



Grant Number: 1U01CI000909-01

Principal Investigator(s):
 Tracey L. Weeks

Project Title: CT EIP Capacities ACA Grant

Dr. Cartter, Matthew, MD
 Principal Investigator
 410 Capitol Ave
 MS# 11EPI
 Hartford, CT 061340000

Budget Period: 09/30/2010 – 09/29/2011
Project Period: 09/30/2010 – 09/29/2012

Dear Business Official:

The Centers for Disease Control and Prevention hereby awards a grant in the amount of \$247,028 (see "Award Calculation" in Section I and "Terms and Conditions" in Section III) to CT ST DEPT OF PUBLIC HEALTH & ADDICTION in support of the above referenced project. This award is pursuant to the authority of 42 USC 241 31 USC 6305 & 6306 and is subject to the requirements of this statute and regulation and of other referenced, incorporated or attached terms and conditions.

Acceptance of this award including the "Terms and Conditions" is acknowledged by the grantee when funds are drawn down or otherwise obtained from the grant payment system.

If you have any questions about this award, please contact the individual(s) referenced in Section IV.

Sincerely yours,

Sharron Orum
 Grants Management Officer
 Centers for Disease Control and Prevention

Additional information follows

DPH22424/ACA 2011

48663 / 42003 EPI

48568 / 42005 LAB

ANGELINA

SECTION I – AWARD DATA – 1U01CI000909-01

Award Calculation (U.S. Dollars)

Salaries and Wages	\$120,962
Fringe Benefits	\$73,859
Personnel Costs (Subtotal)	\$194,821
Supplies	\$1,210
Travel Costs	\$4,400
Other Costs	\$3,050

Federal Direct Costs	\$203,481
Federal F&A Costs	\$43,547
Approved Budget	\$247,028
Federal Share	\$247,028
TOTAL FEDERAL AWARD AMOUNT	\$247,028

AMOUNT OF THIS ACTION (FEDERAL SHARE) \$247,028

Recommended future year total cost support, subject to the availability of funds and satisfactory progress of the project.

02 \$247,028

Fiscal Information:

CFDA Number: 93.521
 EIN: 1066000798A1
 Document Number: 000909LC10

IC	CAN	2010	2011
CD	939ZEMW	\$247,028	\$247,028

SUMMARY TOTALS FOR ALL YEARS		
YR	THIS AWARD	CUMULATIVE TOTALS
1	\$247,028	\$247,028
2	\$247,028	\$247,028

Recommended future year total cost support, subject to the availability of funds and satisfactory progress of the project

CDC Administrative Data:

PCC: N / OC: 4141 / Processed: ORUMS 09/24/2010

SECTION II – PAYMENT/HOTLINE INFORMATION – 1U01CI000909-01

For payment information see Payment Information section in Additional Terms and Conditions.

INSPECTOR GENERAL: The HHS Office Inspector General (OIG) maintains a toll-free number (1-800-HHS-TIPS [1-800-447-8477]) for receiving information concerning fraud, waste or abuse under grants and cooperative agreements. Information also may be submitted by e-mail to hstips@oig.hhs.gov or by mail to Office of the Inspector General, Department of Health and Human Services, Attn: HOTLINE, 330 Independence Ave., SW, Washington DC 20201. Such reports are treated as sensitive material and submitters may decline to give their names if they choose to remain anonymous. This note replaces the Inspector General contact information cited in previous notice of award.

SECTION III – TERMS AND CONDITIONS – 1U01CI000909-01

This award is based on the application submitted to, and as approved by, CDC on the above-titled project and is subject to the terms and conditions incorporated either directly or by reference in the following:

- a. The grant program legislation and program regulation cited in this Notice of Award.
- b. The restrictions on the expenditure of federal funds in appropriations acts to the extent those restrictions are pertinent to the award.
- c. 45 CFR Part 74 or 45 CFR Part 92 as applicable.
- d. The HS Grants Policy Statement, including addenda in effect as of the beginning date of the budget period.
- e. This award notice, INCLUDING THE TERMS AND CONDITIONS CITED BELOW.

This award is funded by the following list of institutes. Any papers published under the auspices of this award must cite the funding support of all institutes.

Office Of The Director, Centers For Disease Control & Prevention (ODCDC)

Treatment of Program Income:
Additional Costs

SECTION IV – CI Special Terms and Conditions – 1U01CI000909-01

TERMS AND CONDITIONS OF THIS AWARD

Note 1. INCORPORATION. Funding Opportunity Announcement Number (FOA) RFA-CI-10-003 titled, Center for Disease Control and Prevention (CDC), National Center for Emerging and Zoonotic Infectious Diseases and National Center for Immunization and Respiratory Diseases, Patient Protection and Affordable Care Act (PPACA); Emerging Infections Program (EIP) Enhancing Epidemiology and Laboratory Capacity as amended, additional requirements and, the application dated August 27, 2010 are made a part of this award by reference.

Note 2. RESPONSE TO THE SUMMARY STATEMENT. Attached to this Notice of Award is a Summary Statement of the application. A response to the Recommendations and Weaknesses within the Summary Statement must be submitted to the Grants Management Specialist within 30 days from the effective date of the Notice of Award. Failure to respond to this requirement could result in enforcement actions, including withholding of funds or termination.

Note 3.a. APPROVED FUNDING.

Funding in the amount of \$247,028 is approved for the year 01 budget period, which is September 30, 2010, through September 29, 2011. All funding for future years will be based on satisfactory programmatic progress and the availability of funds.

Note 3.b. REVISED BUDGET SPECIAL CONDITION.

The grantee must submit a revised budget with narrative justification and work plan within 30 days from the effective date of this Notice of Award. Failure to submit the required information in a timely manner may adversely affect the future funding of this project. If the information cannot be provided by the due date, you must submit a letter explaining the reason and state the date by which the Grants Officer will receive the information.

Note 4. HUMAN SUBJECTS NOTICE. Under governing regulations, federal funds administered by the Department of Health and Human Services shall not be expended for research involving human subjects, and individuals shall not be enrolled in such research, without prior approval by the Office for Human Research Protections (OHRP) of an assurance to comply with the requirements of 45 CFR 46 to protect human research subjects. Whenever an institution receives funding from a DHHS agency award to support such research, the awardee institution bears the ultimate responsibility for protecting human subjects under the award. This restriction applies to all performance sites engaged in human subject research, whether domestic, foreign, or international without OHRP-approved assurances. Compliance for all performance sites must be ensured by the awardee.

a. IRB approval must be provided to the grants management specialist for the following research sites:

Connecticut State Department of Public Health-FWA00001517
CDC

b. NOTICE OF CDC INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL. It has been determined that this requirement will involve participation by CDC investigators in the research activities, therefore, the CDC IRB is required to approve the protocol prior to beginning any tasks or using Federal funds that involve human subjects. Once the CDC IRB approval of the protocol is rendered, the Grants Management Officer will provide written notification removing the award restriction.

Note 5. INDIRECT COSTS.

Indirect costs are approved based on the Indirect Cost Rate Agreement dated February 29, 2008, which calculates indirect costs as follows, at a rate of 36.2% of the base, which includes, personnel and fringe costs.

Note 6. REPORTING REQUIREMENTS.

Recipient Organization must provide HHS/CDC with an original, plus two hard copies of the following reports:

1. Non-Competing Grant Progress Report, (use form PHS 2590, posted on the HHS/CDC website, <http://www.cdc.gov/od/pgo/funding/forms.htm> and at <http://grants.nih.gov/grants/funding/2590/2590.htm>, no less than 120 days prior to the end of the current budget period. The progress report will serve as the non-competing continuation application.
2. Financial status report, no more than 90 days after the end of the budget period.
3. Final financial and performance reports, no more than 90 days after the end of the project period.

Recipient Organization must forward these reports by the U.S. Postal Service or express delivery to the Grants Management Specialist listed in the "Agency Contacts" section of this Notice of Award.

Although the financial plans of the HHS/CDC CIO(s) provide support for this program, awards pursuant to this funding opportunity are contingent upon the availability of funds, evidence of satisfactory progress by the recipient (as documented in required reports) and the determination that continued funding is in the best interest of the Federal government.

Note 7. CORRESPONDENCE. ALL correspondence (including emails and faxes) regarding this award must be dated and, identified with the AWARD NUMBER.

