State Medicaid Health Information Technology Plan

For the
Health Information Technology Implementation
Electronic Health Records
Incentive Payment Program

November 2010
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Executive Summary

On February 17, 2009, the American Recovery and Reinvestment Act of 2009 (ARRA) was signed into law and established the framework of financial incentives to stimulate growth and improve the health of the nation’s economy and health care system. ARRA defined specific roles and incentives for the U.S. Department of Health and Human Services (HHS) and its partner State Medicaid Agencies (SMA) in improving the nation’s health care through the “Meaningful Use” of Electronic Health Record (EHR) technologies. Two titles in ARRA, Title XIII, Division A, Health Information Technology, and Title IV, Division B, Medicare and Medicaid Health Information Technology, comprise the “Health Information Technology for Economic and Clinical Health” (HITECH) Act, which provides unprecedented opportunities for states to plan, design, and support providers in meaningfully using EHRs and Health Information Exchanges (HIEs) to improve the health, care quality and cost efficiency of its residents.

To help guide State Medicaid Agencies’ planning efforts, the Center for Medicaid and State Operations (CMSO) within the Centers for Medicare and Medicaid Services (CMS) issued a letter to state Medicaid directors on September 1, 2009. The letter provided initial guidance on section 4201 of ARRA, Pub. L. 111-5, which requires all SMAs to develop a State Medicaid Health Information Technology Plan (SMHP) and to establish a Medicaid EHR incentive payment program to provide incentives for Eligible Professionals (EPs) and hospitals to adopt and meaningfully use EHRs to improve the health of its residents and quality and efficiency of the health care system. This guidance specifically required the submission of the Planning – Advance Planning Document (P-APD) to obtain prior approval and to secure 90% Federal financial participation for the planning activities for the SMHP, the SMHP, which outlines the approach to implement the EHR incentive program, and an Implementation-Advance Planning Document (I-APD) to request enhanced funding for the administration of the project and the 100% federal funding of the incentive payments themselves.

On July 13, 2010, CMS and the Office of the National Coordinator for Health Information Technology (ONC) announced two complementary final rules to implement the EHR Incentive Program under HITECH Act. The CMS regulations specify the objectives that providers must achieve to qualify for incentive payments. States will be initiating their incentive programs on a rolling basis, subject to CMS approval of their State Medicaid HIT Plans which detail how each state will implement and oversee the incentive programs. The ONC regulations specify the technical capabilities that EHR technology must have to be certified for Meaningful Use and to support providers in achieving the Meaningful Use objectives.

On August 17, 2010, CMS issued a second letter to the state Medicaid directors providing more detailed guidance to the Medicaid agencies regarding the implementation of Section 4201 of ARRA, Pub. L. 111-5, and CMS’ recently published regulations at 42 CFR Part 495, Subpart D. The letter also set stated CMS’ expectations relating to the activities and potential uses of 90% Federal Financial Participation (FFP) administrative matching funds (90/10 funds). In order to qualify for the 90/10 funds, a state must, at a minimum, demonstrate to the satisfaction of the Secretary compliance with three requirements:

- Administration of Medicaid incentive payments to Medicaid EPs and eligible hospitals;
• Oversight of the Medicaid EHR Incentive Program, including routine tracking of Meaningful Use attestations and reporting mechanisms; and
• Pursuit of initiatives that encourage the adoption of certified EHR technology for the promotion of health care quality and the electronic exchange of health information.

Connecticut Department of Social Services (DSS) staff have reviewed the final rules, the State Medicaid Directors letters and have actively participated in the CMS All-States calls to strengthen the State’s understanding regarding the intent of the rule language and to ensure the State’s ability to successfully develop an EHR Incentive Program that meets the needs of Connecticut and is in alignment with the rule.

Connecticut’s SMHP will provide CMS with an understanding of the activities the DSS expects to undertake over the next five years as the Department implements Section 4201 Medicaid provisions of the American Recovery and Reinvestment Act. Specifically, Connecticut’s SMHP constitutes a roadmap of how DSS expects to encourage, administer, and monitor incentive payments to eligible providers (EPs) and hospitals. The State’s SMHP will detail the components necessary to ensure that incentive program applicants that are able to demonstrate eligibility receive timely and accurate incentive payments, without duplication. The SMHP for Connecticut addresses how the Department will work with and support the statewide HIE initiative. The SMHP includes efforts that DSS will employ to work effectively with the Regional Extension Center (REC) to promote EHR adoption and Meaningful Use.

This SMHP is a collaborative effort that includes key DSS stakeholder in the EHR Incentive Program, the Department of Public Health, the State Government HIT Coordinator, the Regional Extension Center and the Department of Information Technology.
A. Connecticut Background

A.1 State Demographics

A.1.1 Population
The most recent U.S. Census count puts the population of Connecticut at 3.5 million people in 2009, a 3.3% percent increase since 2000 (2009 estimate, U.S. Census\textsuperscript{a}). More than half the population (73.2%) is non-Hispanic white. Hispanics comprise 12.3% of the state’s population, blacks make up 10.4%, Asians make up 3.6%, American Indians comprise 0.4% and Native Hawaiian and Other Pacific Islander make up 0.1%.

A.1.2 Geography
Connecticut is the second smallest New England state and the third smallest state in the U.S. at 4,845 square miles. It is bordered on the west and south by New York, the north by Massachusetts and on the east by Rhode Island. It is comparatively densely populated with an average of 702.9 people per square mile to the U.S. average of 79.6 people per square mile.

A.1.3 Income and Poverty
The median household income in Connecticut is $68,294 compared to $52,029 in the U.S. (2008, U.S. Census\textsuperscript{b}). In 2008, the percentage of Connecticut residents living below the federal poverty level was 9.1%, compared to 13.2% in the U.S.

A.2 Health Care Environment in Connecticut

A.2.1 State of Health Indicators
The health status of Connecticut residents is slightly better than the U.S. on a number of key indicators in 2007-2008, as shown in Table 1. Similarly, access to care is significantly higher for adults in Connecticut than the nation as a whole.

Table 1. State of Health: Connecticut and the U.S.

<table>
<thead>
<tr>
<th>Health Status</th>
<th>CT #</th>
<th>CT %</th>
<th>US #</th>
<th>US %</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Mortality Rate</td>
<td>6.6</td>
<td>-</td>
<td>6.8\textsuperscript{c}</td>
<td>-</td>
<td>per 1,000 live births</td>
</tr>
<tr>
<td>Teen Death Rate</td>
<td>43</td>
<td>-</td>
<td>62\textsuperscript{c}</td>
<td>-</td>
<td>per 100,000 population</td>
</tr>
<tr>
<td>AIDS Diagnosis Rate</td>
<td>7.6\textsuperscript{c}</td>
<td>-</td>
<td>12.3</td>
<td>-</td>
<td>per 100,000 population</td>
</tr>
<tr>
<td>Overweight or Obese Children</td>
<td>-</td>
<td>25.7\textsuperscript{c}</td>
<td>-</td>
<td>31.6</td>
<td>% of children</td>
</tr>
<tr>
<td>Adults who Visited the Dentist/Clinic</td>
<td>-</td>
<td>80.2\textsuperscript{c}</td>
<td>-</td>
<td>71.3</td>
<td>% of adults</td>
</tr>
<tr>
<td>Adults with Disabilities</td>
<td>-</td>
<td>10.4\textsuperscript{c}</td>
<td>-</td>
<td>12.1</td>
<td>% of adults</td>
</tr>
</tbody>
</table>
A.2.2 Health Coverage

The percentage of Connecticut residents without health insurance in 2007-2008 was 9.7% compared to 15.4% for the U.S., and for children the rate is 6.1% compared to 10.3% for the nation. Similarly, the health spend rate per capita in the State is slightly greater than the rate for the U.S., $6,344 vs. $5,283. See Appendix G.2 for information on the health care services provided by the State.

Table 2. Health Insurance Coverage in Connecticut and the Unites States

<table>
<thead>
<tr>
<th></th>
<th>CT #</th>
<th>CT %</th>
<th>CT %</th>
<th>US #</th>
<th>US %</th>
<th>US %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer</td>
<td>2,072,400</td>
<td>60.1%</td>
<td>1.3%</td>
<td>157,194,100</td>
<td>52.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Individual</td>
<td>160,300</td>
<td>4.6%</td>
<td>1.1%</td>
<td>13,995,800</td>
<td>4.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>396,500</td>
<td>11.5%</td>
<td>1.0%</td>
<td>42,326,300</td>
<td>14.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Medicare</td>
<td>468,600</td>
<td>13.6%</td>
<td>1.3%</td>
<td>37,183,500</td>
<td>12.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Other Public</td>
<td>16,300</td>
<td>0.5%</td>
<td>0.5%</td>
<td>3,505,000</td>
<td>1.2%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Uninsured</td>
<td>334,200</td>
<td>9.7%</td>
<td>0.7%</td>
<td>46,339,500</td>
<td>15.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>3,448,200</td>
<td>100.0%</td>
<td>1.2%</td>
<td>300,544,200</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

A.3 Overview of Medicaid in Connecticut

The total Medicaid enrollment in Connecticut as of June 2009 was 558,200, or 16% of the total State population. This is slightly lower than the average U.S. Medicaid enrollment of 19%. As of June 2010, children comprised the largest percentage of Connecticut Medicaid recipients (47%), adults accounting for 35%, aged, blind and disabled 18%.

A.3.1 Connecticut’s Medicaid Program

Connecticut’s Medicaid program provides health care services to over 558,000 Connecticut residents either through managed care or fee for service. Connecticut’s Medicaid managed care program (HUSKY A) serves children and their families. As of June 2010, the number of Medicaid managed care enrollees was 378,168 or 71% of Medicaid enrollment Medicaid clients. All other Medicaid clients (those exempt from managed care, children or families enrolled in the Primary Care Case Management program, adults, the disabled, and low income single adults) receive Medicaid covered services under fee for service. In addition, services provided under the dental program, pharmacy and federally qualified health centers are carved out of managed care and paid via fee for service.
A.3.2 Medicaid Budget

The total Medicaid spending in Connecticut for FY 2010 was $5.1 billion. 15% of this budget was spent on the Medicaid managed care program in 2010. The total Connecticut Medicaid payments to nursing homes in FY 2010 were $1.4 billion.

A.4 Overview of Current Project

Connecticut’s State Medicaid Health Information Technology Plan was developed to satisfy the requirements under Section 4201 - Medicaid Provisions of the ARRA. It includes the activities the Department of Social Services plans to undertake in the next five years to implement and support the EHR Incentive Program.

Specifically, this SMHP constitutes a roadmap of how DSS expects to encourage, administer, and monitor incentive payments to eligible providers and hospitals. The State’s SMHP will detail the components necessary to ensure that applicants that are able to demonstrate eligibility will receive timely and accurate incentive payments, without duplication. To accomplish these objectives, DSS will focus on implementing mechanisms that will:

- Validate that Medicaid patient volume thresholds are met;
- Ensure satisfactory adoption, implementation, and upgrade of Electronic Health Record (EHR) technology; and
- Verify that EHR technology meets Meaningful Use criteria, in accordance with the definition set forth in 42 CFR Part 495, Subpart D.

Additionally, the SMHP for Connecticut addresses how the Department’s efforts will work with and support the statewide Health Information Exchange (HIE) initiative in Connecticut, and activities DSS will undertake to most effectively work with the Regional Extension Center (REC) to promote EHR adoption and Meaningful Use.

As most states are expected to pursue development of EHR incentive programs, the Department of Social Services is collaborating with other states that use the same HP Enterprise Services Medicaid Management Information System (MMIS). This collaboration will yield an application called the Medical Assistance Provider Incentive Repository (MAPIR) that can be used by all participating states to support the EHR Incentive Program and significantly reduce development costs for both the states involved and CMS. The details for the requirements of this approach are described in Section D.8.

As CMS acknowledges, plans generally will need to change over time. With this in mind, DSS expects to keep CMS informed of anticipated changes to activities, scope, and/or objectives. DSS will provide annual updates and as-needed updates to CMS over the next five years to ensure DSS’ ability to successful implement the Incentive Program.

A.4.1 Planning Activity Summary

The activities DSS has undertaken during the SMHP planning process have been focused on addressing and reaching consensus for answering the key questions in the CMS SMHP template and for planning and initiating the provider outreach and engagement process.

Over the course of five months, from July 2010 to November 2010, DSS employed a comprehensive methodology in the development of the State Medicaid HIT Plan (SMHP). The planning process included the following activities:

- Review of the CMS EHR Incentive Program final rule requirements.
- Review of documentation relevant to the State’s EHR Incentive Program, such as: MAPIR requirements and scope, Connecticut Medicaid Management Information System (MMIS) General System Design, Connecticut Health Information Technology and Exchange Strategic and Operational Plan, and eHealthConnecticut (eHealthCT) Regional Extension Center application and plans.

- Meeting with stakeholders from DSS, the State’s HIT coordinator, the Department of Information Technology (DOIT), the Department of Public Health (DPH), the Regional Extension Center (REC) at eHealthCT and HP Enterprise Services (HP) to seek their input and guidance on the HIT vision for the State and to validate findings.

- Performing an environmental scan of current HIT Landscape (“As-is”) in the State that included a targeted Medicaid provider survey of the eligible Medicaid providers to determine current adoption of EHR technologies. The As-Is assessment included:
  - Creating a methodology for verifying provider eligibility for ARRA incentives, including calculating the Medicaid members in relationship to overall patient case load to meet the appropriate thresholds per regulations
  - Understanding barriers to applying for incentives, including but not limited to certification of existing EHR systems, and identifying providers who are eligible
  - Understanding needs and barriers to EHR adoption in Connecticut and identifying strategies to overcome these challenges in collaboration with the Department of Public Health’s Statewide Health Information Exchange (HIE) project and the designated Regional Extension Center

- Facilitating the creation of a vision for Connecticut Medicaid HIT with key stakeholders and the HIT Roadmap needed to achieve the vision as part of the SMHP.

- Defining the required processes and resources for the administration and oversight of the Program.

- Coordinating with other states and especially the Pennsylvania Office of Medical Assistance Program (OMAP) within the Pennsylvania Department of Public Welfare (DPW) using HP’s (formerly EDS’) MMIS solution to design and develop a web based application that will support National Level Repository (NLR) interfaces and data exchanges and State requirements for determining and issuing eligible provider incentive payments.

- Developing and circulating several reports that included Connecticut’s current initiatives that were leveraged for the Program, functional and technical gaps, gap closure alternatives, processes for prioritization of viable alternatives and recommendations for the Program.

The Department is ensuring that their staff become knowledgeable about the intent and impact of the new rules and subsequent modifications on Connecticut’s Medicaid Program in order to appropriately address the development, implementation, monitoring and administration of the Incentive Program.

DSS has initiated a comprehensive campaign to increase the awareness of the Program among Medicaid providers and hospitals which will ultimately increase Program enrollment. This campaign is intended to address the individual providers, provider groups and numerous statewide medical organizations through the dissemination of newsletters and educational material. DSS anticipates this campaign to evolve in order to address four key phases of communication, education and outreach: Promote awareness, promote understanding (including timely and accurate information regarding the Program and the responsibilities of
those who participate), promote participation opportunities and promote ownership of becoming meaningful users of EHRs. DSS plans to continue to execute outreach and education activities in the State.

A.4.2 Coordination with Other Federal Entities and Federally Funded Entities/Projects

DSS has established effective coordination efforts with other Connecticut ARRA programs. Three core HIT groups in the State – the Department of Public Health (the lead entity for the State HIE), eHealthCT (the designated Regional Extension Center for the State), and DSS – all ARRA grant recipients – have formed a working group to collaborate on Health Information Technology (HIT) and HIE in the State. Coordinated activities between the three organizations as part of this group have included the following:

- Creating a master work plan for the HIE, REC and SMHP planning activities (Appendix G.5)
- Creating Communications and Evaluation subcommittees that focus on coordination for the HIT efforts in the State
- Leveraging environmental scan of the HIT landscape in the State to identify opportunities, gaps and challenges for all programs (HIE, REC, EHR)
- Sharing contacts, partners and stakeholders for coordination, sharing and maintenance purposes
- Sharing key audiences that will benefit from the HIE, the REC and the Incentive Program
- Developing and aligning key messages to serve as the base of message vehicles for all entities
- Coordinating communications to providers, hospitals and the public on Health Information Exchange, Meaningful Use, the Incentive Program and REC activities
- Planning and executing conferences for providers, health care entities and the public on Meaningful Use, HIE and other HIT topics
- Participating in the development, review and validation of the State HIE Strategic and Operational Plans and the SMHP

In addition, DSS has been an active participant in Health Information Technology workgroups and collaborative efforts in the State including, but not limited to:

- Contributing to the development of the 2009 Statewide Health Information Technology Plan as a member of the Steering Committee overseeing the initiative
- Collaborating with eHealthCT to implement a health information exchange pilot with a targeted group of hospitals and Federally Qualified Health Centers (FQHCs)
- Participating in Health Information Technology and Exchange Advisory Committee (HITEAC) meetings and as an active member of the HITE-CT Strategic Plan State project team for the development of this Strategic Plan and the Operational Plan.

The following list includes the initial set of activities that DSS plans to execute to support the integration of the Statewide HIE with the Medicaid program’s HIT adoption efforts:

- Continue to be a member of HITEAC to help ensure Connecticut’s HIE supports Medicaid needs for program activities promoting HIT adoption and Meaningful Use and plan to participate on the Health Information Technology Exchange of Connecticut
(HITE-CT) Board of Directors to provide the oversight for the HIE initiative and to promote the long-term sustainability of HITE-CT and the Connecticut HIE

- Ensure that clinical data is shared across Connecticut’s health care system, including Medicaid data and administer the Medicaid HIT adoption and EHR Incentive Program.
B. “As-Is” HIT Landscape

B.1 State Organization of the Incentive Payment Program

B.1.1 DSS

The Department of Social Services is the lead agency for the State Medicaid HIT Plan and Medicaid EHR Incentives under Title IV of ARRA. DSS plays a convening, educational and policy advising role on EHR adoption and Meaningful Use issues that affect Medicaid providers and the populations that Medicaid serves. DSS will be responsible for implementing the Medicaid EHR incentive payment program and for overseeing and coordinating all HIT-related activities that affect the Medicaid program.

