ensure implementation of the state plan, and to sustain HAI prevention infrastructure and activity in the state. Activity B (surveillance) resources will permit DPH to improve and expand surveillance activities, to better train personnel in the healthcare facilities on HAI surveillance and on the National Healthcare Safety Network, and to continue and expand the detailed HAI data validation process that has been initiated in Connecticut. Activity C (prevention collaboratives) resources will build the infrastructure at the state health department to become a full partner in the prevention collaboratives in the state and to ensure they can expand in size and scope in a coordinated manner and in accordance with the state HAI plan.

Narrative

Background and Need

Current level of activity in Healthcare Associated Infection (HAI) surveillance and prevention

Connecticut has an established HAI program and is one of the “mandatory HAI reporting” states. The National Healthcare Safety Network (NHSN) is used for HAI surveillance and mandatory public HAI reporting. In Connecticut only one NHSN “event” is reported. That event is Central Line Associated Blood Stream Infections (CLABSIs) from one medical or medical-surgical intensive care unit (ICU) in each of the 30 acute care hospitals in the state and each of the three Pediatric Intensive Care Units (PICUs). These data are reported to the Connecticut Department of Public Health (DPH) via the NHSN group function. Data have been collected and reported to DPH via NHSN since January 2008 and the first report on these data to the legislature and the public was made in October 2008. The report was posted on the state health department website, and will be updated annually.

Connecticut has a statewide legislatively mandated multidisciplinary group; the Healthcare Associated Infections Committee that advises DPH on HAI surveillance and prevention activities and policy, in particular, what HAIs and locations should be made publicly reportable. According to the law that authorizes public reporting of HAIs and funds the DPH HAI program, DPH must follow the group’s recommendations.

There are two large HAI prevention collaboratives in the state: the Connecticut Hospital Association (CHA)-facilitated Johns Hopkins CUSP: Stop BSI project (a prevention project lead by Dr. Peter Pronovost that creates organizational cultural change that facilitates use of a checklist of best practices that have been demonstrated to reduce central line infections), and the Multi-drug Resistant Organism (MDRO) project facilitate by Qualidigm, the state’s Quality Improvement Organization (QIO), under the CMS 9th Scope of Work. The DPH HAI program and the Network of New England (the regional association of dialysis centers) are participating in the conference calls that are a component of the CDC-Maryland Health Department-Delmarva Foundation collaborative on prevention of HAIs in hemodialysis centers.

Necessity of creating, expanding, and sustaining an HAI surveillance and prevention program in Connecticut

While Connecticut has current capacity and activities in HAI prevention and public reporting, there is a significant need for the state to enhance and expand our work in this area. We are tracking only one measure using NHSN (CLABSIs) and there is interest in the state, and at the federal government, in having us expand to additional measures, including process measures, such as central line insertion practices and outcome measures such as MDRO and *C. difficile* rates, or, in time, data from other locations, including non-hospital facilities.

While a three-person Connecticut HAI program has been established with state funds, we are in need of additional staffing to assist in the writing and implementation of the state HAI plan. This

plan will be an overarching strategic document and will need intensive staff work to complete. Additional staff will be vital for the detailed planning with the prevention collaboratives to enhance the partnership and establish the role of public health as leaders in HAI prevention in the state and full prevention collaborative partners, ensure that the HAI surveillance activities and findings are integrated into prevention collaborative planning and training, meanwhile avoiding duplication of prevention activities and enhancing coordination among them. To date, DPH has only rarely been at the table during collaborative planning and implementation meetings: additional DPH staffing will give public health the visibility and resources needed to become full planning partners in the HAI prevention collaboratives. Without a strong presence of the state health department in planning and prevention collaboratives, HAI prevention initiatives in Connecticut cannot become as effectively coordinated with surveillance and across organizations as necessary to ensure successful reduction of HAIs across the state.

Regarding surveillance and surveillance related training, a CLABSI validation study has been completed on these data from the 4th quarter of 2008, involving blinded chart audits on all patients with a positive blood culture (determined from microbiology reports) in all reporting ICUs in the state. Over 400 charts were reviewed. During the study period DPH identified 49 CLABSIs from the reporting ICUs, while the hospitals reported 23 CLABSIs (47%) of cases were reported (see appendix). Four cases were reported as CLABSIs by the hospitals that were not classified as CLABSIs by the validation. Various misunderstandings about NHSN surveillance or term definitions were identified as the major cause of the underreporting, especially the difference between clinical and surveillance definitions of NHSN “events” such as CLABSIs. DPH recommends additional training of personnel in the hospitals (infection prevention personnel) based on the findings of the study. These trainings will be held this summer, and these data will be revalidated after the training is completed: in the 4th quarter of 2009. This project demonstrates there is a serious need for more resources and efforts in Connecticut for training hospital infection prevention staff, and in revalidating these – an extremely time consuming process that requires additional personnel in the DPH HAI program.

At HAI committee meetings and during DPH HAI assessments of hospital’s prevention program resources, it is repeatedly noted that the hospital infection prevention programs are understaffed. They need more personnel to continue vital facility surveillance and provider education activities to have the necessary time for state HAI prevention surveillance and NHSN reporting tasks. These resources could either be additional in-house or shared DPH-based surveillance staffing to help with this additional burden in addition to their multitude of other responsibilities. In Connecticut, informal Infection Preventionist (IP) staffing per bed ratio data was obtained during DPH HAI program technical assistance visits to all hospitals in May/June 2008. This preliminary data indicated a statewide average of 1 IPs per 117 beds. Given the crucial role of hospital infection prevention and control programs in public reporting and the growth in demands on their time due to mandatory HAI reporting and the new prevention collaboratives, the Connecticut HAI Committee recommended that additional resources were necessary, but due to state and hospital budget constraints, no specific funding had been forthcoming.

There are not enough hospitals and healthcare providers participating in the two main prevention collaboratives in the state: the CUSP: Stop BSI has only 1/3 of the hospitals in the state participating, and the MDRO collaborative has only five (1/6th of hospitals in the state). At

planning meetings, time and lack of resources in the facility prevention programs have been noted by hospital personnel to be a major barrier to participation of the hospital prevention program staff in prevention collaboratives and it affects their ability to advocate in their institutions for participation. If public health staff could assist the facility staff and take some of this data entry burden off them, this would free time for prevention collaborative participation. This would not duplicate the activities of the collaboratives, and would facilitate their expansion.

Accomplishments and Proven Capacity

In 2006, the Connecticut legislature passed CGS 19a-490, an act regarding HAIs. This legislation established an 11-member multidisciplinary group charged with making recommendations that DPH shall follow in order to track and prevent HAIs (see appendix for a listing of the group membership). The committee recommended that NHSN be used for HAI surveillance and that CLABSIs in one medical or medical-surgical ICU in each of the 30 acute care hospitals in the state and each of the three PICUs in the state be reported to DPH via the NSHN group function.

The legislature also allocated state funding of \$275,000 annually, sufficient to establish and maintain a three-person state HAI program at DPH and to mount an educational campaign for health providers and the public. These funds are now a permanent line item in the state budget. There are no formal agreements with HAI prevention firms. Connecticut does not have a state Association for Professionals in Infection Control and Epidemiology, Inc. (APIC) chapter, but Infection Preventionists in the state are members of the New England Chapter of APIC. Connecticut has the capacity to plan for HAI surveillance and prevention. The DPH's HAI program coordinator, a physician with over 20 years of public health experience, in HIV prevention, Family Health (CSHCN, genetics) and public health preparedness (smallpox and mass dispensing coordinator), leads the Connecticut HAI planning effort and directly supervises the DPH HAI prevention staff. These two staff persons are both epidemiologists, and one is a nurse with extensive clinical, infection control, and microbiology laboratory experience. The Connecticut HAI program is housed in the DPH Infectious Disease Section, under the leadership of Dr. Matthew Cartter, the state epidemiologist, who is also the Principal Investigator of the state Emerging Infections Program (EIP) CDC Cooperative Agreement for Connecticut.