Note 8. PRIOR APPROVAL. All requests, that require prior approval, must bear the signature of an authorized official of the business office of the grantee organization as well as the principal investigator or program or project director named on this notice of award. The request must be postmarked no later than 120 days prior to the end date of the current budget period. Any requests received that reflect only one signature will be returned to the grantee unprocessed. Additionally, any requests involving funding issues must include an itemized budget and a narrative justification of the request. Refer to the HHS Grants Policy Statement, <http://www.hhs.gov/grantsnet/adminis/gpd/>

Note 9. INVENTIONS. Acceptance of grant funds obligates recipients to comply with the standard patent rights clause in 37 CFR 401.14.

Note 10. PUBLICATIONS. Publications, journal articles, etc. produced under a CDC grant support project must bear an acknowledgment and disclaimer, as appropriate, such as,

This publication (journal article, etc.) was supported by the Cooperative Agreement Number above from The Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Note 11. CANCEL YEAR. 31 U.S.C. 1552(a) Procedure for Appropriation Accounts Available for Definite Periods states the following, On September 30th of the 5th fiscal year after the period of availability for obligation of a fixed year appropriation account ends, the account shall be closed and any remaining balances (whether obligated or unobligated) in the account shall be canceled and thereafter shall not be available for obligation or expenditure for any purpose. An example is provided below:

FY 2005 funds will expire September 30, 2010. All FY 2005 funds should be drawn down and reported to Payment Management System (PMS) prior to September 30, 2010. After this date, corrections or cash requests will not be permitted.

Note 12. CONFERENCE DISCLAIMER AND USE OF LOGOS.

Disclaimer. Where a conference is funded by a grant or cooperative agreement, a subgrant or a contract the recipient must include the following statement on conference materials, including promotional materials, agenda, and Internet sites,

Funding for this conference was made possible (in part) by the cooperative agreement award number above from the Centers for Disease Control and Prevention. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services, nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government

Logos. Neither the HHS nor the CDC logo may be displayed if such display would cause confusion as to the source of the conference or give the false appearance of Government endorsement. A non-federal entity unauthorized use of the HHS name or logo is governed by U.S.C. 1320b-10, which prohibits the misuse of the HHS name and emblem in written communication. The appropriate use of the HHS logo is subject to the review and approval of the Office of the Assistant Secretary for Public Affairs (OASPA). Moreover, the Office of the Inspector General has authority to impose civil monetary penalties for violations (42 C.F.R. Part 1003). Neither the HHS nor the CDC logo can be used on conference materials, under a grant, cooperative agreement, contract or co-sponsorship agreement without the expressed, written consent of either the Project Officer or the Grants Management Officer. It is the responsibility of the grantee (or recipient of funds under a cooperative agreement) to request consent for the use of the logo in sufficient detail to assure a complete depiction and disclosure of all uses of the Government logos, and to assure that in all cases of the use of Government logos, the written consent of either the Project Officer or the Grants Management Officer has been received.

Note 13. EQUIPMENT AND PRODUCTS. To the greatest extent practicable, all equipment and products purchased with CDC funds should be American-made. CDC defines equipment as Tangible non-expendable personal property (including exempt property) charged directly to an award having a useful life of more than one year AND an acquisition cost of \$5,000 or more per unit. However, consistent with recipient policy, a lower threshold may be established. Please provide the information to the Grants Management Officer to establish a lower equipment threshold to reflect your organization policy.

The grantee may use its own property management standards and procedures provided it observes the provisions of the following sections in the Office of Management and Budget (OMB) Circular A-110 and 45 CFR Part 92:

- i. Office of Management and Budget (OMB) Circular A-110, Sections 31 through 37 provides the uniform administrative requirements for grants and agreements with institutions of higher education, hospitals, and other non-profit organizations
<http://www.whitehouse.gov/omb/circulars/a110/a110.html>
- ii. 45 CFR Parts 92.31 and 92.32 provides the uniform administrative requirements for grants and cooperative agreements to state, local and tribal governments.
http://www.access.gpo.gov/nara/cfr/waisidx_03/45cfr92_03.html

Note 14. TRAFFICKING IN PERSONS. This award is subject to the requirements of Section 106 (g) of the Trafficking Victims Protection Act of 2000, as amended (22 U.S.C. 7104). For the full text of the award term and condition, go to
http://www.cdc.gov/od/pgo/funding/grants/Award_Term_and_Condition_for_Trafficking_in_Persons.shtm

Note 15. ACKNOWLEDGMENT OF FEDERAL SUPPORT. When issuing statements, press releases, requests for proposals, bid solicitations and other documents describing projects or programs funded in whole or in part with Federal money, all awardees receiving Federal funds, including and not limited to State and local governments and recipients of Federal research grants, shall clearly state (1) the percentage of the total costs of the program or project which will be

financed with Federal money, (2) the dollar amount of Federal funds for the project or program, and (3) percentage and dollar amount of the total costs of the project or program that will be financed by nongovernmental sources.

Note 16. PAYMENT INFORMATION:

Automatic Drawdown:

PAYMENT INFORMATION: Payment under this award will be made available through the Department of Health and Human Services (HHS) Payment Management System (PMS). The Division of Payment Management, Program Support Center, administers PMS, HHS administers PMS. PMS will forward instructions for obtaining payments.

A. PMS correspondence, mailed through the U.S. Postal Service, should be addressed as follows:

Director, Division of Payment Management, OS/ASAM/PSC/FMS/DPM
P.O. Box 6021
Rockville, MD 20852

Phone Number: (877) 614-5533
Fax Numbers:
University and Non-Profit Payment Branch (301) 443-2672
Governmental and Tribal Payment Branch (301) 443-2569
Cross Servicing Payment Branch: (301) 443-0377
General Fax: (301) 443-8362

Email PMSSupport@psc.gov
Website: http://www.dpm.psc.gov/grant_recipient/shortcuts/shortcuts.aspx?explorer.event=true

B. If a carrier other than the U.S. Postal Service is used, such as United Parcel Service, Federal Express, or other commercial service, the correspondence should be addressed as follows:

Division of Payment Management
FMS/PSC/HHS
Rockwall Building #1, Suite 700
11400 Rockville Pike
Rockville, MD 20852

To expedite your first payment from this award, attach a copy of the Notice of Grant/Cooperative Agreement to your payment request form.

For more information and to obtain your agency point of contact at the Payment Management System, visit the following website, http://www.dpm.psc.gov/contacts/dpm/dpm.aspx?cms_branchevent=/contacts/dpm/univ_nonprofit/univ_nonprofit.object

Note 17. CERTIFICATION STATEMENT: By drawing down funds, Awardee certifies that proper financial management controls and accounting systems to include personnel policies and procedures have been established to adequately administer Federal awards and funds drawn down are being used in accordance with applicable Federal cost principles, regulations, and the President's Budget and Congressional intent.

Note 18. AUDIT REQUIREMENT: An organization that expends \$500,000 or more in a year in Federal awards shall have a single or program-specific audit conducted for that year in accordance with the provisions of OMB Circular A-133, Audit of States, Local Governments, and Non-Profit Organizations. The audit must be completed along with a data collection form, and the reporting package shall be submitted within the earlier of 30 days after receipt of the auditors report(s), or nine months after the end of the audit period. The audit report must be sent to:

Federal Audit Clearing House
Bureau of the Census
1201 East 10th Street
Jeffersonville, IN 47132

Should you have questions regarding the submission or processing of your Single Audit Package, contact the Federal Audit Clearinghouse at: (301) 763-1551, (800) 253-0696 or email: govs.fac@census.gov

The grantee is to ensure that the sub-recipients receiving CDC funds also meet these requirements (if total Federal grant or grant funds received exceed \$500,000). The grantee must also ensure that appropriate corrective action is taken within six months after receipt of the sub-recipient audit report in instances of non-compliance with Federal law and regulations. The grantee is to consider whether sub-recipient audits necessitate adjustment of the grantees own accounting records. If a sub-recipient is not required to have a program-specific audit, the Grantee is still required to perform adequate monitoring of sub-recipient activities. The grantee is to require each sub-recipient to permit independent auditors to have access to the sub-recipients records and financial statements. The grantee should include this requirement in all sub-recipient contracts.