The Department is severely understaffed and this will adversely affect administration of the Program. Multiple responsibilities are executed by a limited number of individuals across the organization. DSS will need to hire new staff with appropriate skill sets to initiate, manage and oversee the EHR Incentive Program and to support the HIT coordination activities in the State. Currently, DSS has assigned three interim, part-time staff members to support the Connecticut Medicaid HIT initiatives until additional dedicated staff is hired to complete the HIT planning project team. The team will be responsible for implementing and overseeing the Incentive Program and pursue the necessary activities to encourage EHR adoption and HIE use.

B.1.2 Claims Administrator

HP Enterprise Services is the Department’s fiscal agent that supports the operation of the Medical Assistance Program. HP’s responsibilities include: processing claims, financial refunds and recoupments; issuing payments and remittance advice; performing provider enrollment and re-enrollment; maintaining a provider call center dedicated to assisting providers with billing questions; providing a dedicated provider relations team to perform provider training and respond to complex program issues; performing ConnPACE client enrollment; providing a ConnPACE client call center; and providing pharmacy prior authorization services.

HP maintains the secure provider web portal which allows for real-time claim submission and adjudication, online provider enrollment/re-enrollment, inquiries regarding prior authorization submission and inquiry, claims submission and status, client eligibility verification, and other self-service features aimed at increasing access to and improving the efficiency of participating in the Connecticut Medical Assistance Program. In addition, HP provides an automated eligibility verification system which provides the most current client eligibility information, prior authorization information and a fax-on-demand feature.

HP Enterprise Services is also the builder of MAPIR which will be connected with CMS’s National Level Repository (NLR) and provider files maintained in each state’s Medicaid Management Information System (MMIS). The Department will leverage HP’s shared resources in the development and implementation of this approach for the Incentive Program administration in Connecticut.

DSS will oversee and direct HP Enterprise Services in the design, development, implementation of the incentive payment processes and accounting in the MMIS utilizing the Department’s secure provider web portal and financial payment and accounting system. They will also ensure proper payments, audit and monitor such payments, and track Meaningful Use attestations and reporting mechanisms.
B.2 Status of Statewide HIE initiatives

The State of Connecticut has made great strides in the past few years in the development of HIT and HIE initiatives and more will be surfacing in the coming months and years. The functionality of HIEs will be crucial to the Incentive Program, especially as the expected criteria for Stages 2 and 3 are released. The HITE-CT will provide direction, establish standards and ensure compliance with the State’s effort for interoperable data exchange, and other initiatives.

B.2.1 State Designated Entity (HITE-CT) and activities to date

The 2007 Connecticut General Assembly required DPH to develop a statewide health information technology plan. In June 2009, DPH published the Connecticut State Health Information Technology Plan, setting the baseline agenda for health care information exchange and technology in the state. The 2009 legislature designated DPH as the lead health information exchange organization and responsible for the State of Connecticut Health Information Technology and Exchange Development Project with an appointed advisory committee.

By the end of 2009, DPH worked with ONC to secure $7.29 million for a multi-year Cooperative Agreement for planning and building a coordinated, sustainable Statewide health information exchange system for Connecticut. DPH is the federally-designated state health information exchange organization and has recently submitted to ONC the Connecticut Health Information Technology and Exchange Strategic and Operational Plans to meet requirements for the HIE cooperative agreement. These plans will guide the first years of the newly established the Health Information Technology and Exchange of Connecticut (HITE-CT).

The 2010 Connecticut General Assembly created the HITE-CT as a quasi-public agency managed by an appointed Board of Directors to coordinate and oversee Health Information Exchange (HIE) activities in the State. The vision for the HITE-CT is to facilitate secure health information exchange across the care continuum that supports patients’ health needs at the point of treatment by providing immediate, direct and ongoing links between patients, their complete health records and their attending providers. The HITE-CT will initially prioritize support for all Connecticut's health care providers’ meaningful use EHR requirements in close alignment with the SMHP.

Connecticut has determined the initial prioritization of HITE-CT products and services as guidance for the operational planning process in three releases:

- **Release 1 – Continuity of Care Documents (CCDs) and Public Health Registries and Reporting**, to address components of Meaningful Use, provide benefits to all State residents and build a foundational infrastructure and data set.
- **Release 2 – Quality/Gaps in Care Reporting**, to develop and implement metric-based Quality Reporting and the “care gaps” and provide access to and integration with data from multiple sources. This release also includes integrating data from auxiliary services (e.g. lab results).
- **Release 3 – Personal Health Records (PHRs)**, to allow all residents the ability to help manage their own care through the management of their health records.

HITE-CT will lead the effort to define a comprehensive enterprise architecture (including standards considerations) and document the full scope of required HITE-CT technology infrastructure and services. The architecture will permit the exchange of data between entities that house patient data and authorized health care providers in a manner that will accommodate users at various stages of technology adoption.
HITE-CT will work with DSS as the State Medicaid agency and eHealthCT as the Regional Extension Center to encourage and support the adoption of EHRs and the HIE.

B.2.2 HIE Initiatives in Connecticut

There are several instances of HIE initiatives in Connecticut as well as other related efforts for sharing information between organizations. The projects range from offering external access to a central system, expanding rollout of a centralized system to aligned providers, to true disparate systems with interfaces and a centralized Master Patient Index (MPI). Some of the notable HIE initiatives at various stages of planning and implementation in Connecticut are summarized in this section.

HealthLink

Danbury Hospital, in cooperation with many of the area practices, laboratories and pharmacies, has developed a working HIE. The system now incorporates over 250 providers, 500 support staff and 500,000 patient records. This equates to approximately one-third of the medical community in the area.

eHealthConnecticut HIE Pilot

Funded by a Medicaid Transformation Grant ($1.35M), the program aims to link Federally Qualified Health Centers (FQHCs), acute care hospitals, and private physicians within the State, eventually connecting to the statewide HIE and the National Health Information Network for continuity of care. This project is being run by eHealthConnecticut and is being developed in three areas: New London, Hartford and Waterbury. Additional information regarding the DSS HIE pilot is included in Section B.3.2.

Middlesex Hospital

Middlesex Hospital in Middletown, in coordination with local provider groups, pharmacies and laboratories, is in the process of creating an HIE around the hospital’s eClinicalWorks® implementation. The group has implemented the eClinicalWorks proprietary HIE software, eEHX, in an ongoing effort to exchange data among the local providers and support organizations.

Yale New Haven Health System (YNHHS)

Yale New Haven Health System (YNHHS) includes the delivery networks of Yale New Haven Hospital, Bridgeport Hospital and Greenwich Hospital. It has in place a common Physician portal and MPI in use for 1400 employed and affiliated physicians.

YNHHS is in the final stages of agreeing to license and implement Epic EHR systems enterprise wide. This implementation of Epic is expected to start within the next few months and take four years to complete. The vision is to make Epic the EHR of all YNHHS physicians and provide HIE connectivity to the statewide HIE and NHIN.

The William W. Backus Hospital

The William W. Backus Hospital is creating a regional health HIE in eastern Connecticut. The hospital and its Medical Staff have been planning this exchange for over two years.
Implementation started in January 2010 and pilot projects are expected to go live starting in October, 2010. The HIE is expected to support over 300 physicians in the area.

**Charlotte-Hungerford Hospital**

Charlotte-Hungerford Hospital and upper Litchfield County physicians are currently reviewing various EHR, PM and HIE vendors, configurations and pricing models. This group has set aside considerable funds for this year to build an integrated community of providers sharing patient data and using hospital services (lab, radiology, referrals, etc.). The group is also looking at using the HIE to connect to a shared billing service.

They expect to conclude a market review of options, approve a configuration and operational plan and begin phasing in ambulatory EHR implementation and a functioning HIE configuration (with possible billing services) over the second half of 2010 and into 2011 as they collectively move toward meaningful use and clinical integration. The hospital is also expanding its in-house EHR and HIE capabilities to achieve meaningful use in 2011/2012.

**Nationwide Health Information Network (NHIN) Direct – Pilot Project**

Since mid-2010 a number of Connecticut organizations taking a leading interest in HIT and HIE have formed a group to sponsor one of the NHIN Direct pilots for the “Central CT Geography”. This project is being led by Medical Professional Services (MPS) Inc. and lists eHealthConnecticut as the major stakeholder. The following organizations are participating:

- Quest/MedPlus
- DocSite
- Middlesex Hospital
- The Kibbe Group, LLC
- American Academy of Family Physicians (AAFP)
- eClinicalWorks
- Microsoft Health Vault (MHV)
- Community Health Center, Inc. (CHC)

The objective of this project is to demonstrate the feasibility of using NHIN Direct protocols to connect and securely share clinical information among a diverse group of physicians in small practices in Connecticut who have a heterogeneous set of HIT tools (from web access with email, modular EHR components to fully functional EHRs), a hospital, a Federally Qualified Health Center (FQHC) and a large laboratory provider in support of Meaningful Use and the continuity of care.

**B.3 Status of Medicaid HIT Initiatives**

**B.3.1 E-Prescribing**

As part of the Medicaid Transformation Grant, DSS has established an ePrescribing program for Medicaid providers. Since its launch in October of 2009, the program has grown to accommodate over 1,400 providers and now transmits over 80,000 e-Prescribing transactions, 50,000 medication histories and 25,000 formulary requests monthly.
The program was developed by HP Enterprise Services who has fully integrated the program into the Surescripts network and is a 100% certified payer within the Surescripts network. Through the Surescripts network, the ePrescribing technology is securely linked to DSS’ Medicaid Management Information System (MMIS). The ePrescribing technology allows providers with a Surescripts-enabled e-Prescribing system to access preliminary information for clients enrolled in Medicaid fee-for-service, HUSKY A, HUSKY B, State Administered General Assistance (SAGA), Connecticut Pharmaceutical Assistance Contract to the Elderly and Disabled (ConnPACE), Connecticut AIDS Drug Assistance Program (CADAP) and Charter Oak programs.

Surescripts electronically routes up-to-date patient eligibility, medication history, and formulary information between the MMIS and the requesting Medicaid enrolled provider. The Medicaid provider can make informed decisions relative to prescribing the appropriate medication for the patient. The provider can then submit an electronic prescription via Surescripts to the patients’ pharmacy for dispensing. The system allows access to:

- Medications requiring prior authorization
- Preferred Drug List and alternatives
- Resource links
- Quantity and age limits
- Gender restrictions for medications
- Benefit co-pay information.

### B.3.2 eHealthCT HIE Pilot

Initially funded by a Medicaid Transformation Grant ($1.35M), the Medicaid HIE Pilot Project run by eHealthCT aims to link FQHCs, acute care hospitals, and private physicians within the State, and eventually between the HIE and the National Health Information Network (NHIN) for continuity of care. eHealthCT’s Health Information Infrastructure (HII) is based around an IHE Core developed by Misys Open Source Solutions (MOSS), and includes a Web-based portal that provides access to the HII for those who do not have an EHR. As part of eHealthCT’s build, the HII will include a Record locator service, a Cross-enterprise Document Sharing (XDS) registry and a Clinical Data Repository.

In June, 2010 eHealthCT demonstrated the potential capabilities of the pilot’s HIE platform. Three eHealthCT participants were involved in the alpha-pilot: Hartford Hospital, St. Francis Hospital, and ProHealth. Each participant successfully demonstrated the following capabilities:

- Publish a Continuity of Care Document to an edge document repository – The CCD will include at least CCD information includes at least problems, allergies, meds, labs, and discharge summaries
- Publish an ADT feed or other PIX source data to the PIX consumer
- Query for a patient using the PIX/PDQ
- View patient documents using eHealthCT’s HIE Portal

In addition to the initiation of the technology platform, this effort has produced:

- Privacy policies and a Universal Medical Records Release Authorization (UMRRA) for the use of providers, developed by eHealthCT through its legal, health care, State and consumer advocates constituents
- A Data Use and Reciprocal Support Agreement (DURSA) and Business Associate Agreement (BAA) for all participant entities in the HIE
- Online and written education collateral for providers and consumers for the purpose, processes, benefits and risks of participating in the HIE

HITE-CT plans to incorporate practical lessons into the Statewide HIE regarding “transfer of care” summaries and work on data sharing agreements and educational material from the DSS pilot.

The pilot is also being developed in two other geographical areas - New London and Waterbury. In the New London area, Laurence & Memorial Hospital is working with Community Health Centers, Inc. (CHC) to connect their respective EHRs. This is expected to assist the transition of care between the local clinics and the hospital. In Waterbury, transition of care for pregnant women from the Staywell Community Health Center to Naugatuck Valley OBGYN is planned via the pilot.

Other entities have expressed interest, such as Oak Hill Residential Services, who have group homes and assisted living facilities. Because the facilities do not staff physicians, they transport residents to local hospitals for care. A migration from paper-based records could significantly benefit both the facilities and the hospital once the eHealthCT HIE pilot becomes operational and can demonstrate these benefits.

### B.3.3 Comprehensive Active Medication Profile (CAMP) Pilot Project

As part of the Medicaid Transformation Grant, DSS teamed with the University of Connecticut (UCONN), School of Pharmacy and the Connecticut Pharmacist Association (CPA) to build a comprehensive, active medication profile for Medicaid patients.

The University of Connecticut conducted patient interviews and data collection and developed the CAMP database that integrates claims data from the DSS MMIS with patient data collected from patient interviews (prescriptions, Over-The-Counter (OTC), herbal products). All data collected was entered into the Medication Management System, Inc Assurance Standard Interface owned by UCONN. The results of this project were aimed to utilize Rx fill data to alert prescribers on patient adherence trends, identify medication discrepancy, medication errors, and adverse events, increased use of generics, and cost effective therapies for a small number of patients. In the future, this type of information could be accessed by health care providers via the statewide HIE through providers’ certified electronic health record technology.

### B.4 DSS’ Relationship to the State Government HIT Coordinator

The Connecticut State Government HIT Coordinator has begun to develop and advocate for HIT policy to achieve statewide goals and to coordinate with Medicaid, DPH and a number of federally funded programs in the State. DSS has been an active participant in the planning of the HITE-CT and is including all programs in its purview in the planning of the HIE.
In addition, the State Government HIT Coordinator will be a member of the future governance structure for the EHR Incentive Program and will be responsible for ensuring the alignment of this Program with other relevant state programs.

B.5 Status of Public Health HIE/HIT Activities

B.5.1 State Immunization Registry of Connecticut

ARRA funds are supporting the replacement of the outdated DOS-based immunization registry with a web-based registry and tracking system. This will serve as a tool to increase immunization coverage in children and adults and thus protect them from vaccine-preventable diseases.

During the past fifteen years, the Centers for Disease Control and Prevention (CDC) have been providing funds to states to develop and implement immunization registries. Connecticut General Statute 19a-7h (Public Act 94-90) authorizes DPH to establish an immunization registry and requires immunization providers to report to the registry. ARRA funds awarded for the registry are to be used to strengthen the State’s and the nation’s health care infrastructure and reduce health care costs through prevention activities.

Connecticut’s current immunization registry was developed in 1993 and was written using software that has been obsolete for many years (FoxPro for DOS). The registry contains over 5 million immunizations for over 526,000 children and each year over 35,000 children and 800,000 immunizations are added. The registry is not web-enabled and is no longer able to be expanded to meet increasing immunization registry and tracking needs. The hardware cannot support expanding from the present thirty remote user sites to over 400 sites (public and private immunization providers throughout the state). The current system does not comply with all twelve of CDC’s functional standards for immunization registries.

The ARRA-funded CIRTS (Connecticut Immunization Registry and Tracking System) will be populated by birth certificate records from vital records and by membership data from managed care organizations. The CIRTS, however, will allow the State to readily monitor current vaccination trends, link vaccination rates to vaccine-preventable disease occurrence, monitor vaccine uptake, and link data with other DPH child-based systems which our present registry does not permit. Most importantly the CIRTS will provide real-time immunization information. Immunization providers will input immunization information for their own patients and will be able to generate individual and aggregate reports, individual immunization records, and reminder and recall notices.

B.5.2 Electronic Death Registry System (EDRS)

DPH received $1.6 million in 2008 State funding to purchase and implement a new web-based Electronic Vital Records Registry System (EVRRS) that was to include a web-based component for all births, deaths, fetal deaths, marriages and civil unions and comply with the Federal Intelligence Reform and Terrorism Prevention Act (IRTPA). The Act requires that all birth and death records from 1935 to present be issued electronically from a central repository or a central issuance database. EDRS will address the implementation of the death registry functionality and the establishment of the infrastructure components to support a web-based vital records system. EDRS is based on packaged software from Netsmart and Connecticut will be the second state to implement the new version of EDRS.

The current Birth Registry system contains birth data for all CT residents that occur within the State; about 43,000 per year. Data regarding births is received from 30 birthing hospitals and 42 towns in Connecticut electronically. The balance of towns submits information via paper
worksheets when required by circumstances such as home births. The data for deaths (30,000 annually) and marriages (20,000 annually) for all Connecticut residents is collected monthly via electronic media from a contractor at the work program at the Connecticut Department of Corrections that is imported to current death and marriage registries. The current process for collecting fetal death (250 annually) and civil union (100 annually) data is via paper that DPH personnel enter into systems manually. The master data for children are maintained by the State, which includes each child’s demographic and other highly confidential medical and health related information.

The DPH Vital Records and IT units’ goal is to implement a new comprehensive web-based electronic Vital Records Registry system to replace current disparate registry systems that are client server based or serve only as a general repository. The new system must include web-based components for collecting Connecticut birth, death, fetal death, marriage and civil union records electronically and meet several State and Federal mandates.

B.5.3 Public Health Information Network (PHIN)

DPH is required by federal mandates to meet and certify to Public Health Information Network (PHIN) requirements. In addition, three state-mandated reportable conditions are to be reported electronically (since 2007). To achieve this, a key requirement is the ability to securely electronically share public health information in Health Level 7 (HL7) format, such as laboratory test results and reportable disease and condition information, with public health partners. These partners include clinical laboratories (hospital and private reference laboratories), the State Poison Control Center, private providers, and the Centers for Disease Control and Prevention (CDC). The CDC requires that DPH send data to them using the PHIN Messaging System (MS).