The Connecticut multidisciplinary group met monthly or bimonthly throughout 2007. Once reporting began in January 2008, the group has become a permanent state advisory committee and meets quarterly (and more often, usually by conference call, as necessary). The Committee established a strategic planning group in January 2009 to work intensively in partnership with DPH on the state HAI plan. The initial focus of this planning has been on which data elements should be added to the one measure and location that are currently reported in Connecticut; however, the mandate of the group has expanded to assist DPH and the Committee in the development of a comprehensive state plan consistent with the federal (DHHS) plan. The DPH HAI Coordinator facilitates this group. The Committee has already begun to prioritize and determine which National Target metrics to expand to, leading candidates are the central line insertion practices metric which is the process measure that relates to the currently tracked metric in Connecticut (CLABSIs), and the subject of one of the two statewide HAI prevention collaborative in the state: the Johns Hopkins CUSP: Stop BSI project. Another under

consideration is MRSA, which, as noted earlier, is the subject of a prevention collaborative in the state under the CMS 9th Scope of Work, or c. difficile, for which there is a NHSN module. We already have data for the CLABSIs target and with the NHSN can readily build on this by adding events to develop baseline data for additional prevention targets. The approach we will take is to build on current activities, including surveillance (bolstered by any EIP HAI ARRA funds we receive), and our prevention collaborative to link our NHSN-based HAI surveillance and reporting systems to prevention activities, the success of which can be evaluated by ongoing surveillance.

As an EIP site, Connecticut is actively involved in MRSA surveillance through the Active Bacterial Core Surveillance (ABCs) program and was a co-author in the landmark EIP study on community-associated MRSA in JAMA in 2007. Our EIP participation means that we can enhance surveillance and improve the impact of focused prevention collaboratives if our base HAI program is functioning fully enough to take advantage of this capacity.

In addition, the Epidemic Intelligence Officer at DPH has recently completed a validation study of VRE data reported from ICUs in Connecticut hospital. She lead a team of eight master's level nursing students in a chart audit involving all 30 of the hospitals in the stat to determine the cause of a recent increase in Vancomycin Resistant Enterococcus (VRE) reports, this study indicates that the increase was a real finding and not a reporting artifact.

The Connecticut DPH was one of the earliest, and is still one of the most active and innovative state health department TRAIN partners. TRAIN, the public health learning management system (LMS) created and managed by the Public Health Foundation, is the premier public health LMS in the country. It gives DPH the capacity to easily store training data on staff and facilitates management and reporting on staff training. Though most hospital staffs do not use TRAIN actively, the system is capable of loading and storing data on non-TRAIN registrants collected via other means and "batch" loaded into the system, permitting management and documentation of the HAI program-sponsored trainings of hospital staff and other health providers.

Over the past year, Connecticut DPH staff has been regular participants on monthly Centers for Disease Control and Prevention Division of Healthcare Quality Promotion (CDC DHQP)-lead NHSN state conference calls, and on the Council of Sate and Territorial Epidemiologists (CSTE) HAI committee that also has monthly calls. This will continue. In addition, DPH has been regularly using and posting materials in the state user section of the NHSN Web board. This will also continue, and will include the posting of the validation study protocol and results, and the 2009 Annual report, by November 1, 2009, and the state HAI plan by January 1, 2010.

Having ongoing state funding and actively engaged prevention partners will help make our ARRA-funded activities sustainable. ARRA will allow us to build capacity off of a reasonable baseline in our state. We will not be building from scratch. Planning (Activity A) is sustainable because the state HAI coordinator is state funded, B because we are using NHSN and our infection control and data staff at DPH are state funded, as well. "C" activity is sustainable because it is funded by CMS (the MRSO collaborative) and by a foundation grant (Johns Hopkins CUSP: Stop BSI). In addition, the QIO and CHA staffs are permanent. In addition to

other functions, the aim of the ARRA planning will also be to develop sustainability planning, as will be described in the next sections of this application.

Connecticut state government is committed to economic revitalization, and is vigorously seeking and managing ARRA funds. The Governor has established a cabinet-level task force that meets biweekly to ensure that funds are rapidly allocated and disbursed and that all federal requirements for accountability and transparency and other guidelines are met. This includes expedited hiring and recruitment. The work plan of this application has been designed to increase the speed of allocation. By using 2-year durational positions and flagging the personnel action forms (PAFs) as ARRA funded positions, we will be able to hire despite the general state hiring freeze and will receive expedited processing. Contractual funds are minimal in this application; the focus is on workforce development and capacity building of sustainable infrastructure of professionals, rather than use of contractors. For those funds that will be contracted to our prevention collaborative leader agencies, the state budget office will permit expediting funds through a special accounting tracking code in our state administrative management software.

Project Work Plan

Activity A: Coordination and Reporting of State HAI Prevention Efforts

Description of objectives and activities

First year

Objective A1: Establish a state HAI coordinator.

As noted earlier, the state HAI coordinator, who is the HAI program and planning coordinator, has already been hired. He began work in February 2008. The position will continue to be maintained with state funds. This position is at the Connecticut DPH.

Objective A2: Convene a state multi-disciplinary HAI group to guide HAI surveillance and prevention activities throughout the state.

As described in the prior section, the state multidisciplinary group, the Connecticut HAI Committee, convened in 2007 by legislative action, will continue throughout the project period.

Objective A3: The state HAI plan will be drafted and submitted to DHHS by 1/1/10.

1. Activity: Convening HAI committee strategic planning group. This has also been accomplished. The group is composed of HAI committee members and other interested persons, it is open to anyone who would like to participate. It has representatives from hospitals (infection preventionists and hospital epidemiologists), DPH, the state QIO, the hospital associations, dialysis center networks, and consumers).

2. Activity: HAI committee strategic planning group work plan – the work plan has been developed and the following activities are the key steps in the work plan.
 - a. Activity: Choosing key one and five year metrics and activity in the plan – the strategic planning group is committee to planning for the state in accordance with the DHHS plan, and the seven metrics in that plan (with the understanding that they may be later amended by DHHS) over a five-year planning cycle (1/1/2010 – 1/1/2015). The group will choose at least two metrics from the National Targets for the first year (one will be the measure we are already reporting: CLABSIs in an ICU in each acute care hospital). The plan will also include a process for adding metrics to achieve the goal of full reporting on all seven metrics by the end of the 5-year planning cycle.
 - b. Activity: Plan elements in addition to the metrics - other elements in the template beyond the metrics, such as planning for outbreak management, public information and reporting, non-hospital setting surveillance and prevention collaboratives, and data system interoperability (e.g., electronic messaging to NHSN) will also be incorporated into the plan. The strategic planning group also will consider other metrics, such as staff and patient vaccine rates as well.
 - c. Activity: Drafting process – decisions on metrics and a draft will be completed and submitted to the full planning group for its August meeting, and a final draft will be submitted to the DPH Commissioner in October for review. This will permit submission of the plan to DHHS in December 2009, in accordance with federal Omnibus 2009 funding requirements and as certified by DPH in our renewal application for the DHHS Public Health Prevention Block grant.

Plan dissemination. All HAI Committee and Strategic Planning Group meetings are public and all agendas and draft and final minutes are posted on the DPH HAI website. This ensures a transparent planning process with wide input from planning partners and the public. The final plan will be announced through a press release and posted on the DPH website. In addition, DPH will send a letter announcing the plan to key leaders in the healthcare systems in the state (such as hospital CEOs, medical and nursing associations, etc.) and other stakeholders, when it is completed and posted.

Second year

The second year activities will consist of revisions of the state plan to incorporate DHHS review commentary and requests for revision, and any changes in the federal plan. It will also incorporate any needed changes based on continuing state-level assessments, program evaluation, and planning. Finally, the HAI program, enabled by the hiring of ARRA-funded planning staff, will develop detailed action plans needed to implement the broad outline of the state plan into specific implementation action plans. Our experience with public health preparedness, and advice from our DPH Planning Branch colleagues, reinforces the critical need for this “second tier” or “tactical” (planning to ensure the state strategic plan is actually carried out). Planning will include the implementation and monthly reporting on the state’s metrics, which will also be included in the quarterly reporting data submitted to DHHS/CDC. One of the detailed action plans that will be developed is the plan for reporting on ARRA activities.