Note 19. REDUCING TEXT MESSAGING WHILE DRIVING

The following administrative requirement (AR) is incorporated into this award and is in full effect for the entire project period:

AR 29: Compliance with EO13513, Federal Leadership on Reducing Text Messaging while Driving, October 1, 2009

Recipients and subrecipients of CDC grant funds are prohibited both from texting while driving a Government owned vehicle and/or using Government furnished electronic equipment while driving any vehicle. Texting means reading from or entering data into any handheld or other electronic device, including SMS texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication. Driving means operating a motor vehicle on an active roadway with the motor running, including while temporarily stationary due to traffic, a traffic light, stop sign or otherwise. Driving does not include operating a motor vehicle with or without the motor running when one has pulled over to the side of, or off, an active roadway and has halted in a location where one can safely remain stationary. Grant recipients and subrecipients are responsible for ensuring their employees are aware of this prohibition and adhere to this prohibition.

Note 20. CDC CONTACT NAMES

Financial, Grants Management, or Budget Assistance Contact:
DeLisa Simpson, Grants Management Specialist
US Centers for Disease Control and Prevention, PGO, Branch II
2920 Brandywine Road, Mail Stop K-14
Atlanta, GA 30341-4146
Telephone: 770-488-2905
Fax: 770-488-2778
Email: ddsimpson@cdc.gov

Scientific/Research Contact:
Susan Conner, MPH, Project Officer
Department of Health and Human Services
Centers for Disease Control and Prevention
1600 Clifton Rd NE MD D-59
Atlanta, GA 30333
Telephone: 404-639-7087
E-mail: SConner1@cdc.gov

STAFF CONTACTS

Grants Management Specialist: De'lisa Simpson
PGO
Center for Disease Control and Prevention
Koger Center/Colgate Bldg/Room 3201
MS K14
Atlanta, GA 30331
Email: ino9@cdc.gov **Phone:** 770-488-2905 **Fax:** 770-488-2670

Grants Management Officer: Sharron Orum
 Centers for Disease Control and Prevention
 Procurement and Grants Office
 Koger Center, Colgate Building
 2920 Brandywine Road, Mail Stop K 14
 Atlanta, GA 30341
 Email: spo2@cdc.gov Phone: 770-488-2716

SPREADSHEET SUMMARY
GRANT NUMBER: 1U01CI000909-01

INSTITUTION: CONNECTICUT STATE DEPT OF PUBLIC HEALTH

<i>Budget</i>	<i>Year 1</i>	<i>Year 2</i>
Salaries and Wages	\$120,962	
Fringe Benefits	\$73,859	
Personnel Costs (Subtotal)	\$194,821	
Supplies	\$1,210	
Travel Costs	\$4,400	
Other Costs	\$3,050	\$203,481
TOTAL FEDERAL DC	\$203,481	\$203,481
TOTAL FEDERAL F&A	\$43,547	\$43,547
TOTAL COST	\$247,028	\$247,028

**Connecticut Department of Public Health (DPH)
Project Abstract**

EIP FOA# RFA-CI-10-003. Patient Protection and Affordable Care Act (PPACA); Emerging Infections Program (EIP); Enhancing Epidemiology and Laboratory Capacity (U01)

Proposed Connecticut application budget:

- Year One: \$490,965
- Year Two: \$309,806 (non-ACA funds for HAI are not available in year two)
- There are no cost-sharing or matching funds required

Proposed Project Period:

- FY 2010 and FY 2011

Objectives: Through the EIP projects the Centers for Disease Control and Prevention (CDC) support the health departments' ability to prevent, control and assess the impact of infectious diseases. This cooperative agreement will improve surveillance infrastructure through enhancement of the epidemiology and laboratory capacity of the existing EIP network by providing additional support for:

1. Personnel, especially those who have responsibilities across multiple EIP activities;
2. Education and training related to infectious diseases;
3. Improvements in information technology consistent with applicable federal standards and the capacity to exchange information pertinent to multiple EIP activities among public health partners;
4. Enhancement of EIP site capacity to a) support the evaluation and validation of proposed reporting metrics for healthcare associated bloodstream infections among dialysis patients in outpatient dialysis centers and b) monitor and assess the burden of influenza following the 2009-2010 Influenza A (N1N1) pandemic.

Proposed Activities 1, 2, and 3 – Personnel, Training, IT

For activities 1, 2, and 3, we are requesting funding for 1 FTE Microbiologist who works at the DPH Laboratory. This person will be responsible for testing of specimens for organisms related to FoodNet activities (*Salmonella*, *Shigella*, *E. coli*, *Vibrio*) as well as the active bacterial core surveillance project (*Streptococcus pneumoniae*, *N. meningitidis*, *Listeria monocytogenes*, *Haemophilus influenzae*). We are requesting funding for a .5 FTE Epidemiologist who will work in the Infectious Diseases Section and assist with food and water-borne outbreaks, and surveillance for influenza associated hospitalizations and deaths.

Funds in this proposal will also support training of EIP staff epidemiologists to acquire and improve technical skills needed for successfully conducting EIP activities. The trainings are held at Emory University in Atlanta, GA. They include control of foodborne and waterborne diseases, epidemiology and analytical methods.

The CT EIP is a collaborative effort between the DPH and Yale University School of Public Health. The EIP projects conducted at Yale have relied on computer support from Yale IT staff who are assigned to provide service to the entire School of Public Health community or from IT technical support by telephone in emergency situations. However, with the increasing amounts and complexity of data needed for these projects, to best use epidemiologist staff resources, and

to share information with the DPH and CDC, additional IT support is needed. Funds are being requested to support a .5 FTE Programmer/Analyst to provide needed computer and database expertise to the staff of the Yale EIP. At a minimum, this person will be certified in ‘desktop support’ and have a background in computer network security.

Proposed Activity 4a. Influenza

The DPH is requesting funding to support a .5 FTE Epidemiologist 1 who will work on influenza associated hospitalizations and deaths. Currently, 1.5 FTE epidemiologists are supported by the EIP for these labor intensive and time sensitive activities. We are also requesting funds for .5 FTE Research Associate at the Yale EIP to carryout the activities of the Influenza Burden Projection Project. This person will work directly with CDC and other EIP sites in the development of the standard protocol to be used at all sites. Additional funds are also requested for a .3 FTE Programmer/Analyst, who will provide the needed computer and database support. This project aims to develop a model for estimating the number of cases, hospitalizations and deaths due to influenza. Development of the model will provide needed information to policy makers when evaluating prevention and control measures.

Activity 4.b. Healthcare Associated Infections - (Non-ACA funds)

The DPH is requesting funds to support the EIP cooperative agreement Healthcare Associated Infections Program End Stage Renal Dialysis Blood Stream Surveillance special pilot project. The project is part of an initiative for the prevention of blood stream infections among dialysis patients initiated by the Center for Medicare and Medicaid Services and CDC. The Network of New England will be the Group Administrator for the project, enroll dialysis providers, conduct administrative functions such as training and user support with CDC, assure the correct submission of accurate data into the national data system, and report on the lessons learned from the project to CMS and CDC. The funds will include support for a Project Coordinator who will communicate with providers and encourage enrollment in retention in the project and also an administrative assistant who will assist the project coordinator with communication and assist in all aspects of the project.

Federal Object Class	ACA Funding		Non-ACA	Total
	Activities 1,2,3	Activity 4.a.	Activity 4.b.	
Personnel	\$95,147			\$95,147
Fringe	\$58,097			\$58,097
Travel	\$500			\$500
Equipment	\$0			\$0
Supplies	\$1,210			\$1,210
Other	\$0			\$0
Contractual	\$36,400	\$84,009	\$181,159	\$301,568
Total Direct Cost	\$191,354	\$84,009	\$181,159	\$456,522
Indirect Costs	\$34,443			\$34,443
Total	\$225,797	\$84,009	\$181,159	\$490,965

Background and Understanding

The Connecticut Department of Public Health (DPH) and Yale University School of Epidemiology and Public Health (Yale) are in an ideal position to seek and be provided support to maintain the Connecticut Emerging Infections Program (CT EIP), continue to participate in the national EIP network, and change activities to respond to disease events based on current needs. To maintain the capacity and flexibility to conduct EIP activities, site infrastructure must be periodically evaluated and strengthened.

The CT EIP was among the first EIPs funded to be part of the emerging infections network. Original funding in 1994 was awarded to Connecticut in part because DPH had a strong track record of responding to emerging infectious disease issues, collaboration was planned with a highly interested and well-qualified academic partner (Yale), and CT had a wide spectrum of public health problems and a diverse population of a size that was small enough (3.28 million) to conduct statewide surveillance.