The CDC has brokered reduced licensing for the Orion Health Rhapsody integration engine and has developed an integrated tool called the Messaging Subscription Service (MSS). These tools are needed to transform and translate incoming electronic messages to meet PHIN standards. As with PHIN MS, the first use of these tools is for electronic laboratory test results of reportable diseases. The Rhapsody/MSS tools are designed to work with PHIN MS.

Together, the PHIN MS, Rhapsody, and MSS tools form the backbone of establishing electronic laboratory reporting and other electronic messaging exchange to meet critical DPH objectives.

B.5.4 Maven and PHIN MS Configurations

Maven is a hyper-configurable application package that is being used for three major projects: CT Electronic Disease Surveillance System (EDSS; notifiable condition surveillance and local health department management), CT Environmental Public Health Tracking (EPHT) and Hospital Emergency Department Syndromic Surveillance (HEDSS), and CT SITE (environmental health reporting, including adult and childhood lead surveillance, and an updated newborn screening system).

Funding for Maven project implementation has primarily come from the PHEP cooperative agreement, but additional funding has been leveraged from other CDC cooperative agreements, such as the Environmental Public Health Tracking Network. The Public Health Information Network, EPHT, CT EDSS, and Health Alert Network (HAN) Coordinators all work together on this implementation and ensuring that the Maven-based systems meet PHIN and NEDSS health information system standards.
Connecticut DPH has worked with DOIT to establish a platform to support the integrated PHIN MS/Rhapsody/MSS components in a secure environment. A separate project is being completed to upgrade these applications and finalize integration activities. The Rhapsody/MSS application will be used as the integration and message subscription engine for public health reporting. The PHIN MS/Rhapsody/MSS components are also installed on servers housed at DPH and PHIN MS has been tested and used in production to transmit FoodNet data to the CDC.

The PHIN MS/Rhapsody/MSS applications will be used with a secure File Transfer Protocol (sFTP) site, also hosted at DOIT, which will be used to receive messages from the DPH state laboratory, acute care hospitals and private reference laboratory partners. Optionally, a hospital or private reference laboratory that can use PHIN MS may do so (not all hospitals have the technical capacity to support use of PHIN MS).

The use of the sFTP site to receive H1N1 novel influenza vaccination records from public clinics has already been demonstrated during the 2009-2010 H1N1 novel influenza pandemic. Local health departments were successfully able to securely post files containing the individual immunization records from public clinics on scanable forms. The images were processed using the Cardiff Teleform application and xml data generated for use in Maven. Maven was able to poll the sFTP for automatic uptake of these Extensible Markup Language (XML) files.

Consilience Software (the vendor supplying and supporting Maven) will be working with the DPH to enhance existing systems for reportable disease surveillance. Enhancements include HL7 message parsing, PHIN MS configurations and setup, Logical Observation Identifiers Names and Codes (LOINC)/Systematized Nomenclature of Medicine-Clinical Terms (SNOMED) mapping, and configuring reporting and monitoring tools within Maven. Additional work will be completed on the configuration of workflows for notification of Electronic Laboratory Reporting (ELR) imported cases. This work is necessary for the successful completion of the project. While the reportable disease surveillance system is in place and in production for several disease groups (including for some not reportable diseases), the connection to PHIN MS and the work necessary to ensure the Maven system can consume and parse the HL7 messages has not been completed.

**B.5.5 Enhanced HIV/AIDS Laboratory Reporting**

The Human Immunodeficiency Virus (HIV) program is currently receiving HIV data from five (5) external labs in text file format (CD) or via paper, which they are importing to the Enhanced HIV/Acquired Immune Deficiency Syndrome (AIDS) Reporting System (eHARS) application. The program is working with IT on facilitating and implementing a secure electronic mechanism to receive and transmit the data from labs in HL7 format. This is a high priority due to the December 31st 2010 approval deadline to secure Federal funding.

**B.5.6 Laboratory Information Management System (LIMS)**

For the past several decades, the Public Health Laboratory (PHL) has relied on a “homegrown” Laboratory Information Management System (LIMS) to support sample intake, sample tracking through laboratory processing and testing, output and reporting of test results, and billing for laboratory services. The PHL’s LIMS, Gemini, was developed by an outside consultant in 1978 in Recital, a dBase-like second-generation language to be run on a DEC mainframe platform. Gemini has been moved from a mainframe to the UNIX environment and has been upgraded several times. The most recent upgrade was in 1998 during which both the hardware and software were modernized.
All acute care hospital laboratories, commercial laboratories, and local health department laboratories are linked to the PHL via the Health Alert Network blast fax system, but there is no capacity for direct electronic exchange of laboratory information.

Another shortcoming of Gemini is its inability to accommodate emerging requirements such as HL7 messaging, LOINC or SNOMED coding systems, or other public health standards critical to the electronic data exchange objectives of the PHIN. Gemini is similarly unable to accommodate emerging data transfer standards for environmental data. There are currently a variety of standards being developed in both the private and governmental arenas for both real-time and non-real-time data transfer. At the present time, a definitive environmental data transfer format has not been established; therefore, the PHL’s new LIMS must be flexible enough to accommodate standards that are adopted in the future. Both clinical and environmental data transfer standards need to be accommodated. Finally, the current LIMS is not HIPAA-compliant. DPH’s HIPAA compliance strategy calls for the replacement of Gemini with a state-of-the-art system that will satisfy all HIPAA requirements for privacy, security, and transactions and code sets.

A new system has been procured to meet the following emerging needs:

- Provide two-way electronic communication between clients and the laboratory. Results should be available on demand by clients, and clients should be able to look up their own records and the status of their submitted test requests in a secure system
- Operate on a variety of communication pathways such as telephone, Internet, cable, and cellular
- Provide electronic security through both hardware and software solutions
- Accommodate the latest in digital identifier technology, including barcodes and chips
- Accept data directly from laboratory instruments into the LIMS
- Be HIPAA-compliant
- Be PHIN-compliant and support HL7, the ANSI health standards, for data mining of all laboratory databases. This should support all surveillance systems, quickly identify index cases in epidemics, and enable public health research activities
- Allow for direct laboratory-to-laboratory data exchange
- Have the flexibility to link laboratory data directly to state and federal databases and registries
- Bill for identified services/tests (including the billing of third-party payers), assemble periodic (daily, weekly, monthly) invoices for customers, and generate standard financial and management information reports
- Provide storage and retrieval capability for large amounts of data over a minimum of three years, with archive capacity for an additional seven years

The PHL has completed a competitive procurement for a Commercial Off-The-Shelf (COTS) LIMS, HORIZON, from ChemWare, Inc. The vendor has begun work with the PHL, in accordance with a written project implementation plan and schedule. The new LIMS will be a large-scale, multi-user, multi-platform, heterogeneous, web-based/distributed IT application, consistent with the public health LIMS standards articulated by the Association of Public Health Laboratories and the Public Health Informatics Institute.
At the same time, DPH and DOIT are collaborating on the implementation of a secure, integrated electronic system for collecting disease surveillance data, including laboratory and clinical data on reportable diseases. This system, the Connecticut Electronic Disease Surveillance System (CEDSS), is based on the National Electronic Disease Surveillance System (NEDSS) model developed by the Centers for Disease Control and Prevention, and this system incorporates PHIN standards. As this project has evolved, it has become clear that one of the key elements of CEDSS, ELR, would be impeded by the limitations of the Gemini system. A work-around was developed which is only intended to serve as an interim solution until the new LIMS can be fully implemented. The web component of the new LIMS will be installed and operate on a PHIN-compliant platform at DOIT, together with the CEDSS application and other DPH applications. The remainder of the LIMS component will reside at DPH.

B.5.7 Environmental Public Health Tracking (EPHT)

EPHT is a reporting portal to meet the requirements under cooperative agreement with the CDC. The EPHT portal will be a point of entry to environmental public health data, directing users to state level information sources, data, metadata, analysis, visualizations and reporting management tools.

The portal will serve to provide:

- A central means of collecting all public health data that is required by the CDC to meet annual federal reporting guidelines; and,
- The general public and DPH users’ access to Statewide public health data, e.g., hospital discharge information, birth defects, vital statistics, infectious disease trends, etc., through dashboards and reports. The portal will allow users to drill into the data and perform ad-hoc analysis based on their security credentials.

B.6 Status of ePrescribing

The implementation of e-Prescribing has been extremely successful in the State. At the fifth annual, Safe-Rx Awards in September 2010, held at the U.S. Capitol, Surescripts, the nation’s largest e-prescribing network, gave awards were given to the top 10 states with the most e-prescribing activity. Connecticut ranked sixth in the country. States were ranked on three factors: percentage of e-prescriptions, electronic use of medication history and electronic use of prescription benefits information. This meant that a state with a higher percentage of electronic prescriptions could rank lower than a state with fewer electronic prescriptions, depending on their performance in the other measures.

Table 3 details the ePrescribing program for Medicaid and non-Medicaid users in the State. The eRx program is on track to exceed over 3.2 million new ePrescriptions in 2010, 1.2 million refill requests and 1 million refill responses. These statistics are all growing at between 4% and 5% monthly in 2010 and this trend is expected to continue.

Table 3. Statewide ePrescriptions, Refill Requests and Refill Responses, Jan - Sep, 2010

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<th>New ePrescriptions</th>
<th>Refill Requests</th>
<th>Refill Response</th>
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<tr>
<td>February</td>
<td>215,698</td>
<td>88,042</td>
<td>77,979</td>
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<tr>
<td>March</td>
<td>261,472</td>
<td>106,516</td>
<td>96,478</td>
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<tr>
<td></td>
<td>New ePrescriptions</td>
<td>Refill Requests</td>
<td>Refill Response</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>----------------</td>
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<tr>
<td>April</td>
<td>265,758</td>
<td>96,845</td>
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<td>August</td>
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</table>

**B.7 Status of Regional Extension Center in CT**

eHealthCT was awarded the designation as the Regional Extension Center (REC) for Connecticut. The award included a $5.75 million grant to help the state’s providers select, implement, and achieve Meaningful Use of Electronic Health Records (EHR) systems. This includes connecting them to the Statewide HIE to enable sharing of patient data. Although the State had a total of 16,691 active licensed physicians/surgeons in October 2009, the commitment of the Regional Extension Center is to help a minimum of 2,300 of the estimated 8,000 practicing physicians during the next four years. In the long term the REC’s objective is to have 80% of Connecticut’s providers live with EHR systems interoperating via the Statewide Health Information Exchange. In the first two years, the REC will serve at least 1,308 “priority” providers, or those in small practices or caring for underserved patient populations. The overall objective is to use HIT to increase quality, safety and efficiency.

Some members of the HITE-CT Board of Directors are also on the board of eHealthCT and are coordinating resources to encourage HIE adoption along with EHR adoption to ensure the most effective use of HIT for beneficiaries of the REC’s services. Increasing the use of EHRs by primary care practitioners and other health care providers is a critical ingredient for achieving successful Statewide exchange of health care information.

To support and promote HIE adoption across the State, the REC will assess individual providers’ levels of EHR use and readiness to participate in an HIE. The REC will work with “Channel Partners” through formal commitments in addition to individual provider practices. These Channel Partners are Individual Practice Associations, Physician Hospital Organizations, or other entities with provider contractual relationships. Their goal is to refer and funnel providers to the REC with the ultimate goal of becoming Meaningful Users.

Services will be provided by a team of local contractors, all experienced in selecting, implementing and supporting EHR systems. Eleven “Direct Assistance Contractors” have been selected via an open competitive bidding process. The contractors include Connecticut’s Quality Improvement Organization, independent consultants, and provider organizations with a direct stake in program outcomes. Reliance on these contractors will decrease over time as permanent employees are hired. A comprehensive online system will be maintained to enable providers and contractors to learn from each other and those engaged in similar programs throughout the country.

Although this program is not limited to Medicaid providers, coordination between DSS and the REC will ensure that Medicaid providers are aware of the opportunities for assistance that can be provided by the REC.
B.8 Broadband Landscape

Connecticut is a relatively compact State geographically with access to broadband in an estimated 95% of the geographical area. There are, however, 65 towns designated as rural by the Connecticut Office of Rural Health and based on 2000 Census data, most of which are concentrated in the Northeast and Northwest corners of the State and with anecdotal evidence that a number of providers in these areas do not have access to high-speed Internet connectivity.

B.8.1 GIS Mapping Landscape

The Department of Utility Control is currently engaged in a comprehensive mapping of broadband connectivity for Connecticut as part of an ARRA-funded program. Both HITE-CT and SMHP planning efforts will coordinate with both the Department of Public Utility Control (DPUC) and DOIT, in their plans to extend the Connecticut Education Network, to fully understand connectivity issues and build them into the roll-out plans.

B.8.2 State Broadband Access and Network Capacity Expansion

In addition, on September 13, 2010, the Department of Information Technology (DOIT) received approval of its application for $79 million federal stimulus funding to expand state broadband access and network capacity. The application, created and submitted in partnership with the Department of Public Safety (DPS) and the Connecticut Education Network (CEN), will enable the State to enhance network connections between schools and libraries to the high speed Connecticut Education Network (CEN) and improve public safety communications capability across the state. Specifically, this funding will be utilized to:

- Deploy Middle Mile broadband infrastructure with a commitment to offer new or substantially upgraded service to Public Libraries, critical community anchor institutions. Those community anchor institutions have expressed a demand for improved access to broadband service.
- Deploy Middle Mile broadband infrastructure and incorporate a public-private partnership among government, non-profit and for profit entities, including Connecticut Public Television and non-profit community-based —charter schools who have expressed a demand for access to broadband service.
- Deploy Middle Mile broadband infrastructure with the intent to bolster growth in economically distressed areas utilizing community anchor institutions to provide direct access to those living in rural areas where access is otherwise prohibitively expensive.
- Deploy Middle Mile broadband infrastructure with a commitment to serve community colleges that have expressed a demand for improved access to broadband service.
- Deploy Middle Mile broadband infrastructure with a commitment to serve public safety entities that have expressed a demand for improved access to broadband service.
- Deploy Middle Mile broadband infrastructure that includes (i) a Last Mile infrastructure component for critical Public Safety and First Responder entities, as well as community anchor institutions.
- Contribute a non-Federal cost match that equals or exceeds 20 percent of the total eligible costs of the project.
B.9 U.S. Department of Veterans Affair and Indian Health Service Clinical Facilities with EHRs

The Connecticut Veterans Affairs (VA) health care system serves veterans in two campuses and six community-based outpatient clinics. These facilities are supported by the VistA EHR system. The VA will be able to interoperate with other providers in the State via the NHIN. There is also communication between the VA and other State initiatives, such as the HIE and the REC, to evaluate potential involvement at the State level.

The Mashantucket Pequot Tribal Nation Tribal Health Services (providing primary medical and outreach services) is affiliated with, and partially funded by, the Indian Health Service (IHS). They have electronic medical records, and are hooked into the IHS HIE. They are also using HIE to communicate with their on-site pharmacy. Their clinic serves Native Americans and Alaska Natives living in Connecticut.

B.10 Status of Medicaid Eligible Providers and Hospitals and Adoption Likelihood

Exact provider HIT adoption numbers are not available for Connecticut providers. To estimate the adoption rates for providers, statistics from Statewide and national adoption rates and estimations based on provider claims data have been used. Data from Connecticut hospitals is more readily available and was analyzed with assistance from the Connecticut Hospital Association, which represents twenty nine (29) of the State’s thirty-two (32) acute care and children’s hospitals in the State.

To further understand the level of EHR adoption in potentially eligible providers, DSS has launched a HIT survey that is targeting over 1,200 providers that met a threshold of 1,000 Medicaid claims in 2009. Once the survey results are collected, DSS anticipates using the responses to obtain a better set of HIT adoption numbers from providers in the foreseeable future and to direct providers to reach out to the REC for additional information.

B.10.1 Statewide Adoption of EHRs

EHR Adoption

In a 2008 Connecticut study chartered by the Connecticut State Medical Society, 1075 physicians in 18 specialty areas responded (26.9% response rate). This survey encompassed over 13% of an estimated 8,000 actively practicing physicians in the State. Of the respondent physicians, Health Information Technology had varying levels of adoption. Office technologies, including Practice Management Applications and Electronic Billing, are the two most utilized technologies with 63.5% and 77.5% adoption among practices, respectively. Only 26% of physicians use an Electronic Medical Record. Figure 1 provides an overview of the State’s physicians HIT adoption.
In January 2010, the Department of Public Health Immunization Program sent out 352 surveys to pediatric and family practitioners to determine how many immunization providers in the State are already using Electronic Medical Record (EMR) systems. There were more than 200 respondents to the survey. Among them, 94 reported that their practice does, in fact, use some form of EMR. Of those, 32 practices reported that they used the Allscripts-Touchworks or Professional products. Most practitioners used some other form of EMR systems including Intergy, Soapware and SSIMed. The study can be summarized as:

- 352 surveys mailed, 200 respondents returned (57%)
- Of the 200 responses received, 92 use an EMR (46%)
- Of the 200 responses received, 108 do not use an EMR (54%)
- Of the 200 responses received, 4 have not decided

Nationally, the CDC reports that HIT adoption is proportional to the number of providers in a practice. As shown in Figure 2 below, in 2007 solo practices showed only a 20% adoption rate of any EHR system (even with single-modal basic functionality) while practices of 11 or more reported an adoption rate over three times as high. The dichotomy in fully functional systems is even more dramatic, with expectation of adoption is over seven times as high in large practices as solo practices.

This adoption curve is expected as smaller practices are generally less able to make a jump financially to an EHR and therefore are less willing to take the risk of adoption. This dichotomy between practice sizes is likely to continue, even with governmental assistance. As Connecticut HIT adoption matches the national statistics well, these statistics are assumed to be true for the State.
Adoption rates have increased steadily for the past five years, though the rate of adoption will not yield a high overall adoption of HIT in the next few years, especially in small practices. In 2007, only 1 out of 3 physicians in small practices had any EHR system, while less than 12% had “basic systems” and less than 4% had a fully functional system\(^{xx}\). Figure 3 shows past adoption metrics for limited to fully functional systems. To help address this inconsistent adoption of HIT, in April 2010, eHealthCT was assigned as a REC for Connecticut, which includes a $5.75 million grant to promote HIT in the State.