Connecticut DPH is very well positioned to do this because we are using ARRA funds for two ¼ FTE planners, what will be partially used to assure rapid and complete ARRA evaluations, and reporting both to the Governor's Task force (a major resource to DPH on ARRA information and compliance technical assistance), the Connecticut state government's Office of Policy and Management (the OMB equivalent), and the HAI Committee, who also want to be kept apprised of DPH's ARRA HAI activities, and the public (Connecticut, like most states, has an ARRA website).

Description of Activity A staffing

The state funded HAI staff consist of Richard Melchreit, the Coordinator, who is responsible for planning and will continue to facilitate the HAI committee and Strategic Planning Work Group, assisted by the two new ARRA-funded planning staff. He is the overall supervisor of all state-funded and the new ARRA staff. The other two state-funded HAI staff persons (Lauren Backman and Richard Rodriguez) participate actively in planning meetings as subject matter experts in infection control and data management/NHSN reporting. The experience and qualifications of the staff are described under the capacity section of this narrative and in the CVs.

DPH will hire two new Connecticut Career Trainees (CCTs) with ARRA funds for 24 months during this budget period. The CCTs are an excellent pool of staff to hire from the civil service recruitment lists. Hiring ARRA staff from the civil service list ensures transparency and equity in hiring, and the candidates are from an excellent pool of recent graduates, professionals changing careers, and persons with experience that have been laid off in this difficult economy. Each of these two new staff will both be assigned ¼ of their time (for a total of ½ FTE) to spend on planning activities to assist the state HAI coordinator, and to assist DPH in compliance with the additional workload posed by ARRA reporting requirements (the remainder of their time will be allocated to activity C). For Activity A, they shall:

1. Prepare ARRA program and fiscal reports: gather data, write, participate in ARRA planning and reporting meetings (mainly at DPH).
2. Assist in writing revisions of state plan based on DHHS feedback.
3. Arrange and help administer HAI Committee meetings, subgroups.
4. Assist the DPH HAI coordinator in expanding the membership of the HAI Committee (this may involve establishing and staff additional subcommittees) to include long term care facilities, dialysis centers, and possibly surgical and colonoscopy centers, among other non-hospital care facilities.
5. Handle meeting logistics (announcements, procuring venues, preparing handouts, etc.).
6. Work with health systems (hospitals, hospital groups, etc.) on coordination plans and planning for infection program infrastructure building in healthcare facilities, consistent with state plan.
7. Engage in sustainability planning for all three activities (A, B, C) finding potential funding streams, and initiatives in both the private and public sectors. We will consider a yearly assessment and report of infection prevention resources in hospitals, a project that New York State has been doing, to disseminate information and advocate for resources to increase

staffing which is a key factor to sustain these surveillance and data collection activities on the front line. This could have the benefit of facilitating increased use of NHSN.

8. Planning for expansion to the DHHS matrix of national targets – research, document white paper preparation, and related tasks.

This ARRA-funded staffing will greatly expand DPH’s ability to complete detailed planning with our partners and to implement a comprehensive, statewide and expanded HAI plan, making public health a full partner with the medical system and using public health’s strengths in planning to better coordinate the current responses to HAIs.

Activity B (Surveillance) – Activity B work will support current NHSN activities in Connecticut, ensure that new Infection Prevention staff is quickly oriented and trained, and that new NHSN reporting requirements are quickly implemented by current reporters.

First year objectives and activities:

Objective B1: By August 30, 2010, define which facilities will report HAI data to NHSN and the type of HAI data to be reported.

The first metric will continue as before: all 30 acute care hospitals in the state will continue to report CLABSIs in one medical or medical surgical ICU and any PICU at the facility to DPH using NHSN. The second of the two metrics to be reported and the types of healthcare facilities and NHSN locations will be specified in the initial state plan that will be completed by 1/1/2010. A surveillance plan will be written and made a section or addendum to the HAI plan. The planning process, already begun, as described earlier, will engage partners through the HAI committee to define types of reporting facilities (hospitals, long term care, etc.) and events to be reported, reflect prevention activities in activity C, reflect priorities of DPH and partners as described earlier under the section A narrative (with a focus on acute care facilities initially), and clearly articulate how activities will be sustained after ARRA funding is completed (i.e., use of state-funded staff and NHSN plus the use of any additional resources identified by planning and collaboration on this project).

Objective B2: By August 30, 2010, demonstrate that over 95% of facilities have been successfully enrolled; staff trained, and have reported at least one month of NHSN data.

This objective has already been completed for the first metric (CLABSIs); this objective will apply to the second metric. Staff at all 30 acute care hospitals has been trained on NHSN and all are reporting CLABSIs monthly to DPH, 95% or more on time (within four weeks of the end of the month, as required by NHSN). Current and new hospital staff has or will develop the necessary expertise in infection control and NHSN for facility enrollment, recruiting, user training, and group user functionality in NHSN.

The hospitals are updating DPH on all staff changes and these new staff are oriented by DPH HAI staff and trained, using CDC NHSN training materials (available on the DHQP website) supplemented by DPH technical assistance materials specific to Connecticut. This includes the Connecticut NHSN manual that specific exactly how to enroll in the DPH Group (permitting

sharing of data with DPH). The DPH NHSN data manager has a written protocol to assess submitted data each month. He contacts each facility that has not entered data within two weeks after the NHSN due date for monthly reports and reminds them, but does not have time to assist them submit the data in situations where there is a break in staffing or overwhelming other priorities. He is continually available by phone or email for technical assistance and is in contact with one or more facilities daily.

Objective B3: By December 31, 2010, 90% of hospital infection preventionists, will have completed training on surveillance challenges identified by the 2009 validation study and will have successfully classified test cases as meeting the NHSN definition or not.

The recent validation study (chart audits on all ICU positive Blood Cultures in the last quarter of 2008) revealed that either they have significant difficulty with understanding or applying the surveillance definitions – this will be addressed through special full-day mandatory training sessions during the summer of 2009. Feedback sheets from participants will be used and performance of training participants in test cases developed to address difficulties in case identification uncovered by the validation study will be used for evaluation. DPH technical assistance ensures that all technical aspects of NHSN (enrollment and data entry issues) are addressed. DPH HAI staff promotes NHSN update and reporting including query resolution of obstacles, technical issues, in collaboration with CDC staff on a daily basis when mentoring and advising NHSN reporters.

Objective B4: By August 30, 2010, have Connecticut DPH staff participate in at least 95% of monthly CDC NHSN conference calls.

Over the past year, Connecticut DPH staff has been regular participants on the calls. This will continue. In addition, DPH has been regularly using and posting materials in the state user section of the NHSN Web board. This also will continue, and will include the posting of the validation study protocol and results, and the 2009 Annual report, by November 1, 2009, and the state HAI plan by 1/1/2010. The new DPH staff hired under this ARRA funding will be encouraged to participate on these calls, both to enhance CDC-DPH collaboration, but also as a workforce development activity to build the capacity, experience, and skills of these staff persons.

Objective B5: Within six months of the distribution of a production NHSN-electronic messaging capability (to allow hospital IT staff to automatically load data into NHSN) assess the capability and interest of the 30 hospitals in Connecticut to participate in the electronic reporting to NHSN.

Until the proposed NHSN electronic messaging system is operational, Connecticut cannot accurately determine the key requirements of the system. When this is available, the DPH NHSN data manager will assess hospital capability and interest in using the system. We will communicate the CDC objective that 10% (in Connecticut, three hospitals) participate. The survey will be performed via conference call and or a Survey Monkey survey instrument. DPH will prepare a report on the finding and make recommendations for next steps based on the survey findings.

Second year objectives and activities:

Objective B6: By August 30, 2011, 95% of hospitals will continue to report data on both the required metrics monthly and on time (within four weeks of the end of the reporting month).