During our 15 years of operation, we have demonstrated our ability to effectively build and manage an EIP and produce high quality work. We have done this in all EIP functional areas including a) active surveillance, b) applied public health epidemiologic and laboratory studies, c) pilot prevention/intervention projects, d) participation in conceptualization, study design and implementation of new EIP network projects on short notice (flexible capacity); e) development of site-specific pilot projects that have lead to new network-wide surveillance activities; and f) training of the future public health workforce. Throughout, we have collaborated with other EIP sites and CDC both directly and through EIP Steering Committee meetings, maintained the flexibility to respond to emerging problems, and worked to disseminate the information learned via EIP network collaborative publications and presentations to national audiences and interstate colleagues and site-specific publications and presentations to in-state audiences and partners. As part of being an EIP site, we have established ongoing collaborative relationships with the clinical laboratories, hospital infection control units, local health departments, and infectious disease clinicians throughout the state, including them as special groups in our state Health Alert Network.

In developing and carrying out the CT EIP, we have learned a number of valuable lessons, including ones in management of an EIP site that have lead to our current administrative structure. Furthermore, we have tried to integrate public health preparedness funding and surveillance initiatives into the EIP so that the objectives of both efforts are mutually enhanced. Important for a high level of level of involvement in EIP network leadership, there has been stability in key staff.

For the past six months, the Centers for Medicaid and Medicare Services (CMS), the CDC, the Connecticut and Massachusetts Departments of Public Health, and the End Stage Renal Disease (ESRD) Network of New England have been collaborating on a proposed, but not yet initiated, project to foster the enrollment of hemodialysis centers in New England into the CDC National Healthcare Safety Network (NHSN), the online Healthcare Associated Infection (HAI) surveillance database. The intent of this proposed surveillance system is to gather baseline and ongoing Blood Stream Infection (BSI) data that can be used to manage and track the

effectiveness of prevention projects aimed at reducing the number of vascular access infections in freestanding and hospital-based dialysis centers. CMS is also evaluating the feasibility of expanding this regional pilot into a national reporting requirement for all CMS-provider dialysis centers and for integrating the surveillance into the development of the CMS's CROWN Web clinical data system.

The CT HAI Program has been heavily engaged in the development of the 2nd Phase Hospital Prevention Survey Pilot and the Denominator Simplification project, the two inaugural projects of the CDC HAI EIP Steering Group. The CT HAI Program Coordinator also participates on the EIP Dialysis Working Group and the ESRD Executive Director participates on the legislatively authorized DPH CT HAI Advisory Committee. The CT HAI Program has entered into contractual agreements to financially support collaborative prevention activities in the state (the CUSP Stop BSI Project and the Qualidigm [CMS QIO] MDRO prevention project). The program has also collaborated with hospitals in the state for the Phase 2 pilot of the Point Prevalence Survey, which has involved human subject review of the research protocol by the DPH and hospital Institutional Review Boards (IRBs).

Need

Activities 1,2, and 3

The Foodborne Diseases Active Surveillance Network (FoodNet) is one of the core projects of the EIP. Within this project, enhanced outbreak detection and investigation is a core activity. In the CT EIP, the Yale EIP has primary responsibility for conducting active laboratory-based surveillance for foodborne diseases, while the DPH has primary responsibility for conducting outbreak detection and investigations. Currently at DPH, one EIP FoodNet-funded epidemiologist, serving as the Outbreak Coordinator, is responsible for statewide outbreak detection and investigations. On average, CT investigates 15-20 foodborne, waterborne, and other enteric disease outbreaks each year. In addition to these known outbreaks, numerous pulsed-field gel electrophoresis (PFGE)-defined clusters (including multistate clusters) are identified and investigated to varying but lesser degrees. Successful outbreak detection and investigation are labor intensive activities. Additional epidemiologic capacity is needed to assist the Outbreak Coordinator with monitoring of surveillance and laboratory data to identify outbreaks, conducting routine and outbreak-related epidemiologic interviews, coordinating investigations with other involved entities (including local health departments, State Laboratory, DPH Food Protection Program, other state agencies, other state health departments, and federal partners), and ensuring timely and complete reporting of outbreak data to the National Outbreak Reporting System (NORS).

Surveillance for Acute Viral Hepatitis (A, B, and C) is also a project of the CT EIP. Hepatitis A Virus (HAV) surveillance is conducted however, without specifically dedicated EIP funds. Currently, HAV related activities include: a) maintenance of laboratory reporting for markers of acute HAV, b) follow-up of reports of laboratory markers for acute HAV infection to determine case status, c) investigation of cases of acute HAV to determine clinical manifestations, laboratory findings, and risk factors, d) collection of serologic specimens on confirmed cases of acute HAV for molecular characterization at CDC, e) completion of the Viral Hepatitis Case

Report form for reported cases and monthly data submission to CDC via an ftp site and to NETSS weekly according to CDC specifications, and f) collaboration with CDC on improving quality of existing data.

During 2009, the DPH received a total of 107 IgM (+) HAV reports requiring follow-up with the reporting laboratory and ordering physician in order to determine case status. Of the 107 reports, 18 (16.8%) met the case definition (CSTE/CDC Case Definitions for Infectious Conditions Under Public Health Surveillance). Of the 18 confirmed HAV cases, risk factor information was obtained for 16 (88.9%) cases through case interviews. To maintain the current level of activity as well as improve on quality and completeness of data collection and reporting to CDC, additional epidemiologic resources are needed for these labor intensive activities.

The DPH Laboratory currently provides laboratory surveillance data for a number of infectious agents funded through the EIP cooperative agreement and is in need of a senior level staff person to coordinate implementation of new testing methodologies, training of staff and data management. EIP surveillance activities currently include: *S. pneumoniae*, *N. meningitidis*, *L. monocytogenes*, *H. influenzae* (ABCs), *Salmonella*, *Shigella*, *E. coli*, *Vibrio*, Norovirus (PulseNet & FoodNet) and Influenza. In 2008, the laboratory received 817 isolates for the ABCs program, performed 613 subtypings by PFGE, tested 631 food samples for *Salmonella*, tested 178 stool samples for Norovirus. In the same period, the laboratory was involved in approximately 25 cluster/outbreak investigations for foodborne illness, often initiated by identification of clusters by PFGE. Consequently, the laboratory tested over 1100 stool specimens at the request of DPH infectious disease epidemiologists. Recently the laboratory has validated CDC multiplex PCR methods for STECs and campylobacter speciation and pyrosequencing of H1N1 for drug resistance mutations.

Timely communication between laboratory staff, DPH epidemiologists, the CDC, local health directors, infectious disease physicians and clinical laboratories is essential for identifying potential outbreaks and characterizing changes in emerging pathogens targeted by the CT EIP. The laboratory has relied on an antiquated laboratory information management system (LIMS) to manage its data; the primary limitation of which is the secure transfer of data to external partners. The laboratory began implementation of a new LIMS system, ChemWare Horizon, in January of 2010. A completion date of all tests is expected by November 2010. The Horizon software has autofax and HL7 send/receive capabilities as well as Web portal access to results. These features will greatly improve the access and flow of data to and from the laboratory. A senior level laboratory coordinator, with experience in both conventional and molecular microbiologic methods and with familiarity with managing laboratory data is needed and will help assure efficient utilization of laboratory testing efforts for disease prevention.

Activity 4a

In Connecticut, the 2009 influenza A (H1N1) pandemic began in April 2009 and bridged two influenza seasons. The 2008-2009 and 2009-2010 seasons lasted longer than usual with influenza cases occurring through the summer months. During the pandemic, the DPH received the highest number of laboratory confirmed influenza reports since 1976, when influenza first became a laboratory reportable condition. The duration and intensity of disease transmission, uncertainty

regarding disease severity and the need for prevention guidance required an ongoing public health response including maintenance of influenza monitoring systems. The DPH conducted enhanced influenza surveillance using multiple systems to characterize the activity level, susceptible population groups, severity, and duration of the influenza seasons,

These systems included laboratory reporting of positive test results, sentinel network of providers, hospital-based syndromic systems, required reporting of fatal cases and patients hospitalized for influenza related illnesses. Results of these monitoring efforts were shared in state and with neighboring states' well as with the CDC, contributing to national surveillance and research activities. Currently, there are no EIP funded influenza surveillance staff at the DPH. One 0.5 FTE epidemiologist is supported by the Epidemiology and Laboratory Capacity cooperative agreement to maintain the ILI Provider Sentinel System. Additional personnel are needed to assist with labor intensive surveillance activities and timely reporting of surveillance information from the various systems as well as the additional proposed activities.