In a study supporting the 2009 Connecticut State Health Information Technology Plan\(^{xxi}\), 14 of 32 hospitals in the State responded. Of those, 13 had a functional Electronic Health Record system with the last in the process of implementing one. Of all 14 hospitals, all have electronic data interfaces in most departments, with the lowest concentration in Emergency and Acute Care departments.

**B.10.2 Estimating the Number of Eligible Hospitals Based on Patient Volume Only**

There are approximately thirty (30) acute care and children’s hospitals in Connecticut, based on Medicare and Medicaid classifications. The following table provides a list of these hospitals.
Table 4.  Acute Care and Children’s Hospitals in Connecticut

<table>
<thead>
<tr>
<th>Hospital</th>
<th>City</th>
<th>Total Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>The William W. Backus Hospital</td>
<td>Norwich</td>
<td>166</td>
</tr>
<tr>
<td>Bridgeport Hospital</td>
<td>Bridgeport</td>
<td>327</td>
</tr>
<tr>
<td>Bristol Hospital</td>
<td>Bristol</td>
<td>93</td>
</tr>
<tr>
<td>The Hospital of Central Connecticut (2 locations)</td>
<td>New Britain</td>
<td>354</td>
</tr>
<tr>
<td>Connecticut Children’s Medical Center</td>
<td>Hartford</td>
<td>97</td>
</tr>
<tr>
<td>Danbury Hospital</td>
<td>Danbury</td>
<td>285</td>
</tr>
<tr>
<td>Day Kimball Hospital</td>
<td>Putnam</td>
<td>89</td>
</tr>
<tr>
<td>John Dempsey Hospital</td>
<td>Farmington</td>
<td>166</td>
</tr>
<tr>
<td>Greenwich Hospital</td>
<td>Greenwich</td>
<td>184</td>
</tr>
<tr>
<td>Griffin Hospital</td>
<td>Derby</td>
<td>103</td>
</tr>
<tr>
<td>Hartford Hospital</td>
<td>Hartford</td>
<td>601</td>
</tr>
<tr>
<td>The Charlotte Hungerford Hospital</td>
<td>Torrington</td>
<td>92</td>
</tr>
<tr>
<td>Johnson Memorial Hospital</td>
<td>Stafford Springs</td>
<td>81</td>
</tr>
<tr>
<td>Lawrence &amp; Memorial Hospital</td>
<td>New London</td>
<td>204</td>
</tr>
<tr>
<td>Manchester Memorial Hospital</td>
<td>Manchester</td>
<td>168</td>
</tr>
<tr>
<td>Middlesex Hospital</td>
<td>Middlesex</td>
<td>168</td>
</tr>
<tr>
<td>Midstate Medical Center</td>
<td>Meriden</td>
<td>117</td>
</tr>
<tr>
<td>Milford Hospital</td>
<td>Milford</td>
<td>106</td>
</tr>
<tr>
<td>New Milford Hospital</td>
<td>New Milford</td>
<td>85</td>
</tr>
<tr>
<td>Norwalk Hospital</td>
<td>Norwalk</td>
<td>259</td>
</tr>
<tr>
<td>Rockville General Hospital</td>
<td>Vernon Rockville</td>
<td>104</td>
</tr>
<tr>
<td>Saint Francis Hospital and Medical Center</td>
<td>Hartford</td>
<td>461</td>
</tr>
<tr>
<td>Saint Mary’s Hospital</td>
<td>Waterbury</td>
<td>180</td>
</tr>
<tr>
<td>Hospital of Saint Raphael</td>
<td>New Haven</td>
<td>438</td>
</tr>
<tr>
<td>St. Vincent’s Medical Center</td>
<td>Bridgeport</td>
<td>296</td>
</tr>
</tbody>
</table>
Eligibility of hospitals (based on patient volume only) was calculated on FY2009 Medicaid discharges and emergency department visits (Fee-For-Service [FFS], SAGA and Managed Care) as a percentage of the total number of encounters (discharges and Emergency Department [ED] visits) for each hospital, as guided by the methodology included in the Program final rule.

Based on FY09 information, twenty-eight (28) acute care hospitals in Connecticut will meet the patient volume criteria required by the Program.

**B.10.3 Estimating the Number of Eligible Providers Submitted Based on Medicaid Claims**

To estimate the number of eligible providers, non-hospital Medicaid claims for CY 2009 were compared to an estimate of a full case load. Assuming that a provider would see four (4) patient per hour, eight (8) hours per day, five (5) days per week and fifty (50) weeks per year, a full patient load would yield eight thousand (8,000) visits each year. To account for vacation time, administrative duties and inefficiencies in practices, this estimated full patient load was reduced to five thousand (5,000) visits per year. At five thousand (5,000) visits per year, an eligible provider would be expected to submit fifteen hundred (1,500) claims (30% of 5,000) to DSS.

On evaluation of claims submitted through the interChange MMIS, there were estimated five hundred seventy eight (578) individual performing providers that met this threshold. In addition to this volume, there were three hundred sixty nine (369) providers in FQHCs that are potentially eligible, excluding twenty four (24) Physician Assistants. A summation of this analysis is shown in Table 5.

### Table 5. Summation of Eligible Provider Analysis

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Estimated Number of Potentially Eligible Providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performing providers submitting claims via the MMIS with greater than 1500 Medicaid claims in 2009.</td>
<td>578</td>
</tr>
<tr>
<td>FQHC providers in 2009. FQHC providers excludes 24 Physicians Assistants that are not assumed eligible given that there are no PA-led FQHCs in CT.</td>
<td>369</td>
</tr>
<tr>
<td>Estimated Total</td>
<td>947</td>
</tr>
</tbody>
</table>
B.11 Existing State Systems and Processes

This section provides an overview of the current state systems and processes that will play a role in the implementation of the future Incentive Program.

B.11.1 Role of the MMIS System in the SMA’s HIT/E Environment

The state claims administrator and fiscal agent is Hewlett Packard (HP) as described in Section B.1.2. HP provides the technical support and staff augmentation necessary to operate the Connecticut interChange Medicaid Management Information System (MMIS).

The MMIS secure provider portal provides a secure means of information access and exchange between authorized users and the MMIS, providing the benefits of the Internet while ensuring information remains confidential. This secure, web-based portal offers access for Medicaid providers to do the following:

- Enroll in the Medicaid program (most of the application process is on-line)
- Submit claims
- Receive remittance advices
- Submit claims status inquiry/response
- Submit eligibility inquiry/response
- Access the on-line provider hand-book
- Receive bulletins and other information about the Medicaid program

This secure provider portal can be leveraged for use in the Incentive Payment Program allowing providers secure electronic access for attestation purposes. Please see Appendix G.3 for additional description of the MMIS.

B.11.2 Provider Relations and Call Center

HP has provider relations staff that currently offer provider workshops, and interface with providers to answer questions and assist them with claiming issues. The call center also provides staff to answer provider inquiries. Both can be leveraged to provide information to providers regarding the Incentive Program.

B.11.3 Current MITA

DSS implemented a new MMIS in 2008. At that time, CMS did not require Connecticut to perform the Medicaid Information Technology Architecture (MITA) initiative that has subsequently been made a requirement for replacement of MMIS systems. DSS has not yet undertaken the MITA state self-assessment, gap analysis, and road-map. Future plans for the MITA initiative are described in more detail in Section C.3.5.

B.11.4 Appeals and Audit

DSS currently has an informal desk review process for provider appeals. Providers who wish to appeal their claims send in required information and a determination is made by DSS and HP provider relations staff regarding the outcome of the appeal.

The audit function is overseen by the DSS Quality Assurance Division. Audits of Medicaid providers are performed in accordance with CMS and state guidelines. Section 17b-99 of Connecticut statute specifies the Medicaid providers’ rights regarding appeal of an unfavorable
audit. This statute does grant the Medicaid providers the right to appeal the audit to the administrative court.

B.11.5 Legal Environment

DSS legal counsel are reviewing the requirements defined in the final rules to determine the extent of statutory or regulatory changes necessary to implement the EHR Incentive Program.

B.11.6 Reporting

DSS is well versed in federal reporting requirements. DSS will leverage this capability to meet the Incentive Program reporting requirements described in the final rule and further defined in the State Directors Letter published on August 17, 2010.
C. The State’s “To-Be” Landscape

C.1 Vision, Goals and Objectives

As the State designated Medicaid agency, DSS is responsible for the Statewide administration of the Medicaid health care program. Through its vision, DSS is making a commitment to “support individuals and families to reach their full potential and live better lives. We do this with humanity and integrity.” The SMHP provides the opportunity for DSS to further support the Department’s vision and move forward with the EHR Incentive Program to encourage the adoption and Meaningful Use of certified EHR technology by the State’s Medicaid eligible professionals and hospitals. The vision of this Program seeks to establish the point on the horizon where the Program is headed – its strategic direction within the larger context of the health care environment and the HITECH.

The Connecticut Medicaid HIT vision is to:

“Support the adoption and ‘meaningful use’ of interoperable Health Information Technology (HIT) and certified Electronic Health Record (EHR) technology by eligible Medicaid professionals to enable coordinated patient centered, evidence-based, prevention-oriented, efficient, and equitable healthcare for all residents.”

C.1.1 Medicaid HIT Strategic Goals

The Connecticut Medicaid Health Information Technology vision aligns with the priorities used by the Office of the National Coordinator for Health Information Technology (ONC) Health Information Technology Policy and Technology Committees to establish a framework for meaningful use that remained a centerpiece of the Medicare and Medicaid Programs: EHR Incentive Program final rule. DSS will ensure the Meaningful Use of certified EHRs result in six strategic goals outlined in Table 6 below.

<table>
<thead>
<tr>
<th>Strategic Goal</th>
<th>Mechanisms</th>
</tr>
</thead>
</table>
| 1. Improved quality, safety, and efficiency of care in the State’s Medicaid health care system | • Leveraging the availability of clinical data for administrative efficiencies  
• Implementing clinical decision support system and capabilities in order to make informed decisions based on data analytics  
• Working collaboratively with Medicaid providers to target and gather clinical quality measures, aggregate and share with physicians  
• Implementing reporting focusing on healthier Medicaid |
### Strategic Goal

<table>
<thead>
<tr>
<th>Strategic Goal</th>
<th>Mechanisms</th>
</tr>
</thead>
</table>
| 2. Engaged patients and families in their care                                | • Promoting health literacy and education  
• Developing tools for consumers to access information and links                                                                                 |
| 3. Improved care coordination                                                 | • Promoting expansion of e-Prescribing pilot  
• Aligning data exchange standards with the State’s HIE efforts and national standards (ICD-10, 5010)                                           |
| 4. Promotion of public and Medicaid population health through achievement of secured real-time EHR reporting | • Resolving barriers to inter-agency data sharing  
• Sharing lessons learned                                                                                                                           |
| 5. Promotion of privacy and security of EHRs                                  | • Ensuring the secure and private exchange of health care information across the Medicaid enterprise consistent with national standards  
• Developing operating policies and track access to patient data  
• Establishing procedures for conducting security analysis and remediation                                                                          |
| 6. Support interoperability                                                    | • Achieving economy and efficiency with Connecticut’s HIE efforts  
• Utilizing the State’s HIE to support and promote HIT for Medicaid providers and provide a platform that will support Meaningful Use requirements, especially in the two later stages of the CMS definition of Meaningful Use, which are expected to be released in 2012 and 2014 respectively, and are likely to increase the requirements to meet Meaningful Use |

### C.1.2 EHR Incentive Program Objectives

In addition, DSS will seek the accomplishment of the following objectives for the Incentive Program for 2015:

- Encourage Medicaid providers to adopt, implement, or upgrade by leveraging the eHealthCT Regional Extension Center scope of efforts for outreach, education and technical support in Connecticut; and conduct targeted efforts to promote certified EHR adoption by those providers not being addressed by the REC work plan.
- Leverage a multi-state incentive program solution for incentive program administration in Connecticut and use/modify/expand existing DSS tools and methods to support audit, oversight, outcome-based analytics and reporting requirements.
- Develop robust communication and coordination with HITE-CT, DPH and the REC.
• Strengthen DSS’ anticipatory management capabilities and mechanisms by enhancing and expanding the State’s clinical decision support capabilities to analyze Medicaid health care administrative and clinical data from across the state and enterprise and to meaningfully use the patient summary information to improve health, care delivery and cost effectiveness
• Conduct a MITA State Self-Assessment (SS-A), develop a transition plan and initiate projects identified in the plan to develop the required services and infrastructure needed by DSS for Medicaid expansion
• Support the implementation of the Statewide HIE

To realize this vision for the Medicaid enterprise and eligible providers, Connecticut requires the commitment, energy and resources of a broad set of stakeholders – health care providers, payers, government entities, legislators, and residents of the State – who have a shared interest in and will benefit from EHR adoption and Meaningful Use. DSS will provide leadership for this vision through communication and collaboration at the state and local levels.

The next phase of the project will focus on working with the REC to engage key clinicians who will serve as champions at the State and local level to successfully achieve the vision of quality of health, care delivery and cost effectiveness. Clinical champions will help build shared commitment for the need to change, and encourage the provider community to engage in the incremental process of learning and improving.

DSS also realizes that this vision will not be achieved overnight and it will only be successful if built on communication, commitment and collaboration with many stakeholders. DSS will also need to augment its existing staff with new hires and support staff development and change management for the anticipated paradigm shift. The SMHP provides a tool to initiate this process and it is intended to be a guide for strategic planning and implementation.

C.2 Governance

C.2.1 Scope and Principles

Connecticut has defined a high-level governance model for Medicaid HIT program decision-making including administration and oversight of the Medicaid EHR Incentive Program and encouraging HIT and HIE that supports Medicaid providers and hospitals.

The following principles will be used to guide the further development of the governance structures, processes and role assignments:

• **Accountability and Transparency:** Ownership for governance must be clear. Roles and responsibilities must be delineated unambiguously and shared openly. Defined responsibilities should include: Providing input to the decision making process; analyzing alternatives; formulating proposals; making determinations and review and approval
• **Broad Participation:** The Department has identified a need for broad stakeholder representation and involvement in the SMHP Governance
• **Aligned and Comprehensive:** Business value of governance will depend in large measure on how well it supports program requirements in all respects
• **Simplicity and Consistency:** The governance process must serve to avoid unnecessary complexity and redundancy in the management of risks and controls across the Medicaid enterprise by developing a single, unified approach
• **Effectiveness:** Governance that delivers value will have staff assigned for operational support, and adequate levels of investment
C.2.2 Key Governance Entities

A number of key governance entities have been identified as having critical roles in SMHP governance:

- **SMHP Executive Committee**: Consisting of DSS Executive Management (including DSS Commissioner, Medicaid Director, Medical Operations Director, Medical Director, Legal Counsel, Director of Quality Assurance and Director of Fiscal Analysis) this committee takes a lead role in organizing the details of Connecticut's approach to Medicaid HIT.

- **DSS Commissioner**: As executive leader of Connecticut's designated Medicaid agency this role is responsible for a range of decisions.

- **CT Legislature & Governor**: Responsible for making State laws and regulations.

- **SMHP Advisory Committee**: A committee that will consist of individual representatives (appointed by the Executive Committee) from a broad set of Connecticut Medicaid and HIT stakeholders. This includes representatives from private (for-profit and not-for-profit) associations and government agencies.

- **DSS HIT Manager**: Manager appointed within DSS (reporting to the Medical Operations Director) with direct responsibility for the EHR Incentives Program and other aspects of the Department's approach to HIT.

- **MAPIR Steering Committee**: The MAPIR Steering Committee which includes representatives from each of the states participating in the MAPIR development exists to guide the development and deployment of the new MAPIR application and to ensure that the core design meets the requirements necessary to facilitate incentive payments to providers for the implementation and continued use of an electronic health record in accordance with the provisions outlined in the ARRA.

- **Connecticut State Government HIT Coordinator**: Appointed by the Governor to provide leadership and coordination across the federally funded state programs including support of the Medicaid Director in developing the Medicaid EHR incentive program.

- **Board of Directors of HITE-CT**: a quasi-public agency set up to promote, plan and improve health care information technology including the creation and management of a Statewide HIE. DSS is a voting member of this board.

- **Connecticut Regional Extension Center (REC)**: eHealthCT, a not-for-profit organization designated and funded by Federal funds to offer technical assistance, guidance and information on best practices to support and accelerate health care providers' efforts to become meaningful users of Electronic Health Records (EHRs).

C.2.3 Governance Roles Matrix - High-level Outline

Figure 4 below outlines the roles of the key Governance entities for the most important decision domains.
Figure 4. Governance Roles Matrix

<table>
<thead>
<tr>
<th>Domain Entity</th>
<th>Strategies</th>
<th>State Regulations</th>
<th>Policies</th>
<th>Processes</th>
<th>Systems and Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMHP Executive Committee</td>
<td>Recommend</td>
<td>Recommend</td>
<td>Formulate Proposals and Recommend</td>
<td>Approve</td>
<td>Approve (within State policy)</td>
</tr>
<tr>
<td>DSS Commissioner</td>
<td>Approve</td>
<td>Formulate Proposals</td>
<td>Approve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT Legislature</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMHP Advisory Committee</td>
<td>Review and Provide Input</td>
<td>Review and Provide Input</td>
<td>Review and Provide Input</td>
<td>Provide Input</td>
<td>Provide Input</td>
</tr>
<tr>
<td>DSS HIT Manager</td>
<td>Formulate Proposals</td>
<td>Provide Input</td>
<td>Analyze Alternatives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAPIR Steering Committee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Government HIT Coordinator</td>
<td>Provide Input and Coordination</td>
<td>Provide Input and Coordination</td>
<td>Provide Input and Coordination</td>
<td>Provide Input and Coordination</td>
<td>Provide Input and Coordination</td>
</tr>
<tr>
<td>HITE-CT Board and Subcommittees</td>
<td>Review and Provide Input</td>
<td>Provide Input</td>
<td>Provide Input</td>
<td>Review and Provide Input</td>
<td></td>
</tr>
<tr>
<td>Regional Extension Center, eHealthCT</td>
<td></td>
<td></td>
<td>Comply</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C.2.4 Status of Governance Implementation

The SMHP Executive Committee has been formed in order to help steer the creation of this plan and submit it to the DSS Commissioner for approval. This Committee will also identify key SMHP stakeholders (internal and external) and appoint members to the Advisory Committee. The main State and external stakeholders are identified in the tables below.