Objective B7: By August 30, 2011, complete a second validation study of the CLABSI data (a validation after the 2009 training, the content of which will be based on the findings of the 2009 validation study. This will involve repeating the study, methodology of the 2009 study for all acute care hospitals reporting CLABSIs for one ICU during the last quarter of 2009 (10/1-12/31). The study will be completed by the validators hired with these ARRA funds and will determine the effectiveness of the training and the reliability of the new data, which will affect future plans and public reporting.

Objective B8: By November 1, 2011, make the third annual report to the legislature and the public, pursuant to the Connecticut state HAI law, and include the new metric data in the report.

Object B9: By December 31, 2011, to have three hospitals using the NHSN electronic data entry capability.

Assuming that Connecticut can enroll three hospitals in the project by August 2010, DPH will offer technical assistance (in collaboration with CDC) to those hospitals to assist their IT staff configure the se and create messages that care compatible with NHSN to permit direct data entry into NHSN.

Description of Activity B staffing

Current

Lauren Backman, a member of the DPH HAI program staff, an epidemiologist and nurse with infection control and hospital microbiology experience, will supervise and train the ARRA staff assigned to validation and surveillance duties. Richard Rodriguez, MPH, the DPH HAI data manager, will train and give all the surveillance staff training and technical assistance on data entry, management, and if appropriate, analysis.

New

For Activity B, DPH will hire three full-time durational project “mangers” as regional surveillance technicians, usually Licensed Practical Nurses (a model successfully employed at Yale-New Haven Hospital, a best practice) to assist hospital infection prevention staff in reporting HAIs through NHSN, while getting on the job experience, performing the following surveillance and technical assistance duties:

- Assisting healthcare infection prevention staff with data entry if needed to meet NHSN data entry deadlines
- Offering on-site technical assistance on data entry into NHSN

- Assisting the DPH NHSN data manager to continue to maintain full reporting of DPH required data via NHSN to the DPH group (technical assistance, follow-up of late reporters, analysis of data compliance, training of new facility staff in use of NHSN)

These staff persons will be housed at DPH but will spend much of their time in the field, working with hospital staff at the facilities. Each surveillance technician will be assigned a group of hospitals (approximately 10 each, to cover all 30 acute care hospitals in the state) in a geographical area.

With ARRA funding, DPH will hire two full-time durational project “managers” to be HAI program data validators for NHSN. These new staff will be trained and supervised by Lauren Backman, the DPH staff person that has developed and implemented Connecticut’s HAI data validation project. They will continue the CLABSI validation project through additional cycles of facility staff training informed by the current validation study data and continuous revalidation of CLABSI data and of the additional National Target data in Connecticut. They will educate and offer technical assistance to healthcare infection prevention staff on NHSN surveillance protocols and definitions.

1. Validation activities will include:

- Assisting in development and revision of data validation protocols for CLABSIs and/or other metrics
- Using standardized protocols, obtain data, including charts at hospitals
- Determining whether the reporting is accurate and complete
- Offering technical assistance to hospital infection prevention staff on more complex cases and questions about NHSN criteria and case reporting than those addressed by the surveillance technicians.

2. Training and technical assistance duties will include:

- Preparing training curricula, materials, handouts about the results of the validation study and its implications for the HAI surveillance using NHSN
- Arranging for and delivering training sessions for healthcare facility staff and others (including publicity, scheduling and other logistics)
- Answering questions about NHSN and HAIs for healthcare professionals staff and others
- Developing and reviewing training evaluation instruments and data (e.g., pre and post test quizzes, “happiness sheets”)
- Revising training based on training evaluation data

3. Addition duties will include:

- Assisting in setting up and offering technical assistance to any facilities or staff that need to be brought into the HAI reporting program due to program “event” expansion to report state baseline and ongoing data for two or more DHHS Prevention Targets in collaboration with CDC staff (first priority will be the CLIP, MDRO modules used by hospitals, either voluntary or required)

- Assisting DPH HAI staff in working with facilities to enable electronic reporting of laboratory data (micro results) to NHSN, with the intent of putting at least three facilities (10% of the 30 in the state) online by December 2011

Activity C (Prevention Collaboratives) – ensure the inclusion of public health and expansion of memberships among acute care hospitals aimed to make progress on national targets, preferably using NHSN (or should be consistent with NHNS definitions and methods). The additional staff through this ARRA funding initiative that will be available to the collaboratives can participate and be of assistance in several ways: arrange and help administer collaborative meetings; communicate electronically through email and listserves and other techniques, assist in expanding the membership of the HAI Committee with relevant subject matter experts from public health, epidemiology, workforce development, and academic partners; arrange meeting logistics and perform member services (recruit and retain state Committee members for vacancies and to expand participation beyond hospitals); address concerns and issues; work with health systems (hospitals, hospital groups, etc.) on coordination plans and planning for infection program infrastructure building in healthcare facilities, consistent with state plan; and assist in writing revisions of state plan based on prevention collaborative feedback.

First year

Objective C1: By August 30, 2010, to assist the CUSP: Stop BSI prevention collaborative to increase the number of participating hospitals in Connecticut from 13 (43%) to 20 (67%).

One of the two DPH ARRA-funded collaborative planners will be assigned to this collaborative, and will spend $\frac{3}{4}$ FTE on collaborative activity (this objective plus the dialysis center collaborative objective C3). DPH will partner with CHA, the organization facilitating the project, to develop an assessment tool (using as a template the CDC checklist for a strong collaborative (available on the DHQP website, and process to determine the not only details about barriers to participation but information that can lead to strategies to increase participation. Such strategies can include a variety of activities possible with active public health participation in the collaborative, such as the DPH Commissioner directly promoting participation to hospital CEOs and HAI staff promoting the project through the organizations they represent to CEOs and other key staff, and using DPH HAI staff (prevention collaboration and surveillance staff as “salespersons” for the collaborative at “teachable moments” during planning and surveillance activities where they are interacting with hospitals staff and leadership).

Objective C2: By August 30, 2010, increase the number of participating hospitals in the Qualidigm-facilitated MDRO prevention collaborative from five to ten hospitals.

The second of the DPH ARRA-funded collaborative planners will be assigned to this collaborative and will spend $\frac{3}{4}$ FTE on collaborative activity (on this objective plus the resource center/non-hospital collaborative objective C4) and will actively participate in collaborative meetings and activities in ways similar to the DPH participation in promoting the CUSP: Stop BSI collaborative. As a CMS 9th Scope of Work collaborative, the Connecticut MRDRO collaborative uses the MDRO module on NHSN to measure success. Therefore DPH’s activities

promoting the collaborative and increasing enrollment in it will increase use of this NHSN module.

Objective C3: By August 30, 2010, representatives from the New England Network and DPH HAI program will have participated in 80% of Delmarva Foundation sponsored dialysis collaborative conference calls and training opportunities.

Collaboration between DPH and the dialysis center community has just begun, and no collaborative in the region focused on HAIs specific has begun. Therefore, this important objective will aim to start a partnership rather than specify particular collaborative action objectives. However, participation of both public health and the clinical community in the Delmarva collaborative and its training component offers an opportunity to build relationships and will be an excellent basis for state planning in the future.

Objective C4: By August 30, 2010, create and post a report of registry of other collaboratives (e.g., intra-hospital network collaboratives, collaboratives with non-hospital providers such as long term care facilities) in the state, and establish a resource center for local facility and care networks.

The aim of this objective is to use the additional capacity afforded by ARRA-funded staff to promote discovery and inventory additional smaller collaborations among facilities and networks, and to make healthcare facilities aware of and have easy access to resources through the DPH HAI website to resources they can use to establish, expand, or improve their local prevention collaboratives.

Second year

Objective C5: By December 31, 2011, to assist the CUSP: Stop BSI prevention collaborative to increase the number of participating hospitals in Connecticut from 20 (67%) to 27 (90%). This will be the logical next step toward full participation by hospitals if the first year objective is met.

Objective C6: By December 31, 2011, increase the number of participating hospitals in the Qualidigm-lead MDRO prevention collaborative in Connecticut from ten (30%) to 20 (60%).

This will be the logical next step toward full participation by hospitals if the first year objective is met.