To provide improved national and regional seasonal influenza burden projections CDC needs to refine and adapt the 'pyramid' model developed during the 2009 influenza pandemic. Additional data are needed to refine and adapt the pyramid model to seasonal influenza; specifically, the incidence of pneumonia and influenza hospitalizations; the proportion of pneumonia and ILI hospitalizations tested for influenza and proportions positive by various test methods and the number and age distribution of deaths from influenza hospitalization.

Influenza is a reportable laboratory finding in Connecticut. Beginning with the 2009-2010 influenza season, hospitalized influenza is also a reportable condition in Connecticut. Beginning in the 2003-2004 influenza season, the EIP has participated in the multi-site surveillance for influenza hospitalizations in collaboration with other EIP sites and the CDC influenza branch. Initial surveillance was for pediatric laboratory-confirmed influenza hospitalizations from a 12-town catchment area around Yale-New Haven Hospital and the Hospital of St Raphael. Surveillance has since expanded to include adult and pediatric laboratory-confirmed influenza –related hospitalizations in all 27 towns of New Haven County. Through this surveillance activity, Yale EIP staff have developed close working relationships with the Infection Preventionists and the Information Technology and Medical records staff at all New Haven County hospitals.

In 2004, the Yale EIP established population-based surveillance for pneumonia hospitalization in a 7-town catchment area in New Haven County where > 90% of patients requiring hospitalization for pneumonia or other lower respiratory infections were admitted to one of two surveillance hospitals. Surveillance data were gathered on all pneumonia admissions to Yale-New Haven Hospital (YNHH) and the Hospital of St Raphael from residents of the catchment area. Case finding was accomplished at YNHH through daily queries of hospital admission data for specific ICD-9 codes and admission diagnosis text/words consistent with a diagnosis of infectious pneumonia or other lower respiratory track (LRTI) infection. Results of these queries were sent electronically to the Yale EIP Office. In addition, weekly summary reports were generated and emailed to the Yale EIP surveillance officer. To ensure that cases were not missed, a dataset of patients whose hospital discharge diagnosis contained ICD-9 codes indicative of pneumonia or LRTI was generated on a monthly basis and compared to the list of potential

pneumonia admissions. Medical charts of potential pneumonia admissions were reviewed to verify diagnosis and abstract pertinent data. Yale-New Haven Hospital's medical records have been computerized, providing rapid, convenient access to demographic, clinical, laboratory and imaging information. Because of the EIP's affiliation with the Yale School of Medicine/Yale School of Public Health, most YNH medical chart information is available to Yale EIP staff from their desktop computers. Similar methods were utilized to identify cases at the Hospital of St. Raphael.

Between April 1, 2004 and March 31, 2005 there were 73,163 hospital admissions at YNH and HSR. Of these, 36,857 (50%) were from our catchment area. Of the 2,951 pneumonia admissions from the catchment area, 1,826 (62%) met the case inclusion criteria of having radiographic evidence and two or more clinical signs/symptoms suggestive of severe pneumonia. The crude annual incidence was 6.2 cases per 1,000 population. Of the 1,826 cases, only 28% (508) had a putative etiology identified for their pneumonia. Of these 137 had a viral etiology identified; 78 (57%) influenza (A and/or B) and 48 (35%) RSV.

The proposed project will utilize the surveillance experience and expertise developed through the Enhanced Pneumonia Surveillance Activity (EPS) to identify and characterize pneumonia outcomes among patients hospitalized with influenza.

Established in 2004, the Hospital Emergency Department Syndromic Surveillance (HEDSS) System monitors emergency department visits. The HEDSS System, receives daily electronic reports of chief complaint strings from 19 of 31 acute care hospitals listing total patient visits and age, gender, zip code and time of visit. These data are reviewed for patterns that may indicate the presence of agents of bioterrorism or emerging infections. Three syndromes from the HEDSS System -- "flu + fever," "respiratory," and "cold" -- are used in tracking seasonal influenza and EDSS is considered part of CT's pandemic influenza surveillance system. Yale-New Haven Hospital participates in this activity.

In response to the September 11, 2001 World Trade Center Attacks, the CT DPH initiated a hospital admissions syndromic surveillance system (HASS) to monitor for possible concurrent biologic attack. This system has continued to the present. Hospital Admission Surveillance System (HASS), receives daily electronic reports from all 31 Connecticut acute care hospitals, listing their total admissions in various diagnosis /syndromic categories: 1) pneumonia, 2) hemoptysis, 3) acute respiratory distress syndrome (ARDS), 4) Meningitis, encephalitis or unexplained acute encephalopathy, 5) non-traumatic paralysis, Guillain-Barré or descending paralysis, 6) Sepsis or non-traumatic shock, 7) fever & rash, 8) fever of unknown origin, 9) gastrointestinal symptoms as vomiting, diarrhea & dehydration, 10) skin infection, and 11) clusters of illness. The HASS has proven to be extremely useful for tracking seasonal influenza among Connecticut populations and is now considered part of CT's pandemic influenza surveillance system.

Similar to HASS, this surveillance system monitors emergency department visits. The EDSS System, receives daily electronic reports of chief complaint strings from 19 of 31 acute care hospitals listing total patient visits and age, gender, zip code and time of visit. These data are reviewed for patterns that may indicate the presence of agents of bioterrorism or emerging

infections. 3 syndromes from the EDSS System--“flu + fever,” “respiratory,” and “cold”--are used in tracking seasonal influenza and EDSS is considered part of CT’s pandemic influenza surveillance system. Yale New Haven Hospital participates in this activity.

Data on Connecticut residents presenting with influenza-like illness (ILI) is collected on a weekly basis by participants of the US Outpatient Influenza-like Illness Surveillance Network (ILINet) (formerly known as the U.S. Influenza Sentinel Provider Surveillance Network. In CT, 31 sentinel providers report baseline acute care visits and those that meet CDC ILI-definition. Data collected weekly include # of patients with ILI (fever \geq 100 F and cough and/or sore throat) by age groups (0-4, 5-24, 25-64 and > 64 years). Also collected is the total number of patients seen for any reason (total of ILI + non-ILI cases for all age groups combined).

Activity 4b. Dialysis Centers

As cited in by Szezech and Lazar (*Kidney International* (2004) **66**, S3–S7) current projections by the National Institutes of Diabetes and Digestive and Kidney Diseases indicate that the population of patients with ESRD will rise from 400,000 patients currently to more than 2 million by 2030.

According to the CDC (http://www.cdc.gov/nhsn/psc_da_de.html; accessed 8/18/10) bacteremia and localized infections of the vascular access site are common in hemodialysis patients. Among patients with a hemodialysis catheter, the rate of catheter-related bacteremias has been estimated to be 0.9 – 2.0 episodes per patient-year. Infections, including bacteremia, are the second leading cause of death among hemodialysis patients. National data also demonstrate that cause-specific hospitalization rates among hemodialysis patients have increased 29% for bacteremia and 24% for cellulitis since 1993.

Such infections are potentially preventable, and there are evidence-based guidelines for infection prevention (“Guidelines for the Prevention of Intravascular Catheter-Related Infections” *MMWR*; 51(RR 10); 1-26). Effective, nationwide, center-specific surveillance linked to prevention initiatives and collaboratives (such as the Delvarva Foundation-facilitated hemodialysis prevention collaborative supported by the CDC) is a worthwhile area for HAI-EIP program intervention.

The large number of outpatients with ESRD, and the need for them to receive outpatient hemodialysis on a regular (typically three times per week) basis, requires a large cadre of outpatient hemodialysis providers to serve them. In Connecticut as of June 30, 2010, there were 40 dialysis providers treating 3,208 in-center hemodialysis patients and 518 patients at home on hemodialysis or peritoneal dialysis. The 40 providers have the following corporate ownership composition.

Affiliation	# of Facilities	%
DaVita	19	47.5
Dialysis Clinic, Inc. (DCI)	2	5
Fresenius Medical Care (FMC)	12	30
Independent	6	15

Veterans Administration	1	2.5
Total	40	100

There are several barriers related to the participation of providers that need to be overcome in the pilot project. Use of NHSN requires formal enrollment of the center, training and certification and approvals, and sustained effort to complete data entry consistently and on time. This has posed a challenge getting commitments from the independent centers to participate. Some Large Dialysis Organizations (LDOs) have expressed similar concerns, they already collect information from the centers, so this may require redundant data collection and entry. There are a few chronic units based within hospital systems that are part of this initiative and their hospitals already use the NHSN reporting system, so this group may be easier to enroll. In addition, most centers do not have the kind of dedicated infection prevention staff that acute care hospitals have to manage NHSN enrollment, data entry, and validation activities. This preliminary assessment suggests that dedicated staff will be needed to devote considerable time to communications with center administrators and staff of the centers to ensure a diverse group of centers enroll. To ensure the centers both enroll and stay active in the project, dedicated project staff will be essential for continuing training, data checks and validation, monitoring of participation, and technical assistance to the centers.