Table 7. Internal State Stakeholders

<table>
<thead>
<tr>
<th>State Stakeholder</th>
<th>Coordination Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>• DSS Office of the Medical Director</td>
<td>• Coordination with Managed Care Organization (MCOs)</td>
</tr>
<tr>
<td></td>
<td>• Focus on improving quality in Medicaid care delivery and health outcomes, including:</td>
</tr>
<tr>
<td></td>
<td>o Fewer visits through better disease management</td>
</tr>
<tr>
<td></td>
<td>o Shortened length of stays</td>
</tr>
<tr>
<td></td>
<td>o Fewer adverse drug events</td>
</tr>
<tr>
<td></td>
<td>o Reduction of duplicative and unnecessary tests, visits, referrals</td>
</tr>
<tr>
<td></td>
<td>• Reduced health care expense</td>
</tr>
<tr>
<td>• DSS Pharmacy Unit</td>
<td>• ePrescribing</td>
</tr>
<tr>
<td></td>
<td>• Liaison to pharmacies</td>
</tr>
<tr>
<td>• DSS Quality</td>
<td>• Coordination of audit function for the Incentive Program.</td>
</tr>
</tbody>
</table>
### State Stakeholder Coordination Points

<table>
<thead>
<tr>
<th>State Stakeholder</th>
<th>Coordination Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance</td>
<td>• Coordination of statutory and regulatory requirements compliance and changes as required.</td>
</tr>
<tr>
<td></td>
<td>• Coordination of Federal reporting (CMS 37 and 64) as required.</td>
</tr>
<tr>
<td></td>
<td>• Coordination of incentive payment funds draw-down process.</td>
</tr>
<tr>
<td></td>
<td>• Development and implementation of EHR incentive payment audit plan.</td>
</tr>
<tr>
<td></td>
<td>• Coordination of using hospital EHRs for remote record review.</td>
</tr>
<tr>
<td></td>
<td>• Coordination of key initiatives: Immunization Registry, Labs, Epidemiology and health outcome staff, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External Stakeholder Representation</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Connecticut Medical Societies</td>
<td>• Coordination and communication with Connecticut providers.</td>
</tr>
<tr>
<td></td>
<td>• Publishing helpful information about the Incentive Program on their website as well as link to DSS/HP website.</td>
</tr>
<tr>
<td></td>
<td>• Inviting DSS to present information at medical societies meetings and events.</td>
</tr>
<tr>
<td>• Connecticut Hospital Association</td>
<td>• Coordination and communication with Connecticut hospitals.</td>
</tr>
<tr>
<td></td>
<td>• Publishing helpful information about the Incentive Program on their website as well as link to DSS/HP website.</td>
</tr>
<tr>
<td></td>
<td>• Inviting DSS to present information at Connecticut Hospital Association (CHA) meetings and events.</td>
</tr>
<tr>
<td>• Connecticut Dental Association</td>
<td>• Coordinating and communicating with Connecticut dentists.</td>
</tr>
<tr>
<td></td>
<td>• Publishing helpful information about the Incentive Program on their website as well as link to DSS/HP website.</td>
</tr>
<tr>
<td></td>
<td>• Inviting DSS to present information at Connecticut Dental Association (CDA) meetings and events.</td>
</tr>
<tr>
<td>• Association of Chain Pharmacies</td>
<td>• Representing the interests of Connecticut pharmacies.</td>
</tr>
<tr>
<td>• CT Pharmacists Association</td>
<td>• Coordinating and communicating with network providers.</td>
</tr>
<tr>
<td>• MCOs:</td>
<td>• Publishing helpful information about the Incentive Program on their websites as well as link to DSS/HP website.</td>
</tr>
<tr>
<td>• Community Health Network of</td>
<td></td>
</tr>
<tr>
<td>External Stakeholder Representation</td>
<td>Role</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Connecticut</td>
<td></td>
</tr>
<tr>
<td>✕ Aetna Better Health</td>
<td></td>
</tr>
<tr>
<td>✕ AmeriChoice by UnitedHealthcare</td>
<td></td>
</tr>
<tr>
<td>• FQHC Representative</td>
<td>• Representing the interests of the FQHC's.</td>
</tr>
<tr>
<td>• HITE-CT</td>
<td>• Coordinating with larger Statewide effort.</td>
</tr>
<tr>
<td>• REC</td>
<td>• Ensuring coordination with the REC – eHealthCT.</td>
</tr>
</tbody>
</table>

C.3 Future Medicaid System Architecture

C.3.1 Architecture Overview

Connecticut plans to base its Medicaid HIT solution architecture on the existing interChange MMIS (detailed in Appendix G.3), DSS Data Warehouse application, the MAPIR application and infrastructure with interfaces to HITE-CT’s Statewide HIE and NHIN Direct as providers adopt EHRs and connect to the HIE infrastructure in order to qualify for incentives. Key elements of this architecture are summarized in Figure 5 below.
Figure 5. SMHP Solution Architecture
C.3.2 Business Architecture

A fundamental principle of this architecture is alignment with the business needs, as opposed to architectural concepts, driving the system design.

A number of business processes covering EP and hospital application, verification, incentive eligibility, attestation, NLR interface, incentive payment and reporting have been identified and will be addressed by the MAPIR subsystem. Figure 6 illustrates how this subsystem will be fully integrated with the CT interChange MMIS Secure Provider Web Portal which will be extended to provide the front-end for the incentive program processes and the MMIS database structure to provide the necessary data storage and facilitate interoperability with the other MMIS subsystems.

C.3.3 Information Architecture

Information in support of Medicaid HIT will consist of three major elements: the interChange MMIS, the Department’s data warehouse and the Statewide HIE.

C.3.3.1 interChange MMIS

The interChange MMIS infrastructure extended with MAPIR including all information required to support the EHR Incentives Program as illustrated in the diagram above. The central Information Architecture principle of interChange is that operational data is managed in a single
normalized relational physical data model, a unified data model that allows all functional areas to work together.

**C.3.3.2 Data Warehouse**

The Department’s existing Data Warehouse is mature having been originally implemented in 2005. It currently contains claims and encounter data from MMIS. The following analytic capabilities have been implemented using this infrastructure.

- Fraud and Abuse and Overpayment functionality
- Management and Administrative Reporting Subsystem (MARS)
- Surveillance and Utilization Review Subsystem (SURS)
- Other decision support/ad hoc functions that support financial analysis, program analysis, and the ability to respond to information requests.

The Data Warehouse is extensible based on a hybrid information architecture with two main physical layers: a foundational layer consisting of largely normalized data organized in a single unified data model and an optimized layer where subsets of that data are restructured into de-normalized, application-focused star schemas.

Connecticut plans to extend the Data Warehouse through the addition of other data, both from within the Department, as well as from outside sources including health care providers to help address the HIT analytic objectives and evolve the existing DSS Data Warehouse and BI Platform to provide the Medicaid HIT Analytic Platform required by the Medicaid HIT program as illustrated in Figure 7 below.

**Figure 7. Overview of the Major Information Flows**

**C.3.3.3 Connecticut Statewide HIE**

Connecticut’s strategy is to provide the HITE-CT as a full service, secure, accessible, patient-centered health information exchange aligned with the Vision and Strategic Goals for the State’s
HIE. The HITE-CT will initially prioritize support for all Connecticut’s health care providers’ meaningful use EHR requirements in close alignment with the SMHP.

Full system functionality will be implemented in phases over a number of years. The HITE-CT will be built on an architectural foundation that will enable an incremental approach toward building a coherent and comprehensive capability for the HIE. The phased implementation approach must balance:

- Priorities related to achieving all aspects of Meaningful Use for Medicaid and Medicare providers
- Widely varying HIT adoption levels and rates of change across Connecticut’s providers
- Leveraging existing State and local HIE capacity and Statewide shared services and directories
- Improving consumers’ access to medical services and their health records
- Supporting public health and vital statistics data needs
- Enabling data aggregation and analytics to improve health care quality and outcomes in Connecticut

The vision for the full implementation of the State’s HIE (please see Figure 8) provides a multitude of services and capabilities and supports a very high proportion of Connecticut’s health care system linking public and private systems for effective and efficient use of information and technology.

**Figure 8. Statewide Health Information Exchange**
The architecture will permit the exchange of data between entities that house patient data and authorized health care providers in a manner that will accommodate users at various stages of technology adoption.

HITE-CT is a quasi-public agency managed by an appointed Board of Directors to coordinate and oversee Health Information Exchange (HIE) activities in the state. The operational plan to develop and implement the Statewide HIE infrastructure has recently been submitted to ONC to obtain funding to get the work kicked off. This plan indicates the basic infrastructure could be in place as early as May 2012 but actual availability of the relevant data will depend on provider EHR adoption and linkage to the infrastructure by those providers.

DSS will work closely with the HITE-CT and the State Government HIT Coordinator to monitor the planning and implementation of the statewide HIE to ensure that it is available for Medicaid providers in 2012. The DSS Commissioner is a legislatively appointed Board Member of the HITE-CT.

The Connecticut Medicaid program accounts for approximately 16% of the population of the State. Based upon this proportion of the population that are Medicaid recipients, the State is proposing annual support for the implementation and ongoing costs of the statewide HIE. This would be founded on the Medicaid population that would benefit from providers and hospitals leveraging the HIE capabilities by having access to a broader set of data upon which clinical decisions can be based. At the same time, Medicaid eligible providers and hospitals will be able to achieve the Meaningful Use objectives that are based on the presence and the availability of a robust statewide HIE (e.g., master patient index) and for Health and Human Services State agencies to establish the necessary interfaces for data exchanges (e.g., key registries, lab reports) to support Meaningful Use requirements through the statewide HIE (structured information such as lab ordering and reports, immunization, etc). DSS has followed CMS’ guidance highlighted in the August 17, 2010 letter to the state Medicaid directors regarding the use of HITECH 90/10 Federal Financial Participation (FFP) for activities that serve as a direct accelerator to the success of the State’s Medicaid EHR Incentive Program and facilitate the adoption and Meaningful Use of certified EHR technology.

C.3.4 Technology Architecture

Key technology architecture components and characteristics in support of the Medicaid EHR Incentive Program will include:

- Browser-based web pages offering online and interactive access to the State health care program data using drop-down menus, navigation, and help tools
- Reuse of code by packaging code into services that can be reused by different applications and improves standardization across the architecture.
- Distributed “net centric” n-tier service-oriented architecture with computing power on the user’s desktop using a thin-client configuration provides access and simplifies distribution of system modifications for consistency across the user population
- Relational database management system (RDBMS) to provide easier access to data and greater flexibility in reporting and manipulating that data
- High-end servers with Sun Solaris Unix operating system and Microsoft Intern Information Services (IIS) technologies support for Windows Increased availability through the use of special partitioning for the claim history database.
• Configurable, table-driven design provides the ability for non-technical staff to establish system changes by defining codes will be covered, what edits, audits and limits will be applied.

• Interoperability based on industry interoperability technology standards such as HTTP, XML, and SOAP to support integration with internal and external systems. The n-tier, transaction-based architecture allows for interfacing with heterogeneous systems and MMIS modules. The architecture is capable of queuing, exchanging information, error-handling, and file recovery.

This architecture will use the software products used by interChange – to see a list of these products please refer to Appendix G.3.

C.3.5 MITA Compliance

Connecticut completed a multi-year project to implement the interChange MMIS. This is a comprehensive, modern, proven and CMS certified MMIS system with an underlying n-tier service-oriented architecture. As such, Connecticut was not required by CMS to complete a MITA self-assessment, and as a result, DSS lacks a strategic IT roadmap.

Connecticut has a clear architectural approach to establishing the processes and systems necessary to support the EHR Incentives Program and Connecticut's Medicaid HIT Vision and Strategies in the short and medium term. In order to mitigate any risk to the availability of Federal support and to ensure an appropriate approach is taken in the long-term, Connecticut plans to undertake a MITA Self-Assessment and develop an associated MITA strategic roadmap. A request for FFP to support these activities will be included in a separate IAPD.

C.3.6 Privacy and Security

The Department sees privacy and security requirements critical to the success of the Incentive Program. Therefore as part of the design, development and implementation of the Program, DSS will work with HP to implement the mechanisms necessary to ensure that HIPAA and Health Information Technology for Economic and Clinical Health Act (HITECH) Privacy and Security requirements are maintained and individually identifiable electronic health information is protected and used only for treatment, payment, or health plan operations as required by law.

DSS has in place an active Information Security Officer in accordance with Connecticut's well established HIPAA Security Policy.

Connecticut has implemented a Systems Development Methodology (SDM) and Risk Management processes based on Federal standards. DSS and its contractors must conform to the SDM. Compliance with Security and Privacy policies is assured by these processes.

C.4 Coordination with the Statewide HIE

It is DSS’s intention that the SMHP will align with and exercise opportunities for economy and efficiency with Connecticut’s HIE efforts; support provider adoption, including technical assistance and provider incentives; leverage the availability of clinical data for administrative efficiencies; and implement reporting for healthier Medicaid members and Connecticut residents.

At the same time, a robust and viable Statewide HIE is essential to the long-term success of the SMHP: supporting and promoting HIT for Medicaid providers and providing a platform that will support Meaningful Use requirements, especially in the two later stages of the CMS definition of
Meaningful Use, which are expected to be released in 2012 and 2014 respectively and are likely to increase the requirements to meet Meaningful Use.

DSS has been an active participant in health information technology workgroups and collaborative efforts, including but not limited to:

- Contributing to the development of the 2009 Statewide Health Information Technology Plan as a member of the Steering Committee overseeing the initiative
- Collaborating with eHealthCT to implement a health information exchange pilot with a targeted group of hospitals and FQHCs
- Participating in HITEAC meetings and as an active member of the 2010 HITE-CT Strategic and Operational Plan State project team for the development of the recently submitted ONC Strategic and Operational Plans
- Going forward DSS plans to support the integration of the Statewide HIE with the Medicaid program’s HIT adoption efforts:
  - Through December 31, 2010, continue to be a member of HITEAC to help ensure Connecticut’s HIE supports Medicaid needs in terms of program activities promoting HIT adoption and meaningful use
  - Beginning October 1, 2010, as a voting member of HITE-CT Board of Directors to provide the oversight of the HIE initiative to promote the long term sustainability of HITE-CT and the Connecticut HIE
  - Ensure that clinical data is shared across Connecticut’s health care system, including Medicaid
  - Administer the Medicaid HIT adoption and meaningful use incentive program and link providers into the Connecticut HIE.
D. Activities Necessary to Administer and Oversee the EHR Incentive Program

D.1 Program Organization

D.1.1 Proposed Staffing

An addition of 9 staff members to the DSS team will be needed to administer and oversee the Medicaid Incentive Program. The acquisition of these positions will be phased in over a 2 year period. The new position titles are:

- Medical Care Administration Manager
- Health Program Supervisor
- Health Program Associate
- Principal Health Care Analyst
- Fiscal Officer/Accountant – Fiscal Management
- Principal Cost Analyst – Quality Assurance
- Health Program Associate
- Health Program Associate
- Health Program Assistant II

The following table provides a description of the required positions and their responsibilities to support the Incentive Program in Connecticut.

Table 9. EHR Incentive Program Staffing

<table>
<thead>
<tr>
<th>Position</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Care Administration Manager</td>
<td>• Department’s designated primary contact with CMS and ONC for the CT Medicaid EHR Incentive Program</td>
</tr>
<tr>
<td></td>
<td>• Department’s voting member of the Board of Directors overseeing the Quasi-public agency to implement and operation the Statewide HIE (HITE-CT)</td>
</tr>
<tr>
<td></td>
<td>• Department’s designee on the State Government HIT Coordinator’s 3C3 Committee (Collaboration, Coordination and Cooperation between DPH, DSS and the State REC (eHealthCT). )</td>
</tr>
<tr>
<td></td>
<td>• State’s Medicaid designee for the intra-state collaborative effort with the New England states and New York</td>
</tr>
<tr>
<td></td>
<td>• Overall administration of the Medicaid incentive payments to Medicaid eligible providers and hospitals</td>
</tr>
<tr>
<td></td>
<td>• Oversight of the Medicaid EHR Incentive Program, including tracking meaningful use attestation and reporting</td>
</tr>
<tr>
<td></td>
<td>• Direct initiatives that encourage the adoption of certified HER technology for the promotion of health care quality and the electronic exchange of health information</td>
</tr>
<tr>
<td></td>
<td>• Oversee the design, development and implementation of MMIS systems and processes necessary to administer the Medicaid Incentive Program</td>
</tr>
<tr>
<td>Position</td>
<td>Responsibilities</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Health Program Supervisor</td>
<td>• Ensure the program meets all statutory and regulatory requirements&lt;br&gt;• Provide supervision and leadership to the current DSS provider relations team in order to leverage existing skill sets and communications to the provider community for the Medicaid Incentive Program&lt;br&gt;• Provide direction and initiate collaborative efforts between provider relations activities of Medical Operations and HP to meet the requirements of the Medicaid Incentive Program&lt;br&gt;• Work collaboratively with hospital and provider associations, the DPH and the REC in communication efforts to educate providers about the Medicaid Incentive Program, Electronic Health Records, Health Information Exchange and meeting meaningful use&lt;br&gt;• Serve on the 3C3 Communications Committee&lt;br&gt;• Develop informational material and presentations to hospitals, provider groups and associations&lt;br&gt;• Participate in the design of the Medicaid Incentive Program including trouble resolution and test case review&lt;br&gt;• Oversee and make determinations concerning provider appeals</td>
</tr>
<tr>
<td>Health Program Associate</td>
<td>• Participate in the multi-year development and implementation of the Medicaid Incentive Program in the interChange system&lt;br&gt;• Develop appropriate regulations, state plan amendments, policies &amp; procedures to support the Medicaid incentive program in accordance with Federal rules&lt;br&gt;• Develop monitoring procedures to insure providers and hospitals are eligible to receive incentive payments&lt;br&gt;• Participate in the biweekly NASMD calls &amp; collaboration with other states&lt;br&gt;• Track regulation and Medicaid Director correspondence to ensure CT remains in compliance with Federal rules and guidance&lt;br&gt;• Develop appeals review process for denial of provider application to participate in incentive program&lt;br&gt;• Participate in the design of the Medicaid Incentive program including test case review and issue resolution</td>
</tr>
<tr>
<td>Principal Health Care Analyst</td>
<td>• Liaison with the CON/Rate Setting Division and the Office of Health Care Access (OCHA) to acquire the hospital data for calculating the hospital incentive payments&lt;br&gt;• Liaison with fiscal analysis in developing the necessary reporting requirements from the MMIS for the incentive program.&lt;br&gt;• Project lead to define incentive payment and clinical data</td>
</tr>
<tr>
<td>Position</td>
<td>Responsibilities</td>
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<tr>
<td></td>
<td>requirements to be captured in the Data Warehouse</td>
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<tr>
<td></td>
<td>• Responsible for all CMS reporting required out of the Med Ops division (monthly IAPD updates, annual IAPD, quarterly progress reports documenting implementation and oversight activities)</td>
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<tr>
<td></td>
<td>• Monitor incentive payments and reporting</td>
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<tr>
<td></td>
<td>• Creates and coordinates development of analytical approaches to evaluate program services</td>
</tr>
<tr>
<td>Fiscal Officer/Accountant</td>
<td>• Development of Federal reporting (CMS 37 and 64) as required</td>
</tr>
<tr>
<td></td>
<td>• Coordination of incentive payment funds draw-down process</td>
</tr>
<tr>
<td>Principal Cost Analyst</td>
<td>• Development and implementation of EHR incentive payment audit plan</td>
</tr>
<tr>
<td></td>
<td>• Coordination of using hospital EHRs for remote record review</td>
</tr>
<tr>
<td>Associate Health Care Analyst</td>
<td>• Understanding of the data and processes at DSS</td>
</tr>
<tr>
<td></td>
<td>• Working knowledge of Business Objects to write queries and reports</td>
</tr>
<tr>
<td></td>
<td>• Ability to work with business users to interpret requirements</td>
</tr>
<tr>
<td></td>
<td>• Analyzes and evaluates health care services</td>
</tr>
<tr>
<td>Health Program Associate</td>
<td>• Clinical/public health informatics background</td>
</tr>
<tr>
<td></td>
<td>• Clinically focused with understanding of clinical quality measures</td>
</tr>
<tr>
<td></td>
<td>• Coordinate researching trends in data and design health outcome programs including investigation of outsourcing options</td>
</tr>
<tr>
<td></td>
<td>• Close coordination and liaison with DPH to promote integration and cross-pollination with DPH programs</td>
</tr>
<tr>
<td>Health Program Assistant II</td>
<td>• Clinical/public health informatics background</td>
</tr>
<tr>
<td></td>
<td>• Clinically focused with understanding of clinical quality measures</td>
</tr>
<tr>
<td></td>
<td>• Research trends in data and design health outcome programs including investigation of outsourcing options</td>
</tr>
<tr>
<td></td>
<td>• Provide support in coordinating with DPH to promote integration and cross-pollination with DPH programs</td>
</tr>
</tbody>
</table>