Objective C7: By December 31, 2011, representatives from the New England Network and DPH HAI program will have participated in 80% of Delmarva Foundation sponsored dialysis collaborative conference calls and training opportunities.

This objective will be reassessed after the first year, and may be revised to include a specific planning objective, such as establishment of a state collaborative.

Objective C8: By December 31, 2011, to promote collaborations by delivering a workshop for healthcare facility-based planners and infection preventionists on the establishment of local collaboratives, and how to effectively link these to state or national resources.

This project (and the resource) center will be aimed at facility types and HAIs that are not involved in the current statewide MDRO and CLABSI collaboratives (e.g., facilities such as long term care or surgical centers; HAIs such as surgical site infection; or interventions, such as promotion of influenza vaccination or handwashing).

Description of Activity C staffing

Current staff

Richard Melchreit, the HAIP program coordinator, will directly supervise the two durational project managers working with prevention collaboratives. He will attend prevention collaborative meetings regularly and will ensure the DPH durational project managers have clearly identified state health department support to ensure they have credibility in the eyes of senior staff in the healthcare organizations across the state.

New staff

1. The durational project managers will focus on coordination, planning, and policy, especially with the CHA and Qualidigm collaborations. They will ensure and assist in the full representation and active participation of stakeholders specified in the FOA, including DPH in collaborative advisory groups.
2. 1/5 FTE of the time of each of the two data validators (4/5 FTE of each will be devoted to Activity B) will be used on work particularly relevant to the consortia. They will be validating outcome (metric) data that will be used to evaluate the consortia. They will also engage in training and sharing information with consortia steering committees and stakeholders in consortia on validation study results.

Staffing (DPH staff working directly or collaborating on HAI program ELC activities)

The current staff involved in this project includes the following:

1. Matthew Cartter, MD, MPH Principal Investigator for the Connecticut ELC site, and Connecticut State Epidemiologist. It is expected Dr. Cartter will be appointed as the DPH Infectious Disease Section Chief, but this appointment has been put on hold due to a freeze in state hirings and promotions.
2. Richard Melchreit, MD HAI Program Coordinator. The HAI program is in the ID Section and he will report to Dr. Cartter when the ID Section Chief position is filled. In the meantime, he directly reports to Lisa Davis, RN Public Health Intervention Program Branch (Bureau) Chief. Dr. Melchreit is a pediatrician with 22 years of experience in the state public health department. He has worked in HIV prevention, Family Health (CSHCN, genetics) and

public health preparedness (smallpox and mass dispensing coordinator), leads the Connecticut HAI planning effort, and directly supervises the DPH HAI prevention staff.

3. Lauren Backman, RN, MHS Epidemiologist 3, Healthcare Associated Infections Program. Ms. Backman is experienced in infection control; she has been a hospital infection control coordinator, microbiologist, clinical-surgical nurse in Connecticut hospitals, and an epidemiologist in the state health department. At DPH she has worked in HIV/AIDS prevention and with community health centers. She will collaborate with infection control practitioners, hospital epidemiologists, and staff on the interpretation of Connecticut NHSN data and on interventions.
4. Richard Rodriguez, MPH Epidemiologist 2, Healthcare Associated Infections Program. Mr. Rodriguez is the person primarily responsible for reviewing the NHSN data, preparing it for analysis, analyzing these data, and preparing reports for the HAIP program, HAI prevention partners, and the public. He is the primary contact for the facilities reporting data through NHSN to DPH and assists them in collaboration with CDC, on technical aspects related to data entry and use of NHSN. He also offers training and technical assistance to the health facility staff on proper NHSN data entry and on data analysis and interpretation.
5. Susan Petit, MPH, Active Bacterial Core Surveillance Project Coordinator, Infectious Disease Section. Ms. Petit manages the Connecticut Active Bacterial Core Surveillance (ABCs) project, which includes MRSA surveillance, and collaborates with the Connecticut HAI program on certain MDRO activities, such as MRSA and other MDRO-related information and training projects; she is a resource to the HAI program on MRSA data.

The curricula vitae (CVs) of certain of the key HAI surveillance and prevention staff are included in the appendix.

Limitations on implementation of the HAIP in Connecticut

There are several limitations on the HAI Program in Connecticut. One limitation is the workload and resources of the hospital infection prevention programs. In the recent economic downturn several hospitals have experienced revenue shortages, one is in bankruptcy, and several have needed to reduce staff, including layoffs. Though the HAI Program does not yet work extensively with long-term care facilities, which have even greater resource problems. In this economic climate it is very hard to successfully increase the funding for the infection prevention programs within the facility's budget. This is why funding for surveillance technicians to help with surveillance and NHSN data entry the facilities plays such a large part in the application.

Another large obstacle is the difficulty in validating these data, even the simplest outcome metric to validate, CLABSIs proves to be very labor-intensive if the most reliable method, chart audits of patients with positive blood culture during the study period. Hospital infection prevention staff raises understandable concerns about reporting of data by specific hospital without having validated data to ensure that each hospital is using correct interpretation and methods of reporting, so that these data are accurate and comparisons are reasonable. This is why data validation plays such a large part in the application for funding.

The NHSN security certification process and other logistical requirements (e.g., procedures for signing up for groups and the like) is often a barrier for the hospital's infection prevention staff, which can affect their ability to begin and continue to report in a timely manner.

Time and traffic make travel to statewide HAI Committee and prevention collaborative meetings difficult. DPH has been using conference calling and will use WebEx technology to the extent possible to remove this barrier, but some face-to-face meetings are still necessary for relationship building, and fuller dialog. Lack of federal and state support for food for participants for these long meetings, often held first thing in the day or over the lunch hour, is also a barrier.

The nursing shortage, and especially the lack of applications for infection preventionist jobs in the facilities and through the state civil service list has been a problem. This is one of the reasons why the DPH HAI program and Workforce Development Section have developed active partnerships with academic institutions, such as the University of Hartford School of Nursing in the recently completed VRE validation study, to foster interest among these nursing students in careers in infection prevention. Infection preventionists state that the chronic work overload in the field is a disincentive to recruitment, so access to more surveillance resources such as surveillance technicians is a step to address this problem.

Reports

1. Connecticut Healthcare Associated Infection Annual report

In accordance with state law, the DPH HAI program submits an annual report to the state legislature that details data required under the state mandatory HAI reporting law. There are three audiences for this report: state legislators (in particular the Public Health Committee), the media, and the general public. The law specifies that the report should be for the legislature and the public, and this report is posted on the state website as required under the law. The report has an executive summary, background information on HAIs and the program, and tables of reported data that have been submitted to DPH via NHSN with analysis and interpretation by DPH HAI program staff.

2. Connecticut HAI website

The aim of the website is to be an educational resource for the general public and for health professionals. The format, complexity of material, and reading level is targeted in different sections of the website for these two audiences. The website is also a location where interested person may access updated information on the deliberations and recommendations of the state HAI Committee, including reports on data in HAI Committee meeting minutes, and where they can get easy access to other authoritative resources, such as CDC's DHQP.

3. NHSN State of Connecticut HAIP folder

The Connecticut HAI program is committed to posting technical assistance materials and reports, including worthwhile documents developed in the course of business, such as the protocol and

the upcoming reports from the recently completed data validation study on the website to make them accessible and useful for our colleagues in the other state HAI programs.

4. Report of a yearly assessment and report of infection prevention resources in hospitals (under consideration)

The report would be posted on the DPH HAI website. The audience would be diverse: infection preventionists, hospital and healthcare facility administrators, third party payors, legislators, and patient safety advocates.

5. Report of registry of other collaboratives

This would be posted on the DPH HAI website. The target audience would be healthcare facility planners, and infection prevention staff.

Web-based Tools

We do not anticipate developing any web-based tools.