Operational Plan

Activity 1,2,3

To enhance existing capacity the DPH will establish an additional epidemiologist position within the Epidemiology and Emerging Infections Program (EEIP). Responsibilities for this position will be broad in scope, crossing multiple EIP activities, and flexible to adapt to the changing needs of the CT EIP. This position will assist Program staff with outbreak investigations and infectious disease surveillance systems. The majority of time will be devoted to identification and investigation of food and water-borne outbreaks and HAV surveillance under the direction of the Outbreak Coordinator.

The epidemiologist will assist the Outbreak Coordinator with monitoring of surveillance and laboratory data to identify outbreaks, conducting routine and outbreak-related epidemiologic interviews, coordinating investigations with other involved entities (including local health departments, State Laboratory, DPH Food Protection Program, other state agencies, other state health departments, and federal partners), and ensuring timely and completeness of reporting of outbreak data to the National Outbreak Reporting System (NORS).

In addition, the epidemiologist will assist with HAV related activities including: a) maintenance of laboratory reporting for markers of acute HAV, b) follow-up of reports of laboratory markers for acute HAV infection to determine case status, c) investigation of cases of acute HAV to determine clinical manifestations, laboratory findings, and risk factors, d) collection of serologic specimens on confirmed cases of acute HAV for molecular characterization at CDC, e) completion of the Viral Hepatitis Case Report form for reported cases and monthly data submission to CDC via an ftp site and to NETSS weekly according to CDC specifications, and f) collaboration with CDC on improving quality of existing data.

With experience in both conventional and molecular microbiologic methods and with familiarity with managing laboratory data the proposed senior laboratory coordinator will: a) work with laboratory staff to maintain current testing requirements for EIP pathogens, b) provide timely information to relevant parties on laboratory tests for outbreak investigations and high profile pathogens such as *Listeria* and *E.coli* O157:H7, c) ensure laboratory staff implement new test methods as specified by EIP initiatives, d) work with IT staff and epidemiology staff to define the parameters (data fields) and processes for access and transfer of appropriate laboratory data from Horizon, and e) manage and maintain the integrity of laboratory data of EIP pathogens.

Activity 4 a

The Yale EIP will work collaboratively with CDC and the other funded sites to develop a standard protocol that will be implemented across sites. This protocol will provide needed data to refine and adapt the 'pyramid' model developed during the 2009 influenza pandemic to provide improved national and regional seasonal influenza burden projections. The 4 areas to be addressed under this activity are listed below along with the proposed operational plan. The CT EIP will modify these plans as necessary to conform with the standard protocol to be developed.

- 1) Measure the incidence of pneumonia and influenza in hospitalized persons as recorded by current testing practices using admission and discharge data:
 - This activity will be limited to Yale New Haven Hospital (YNHH). Yale EIP currently conducts population-based surveillance for influenza hospitalization at YNHH. All New Haven County residents hospitalized with a laboratory-confirmed influenza infection are identified by this surveillance activity. To measure the incidence of pneumonia we will use data from the 2004-2005 EIP Enhanced Pneumonia Surveillance (EPS) activity (see above). We will work with YNHH IT staff re-establish the daily/weekly queries of hospital admission data for specific ICD-9 codes and admission diagnosis text/words consistent with a diagnosis of infectious pneumonia. We will also re-establish the monthly query of hospital discharge data developed for EPS. Limited clinical data will be abstracted to verify pneumonia diagnosis and identify potential etiology of the pneumonia. Data from the prospective surveillance system for pneumonia will be compared with EPS data from 2004-2005.

- 2) Measure the proportion of hospitalized patients with pneumonia and ILI being tested for influenza and the types of influenza tests used:
 - Yale EIP staff will determine whether cases of pneumonia identified through activity 1, above, were tested for influenza by reviewing electronic medical chart of pneumonia cases to determine if they were tested for influenza and, if so, by what test methodology. To measure the proportion of hospitalized patients with ILI being tested for influenza, Yale EIP staff will work with YNHH IT staff to develop an admission diagnosis query (combining ICD-9 codes and key words from the admission diagnosis) to identify patients hospitalized with ILI. Yale EIP staff will review the electronic medical record of these patients to abstract data necessary to confirm ILI case status and influenza testing data.

3) Calculate the number and age distribution of deaths with laboratory confirmed influenza in the catchment area:

- Retrospectively, Yale EIP staff will request electronic death certificate data from CT-DPH for all New Haven County residents who died in 2005-2010. Electronic death certificate data will be cross-matched with cases of influenza-related hospitalizations among New Haven County residents from the 2005-10 influenza season. If a match is found, data will be entered in an Influenza Death Matching Database including date of birth, date of death, and specific cause(s) of death. Prospectively, on a monthly basis, Yale EIP staff will query the on-line Social Security Death Index database to identify any deaths among cases of influenza-hospitalization from New Haven County. If a match is found, date of death will be entered into the SSDI section of the Influenza Death Matching Database. This project poses minimal risk of harm to patients. No patient contact will occur as part of any of the data collection for the death matching. Instead, two existing databases will be linked. The influenza-hospitalization death matching project will begin once the standard protocol is completed. This protocol will build on the methods developed for the previous Influenza Death Matching Study (2007). We anticipate beginning the project in the first quarter of 2011.

4) Measure the incidence of influenza-like illness (ILI) in the EIP catchment areas and the proportion tested for influenza:

- Yale EIP staff will work with CT DPH to measure the incidence of ILI in New Haven County. DPH staff maintains both the sentinel ILI surveillance system and the Hospital Admissions Syndromic Surveillance (HASS) and Hospital Emergency Department Syndromic Surveillance (HEDSS) systems. Data from all three of these systems will be used to estimate the incidence of ILI among county residents. The proportion of the cases of ILI tested for influenza will be estimated by comparing the total number of reports of laboratory positive influenza infections reported to DPH from New Haven County residents with the estimated number of ILI in New Haven County.

Activity 4b

All the ESRD Dialysis facilities in the state of Connecticut will be invited to participate. Special efforts will be made to recruit providers who are motivated and interested in working to identify setting-specific barriers and challenges, able to identify workable and practical solutions to IT barriers, open to innovation, able and willing to collect and share data in a uniform fashion, and excited by the prospect that their participation will likely have major and enduring impact on the health of hemodialysis patients not only in participating dialysis facility, but across the Nation. The project will aim to enroll both independent and LDO affiliated centers.

The NHSN Dialysis Event (DE) module will be used to conduct the infection surveillance. The ESRD Network will be the NHSN Group Administrator, and the Network will see individual facility data when the participating centers confer rights to the Network (they will not confer rights to DPH for this project as DE data is not currently reportable in Connecticut). The New England Network will be responsible for enrollment of providers and conducting administrative

functions that enables the data entry by providers. The Network will also be responsible for training and user support with the assistance of CDC and Connecticut DPH. DPH will co-host training events and some user support.

Facilities enter the data in the tool using two forms. Denominator data are captured on an Outpatient Dialysis Center Practices Survey form completed monthly. It counts all hemodialysis patients in the first week of the month. Numerator data are collected for each patient who has an event on a Dialysis Event form. Data are categorized by type of pathogen (gram positive organisms, gram negative organisms and other organisms) and type of vascular access. The Network of New England will analyze the data to develop baseline event rates for the centers that can be used to track the effectiveness of future interventions to decrease vascular access infections and BSI. Regular and effective communications will be key to the success of the project. Conference calls at regular intervals with enrolled providers, participation in conference calls with state departments of health and CDC/CMS, validate data for providers, etc.

Because the Network serves the entire six-state New England region, the Network will be situated to expand the project beyond Connecticut, if CDC and the other New England states are interested. This has the potential of accelerating the replication of the project to other states.