D.2 Provider Eligibility

D.2.1 Eligibility Methodology

DSS will determine eligibility for providers and hospitals based on the ‘patient encounter’ methodology as described in Section 495.306(c) of the final rule. Providers will attest to their eligibility and will be initially verified during enrollment in the process described in Section D.3 of this document.
Hospitals that are deemed Meaningful Users from the Medicare Program will have this status passed through the NLR via the MAPIR solution.

**D.2.2 Verifying Provider and Hospital Qualifications**

Attesting provider and hospital qualifications will be verified using a two step process. First, MAPIR will use daily batch files retrieved from the NLR and loaded into MAPIR to ensure that the attesting provider/hospital is enrolled in the NLR and is not currently in a federally sanctioned status. Second, the MAPIR interface to the CT MMIS will verify that an attesting provider and/or hospital is recognized by the MMIS as a licensed, credentialed provider who is not currently in a state sanctioned status.

DSS does not require MCO network providers to enroll in the Medicaid program. Thus, these providers do not have access to the Secure Provider Portal and the MMIS does not have information about the provider. In order to participate in the Incentive Payment Program, DSS must “register” these providers. DSS will require interested providers to go through an “abbreviated enrollment” process so that DSS can collect the data elements that will be needed to ensure that the provider is qualified to receive the incentive as well as information about where to send the payment, as appropriate. Interested providers will be able to log-on to the Secure Provider Portal and follow the prompts to provide the necessary information.

DSS will also use the abbreviated enrollment process for performing providers who may be enrolled through a group practice, as applicable.

**D.2.3 Verifying Provider Hospital-Based Status**

The EHR Incentive Payment final rule requires the exclusion of hospital-based providers if more than 90 percent of their Medicaid services are provided in the following two place of service (POS) codes for HIPAA standard transactions: 21—Inpatient Hospital, 23 – Emergency Room.

Through the MMIS interface with MAPIR, DSS plans to use claims and encounters data to validate places of service in order to make a determination about the hospital-based status of the provider. If the claims/encounter data shows a preponderance of hospital based claims/encounters (in-patient and emergency room), DSS can suspend the payment for review, as applicable. When rejecting a payment based on this metric, the provider will be notified and given an opportunity to submit supporting evidence per the appeals process detailed in Section D.5.

**D.2.4 Medicare versus Medicaid**

The EHR Incentive Payment final rule states that providers are not eligible for both Medicare and Medicaid incentive payments. To identify and preclude providers that have previously attested to the Medicare program, the MAPIR will use the NLR for verification of payment by Medicare and deny payment to any provider who has already received/attested to the Medicare program.

To prevent Medicaid providers from applying to Medicare for payment after attesting to Medicaid, the MAPIR will send notification of Medicaid attestations to the NLR daily for the Medicare system to use in its attestation process.
D.3 Attestation Verification Mechanisms

D.3.1 Provider Attestations

All applying providers will provide answers in the MAPIR application specific to their qualification - professional, pediatrician, and physicians practicing in an FQHC/Rural Health Clinic (RHC).

Providers will attest to their number of patient encounters by payer source. In order to facilitate pre-eligibility verification and post-payment audits as necessary, Connecticut will calculate patient volume based on data representing a full calendar year and/or a 90-day consecutive period if data is not available for a full year.

To assist with initial eligibility determinations, when a provider attests to be eligible for the incentive, MAPIR will check the provider’s patient claims volume as well attempt to match the provider to their Title XIX Medicaid ID. If the claim volume appears to be grossly out of line, the payment could be suspended for review. When rejecting an application based on this metric, the provider will be notified and given an opportunity to submit supporting evidence per the appeals process detailed in Section D.5.

D.3.2 Data Sources to Corroborate Patient Volume

DSS will use the following data sources to corroborate information submitted by the attesting provider or hospital regarding patient volume:

**Hospitals**: DSS will use the following data sources to verify hospital patient volume data. In addition, DSS will allow hospitals to provide patient volume data that accounts for out-of-state Medicaid population served.

<table>
<thead>
<tr>
<th>Data Element</th>
<th>History Needed</th>
<th>Data Source</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFS Medicaid Discharges</td>
<td>1 Year</td>
<td>MMIS Claims Data</td>
<td>Audited Data Set</td>
</tr>
<tr>
<td>MCO Medicaid Discharges</td>
<td>1 Year</td>
<td>MMIS Encounter Data</td>
<td>Audited Data Set</td>
</tr>
<tr>
<td>SAGA Discharges</td>
<td>1 Year</td>
<td>MMIS Claims Data</td>
<td>Audited Data Set</td>
</tr>
<tr>
<td>Total (Medicaid and non-Medicaid) Discharges</td>
<td>1 Year</td>
<td>Medicare Cost Report Worksheet S-3, Part I, Column 15</td>
<td>Depending on when filed, status could be “initial” or “audited”, “final”, “desk reviewed”, or “reopened”</td>
</tr>
<tr>
<td>FFS Medicaid Emergency Department Visits</td>
<td>1 Year</td>
<td>MMIS Claims Data</td>
<td>Audited Data Set</td>
</tr>
<tr>
<td>MCO Medicaid Emergency Department Visits</td>
<td>1 Year</td>
<td>MMIS Encounter Data</td>
<td>Audited Data Set</td>
</tr>
<tr>
<td>SAGA Emergency Department Visits</td>
<td>1 Year</td>
<td>MMIS Claims Data</td>
<td>Audited Data Set</td>
</tr>
<tr>
<td>Total (Medicaid and non-Medicaid) Emergency Department Visits</td>
<td>1 Year</td>
<td>OHCA</td>
<td></td>
</tr>
</tbody>
</table>

Table 10. Data Sources to Corroborate Hospital Patient Volume
Eligible Providers: DSS will use Medicaid claims and Medicaid managed care encounter data contained in the MMIS to corroborate information submitted by the attesting provider regarding their Medicaid patient volume. If there is a significant discrepancy between the provider’s attested patient volume and the patient volume calculated using MMIS claims/encounter data, the provider will be asked to provide additional documentation.

D.3.3 Adopt, Implement or Upgrade

All applying providers will indicate in MAPIR the phase they would like to receive incentive payment. Based on the selection of one of the four phases described below, MAPIR will display a tailored set of questions for the corresponding phase:

- **Adopt**: Acquire, purchase, or secure access to certified EHR technology
- **Implement**: Install or commence utilization of certified EHR technology capable of meeting Meaningful Use requirements
- **Upgrade**: Expansion of functionality of the certified EHR technology, such as the addition of clinical decision support, e-Prescribing functionality, Computerized Physician Order Entry (CPOE) or other enhancements that facilitate the Meaningful Use of certified EHR technology
- **Meaningful Use**: Using certified technology in a manner that meets the criteria set forth in the Program final rule

Providers and hospitals will be required to provide supporting documentation as part of their attestation for Adopt/Implement/Upgrade (A/I/U) documentation requirements as described in Table 11 below. These documents may be uploaded via MAPIR or faxed (faxed documents will be converted into an electronic image file).

<table>
<thead>
<tr>
<th>Category</th>
<th>Document – Could be any of the items below</th>
</tr>
</thead>
</table>
| Adoption   | 1. Contract  
2. Software license  
3. Receipt or evidence of cost  
4. Purchase order |
| Implementation | 1. Contract  
2. Software license  
3. Training – evidence of cost or contract  
4. Hiring of staff to assist with the implementation – payroll records |
| Upgrade   | 1. Contract  
2. Software license  
3. Receipt or evidence of cost  
4. Purchase order |

D.3.4 Verifying Meaningful Use

In the first payment year, the EHR final rule does not require providers, who have adopted, implemented or upgraded certified EHR technology to demonstrate Meaningful Use. Therefore, Connecticut will not be verifying Meaningful Use in the first year.

In subsequent years, DSS will look to adopt verification strategies based on best practices by Medicare and other States. In addition, later versions of MAPIR will allow providers to select the
Meaningful Use measures for those objectives that are part of the Meaningful Use menu set. DSS will request providers to specify the EHR reporting period and provide the result of each applicable measure for all patients seen during the EHR reporting period for which a selected measure is applicable.

D.3.5 Proposed Changes to the Meaningful Use Definition
Connecticut will not propose any State-specific changes to the first stage of Meaningful Use criteria.

D.3.6 Verifying Use of Certified Electronic Health Record Technology
This will be based on a list of certified EHRs to be distributed by ONC and uploaded to MAPIR. Providers will be required to submit proof of certification from the EHR vendor.

D.3.7 Collecting Meaningful Use Data
Connecticut plans to begin the collection of Meaningful Use data (i.e. clinical quality measures reported by Medicaid EP or eligible hospital per Final Rule section §495.4) in 2012 leveraging the statewide HIE and using MAPIR and the Department’s Data Warehouse.

D.4 Incentive Payment Processing
DSS will leverage MAPIR to support the NLR interfaces, data exchanges, and State requirements for determining and issuing EP and hospital incentive payments. The NLR will pass data to the MMIS via a daily interface and the data will be used by the MAPIR application to prepare the information to support the incentive payment.

The MAPIR system will be a stand-alone, web-based application capable of interfacing with the Connecticut MMIS system. The MAPIR application is being designed with the following functionality:

- Interfaces with the NLR
- Provider Eligibility Verification and Notification
- Provider and Hospital Attestation
- Incentive Payment Calculation and Distribution
- Appeals Tracking
- User Interface for DSS to be able to view, monitor and support applications submitted by providers

The Connecticut MMIS with MAPIR will determine and calculate the incentive payment amounts for providers and hospitals based on direction from the final rule.

D.4.1 EHR Incentive Payment Calculation Approach
EP incentive calculations will be completed by the MAPIR application. MAPIR will use MMIS claims and encounter data and compare totals with the information provided by the provider in the attestation by providers.

Hospital calculation will be based on data that is contained in the data sets listed in Table 12 below.
Table 12. Data Sources to Determine Incentive Payments

<table>
<thead>
<tr>
<th>Data Element</th>
<th>History Needed</th>
<th>Data Source</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid FFS Inpatient Bed Days</td>
<td>1 Year</td>
<td>MMIS Claims Data</td>
<td>Audited Data Set</td>
</tr>
<tr>
<td>SAGA Inpatient Bed Days</td>
<td>1 Year</td>
<td>MMIS Claims Data</td>
<td>Audited Data Set</td>
</tr>
<tr>
<td>Medicaid Managed Care Inpatient Bed Days</td>
<td>1 Year</td>
<td>MMIS Encounter Data</td>
<td>Audited Data Set</td>
</tr>
<tr>
<td>Total (Medicaid and non-Medicaid) Inpatient Bed Days</td>
<td>1 Year</td>
<td>Medicare Cost Report Worksheet S-3, Part I, Column 6</td>
<td>Depending on when filed, status could be “initial” or “audited”, “final”, “desk reviewed”, or “reopened”</td>
</tr>
<tr>
<td>Total (Medicaid and non-Medicaid) Charges</td>
<td>1 Year</td>
<td>Medicare Cost Report Worksheet C, Part I, Column 8</td>
<td>Depending on when filed, status could be “initial” or “audited”, “final”, “desk reviewed”, or “reopened”</td>
</tr>
<tr>
<td>Charity Care Charges</td>
<td>1 Year</td>
<td>OHCA Notes to audited financial statements</td>
<td>The audit is done on the basic financial statements- not the notes (AICPA statements on auditing standards, AU § 551.02)</td>
</tr>
<tr>
<td>Total (Medicaid and non-Medicaid) Discharges</td>
<td>3 Years</td>
<td>Medicare Cost Report Worksheet S-3, Part I, Column 15</td>
<td>Depending on when filed, status could be “initial” or “audited”, “final”, “desk reviewed”, or “reopened”</td>
</tr>
<tr>
<td>Total (Medicaid and non-Medicaid) Emergency Department Visits</td>
<td>3 Years</td>
<td>OHCA</td>
<td></td>
</tr>
</tbody>
</table>

As per the final rule, hospitals must attest to patient volumes for “Medicaid patient encounters in any representative continuous 90-day period in the preceding calendar year”. DSS will use a full fiscal year of MMIS data, a continuous 90-day period when full fiscal year is not available and the most recently available Medicare Cost Reports.

D.4.2 EHR Incentive Payment Frequency

Providers will be required to report all necessary required data under subpart A of the final rule during the EHR reporting period. Once the data is received and approved, payments will be made annually to each provider, with annual payment dates staggered monthly based on the month the application is approved. Payment will be made in the bi-monthly MMIS payment cycle after the incentive is approved.
DSS has proposed a payment schedule for hospitals that both provides an immediate payment but reserves a balanced amount for the second and third year. This strategy was chosen to encourage hospitals to take immediate action but also to ensure that they stay involved with the Program through the increase in Meaningful Use requirements. The proposed payment schedule is shown in Table 13.

Table 13. Three Year Payout Schedule for Hospitals

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>30%</td>
<td>20%</td>
</tr>
</tbody>
</table>

D.4.3 Assignment of Payment

Connecticut will allow an EP to assign their payments to other entities. This decision was made to allow EPs to direct payments to those who will support the adoption of EHRs and HIT activities for their business. DSS plans to allow assignment to the following three entities:

- The attesting provider’s group practice
- The attesting provider’s employer provided such employer is a Medicaid enrolled entity
- The attesting FQHC

Using MAPIR, the provider will be able to select assignment to one of the approved entities and be prompted to enter the assignment information so that payment can be made.

D.5 Appeals Process

DSS, in conjunction with HP Provider Relations staff, will put into place a process for providers and hospitals to appeal an adverse action. A provider or hospital may seek a desk review of the adverse action. If the provider or hospital is still aggrieved by the decision of DSS after the desk review, the provider or hospital may, in accordance with chapter 54 of the Connecticut General Statutes, seek an administrative hearing and may appeal the decision issued by the hearing officer to Superior Court. A provider or hospital will be able to appeal the discretionary portion of decisions in one or more of the following areas:

1. Program eligibility
2. Payment amounts
3. Adopt, implement, upgrade attestation
4. Meaningful use (Year 2 and beyond) attestation

D.5.1 Program Eligibility

DSS will determine the eligibility of the provider and the hospital based on the methodology outlined in Section D.2.1. When the provider or hospital submits their attestation, their eligibility will be checked in the HP Incentive Program database. If the provider/hospital’s Medicaid data appears grossly out of line with expected values, the payment may be denied. The provider/hospital may appeal this adverse action. The provider or hospital will be required to submit written or electronic documentation requesting a desk review, along with documentation supporting the request. The request for a desk review must be received by DSS within 30 days of the adverse action date. DSS will review the documentation and provide a response within 30 days.
D.5.2 Payment Amount
DSS will determine the payment amount due to the provider or hospital using the methodology outlined in Section D.4.1. If the provider/hospital disagrees with the payment amount calculated by DSS, they may appeal the decision. The provider or hospital will be required to submit written documentation requesting a desk review, along with documentation supporting the request. The request for a desk review must be received by DSS within 30 days of the adverse action date. DSS will review the documentation and provide a response within 30 days.

D.5.3 Adopt, Implement, Upgrade
As part of the attestation process, DSS will require the provider/hospital to submit documentation that substantiates the cost of the adoption, implementation, or upgrade of a certified EHR technology. If, after review of the provider documentation, DSS finds it to be insufficient, it may deny the payment. If the provider/hospital disagrees with the adverse action, they may appeal the decision. The provider or hospital will be required to submit written documentation requesting a desk review, along with documentation supporting the request. The request for a desk review must be received by DSS within 30 days of the adverse action date. DSS will review the documentation and provide a response within 30 days.