Alternative surveillance system if NHSN is not used

Connecticut uses NHSN and will not be developing an alternative surveillance system, unless we decide to use data directly from the CMS Hospital Compare website for the SCIP metric (National Target no. 7), or if the NHSN Committee recommends that Connecticut track central line insertion practices (National Target no. 2) and that DPH not use the NHSN Central Line Insertion Practices (CLIP) module (there has been extensive discussion on this in Committee, and when a decision is made, either recommendation is possible). If CLIP is not used, then DPH will need to develop an alternative. This will likely be a simple EXCEL spreadsheet that would be submitted either monthly or quarterly, and would permit using a “blended” method of reporting this metric (e.g., offering the alternative of using CLIP or a spreadsheet that will include the five Institute for Healthcare Improvement central line insertion practice parameters (the “Bundle”).

Avoiding federal funding duplication

The greatest danger of duplication would be to have the EIP project operate separately from the MDRO prevention collaborative that Qualidigm is managing for CMS. The CUSP: Stop BSI project in Connecticut is supported with foundation funds. This will be avoided because DPH is developing an actively collaborative relationship with Qualidigm and is hiring ARRA staff under the ELC cooperative agreement supplement that will ensure we have DPH staff at all collaborative planning activities. By participating actively throughout the planning, implementing, and evaluation cycles of the collaborative, we will ensure the EIP activities will be complementary and responsive to the needs of the collaborative for enhanced surveillance data to improve, and not duplicate the data gathering and collaborative’s evaluation activities.

Sustainability planning

Description of sustainability plan: The major task of the planners hired under the ELC ARRA supplement will be to engage experts, stakeholders and possible funders, and other subject matter experts, such as the DPH Workforce Development Section and its workforce planning partners, including the state Department of Labor, Department of Higher Education, academia institutions, and insurers, CHA/Qualidigm, APIC, Insurers, health systems (i.e., corporations that are networks of health providers and facilities), patient and patient safety advocates, the Connecticut Business and Industry Association, and Unions. The state HAI Committee will come up with a profile of staffing needs in HAI prevention. We will build infection control into workforce tracking, find funding streams, and disseminate information to perspective employment applications, on internships, mentorships, and paid positions (jobs).

The addition of staff to an established and active program is an excellent opportunity to provide training and mentoring and give new staff experience in the field. These new staff will be in a good position to seek long term careers in HAI prevention and build greater long term capacity in the public health and medical systems for HAI prevention: a marriage of the twin goals of ARRA: creating jobs while reducing HAIs. DPH HAIP is state funded and will continue to monitor and advocate for the activities initiated under ARRA

Performance Measures and Evaluation Plan

The EIP HAI staff will be responsible for preparing the reports and for ensuring they are submitted to CDC by the 10th day after the end of the reporting quarter. These quarterly reports will be reviewed with senior HAI program and Infection Disease Section staff, and will be used as a management tool for supervision of EIP HAI staff.

1. ARRA reporting

- a. Fiscal data on expenditures (which are mostly for DPH personnel) are generated by the State Comptroller and will be accessed from CoreCT, the state MIS
- b. Estimate of number of jobs created or retained – for this project it will be simple to count, and can be documented via CoreCT.
- c. Fiscal data on expenditures for travel and supplies are also generated by CoreCT and can be accessed by DPH staff directly, and if necessary, with assistance from the DPH Business Office staff
- d. Program reports on activities – staff will be asked to maintain a transcript of training on TRAINConnecticut, the DPH learning management system. TRAINConnecticut can retain training records both on trainings accessed through TRAIN and on trainings not accessed through TRAIN.
- e. Documentation of program outputs – these will be accessible and archived by posting them on the DPH HAI website, the CDC webboard.
- f. Logs kept by HAI staff will maintain documentation of program staff collaborative activity.
- g. Sub-awards – there are only two small budget items in this application for subcontractors (the two prevention collaborative facilitators). These funds can be quickly (within 2-3 months) amended to previously executed contracts.

2. Performance Measures

- a. ELC outputs
 - i. DPH business office staff can prepare any necessary certificates or evidence required by CDC regarding the hiring of the state HAI coordinator
 - ii. The DPH HAI plan and EIP administrative staff at DPH will submit a copy of the final state HAI plan to CDC in the format required
 - iii. The DPH HAI staff will fill out collaborative key attribute checklist forms on the two state prevention collaboratives and will submit a copy of the final state HAI plan to CDC in the format required
- b. Outcomes
 - i. DPH will track and CDC already has access to the number of hospitals that adopt the CLIP module, when, as expected National Target No. 2 (central line insertion practices) is adopted in the state HAI plan and reporting framework as the next mandatory reporting metric for all 30 hospitals in the state.
 - ii. DPH and CDC will track the CLABSI rates using NSHN (already a component of the Connecticut HAI program activity).

PROJECT TIMELINE

Activity A			
Objective	Description	Person responsible	Due
A1	Establish a state HAI coordinator	Richard Melchreit	Done
A2	Convene a state multi-disciplinary HAI group	Richard Melchreit	Done
A3	Draft and submit the state HAI plan	Richard Melchreit (with ARRA planners)	1/1/10
A4	Prepare and publish the DHHS approved state HAI plan	Richard Melchreit (with ARRA planners)	12/31/11
Activity B			
Objective	Description	Person responsible	Due
B1	HAI data to be reported via NHSN (facilities, type of data)	Richard Melchreit (with ARRA planners)	8/30/10
B2	>95% of facilities have enrolled; reporting NHSN data	Richard Rodriguez	August 30, 2010
B3	90% of hospital infection preventionists complete training on the 2009 validation study and successfully classify NHSN test cases	Lauren Backman	12/31/2010
B4	DPH HAI are on at least 95% of monthly CDC NHSN conference calls.	Richard Melchreit	8/30/2010
B 5	Assess the capability and interest of Connecticut hospitals to participate in NHSN electronic messaging	Richard Rodriguez	Within six months of the distribution of a production NHSN-electronic messaging capability
B6	95% of hospitals will continue to report data on both the required metrics monthly and on time	Richard Rodriguez	8/30/11
B7	Complete a second validation study of the CLABSI data	Lauren Backman	8/30/11
B8	Publish third annual state HAI report to the legislature and the public	Richard Melchreit	11/1/11
B9	Three hospitals using the NHSN electronic data entry capability	Richard Rodriguez	12//31/11

Activity C			
Objective	Description	Person	Due
C1	Increase the number of CUSP: Stop BSI prevention collaborative participating hospitals from 13 (43%) to 20 (67%)	ARRA-funded collaborative planner	8/30/10
C2	Increase the number of MDRO prevention collaborative participating hospitals from five to ten	ARRA-funded collaborative planner	8/30/10
C3	New England Network and DPH participate in 80% of Delmarva Foundation sponsored dialysis collaborative conference calls and training opportunities	ARRA-funded collaborative planner	8/30/10
C4	Create and post a report of registry of other collaboratives	ARRA-funded collaborative planner	8/30/10
C5	Increase the number of CUSP: Stop BSI prevention collaborative participating hospitals from 20 (67%) to 27 (90%)	ARRA-funded collaborative planner	12/31/11
C6	Increase the number of participating hospitals in the MDRO prevention collaborative from ten (30%) to 20 (60%)	ARRA-funded collaborative planner	12/31/11
C3	New England Network and DPH participate in 80% of Delmarva Foundation sponsored dialysis collaborative conference calls and training opportunities	ARRA-funded collaborative planner	8/30/11
C8	Deliver a workshop for healthcare facility-based planners and infection preventionists on the establishment of local collaboratives, and how to effectively link these to state or national resources	ARRA-funded collaborative planner	12/31/11

The State of Connecticut Department of Public Health (DPH) is requesting funds to support the Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) cooperative agreement Healthcare Associated Infections Program. The DPH is requesting \$1,670,887 for the budget period August 30, 2009 to December 31, 2010.