- Objective 1: By December 31, 2010, to have enrolled, trained staff, and begin data entry from participating (estimated 10 or more) hemodialysis centers in Connecticut.
- Objective 2: By September 30, 2011, to have completed collection of data from 90% of participating dialysis centers within the NHSN one-month data entry timeframe, for the final three months of the project year (June-August).
- Objective 3: By September 30, 2011, to have completed a validation of the completeness and accuracy of reporting and to have determined baseline levels of reporting.

Timeline:

- October 2010: Hire an experienced ESRD nurse who has statistical or study methods experience and has computer software analytical skills.
- October 2010: Complete training in NHSN data entry system, registration process of NHSN system, and establish group user function for ESRD Network of New England. Volunteer dialysis providers will be recruited. The objective is to have 25% of providers enrolled by the end of October.
- November 2010: Host orientation meeting for dialysis providers in central Connecticut location. Prepare instruction manuals. Get dialysis providers registered in NHSN system.
- December 2010: Data entry begins with volunteer dialysis providers. Technical assistance given by the Network HAI project coordinator.
- January/February 2011: Review and evaluate of initial data profiles to identify variation, technical barriers. Start baseline provider profile analysis.
- March/April 2011: Begin onsite data validation of NHSN data based on DPH/CDC criteria. Prepare comparative feedback reports to providers and DPH/CDC.
- May/June 2011: Continue onsite data validation of NHSN data. Do interim analysis to identify variation/trends.
- Host learning sessions with participating providers on data profiles – seek intervention opportunities for improvement.

- September 2011: Prepare reports on project findings, barriers, lessons learned, and results of the project.

Measures of Effectiveness

Activity 1,2,3

The measures of effectiveness of the additional epidemiologist and laboratory coordinator will include:

- Routine and outbreak-related epidemiologic interviews conducted
- Investigations coordinated with other involved entities (including local health departments State Laboratory, DPH Food Protection Program, other state agencies, other state health departments, and federal partners)
- Timeliness and completeness of reporting of outbreak data to the National Outbreak Reporting System (NORS)
- Maintenance of laboratory reporting for markers of acute HAV
- Follow-up of reports of laboratory markers for acute HAV infection to determine case status
- Cases of acute HAV investigated to determine clinical manifestations, laboratory findings, and risk factors
- Serologic specimens on confirmed cases of acute HAV collected for molecular characterization at CDC
- Viral Hepatitis Case Report forms completed for reported cases and monthly data submission to CDC via an ftp site and to NETSS weekly according to CDC specifications
- Collaboration with CDC on improving quality of existing data
- Accurate and timely reporting laboratory testing for EIP pathogens is performed
- Maintain CLIA required proficiency level (80%) for EIP pathogens
- Laboratory staff receives appropriate training to implement new methods
- The laboratory validates new test methods as specified by the EIP
- Appropriate laboratory data is submitted electronically to interested parties
- PFGE subtyping of *Listeria* and *E. coli* O157:H7 is completed within 96 hrs.

Activity 4 a

- Number and proportion of CDC protocol development conference calls in which Yale EIP staff participate.
- The number of pneumonia hospitalizations identified at YNHH among New Haven County residents and the proportion for which chart review is completed.
- The number and proportion of hospitalized pneumonia patients for which influenza testing information is gathered.
- The number and proportion of hospitalized ILI cases for which influenza testing information is gathered.
- The number and proportion of deaths linked to influenza hospitalization by influenza season.

Activity 4b

- The Network will prepare progress reports on the initiative in accordance with DPH and CDC expectations, and an interim NHSN report using the NHSN analysis features already programmed into the software for the participating dialysis centers and the Network's project partners (i.e., CMS, CDC, Connecticut DPH). These reports will be disseminated to the dialysis centers during individual technical assistance visits and group training. The final report will be prepared and distributed to the centers and project partners in September 2011. These data are pilot data and therefore will not be published and distributed to the general public. As NHSN will be used, web based tools will not be developed, other than possibly Survey Monkey surveys to poll providers on implementation issues as the project proceeds.
- The NHSN dialysis module allows dialysis centers to gather information on patient characteristics, vascular access type (e.g., fistula or not) which can affect the risk of infection, and relevant clinical outcomes. The outcomes include infections, antimicrobial use, and hospitalization. The centers (and any group administrator they give data access to), can analyze the data by numbers of infections, and infection rates (because it permits collection of denominator data on the size of the population in the center). Use of NHSN allows the facilities to compare their rates of infection and fistula utilization to peers nationally. The NHSN also presents the data in easily understandable, graphical and tabular formats that will be used when the Network reviews the data with the dialysis centers. In addition to the NHSN data, project implementation data and feedback from the participating centers on the use of NHSN for surveillance, the technical assistance and training they are receiving and related administrative, resource, and logistical topics will be collected and shared with CDC/CMS/Connecticut DPH.
- These data are already collected (in different form) as a component of clinical care; therefore, this is not clinical research, and no human subjects reviews are necessary. We will share the protocol informally with the DPH IRB to see if they agree with this determination or whether a formal IRB review will be necessary. Similarly, the Network of New England will also seek a review from their IRB if an informal reading suggests that a submission is necessary. If it were deemed to be research, Connecticut would follow the protocol it routinely follows for EIP projects. The protocol, which includes all data collection forms and information relevant to Human Subjects Consent and confidentiality, would be submitted to the DPH IRB for review. If the DPH IRB approves, it would be submitted to individual facilities for review and approval of their IRBs before the project commences.

Human Subjects

All EIP activities that fall outside of public health surveillance, including women or persons under the age of 21 years, will be reviewed by Human Investigations committees (HIC) at Yale University School of Medicine, the local institutional level (if applicable) and at the state (DPH) and/or national level (CDC) as necessary. The HICs at Yale and DPH meet on a regular basis and CT EIP staff follow procedures set by both institutions to renew protocols on a yearly basis or as needed due to changes. The HIC approval letters are forwarded to the CDC on a yearly basis or as instructed by CDC guidance. Appropriate HIPAA authorizations or waivers will also be sought when necessary from the Yale HIC. All Yale EIP Staff, regardless of position, are required to complete initial training as well as complete continuing education in Human Subjects Research and HIPAA regulations. In addition, CT DPH has authorized Yale EIP staff to act as agents of DPH in conducting surveillance activities. As such, Yale EIP staff are bound by the

same confidentiality statute relating to reportable diseases as DPH employees (Connecticut general Statutes Section 19a-25).

Data Sharing

The DPH will enter all research data into a secured database and transmit complete data to the CDC on a regular basis. The timing of the data transmission will be based on the nature of the project activity, described in the Operational Plan, and determined in collaboration with the CDC to meet project needs. The data will be electronically transmitted to CDC, stripped of personal identifiers on a routine basis using the agreed upon secure data transfer policy.

**Budget Justification
Connecticut Emerging Infections Program
RFA-CI-10-003**

Federal Object Class	ACA Funding		Non-ACA	Total
	Activities 1,2,3	Activity 4.a.	Activity 4.b.	
Personnel	\$120,962	\$68,321		\$189,283
Fringe	\$73,859	\$41,717		\$115,576
Travel	\$4,400	\$500		\$4,900
Equipment	\$0			\$0
Supplies	\$1,210	\$1,210		\$2,420
Other	\$3,050			\$3,050
Contractual			\$178,995	\$178,995
Total Direct Cost	\$203,481	\$111,748	\$178,995	\$494,224
Indirect Costs	\$43,547	\$24,732		\$68,279
Total	\$247,028	\$136,480	\$178,995	\$562,503

Budget Justification – Activities 1, 2, and 3 (ACA funding) Total \$247,028

Personnel Total \$120,962

1. Principal Microbiologist, Mona Mandour (100% effort for 12 months)(\$67,806)

This position works in the DPH State laboratory and will report directly to Diane Barden, Supervising Microbiologist. Responsibilities of this position include serving as the liaison between the DPH State Laboratory and EIP partners at the DPH Epidemiology Program and at the Yale EIP.

2. Epidemiologist 1, TBD (100% effort for 12 months) \$53,156

This person will assist Program staff with outbreak investigations and infectious disease surveillance systems. These will include food and water-borne outbreaks and surveillance for influenza associated hospitalizations and deaths, as well as support for other activities conducted by the Epidemiology and Emerging Infections Program in response to changing needs. In addition, this person will coordinate the submission and tracking of laboratory specimens submitted for these activities. The Epidemiologist 1 will work under the direct supervision of Quyen Phan, MPH, Epidemiologist 3.

Fringe Benefits Total \$73,859

Fringe benefits for DPH FY2011 are 61.06% of the total salaries.