D.5.4 Meaningful Use
In future years, payment may be denied if DSS has reason to believe the provider/hospital has not fulfilled the Meaningful Use criteria as required. If the provider/hospital disagrees with the adverse action, they may appeal the decision. The provider or hospital will be required to submit written documentation requesting a desk review, along with documentation supporting the request. The request for a desk review must be received by DSS within 30 days of the adverse action date. DSS will review the documentation and provide a response within 30 days.

D.5.5 Appeals Staffing
The desk review process will be staffed by a combination of HP and DSS staff. HP staff will process the desk review documentation recording the status of the review in the MAPIR system. HP will make a recommendation on the review to DSS. DSS staff will then review HP’s decision and either agree with or adjust the decision. Once a determination is made, DSS will inform HP and HP will notify the provider/hospital of the determination. The notification of the desk review decision will be made within 30 days of the receipt of the complete documentation of the review. All information about the status of the desk review will be logged and tracked using the MAPIR system. Staff will also be able to use the MAPIR/MMIS system to generate desk review notification letters to providers.

If a provider or hospital is aggrieved by the decision reached by DSS in the desk review, the provider or hospital may submit a request for an administrative hearing in writing within sixty days to the DSS Office of Legal Counsel, Regulations and Administrative Hearings. A hearing will be scheduled with a DSS hearing officer in accordance with the provisions of chapter 54 of the Connecticut General Statutes. The decision issued by the hearing officer will be the final decision of the agency which may be appealed to Superior Court.
D.6 Provider Support Activities

D.6.1 Outreach and Education

DSS has engaged HP Provider Relations staff to support the communication, outreach, and education effort for the EHR Incentive Program. HP will provide the operational resources to effectively support this initiative. HP will use a multi-channel communication approach to the provider community in support of bringing the EHR Incentive Program into focus and encourage the program to become a matter of priority for eligible providers. Existing communication channels and processes will be leveraged and several new components will be added to the in order to support this effort.

In order to achieve successful outreach and education, DSS will contract HP to increase the Provider Relations staff by three dedicated full time positions. These three resources would be locally based to support the Connecticut office and would include two Provider Relations Representatives and one Call Center Representative. HP plans to utilize current staff members to support this effort and hire replacements for those vacant positions in the Provider Relations and Call Center areas. This approach will allow experienced resources to support this implementation initiative and coordinate with the Managed Care Organizations on this initiative. These resources have demonstrated a strong rapport with the provider community and have a base knowledge and understanding of the Connecticut Medicaid EHR Incentive Program which will eliminate the need for any substantial training processes.

Responsibilities for Provider Relations resources would include:

- Draft all outreach documentation, training and publication materials such as bulletins, newsletters, important messages, workshop training materials and invitations, drafting survey materials
- Deliver dedicated EHR provider training and informational workshops both in person and in HP Virtual Room settings
- Provide provider site visits as requested
- Deliver regular update training to call center and internal staff
- Assist providers with questions surrounding the EHR program, provider eligibility and incentive payment calculations
- Review and update all Connecticut Medicaid EHR Incentive Program static content materials as needed

D.6.2 Coordination with the Regional Extension Center (eHealthCT)

DSS recognizes the importance of ensuring that the HP staff who work directly with providers have regular contact with the eHealthCT Regional Extension Center. Therefore, DSS plans to host monthly meetings with HP and eHealthCT staff to provide the forum to exchange information. In addition, DSS has directed HP to produce a report that provides potential eligible provider contact information to eHealthCT for outreach purposes. Initially, those providers who appear to have a significant number of Medicaid patients will be targeted for outreach, including FQHC providers.

D.6.3 Connecticut Medicaid Webpage Enhancements

A new dedicated webpage will be added to the DSS Medical Assistance Program website (www.ctdssmap.com) to disseminate information about the Incentive Program. This website will provide details about the EHR Incentive Program and will be designed to promote participation. The website will include a Frequently Asked Questions (FAQs) section that will be updated as
new questions are asked and answered. The website will also provide links to valuable external websites for entities such as CMS and ONC.

D.6.4 Communication Tools

DSS and HP will use the following communication tools:

- Dedicated toll-free, local and fax phone lines connected to the existing call center for the Incentive Program with afterhours voicemail capability
- A dedicated email address specific to the Incentive Program
- An email distribution list will be compiled and maintained as a means of electronic communication to participating EPs

Several communication methodologies are currently in place to support the Connecticut Medical Assistance Program provider population. These methodologies will be leveraged and customized with minimal technical support as a means of providing varied and ongoing outreach to this subset of eligible providers. These methods include:

- Quarterly provider newsletter
- Provider bulletin notifications
- Postings on the home page of the Medical Assistance Program website
- Remittance advice banner messages
- Global messaging to provider portal accounts
- Provider workshops
- HP Internet Virtual Room training sessions
- Provider site visits
- Call center informational hold/wait messaging
- Online surveys via SurveyMonkey®

Ongoing communication efforts through this initiative would incorporate all of these methodologies and, where appropriate, would modify delivery timings to meet distribution notification needs.

Provider outreach efforts have already begun for the Program. Communications and Provider outreach efforts that have been delivered to date include:

- A quarterly provider newsletter article published August 3, 2010
- Important Message “New!! EHR Incentive Programs Tip Sheets for Medicaid Eligible Professionals and Hospitals” notification published August 9, 2010
- Important Message “Health Information Exchange Public Forums” notification published August 17, 2010
- Quarterly Provider Newsletter Article - October, 2010

Future planned and ongoing provider outreach efforts:

- A Connecticut Medicaid EHR Incentive Program Provider Survey – ongoing
- Topic to be added to ongoing quarterly “New Provider Workshop” - targeted for delivery November 16, 2010
- Dedicated Connecticut Medicaid EHR Incentive Program Provider Workshops – targeted to start in the first quarter of 2011. Workshops will be both in person and in HP Virtual Room Internet session formats
- Dedicated Connecticut Medicaid EHR Incentive Program newsletters planned to start in the first quarter of 2011
• Important Messages updates to planned EHR Web page – Targeted to start in the last quarter of 2010
• Creation of Connecticut Medicaid EHR Incentive Program specific Contact Tracking Management System (CTMS) reason and type codes for unique tracking and subsequent reporting of contact activities
• Static review of EHR Web page – targeted to begin in the last quarter of 2010
• Proposed reoccurring status survey to be sent to participating eligible providers – targeted to begin in early 2011
• Coordination with the REC outreach and education efforts

D.6.5 Help Desk Support Plan
HP will ensure that Call Center Representatives are knowledgeable and able to respond appropriately to provider questions. Responsibilities for the new dedicated Call Center Representative resource would include:

• Initial response of inbound provider contacts via phone, voicemail, fax, letter and email and tracking of these through interchange / CTMS subsystem
• Escalation, if needed, of provider inquiries to EHR Incentive Program Provider Relations representatives
• Coordination of provider workshop registrations

D.7 Financial Reporting
Financial reporting will be managed by DSS’s Fiscal Division. The Fiscal Division will estimate quarterly expenditures and report them on Form CMS-37, as required. Funds for the incentive payment will follow the existing federal draw down process. As required, all expended funds will be reported on appropriate lines of Form CMS-64.

D.8 IT Systems Changes Needed and Associated Timeframe
MAPIR will be phased in over a period of two years and will have the flexibility to be modified to accommodate the reporting of new Meaningful Use criteria as CMS expands the requirements over the course of the Incentive Program.

DSS will integrate use of the MAPIR application into their existing MMIS and business operations phase (please see Appendix G6 for additional details on MAPIR integration activities).

The key implementation dates are listed below:

• April 2011: Providers will be able to view their NLR data
• End of May 2011: Projected date to complete the MAPIR-MMIS integration/customization
• June 2011: MAPIR will be able to receive provider applications
• July 2011: DSS will be ready to make payments to providers

The MAPIR application will be tested by HP with the NLR prior to implementation by individual states. In a meeting on September 9, 2010, CMS agreed that once the MAPIR application development team performed interface testing with the NLR, all states included in the HP Multi-State Collaborative would receive approval for interface testing. Additionally, Connecticut intends to individually test their connectivity with the NLR via GenTran in February 2011.

The HP Multi-State Collaborative steering committee agreed to release the MAPIR core product in two parts. The first core MAPIR release, targeted for February 2011, encompasses the following:
• File exchanges to receive provider registration information from the NLR (B6 interface)
• Capability for states to integrate MAPIR into their provider portals and existing user management processes – allowing authorized providers to view their NLR registration information
• Provider information from the MMIS will be utilized for validating against NLR data
• Email notifications can be sent to providers using provider submitted addresses
• Eligible Professionals (EP) and hospital providers will be able to view and validate their NLR data through a user interface
• State users will be able to view NLR data and provider submitted registration information through a user interface
• State specific data such as summarized claim data and hospital cost reports will be loaded and viewable in MAPIR by the DSS for validation against provider submitted application data

The second core MAPIR release, targeted for May 2011, encompasses the following additional functionality:

• All additional file exchanges with the NLR
• Functionality to enable eligible providers and hospital providers to register, attest, and submit an application
• Calculation of estimated payment amounts
• Interface to the ONC Certified HIT Product List (CHPL)
• Payment determinations
• Checking against the NLR for duplicate payments
• Payment transactions will be created in MAPIR to be sent to the MMIS
• MMIS-MAPIR communication of payment information
• Payment data will be sent to the NLR
• Reports and extracts generation
• Appeals status entry into MAPIR via a user interface

The ability for MAPIR to collect Meaningful Use metrics and generate reports will be addressed in subsequent iterations of the MAPIR application. In addition, DSS plans to develop the functional and technical requirements for the extension of the Data Warehouse described in Sections C3.3.2 and F.3 by the end of 2011 to help address the HIT analytic objectives and to provide the analytic platform required by the Medicaid HIT program. This extension will be completed in 2012.
E. The State’s Audit Strategy

E.1 Pre-payment

DSS intends to audit several pieces of information during the provider and hospital attestation process (before a payment is issued). The specific data elements are:

- The provider National Provider Identifier (NPI) – this will be verified using data from both the NLR and the MMIS
- The provider tax ID number – this will be verified using data from the MMIS
- Provider patient caseload – this will be verified using Medicaid claims and encounter data as a proxy
- EHR technology certification – this will be submitted by EPs and hospitals and will be checked against the CHPL
- A/I/U cost data – this will be checked for reasonability and the presence of expected documentation (please see Section D.3.3 for a list of A/I/U supporting documentation)

E.2 Post-Payment

Post-payment auditing of participating hospitals and EPs will be the responsibility of the Office of Quality Assurance’s Audit Division at DSS. This Division is charged with auditing payments made to providers in all of the Connecticut Medical Assistance Programs. In addition, the office of Quality Assurance’s Special Investigations Unit is responsible for investigating any fraud and or abuse in the programs. The Audit Division has established the following criteria for post-payment auditing:

1. **Post-Payment Auditing of Hospitals:** Because the payment calculations will be based on patient volumes that are supplied mostly through previously audited data sources, hospitals are judged to be at less risk for incorrect payment or fraud/abuse by the attesting hospital. Therefore, audits of hospitals will mainly focus on whether the hospitals meet Meaningful Use criteria. The Audit Division plans to follow the Medicare audit plan when that plan becomes available.

2. **Post-Payment Auditing of EPs:** The Audit Division plans to perform a number of routine audits based on a statistically significant percentage (15%) of the number of attesting providers. There will be two triggers for these audits. First, a certain number of providers will be randomly selected for audit spread across ranges of geography, practice size and provider type and specialty. Second, providers may be selected at the discretion of the Audit Division based on the results of attestation data elements.

The Audit Division staff will perform an audit assessment. During this assessment, they will determine the steps necessary to assemble information that will enable the audit team to make decisions concerning the nature, timing, and extent of detailed audit work. The review will include a collection and analysis of information so that potential audit areas can be identified and plans made to review and test management controls over these areas. Auditing will be conducted in accordance with Generally Accepted Government Auditing Standards. The auditing will be performed by State staff in the Audit Division (see Section D.1.1 for audit staff job descriptions).

During the audit process, the Audit Division will identify and fully document any fraud or abuse detected. Fraud detection will be done primarily through the use of established auditing and investigation techniques.
E.3 Corrective Action

The stated goal of the Incentive Program is to encourage and support providers in the adoption and meaningful use of certified EHR technology. Given the changing requirements of Meaningful Use requirements and natural flow in provider, hospital and vendor business, it would be reasonable to assume that not all attesting providers will be in full compliance at all points in the Program lifespan. Although some of these deficiencies may be attempts to defraud the Program, others are likely going to be due to unexpected circumstances, simple misunderstandings or honest mistakes.

When deficiencies are discovered and are judged to be unintentional rather than intentional fraud or abuse, DSS and the Audit Division have decided to continue to encourage adoption and use of EHRs. This will be embodied through a Corrective Action Plan (CAP) that the DSS and the provider/hospital will agree to. The CAP will be used to ensure the deficiencies are corrected in a timely manner, while allowing and encouraging the provider or hospital to successfully implement the EHR.

Should the CAP not meet its corrective goal for any provider or hospital, additional action may be taken by DSS, as appropriate and dictated in other sections of this Plan.

E.4 Fraud and Abuse Identification, Remedies and Recoupment

If a preliminary investigation of a provider leads the Audit Division and Special Investigation Unit to believe that fraud or abuse may have occurred, the case will be referred in accordance with an existing Memorandum of Understanding (MOU) between DSS, the Division of Criminal Justice, Office of the Chief State’s Attorney (for criminal investigation and prosecution), the Office of the Attorney General (for civil investigation and prosecution) and the Department of Health and Human Services, Office of the Inspector General (for federal civil and criminal investigation and prosecution).

Providers found to be in violation of their attestation may be suspended from Medical Assistance Programs. In certain situations, violators may also be sanctioned by the Office of the Inspector General, which may result in a provider's exclusion from participation in Federal health care programs including Medicare and Medicaid.

In the event the Audit Division determines monies have been paid inappropriately, a recoupment process will be leveraged to recover the funds. An accounts receivable record will be created in the MMIS and associated with the appropriate provider and the payment will be identified as an overpayment. If payments need to be collected they would be refunded to DSS via the appropriate CMS-64 Form adjustment.

The existing practice allows DSS to work with the provider to develop an acceptable repayment period dependent upon the provider circumstances and amount of the overpayment.
F. The State’s HIT Roadmap

Connecticut envisions the next five years will bring significant changes in Health Information Technology to the State that will make a significant impact on the persistent problems of safety, quality, cost and access in health care. The State intends to support these changes by promoting the adoption of certified EHR technology and the statewide HIE, information life cycle management and the exchange of health care information across the array of health care providers and delivery services.

The following diagram provides a high-level timeline of the anticipated HIT changes in the State.

![HIT Evolution in the Next Five Years](image)

F.1 Roadmap Narrative

The State’s HIT Roadmap sets expectations for what activities are to be undertaken and in what order, to encourage EHR adoption, administer, and monitor incentive payments to Eligible Professionals and hospitals. The Roadmap covers the activities required to realize the Department’s goal of ensuring that applicants that demonstrate eligibility receive timely and accurate incentive payments, without duplication.

This Roadmap lays a foundation upon which DSS can build toward greater levels of provider EHR adoption and Meaningful Use over time. The Roadmap includes activities that cover five key areas: governance, organization and staffing, key processes, measurement, and IT infrastructure and architecture.

- **The Governance category** addresses how decisions are made to develop and most effectively use HIT for Connecticut's Medicaid patients and providers. The perspective includes consideration of: The decisions to be taken; which stakeholders participate in the decision making process; and the details of the decision making processes. This is a key area for attention as it may involve the introduction of new governance processes which often require education, incentives, risk mitigation and a phased implementation approach.

- **The Organization and Staffing category** addresses the skilled human resource and organization needs of the State in planning and executing Connecticut’s vision for Medicaid HIT. This perspective includes consideration of the many activities that must be undertaken to meet all State and Federal requirements.
The Key Processes category addresses all the specific key processes required to encourage HIT adoption, administer and oversee the Incentive Program, meet Federal reporting requirements and the performance management responsibilities related to health care and health outcomes in Connecticut. This must include consideration not only of the processes required for planning and immediate implementation of the Program but also the processes required during the evolving HIT program throughout all phases of implementation and ongoing support activities.

The Measurement category addresses how Connecticut will use specific measurements to document baseline HIT capabilities, provide a balanced method to communicate progress to a variety of stakeholders and evaluate performance toward meeting Program objectives. This must include consideration of all the measurement and reporting requirements for the Program mandated by CMS as well as Connecticut-specific measurement and reporting requirements.

The IT Architecture/Technology category addresses both the short and long-term information technology infrastructure and architecture requirements to facilitate and manage HIT adoption throughout the Connecticut Medicaid provider community. This domain will focus on:
  o The system need to support the administration and execution of the Incentive Program
  o Facilitation of requirements for information flows from State systems
  o System needs for the measurement and reporting of health care and health outcomes; and
  o Alignment with MITA Framework 2.0.

The Roadmap also attempts to account for progress made to date and, based on this information, forecasts the status of DSS efforts to-date as well as what remains to be addressed. Figure 10 below provides a graphical representation of this roadmap highlighting the where Connecticut is today and the activities necessary to achieve the HIT vision defined in this plan.