ACTIVITY A – PLANNING

Total \$128,138

DPH is requesting **\$128,138** to support HAI planning throughout the budget period (August 30, 2009- December 31, 2011)

Personnel

Total \$64,000

1. Vacant, Health Program Associate (1 FTE, 25% effort for 24 months) \$32,000

Two full-time durational project manager health program planners in the Health Program Associate (HPA) classification would be hired and expected to spend $\frac{1}{4}$ of effort on Activity A (state HAI planning) and $\frac{3}{4}$ of effort on Activity C. For activity A, these individuals would prepare ARRA program and fiscal reports, gather data, write, participate in ARRA planning and reporting meetings; assist in writing revisions of state plan based on DHHS feedback; arrange and help administer HAI Committee meetings, subgroups, recruit and retain state Committee members for vacancies and to expand participation beyond hospitals to work with health systems (hospitals, hospital groups, etc.); coordinate plans and planning for Infection Preventionist infrastructure building consistent with state plan; perform important sustainability planning for all three activities (A, B,C) finding potential funding streams, initiatives in private/public sectors; and plan for expansion to the DHHS matrix of national targets – research, document white paper preparation and related tasks. One of the two would be responsible for detailed sustainability planning, assisting public and private sector partners in developing plans and funding applications to foster the creation of jobs and related infrastructure to continue infection prevention program development in the healthcare and public health sectors.

2. Vacant, Health Program Associate (1 FTE, 25% effort for 24 months) \$32,000

Two full-time durational project manager health program planners in the Health Program Associate (HPA) classification would be hired and expected to spend $\frac{1}{4}$ of effort on Activity A (state HAI planning) and $\frac{3}{4}$ of effort on Activity C. For activity A, these individuals would prepare ARRA program and fiscal reports, gather data, write, participate in ARRA planning and reporting meetings; assist in writing revisions of state plan based on DHHS feedback; arrange and help administer HAI Committee meetings, subgroups, recruit and retain state Committee members for vacancies and to expand participation beyond hospitals to work with health systems (hospitals, hospital groups, etc.); coordinate plans and planning for Infection Preventionist infrastructure building consistent with state plan; perform important sustainability planning for all three activities (A, B,C) finding potential funding

streams, initiatives in private/public sectors; and plan for expansion to the DHHS matrix of national targets – research, document white paper preparation and related tasks. One of the two would be responsible for detailed sustainability planning, assisting public and private sector partners in developing plans and funding applications to foster the creation of jobs and related infrastructure to continue infection prevention program development in the healthcare and public health sectors.

Fringe Benefits

Total \$36,294

The estimated fringe benefit rate or state fiscal year 2009 for DPH is 56.71%. This rate is applied to the personnel salary base for the position above. The fringe benefit rate may change in future state fiscal years.

Travel

Total \$2,476

1. In-state conferences/trainings (\$76)
This is for travel reimbursement and registration fees for the planner to attend in-state conferences/meeting/trainings (2 conferences x \$38/conference)
2. In-state Travel (\$2,400)
Funds are requested to support the cost of in-state travel to meetings.
(\$0.55/mi x approximately 90 mi/month x 24 months x 2 staff)

Supplies

\$2,200

1. General Office supplies (\$200)
Connecticut is committee to reducing the use of office paper, but some paper supplies are needed for preparation of reports and planning documents; computer supplies will be needed, include compact disks; and printing costs include copying costs for printouts of documents, and mailings. Other supplies will also be needed, including files, organizers, staples, pens, and note pads.
2. Desktop Computer
Funds are requested to support the cost of 2 desktop computers for the two HPA positions.
(2 computers @ \$1,000 each)

Indirect Costs

Total \$23,168

The indirect cost rate for DPH for SFY 2009 is 36.2%. Indirect costs are based on the salary total.

ACTIVITY B – SURVEILLANCE**Total \$1,049,046**

DPH is requesting \$1,049,046 to support HAI surveillance throughout the budget period (August 30, 2009- December 31, 2011)

Personnel**Total \$535,200**

- 1. Vacant, Infection Control Practitioner (1 FTE, 90% effort for 24 months) \$120,600**

Two fulltime durational data validators/chart auditors will be hired as DPH employees for 24 months during the two-year budget period. They will audit laboratory records and patient charts in hospitals to validate the HAI data that is reported to NHSN by the hospitals. This validation and chart-auditing role will linked to training of and technical assistance for infection prevention staff performing NHSN HAI surveillance in hospitals to improve the quality of the reported data and inform prevention activities. The data validators will assist in development and revision of data validation protocols for CLABSIs and/or other metrics reported to DPH in accordance with the state HAI plan (reflecting National Targets). They will offer TA to hospital infection prevention staff on more complex cases and questions about NHSN criteria and case reporting than those addressed by the surveillance technicians (see below), and answer questions about NHSN and HAIs for healthcare professionals staff and others. We estimate that ¼ of their effort will support the reporting and surveillance training needs of the prevention collaborates and is assigned to Activity C, the remainder is assigned here to Activity B.
- 2. Vacant, Infection Control Practitioner (1 FTE, 90% effort for 24 months) \$120,600**

Two fulltime durational data validators/chart auditors will be hired as DPH employees for 24 months during the two-year budget period. They will audit laboratory records and patient charts in hospitals to validate the HAI data that is reported to NHSN by the hospitals. This validation and chart-auditing role will linked to training of and technical assistance for infection prevention staff performing NHSN HAI surveillance in hospitals to improve the quality of the reported data and inform prevention activities. The data validators will assist in development and revision of data validation protocols for CLABSIs and/or other metrics reported to DPH in accordance with the state HAI plan (reflecting National Targets). They will offer TA to hospital infection prevention staff on more complex cases and questions about NHSN criteria and case reporting than those addressed by the surveillance technicians (see below), and answer questions about NHSN and HAIs for healthcare professionals staff and others. We estimate that ¼ of their effort will support the reporting and surveillance training needs of the prevention collaborates and is assigned to Activity C, the remainder is assigned here to Activity B.
- 2. Vacant, Licensed Practical Nurse (1 FTE, 100% effort for 24 months) \$98,000**

These three full-time durational Surveillance Technicians will be nurses trained in infection control will assist and train hospital infection prevention staff in reporting HAIs through NHSN, while getting on the job experience. They will assist healthcare infection prevention staff with data entry if needed to meet NHSN data entry deadlines, and offering technical assistance on data entry into NHSN. The Technicians will help the DPH data manager continue to maintain full reporting of DPH required data via NSHN to the DPH group, thought offering TA, and following up with late reporters). These staff persons will be housed at DPH but will spend much of their time in the field, working with hospital staff at the facilities. Each surveillance technician will be assigned a group of hospitals (approximately 10 each, to cover all 30 acute care hospitals in the state) in a geographical area

3. Vacant, Licensed Practical Nurse (1 FTE, 100% effort for 24 months) \$98,000

These three full-time durational Surveillance Technicians will be nurses trained in infection control will assist and train hospital infection prevention staff in reporting HAIs through NHSN, while getting on the job experience. They will assist healthcare infection prevention staff with data entry if needed to meet NHSN data entry deadlines, and offering technical assistance on data entry into NHSN. The Technicians will help the DPH data manager continue to maintain full reporting of DPH required data via NSHN to the DPH group, thought offering TA, and following up with late reporters). These staff persons will be housed at DPH but will spend much of their time in the field, working with hospital staff at the facilities. Each surveillance technician will be assigned a group of hospitals (approximately 10 each, to cover all 30 acute care hospitals in the state) in a geographical area

4. Vacant, Licensed Practical Nurse (1 FTE, 100% effort for 24 months) \$98,000

These three full-time durational Surveillance Technicians will be nurses trained in infection control will assist and train hospital infection prevention staff in reporting HAIs through NHSN, while getting on the job experience. They will assist healthcare infection prevention staff with data entry if needed to meet NHSN data entry deadlines, and offering technical assistance on data entry into NHSN. The Technicians will help the DPH data manager continue to maintain full reporting of DPH required data via NSHN to the DPH group, thought offering TA, and following up with late reporters). These staff persons will be housed at DPH but will spend much of their time in the field, working with hospital staff at the facilities. Each surveillance technician will be assigned a group of hospitals (approximately 10 each, to cover all 30 acute care hospitals in the state) in a geographical area

Fringe Benefits

Total \$303,512

The estimated fringe benefit rate or state fiscal year 2009 for DPH is 56.71%. This rate is applied to the personnel salary base for the position above. The fringe benefit rate may change in future state fiscal years.