Travel**Total \$4,400**

1. Funds are requested to support in state travel. Cost is calculated at \$.50/mile x 1,000 miles. (\$500)
2. Airfare and hotel expenses are being requested for out of state training travel costs for the Epidemiologist 1 for needed training. The Epidemiologist 1 will be required to have 3 trainings as part of their job criteria. The trainings will be held in Atlanta, GA, so airfare and hotel expenses.
 - 3 trips to Atlanta, GA at \$500 per trip (\$1500)
 - Hotel- 20 nights at average of \$120 per night (\$2400)

Supplies**Total \$1,210**

1. Desktop Computer for EPI 1 (\$610)
Funds are requested to support the cost of purchasing a new desktop computer for the EPI 1 position. The DPH will follow state procedures and order a computer per the approved state contract (see link below)

<http://www.ct.gov/doi/lib/doi/purchase/awards/ca09itz0080.pdf>
2. General Office Supplies (\$600)
Funds are requested to support the cost of general office supplies such as pens, note pads, toner, and paper for the document center.

Other**Total \$3,050**

Funds are being requested to send the Epidemiologist 1 on out of state training needed for the position. The trainings are held at Emory University in Atlanta, GA. The trainings are as follows:

- Control of Foodborne and Waterborne Diseases- 1 week course (\$950)
- Epidemiology in Action- 2 week course (\$1200)
- Epidemiology in Action: Intermediate Analytic Methods- 1 week course (\$900)

Indirect Cost**Total \$43,547**

The indirect cost rate for DPH SFY2011 is 36.2%.

Budget Justification – Activities 4.a. Influenza (ACA funding)(\$136,480)

Personnel **Total \$68,321**

1. Epidemiologist 2, TBD (100% effort for 12 months)(\$68,321)

This person will work in the Epidemiology Program under the supervision of Randall Nelson, Epidemiologist 4. Responsibilities shall include: 1) collection and management of influenza positive laboratory reports received from commercial and hospital laboratories as well as the DPH State Public Health laboratory. In addition, this position will also assure timely reporting of surveillance data to local health departments, other local and state government agencies, the Yale EIP, and the CDC. Rapid reporting is critical for public health decision making as well as successful completion of the influenza related research activities.

Fringe Benefits **Total \$41,717**
Fringe benefits for DPH FY2011 are 61.06% of the total salaries.

Travel **Total \$500**
1. Funds are requested to support in state travel. Cost is calculated at \$.50/mile x 1,000 miles. (\$500)

Supplies **Total \$1,210**
1. Desktop Computer for EPI 2 (\$610)
Funds are requested to support the cost of purchasing a new desktop computer for the EPI 2 position. The DPH will follow state procedures and order a computer per the approved state contract (see link below)
<http://www.ct.gov/doi/lib/doi/purchase/awards/ca09itz0080.pdf>
2. General Office Supplies (\$600)
Funds are requested to support the cost of general office supplies such as pens, note pads, toner, and paper for the document center.

Indirect Cost **Total \$24,732**
The indirect cost rate for DPH SFY2011 is 36.2%.

Budget Justification – Activity 4.b. Healthcare Associated Infections (non-ACA funding)

The State of Connecticut Department of Public Health (DPH) is requesting funds to support the Emerging Infections Program (EIP) cooperative agreement Healthcare Associated Infections Program End Stage Renal Dialysis Blood Stream Surveillance special project.

Contractual

Total \$178,995

1. Name of Contractor: The End Stage Renal Disease Network of New England
2. Method of Selection: Sole source
3. Funding period: September 30, 2010- September 29, 2011
4. Method of Accountability: Per DPH contract language, the contractor shall submit expense and program progress reports.

Two DHHS agencies, CMS and CDC, started an initiative for the Prevention of Blood Stream Infections in Outpatient Dialysis Patients. CMS contacted the Network of New England and State Departments of Health of Massachusetts and Connecticut to be part of this initiative.

The ESRD Network of New England is a non-profit corporation, which serves as the Medicare contractor for the six New England States. The federal End Stage Renal Disease (ESRD) Program is administered through the Centers for Medicare & Medicaid Services. Network organizations are legislated to monitor and improve the quality of care provided by dialysis facilities and kidney transplant programs. The United States is divided into 18 geographic areas, covering all 50 states and US territories. Each End Stage Renal Disease Network Organization is responsible for serving the dialysis and transplant community in its particular region. Networks are an effective bridge between the federal government, ESRD providers and professionals, and the consumers they serve. The New England Network has held the ESRD Network contract for over 30 years. There are 170 dialysis facilities and 15 renal transplant centers in New England, providing treatment to over 12,306 dialysis patients and approximately 8,640 patients who have a functioning kidney transplant. Each Network Organization is required by CMS to conduct specific contractual activities to improve patient care, maintain a patient registry, provide educational materials and investigate patient complaints. All ESRD providers (dialysis facilities) are required to participate in Network activities and cooperate in achieving Network goals.

The ultimate goal of this project is to identify evidence-based “Core interventions” that will decrease Blood Stream Infections in the outpatient dialysis setting. The Network of New England will be the NHSN (surveillance data system) Group Administrator for the project, enroll dialysis providers, conduct administrative functions such as training and user support with CDC, assure the correct submission of accurate data into the NHSN data system, and submit lessons learned from the Network and facility perspective to CMS and CDC.

Personnel

\$102,339

1. **Vacant**, HAI/ESRD Project Coordinator (1 FTE, 12 months) (\$83,200)
(\$40/hr x 40 hrs/wk x 52 weeks)

This individual will be the Group Administrator for the New England Dialysis Program Group, communicate with dialysis providers and encourage enrollment and retention in the project, perform site visits, train dialysis providers in surveillance and data entry in compliance with NHSN protocols and requirements, perform data validations, offer individual and group technical assistance and assurance of correct data collection and entry analyze data, and lead preparation of reports (programmatic, fiscal, and surveillance).

2. Vacant, Administrative Assistant (0.4 FTE, 12 months) (\$19,139)
(\$23/hr x 16 hrs/wk x 52 weeks)

This individual will assist the project coordinator with communicating with dialysis providers when the coordinator is traveling, will assist in training materials preparation and other meeting logistics, assist in the preparation of reports, and filing and other clerical tasks.

Fringe Benefits \$28,297

The contractor calculates fringe benefits at 20% over gross wages plus employer FICA at 7.65% (6.2% SSA plus 1.45% Medicare) = \$20,467 + \$7,829

Travel \$10,820

In-region (New England) travel \$7,320
(GSA domestic per diem \$61/day x 12 days x 10 mos)

Mileage (700 mi/mo x 10 mos) x \$0.50/mi (\$3,500)

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.

Training \$600

Training dialysis facility staff to use CDC's National Healthcare Safety Network data system and end of year learning session on project results (2 meetings @ \$300 each) for meeting space rental, development of materials, publicity to meeting, and AV equipment.

Supplies \$2,000

Office supplies: paper, covers, fasteners 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

\$34,939

Based on the ESRD Network of New England fixed direct and administrative costs (wages and fringe benefits excluded).

YEAR 2 PROJECTION

Federal Object Class	ACA Funding		Non-ACA	Total
	Activities 1,2,3	Activity 4.a.	Activity 4.b.	
Personnel	\$120,962	\$68,321		\$189,283
Fringe	\$73,859	\$41,717		\$115,576
Travel	\$4,400			\$4,400
Equipment	\$0			\$0
Supplies	\$1,210	\$1,210		\$2,420
Other	\$3,050			\$3,050
Contractual				
Total Direct Cost	\$203,481	\$111,248		\$314,729
Indirect Costs	\$43,788	\$24,732		\$68,520
Total	\$247,269	\$135,980		\$383,249

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Klevens MR, Morrison MA, Nadle J, Petit S, Gershman K, Ray S, Harrison LH, Lynfield R, Dumyati G, Townes JM, Craig AS, Zell ER, Fosheim GE, McDougal LK, Carey RB, Fridkin SK for the Active Bacterial Core surveillance (ABCs) MRSA Investigators. [Invasive Methicillin-Resistant *Staphylococcus aureus* Infections in the United States](#). *JAMA* 2007; 298(15):1763-71.

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TF Jones, LA Ingram, PR Cieslak, DJ Vugia, M Tobin-D'Angelo, S Hurd, C Medus, A Cronquist, FJ Angulo. [Salmonellosis Outcomes Differ Substantially by Serotype](#). *J Infect Dis*. 2008;198:109-14.