Travel**Total \$15,092**

1. In state conferences/trainings (\$720)

This is for travel reimbursement and registration fees for the HAI surveillance staff to attend in-state conferences/meeting/trainings (4 staff x 3 meetings x \$60/meeting)

2. In-state Travel (\$12,672)

Funds are required to support the cost of in-state travel, including parking, to healthcare facilities. These funds would permit the staff to travel to the 30 acute care hospitals (one with two campuses) to meet with facility infection control staff, review charts, and deliver in-person training workshops. (\$0.55/mi x 240 mi/month x 24 months x 4 FTE)

3. Out-of-state Travel (\$1,700)

Item	Cost per	Persons	Days	Subtotal
Hotel	\$150	1	3	\$450
Airfare (round trip)	\$950	1		\$950
Other (meals, per diem)	\$100	1	3	\$300
TOTAL				\$1,700

This would be to permit the staff person leading the surveillance activities and supervising the validators and surveillance technicians (HAI Epidemiologist 3) to attend an anticipated national meeting on the HAI data validation initiatives.

Supplies**\$1,500**

Office supplies (\$1,500)

Connecticut is committed to reducing the use of office paper, but some paper supplies are needed for preparation of reports and planning documents; computer supplies will be needed, include compact disks; and printing costs include copying costs for printouts of documents, and mailings; and materials for the preparation and delivery of training workshops. Other supplies will also be needed, including files, organizers, staples, etc.

Indirect Costs**Total \$193,742**

The indirect cost rate for DPH for SFY 2009 is 36.2%. Indirect costs are based on the salary total.

ACTIVITY C – PREVENTION COLLABORATIVES**Total \$493,703**

DPH is requesting \$493,703 to support HAI prevention collaboratives throughout the budget period (August 30, 2009- December 31, 2011)

Personnel**Total \$245,600**

- 1. Vacant, Health Program Associate (1 FTE, 75% effort for 24 months) \$96,000**
As noted earlier, the full-time durational project manager health program planners in the HPA classification will be expected to spend and $\frac{3}{4}$ of effort on Activity C (prevention collaboratives) and $\frac{1}{4}$ of effort on Activity A (state HAI planning). For activity C, this individual will focus on coordination, planning, and policy, especially with the Connecticut Hospital Association and Qualidigm (Connecticut's QIO) HIA prevention collaborations. They will ensure and assist in the full representation and active participation of stakeholders specified in this ELC FOA, including DPH, in collaborative advisory groups. They will assist in the recruitment of additional facilities to join the two collaboratives. They will also promote discovery and inventory and/or development of additional smaller collaborations among facilities and networks. These project managers will especially promote collaborations involving training and education of healthcare workers on HAIs and infection prevention.
- 2. Vacant, Health Program Associate (1 FTE, 75% effort for 24 months) \$96,000**
As noted earlier, the full-time durational project manager health program planners in the HPA classification will be expected to spend and $\frac{3}{4}$ of effort on Activity C (prevention collaboratives) and $\frac{1}{4}$ of effort on Activity A (state HAI planning). For activity C, this individual will focus on coordination, planning, and policy, especially with the Connecticut Hospital Association and Qualidigm (Connecticut's QIO) HIA prevention collaborations. They will ensure and assist in the full representation and active participation of stakeholders specified in this ELC FOA, including DPH, in collaborative advisory groups. They will assist in the recruitment of additional facilities to join the two collaboratives. They will also promote discovery and inventory and/or development of additional smaller collaborations among facilities and networks. These project managers will especially promote collaborations involving training and education of healthcare workers on HAIs and infection prevention.
- 3. Vacant, Infection Control Practitioner (1 FTE, 20% effort for 24 months) \$26,800**
The two Infection Control Practitioners will participate in prevention collaborative activities to create a critical ongoing link between HAI surveillance activities and data, and the collaboratives that seek to use this data to guide the work and measure the success of the collaboratives. We estimate that 10% of their effort will support the reporting and surveillance training needs of the prevention collaborates and is assigned to here to Activity C, the remainder is assigned to Activity B. This time will be spent attending meetings, offering technical assistance to collaboratives (e.g., answering questions, training), preparing briefing materials, and the like.

4. Vacant, Infection Control Practitioner (1 FTE, 20% effort for 24 months) \$26,800

The two Infection Control Practitioners will participate in prevention collaborative activities to create a critical ongoing link between HAI surveillance activities and data, and the collaboratives that seek to use this data to guide the work and measure the success of the collaboratives. We estimate that 10% of their effort will support the reporting and surveillance training needs of the prevention collaborates and is assigned to here to Activity C, the remainder is assigned to Activity B. This time will be spent attending meetings, offering technical assistance to collaboratives (e.g., answering questions, training), preparing briefing materials, and the like.

Fringe Benefits

Total \$139,280

The estimated fringe benefit rate or state fiscal year 2009 for DPH is 56.71%. This rate is applied to the personnel salary base for the position above. The fringe benefit rate may change in future state fiscal years.

Travel

Total \$5,016

In-state Travel (\$5,016)

Funds are required to support the cost of in-state travel, including parking, to healthcare facilities. These funds would permit staff to travel to prevention collaborative meetings and workshops that would be held around the state to recruit collaborative participants and implement collaborative activities. ($\$0.55/\text{mi} \times 190 \text{ mi}/\text{month} \times 24 \text{ months} \times 2 \text{ FTE}$).

Supplies

Total \$1,000

Office supplies (\$1,000)

Connecticut is committed to reducing the use of office paper, but some paper supplies are needed for preparation of reports and planning documents; computer supplies will be needed, include compact disks; and printing costs include copying costs for printouts of documents, and mailings; and materials for the preparation and participation in collaborative meetings and workshops.

Indirect Costs

Total \$88,907

The indirect cost rate for DPH for SFY 2009 is 36.2%. Indirect costs are based on the salary total

Contractual**Total \$13,900****1. The Connecticut Hospital Association (CHA)**

CUSP: Stop BSI (\$6,400)

Contract Period: September 1, 2009 to August 30, 2010

Contractor Selected Noncompetitively

Funds will be transferred to the contractor via a Personal Services Agreement, contractor will be required to submit fiscal and program reports per DPH guidelines to monitor program activities.

The Connecticut Hospital Association has developed a prevention collaborative with hospitals in the state and other HAI prevention partners, such as DPH, to join the national network and implement the Johns Hopkins CUSP: Stop BSI project. The CUSP: Stop BSI project aims to replicate the Michigan Keystone project, which involves face-to-face meetings between the John's Hopkins group and local participants. The Connecticut BSI collaborative needs funding to travel the team from Baltimore to Connecticut for annual collaborative on-site meetings.

Item	Projected Cost
Faculty air fare (4 persons)	\$1600 (\$400 x 4)
Hotel (4 persons)	\$800 (\$200 x 4)
Transportation to and from meeting (4 persons)	\$800 (\$200 x 4)
Total	\$3200 per Face to Face Meeting
Total for Two Collaborative Meetings	\$6,400

2. **Qualidigm**

MDRO Collaborative (\$9,900)

Contract Period: September 1, 2009 to August 30, 2010

Contractor Selected Noncompetitively

Funds will be transferred to the contractor via a Personal Services Agreement, contractor will be required to submit fiscal and program reports per DPH guidelines to monitor program activities.

Qualidigm, the Connecticut CMS Quality Improvement Organization, is the leader of the Connecticut MDRO prevention collaborative. To achieve the goals of the collaborative, Qualidigm, in partnership with the state hospital association, developed a series of educational MDRO workshops for multidisciplinary hospital teams after a needs assessment. This funding would permit Qualidigm to recruit and support the participation of national subject matter experts in hand hygiene and MDRO prevention for two statewide workshops, and the funds would also pay for meeting support items, including facility rental.

Item	Projected Cost
Faculty recruitment, travel and lodging (1 person)	\$4,000
Meeting support costs (including room rental)	\$950
Total	\$4,950 per Meeting
Total for Two Collaborative Meetings	\$9,900