DSS plans to take an incremental approach to the implementation of the Incentive Program in Connecticut. The Department intends to start by focusing on provider outreach and communication, continue with provider registration, provider attestation and verification of eligibility, next on provider payments, and finally, on capturing on meaningful use data as described in Figure 10 and further detailed in Appendix G.4 – Program Activities and Schedule.
Figure 10. The State’s HIT Roadmap

<table>
<thead>
<tr>
<th>As-Is</th>
<th>2011</th>
<th>2012…2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Governance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-state coordination and partnership – MAPIR Steering Committee</td>
<td>Establish governance structure – Steering and Advisory Committees</td>
<td>Committees are actively engaged in oversight and decision making</td>
</tr>
<tr>
<td>Active member of the Health Information Technology Advisory Committee (HITEAC)</td>
<td>Active participant in HITE-CT</td>
<td>Continue to train staff as needed</td>
</tr>
<tr>
<td>Stakeholder Engagement - DSS Core Project Team, DSS leadership, DPH and eHealthCT REC</td>
<td>Setup Business Intelligence Competency Center</td>
<td>Develop, test, implement data warehouse requirements</td>
</tr>
<tr>
<td>Severely understaffed - limited resources available to support HIT efforts; two interim part-time staff assigned to Incentive Program planning activities</td>
<td>Conduct provider communication, education &amp; outreach in collaboration with REC</td>
<td>Integration of Statewide HIE</td>
</tr>
<tr>
<td>Leverageable audit processes of Medicaid providers</td>
<td>Collect and analyze clinical data and report on MU quality metrics</td>
<td>Integrate subsequent versions of MAPIR, And implement Health Analytics Platform</td>
</tr>
<tr>
<td>HP provider relations support including web-based provider communication tool for disseminating information</td>
<td>Plan activities to establish Health Analytics Platform, including establishing data stewardship, and interoperability with external data sources</td>
<td></td>
</tr>
<tr>
<td>Health data maintained by a number of State Agencies exist with limited exchange of data between agencies</td>
<td>Collect and analyze clinical data and report on MU quality metrics</td>
<td></td>
</tr>
<tr>
<td>DSS’ data warehouse infrastructure will enable verification of provider eligibility and identification providers for communication / outreach</td>
<td>Setup Business Intelligence Competency Center</td>
<td></td>
</tr>
<tr>
<td>A secure provider portal and extensible data warehouse in place</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSS MMIS recently updated to a modern system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active participant in HP multi-state initiative to extend CT MMIS with MAPIR and interface with NLR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well versed in Federal reporting requirements. Can be extended to meet Program requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverageable payment disbursement mechanism for claims</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data sources in place to corroborate provider eligibility (patient volume)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement</td>
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<td></td>
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<tr>
<td><strong>Organization and Staffing</strong></td>
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<tr>
<td><strong>Key Processes</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>IT Architecture / Technology</strong></td>
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</tr>
</tbody>
</table>
F.2 Risk Analysis

The risk analysis described below is based on the risks that have been identified from the perspective of DSS in regard to the successful implementation of the EHR Incentive Program. Table 14 provides a definition of the type of risk and Table 15 provides a description and prioritization of these risks.

**Table 14. Risk Analysis Table Legend**

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>A high priority risk. If the risk is not mitigated, it will impede the EHR Incentive Program from moving forward as planned.</td>
</tr>
<tr>
<td>Yellow</td>
<td>A medium priority risk. If the risk is not mitigated, there may be challenges faced in moving the Program forward as planned.</td>
</tr>
<tr>
<td>Green</td>
<td>A low priority risk that must be monitored.</td>
</tr>
</tbody>
</table>

**Table 15. Risk Analysis Table**

<table>
<thead>
<tr>
<th>Risk Key Area</th>
<th>Risk</th>
<th>Definition</th>
<th>Mitigation Strategy</th>
<th>Risk Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance</td>
<td>The governance structure is not fully functional</td>
<td>Given future changes in administration the proposed governance structure may not be fully functional by 2011.</td>
<td>DSS will ensure to convey to the new administration the need to establish the Program’s governance structure where stakeholders are well represented.</td>
<td>Yellow</td>
</tr>
<tr>
<td>Organization and Staffing</td>
<td>There is a significant shortage of staff to support the Program</td>
<td>New staff with required skill sets are not hired in a timely manner to support the management and oversight of the Program and other Statewide HIT activities.</td>
<td>DSS has begun the process of identifying the required staff and defining their future responsibilities in support of Program. Additional work has been planned to obtain senior-level approval to fill the new positions and attract the needed talent.</td>
<td>Red</td>
</tr>
<tr>
<td>Key Processes /</td>
<td>There is limited participation from</td>
<td>Lack of EHR adoption by physicians.</td>
<td>DSS has developed a communications strategy and plan to</td>
<td>Yellow</td>
</tr>
<tr>
<td>Risk Key Area</td>
<td>Risk</td>
<td>Definition</td>
<td>Mitigation Strategy</td>
<td>Risk Priority</td>
</tr>
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<td>----------------------</td>
<td>-------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Measurement</td>
<td>providers and hospitals</td>
<td>Limited collection of Meaningful Use clinical quality metrics.</td>
<td>ensure that the Incentive Program is clearly articulated to providers and hospitals. DSS will collaborate closely with the Regional Extension Center to ensure that substantial and focused support is provided to smaller physician practices.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A great amount of interest from providers</td>
<td>Providers may decide to apply for incentives, even if they do not qualify, and request an appeal if rejected. Given that the Program appeals process will be new to DSS, an overwhelming number of appeals may impact the available resources dedicated to this task.</td>
<td>Establish appropriate communication channels and education to providers to encourage participation yet ensure they have a good understanding of the Program requirements and eligibility criteria.</td>
<td></td>
</tr>
<tr>
<td>IT Architecture /</td>
<td>The State HIE may not in place by 2012</td>
<td>HIE infrastructure may not be in place in time for the Medicaid providers to demonstrate exchange of information.</td>
<td>DSS will work closely with the HITE-CT and the State Government HIT Coordinator to monitor the planning and implementation of the statewide HIE to ensure that it is available for Medicaid providers in 2012. The Connecticut Medicaid program accounts for approximately 17% of the population of the state. Therefore, it is the intention of the HITE-CT to expect the Medicaid program to bear the portion of the cost that is proportional to the Medicaid population.</td>
<td></td>
</tr>
<tr>
<td>Risk Key Area</td>
<td>Risk</td>
<td>Definition</td>
<td>Mitigation Strategy</td>
<td>Risk Priority</td>
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<tr>
<td>---------------</td>
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</tr>
</tbody>
</table>
|               | MAPIR may not be in place by 2011 | While MAPIR is projected to be integrated with the MMIS and ready to make payments to participating providers by June 2011, a number of dependencies exist –  
- NLR connectivity testing with Connecticut  
- DSS customization of the MAPIR application | DSS will work closely with the MAPIR Steering Committee and HP to ensure that all efforts are made to stay within the projected timeline. | ☢️ |
F.3 Long-Term Plan for Health Outcome Analytics

DSS plans to evolve its Health Analytics Platform to enable a wide variety of health care and health quality improvement analyses and reporting that will fully exploit HIT for Medicaid. There are very many opportunities to improve the health of the Medicaid population by making health care processes and practices more efficient and effective.

Figure 11 shows how Connecticut is currently considering measuring and managing the impact of Health Information Technology on the health of its Medicaid clients. The examples of goals for each of the four key perspectives show the foundational effect that core Learning and Organization has as it supports Health Information Technology, which in turn enables Health Care Process and Practice, which ultimately generates better Health and Well-Being betterment.

Figure 11. Performance Framework – Connecting HIT Outcomes

The Connecticut Health Analytics Platform will be designed to analyze data on each of the four perspectives and measure performance against objectives designed to support the goals described in the following table.
### Table 16. Health Outcome Analytics Goals

<table>
<thead>
<tr>
<th>Learning and Organization</th>
<th>These goals are related to people and their behavior that are enabling for the introduction and use of technology, the ability for health care delivery to improve and deliver the desired improvements in health and well-being of Connecticut.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Information Technology</td>
<td>A large variety of health care data will become readily available by virtue of widespread HIT adoption and connectivity enabled by the Statewide Health Information Exchange and Information Technologies. These technologies provide an exciting array of capabilities that can be used to adjust, streamline and improve nearly every aspect of health care delivery practices and processes and provide data for additional understanding.</td>
</tr>
</tbody>
</table>
| Health care Process and Practice | Accurate information is available during preparation and at the point of care without challenging the memory of patients and asking them to fill out extensive forms. Enabled by having:  
  - IT tools and access that are increasingly at the provider's finger tips when needed  
  - Information that is shared between providers electronically and follows the patient throughout their care journey. |
| Health and Well-Being | Goals can be understood by quality reporting and Public Health data analysis enhanced by HIT including by the following:  
  - Analysis capabilities will be enriched by the availability, integration (with many sources including for-profit providers) and quality of the data  
  - Reduced operational challenges means the capabilities can be used more flexibly and repeated for varying scenarios  
  - Much more sophisticated tools and methods can be deployed across the integrated data set, such as visualization, simulation and predictive modeling. |

The Medicaid Health Analytics Platform will be integrated to connect data to actions. At each level of operations within the Medicaid and Incentive Program and across the Program areas it will improve the capacity to anticipate, support and validate key decisions and actions. This is illustrated in Figure 12 below.
The Health Analytics Platform will include mechanisms and analytical capabilities to:

- Collect clinical decision support data originating in multiple sources, including provider/hospitals’ EHR systems, MMIS, REC and other State systems and integrate this data in an extensible data warehouse architecture driven by a unified data model for the Connecticut Medicaid Enterprise.
- Manage the sharing of this data by establishing open data governance practices that enable enterprise agreement on data semantics and standards while providing a system of distributed data stewardship to achieve the level of data quality required by the full set of data users.
- Provide a comprehensive set of Business Intelligence software tools aligned to functional needs and working styles of the specific health analytic roles identified as important for achieving the goals of the Medicaid program in Connecticut. As the skills sets and resource levels needed will vary with the analysis opportunities being tackled it is expected that health analytic roles will be filled by, State employees, staff employed on a contract basis to augment State staff and specialist health analytic consultants from the business or academic world (e.g. UCONN) to engage specific analysis projects.
- Offer leadership and support in the use of this data and tools and provide the level of help each health analytic role needs. This support needs to extend to help and guidance on analytic and statistical methods, full understanding of the data available and how to efficiently use the tools and technology available to achieve the desired results.

F.4 Metrics and Measurement of EHR Adoption
In this plan DSS has set the vision and began to baseline the current state of provider adoption and meaningful use of EHR technologies. DSS used the vision and baseline to draft target set
of measures to assess progress in adoption and use as an essential foundational step in this transformative change process. As these measures are defined, reviewed and refined, DSS will establish a systematic process to collect, collaborate and make transparent progress assessments for the Medicaid enterprise and health care system. DSS views this as a first step in what will be an ongoing quality improvement process. Table 17 details the strategies and measures that DSS will use for tracking EHR adoption.

Table 17. Incentive Program Implementation Performance Measures

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Measures</th>
<th>Initial Target (Years 1-3; Incremental)</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible providers have adopted and are meaningful users of EHRs.</td>
<td>Percent of eligible Medicaid providers who have successfully attested and received incentive payments.</td>
<td>5% year 1 15% year 2 20% year 3</td>
<td>List of active potential Medicaid eligible providers based on calculations described in Section B.9.2 of the plan.</td>
</tr>
<tr>
<td>Eligible hospitals have adopted and are meaningful users of EHRs.</td>
<td>Percent of eligible Medicaid hospitals who have successfully attested and received incentive payments.</td>
<td>Year 1 (FFY2011, 3 months) – 2 hospitals Year 2 (FFY2012, 12 months) – 25 hospitals Year 3 (FFY2013, 12 months) – 1 hospital</td>
<td>List of active potential Medicaid eligible hospitals based on calculations described in Section B.9.3 of the plan.</td>
</tr>
<tr>
<td>Pharmacies within the state are able to fill prescriptions via e-prescribing.</td>
<td>Percent of new scripts that are electronic Percent of refill requests that are electronic.</td>
<td>10% year 1 20% year 2 30% year 3</td>
<td>In the first nine months of 2010, Medicaid and non-Medicaid providers sent the following (see Table 3): 2.4 million new eRx 931,000 refill requests 806,000 refill responses</td>
</tr>
<tr>
<td>Immunizations are sent to the CT registry electronically.</td>
<td>Number of immunizations sent electronically.</td>
<td>Year 1 - 0% Year 2 - 15% Year 3 - 30% DPH expects that the registry will be up and ready in 2011, but the completion of PHIN has a tentative end date.</td>
<td>0% sent electronically today.</td>
</tr>
</tbody>
</table>
F.5 Annual Benchmarks

F.5.1 Annual Benchmarks for Strategic Objectives

Table 18 provides a description of the annual benchmarks that DSS aims to achieve in support of the EHR Incentive Program and in alignment with the Program’s strategic objectives defined in Section C.1.2 of this plan.

| Objective 1. Encourage Medicaid providers to adopt, implement, or upgrade by leveraging the eHealthCT Regional Extension Center scope of efforts for outreach, education and technical support in Connecticut; and, conduct targeted efforts to promote certified EHR adoption by those providers not being addressed by the REC work plan. |
|---|---|---|---|---|
| 2011 | 2012 | 2013 | 2014 | 2015 |
| Leverage eHealthCT’s outreach, education and technical support | Leverage eHealthCT’s outreach, education and technical support | Leverage eHealthCT’s outreach, education and technical support | Leverage eHealthCT’s outreach, education and technical support | Leverage eHealthCT’s outreach, education and technical support |

| Objective 2. Leverage a multi-state incentive program solution for incentive program administration in Connecticut and use/modify/expand existing DSS tools and methods to support audit, oversight, outcome-based analytics and reporting requirements. |
|---|---|---|---|---|
| 2011 | 2012 | 2013 | 2014 | 2015 |
| Continue to be an active member of the steering committee for the MAPIR multi-state initiative. | Continue to be an active member of the steering committee for the MAPIR multi-state initiative. | Continue to be an active member of the steering committee for the MAPIR multi-state initiative. | Continue to be an active member of the steering committee for the MAPIR multi-state initiative. | Continue to be an active member of the steering committee for the MAPIR multi-state initiative. |

| Objective 3. Develop robust communication and coordination with the HITE-CT (State designated entity for HIT), the Department of Public Health and eHealthCT (the Regional Extension Center). |
|---|---|---|---|---|
| 2011 | 2012 | 2013 | 2014 | 2015 |
| DSS to be an active participant in the 3C3 Statewide activities. | DSS to be an active participant in the 3C3 Statewide activities. | DSS to be an active participant in the 3C3 Statewide activities. | DSS to be an active participant in the 3C3 Statewide activities. | DSS to be an active participant in the 3C3 Statewide activities. |
| Hire the required | | | | |

Table 18. Annual Benchmarks for Strategic Objectives
<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td><strong>Objective 4.</strong> Strengthen DSS’ anticipatory management capabilities and mechanisms by enhancing and expanding the State’s clinical decision support capabilities to analyze Medicaid health care administrative and clinical data from across the state and enterprise and to meaningfully use the patient summary information to improve health, care delivery and cost effectiveness.</td>
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</tr>
<tr>
<td>Develop functional and technical requirements for the extension of the data warehouse to collect data from different sources including providers' EHRs, and external systems, e.g., DPH's systems.</td>
<td>Implement data warehouse changes</td>
<td>Make additional changes to data warehouse as needed.</td>
<td>Make additional changes to data warehouse as needed.</td>
<td>Make additional changes to data warehouse as needed.</td>
<td></td>
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<tr>
<td>Hire the required resources to strengthen internal capabilities.</td>
<td>Hire the required resources to strengthen internal capabilities.</td>
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<tr>
<td><strong>Objective 5.</strong> Conduct a MITA State Self-Assessment (SS-A), develop transition plan and initiate projects identified in the plan to develop the required services and infrastructure needed by DSS for Medicaid expansion.</td>
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<tr>
<td>Plan to hire a third-party to conduct MITA Self-Assessment, Gap Analysis and Roadmap.</td>
<td>Conduct MITA Self-Assessment, Gap Analysis and Roadmap to align business and technology efforts.</td>
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</tr>
<tr>
<td><strong>Objective 6.</strong> Support the Statewide HIE.</td>
<td>DSS to be an active</td>
<td>DSS to be an</td>
<td>DSS to be an</td>
<td>DSS to be an</td>
<td>DSS to be an</td>
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<td>2011</td>
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<tr>
<td>member on the</td>
<td>active member on the HITE-CT board of</td>
<td>active member on the HITE-CT board of</td>
<td>active member on the HITE-CT board of</td>
<td>active member on the HITE-CT board of</td>
<td>active member on the HITE-CT board of</td>
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<td>HITE-CT board</td>
<td>directors.</td>
<td>directors.</td>
<td>directors.</td>
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<td>Hire the required</td>
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<td>resources to</td>
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<td>strengthen</td>
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<td>internal</td>
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<tr>
<td>capabilities.</td>
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</tr>
<tr>
<td></td>
<td>Leverage the HIE for reporting and data</td>
<td>Leverage the HIE for reporting and data</td>
<td>Leverage the HIE for reporting and data</td>
<td>Leverage the HIE for reporting and data</td>
<td>Leverage the HIE for reporting and data</td>
</tr>
</tbody>
</table>

**F.5.2 Annual Benchmarks for Audit and Oversight**

Table 19 provides a description of the annual audit and oversight benchmarks that DSS aims to achieve in the next five years.

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td>Use existing</td>
<td>Use existing processes and methods to</td>
<td>Use existing processes and methods to</td>
<td>Use existing processes and methods to</td>
<td>Use existing processes and methods to</td>
<td>Use existing processes and methods to</td>
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<tr>
<td>processes</td>
<td>support the audit requirements.</td>
<td>support the audit requirements.</td>
<td>support the audit requirements.</td>
<td>support the audit requirements.</td>
<td>support the audit requirements.</td>
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<tr>
<td></td>
<td>Incorporate lessons learned from first</td>
<td>Incorporate lessons learned from first</td>
<td>Incorporate lessons learned from first</td>
<td>Incorporate lessons learned from first</td>
<td>Incorporate lessons learned from first</td>
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<td></td>
<td>year and adjust accordingly.</td>
<td>year and adjust accordingly.</td>
<td>year and adjust accordingly.</td>
<td>year and adjust accordingly.</td>
<td>year and adjust accordingly.</td>
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<tr>
<td></td>
<td>Conduct audit on a pre-payment basis</td>
<td>Conduct audit on a pre-payment basis</td>
<td>Conduct audit on a pre-payment basis</td>
<td>Conduct audit on a pre-payment basis</td>
<td>Conduct audit on a pre-payment basis</td>
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<td></td>
<td>during the provider and hospital attestation process</td>
<td>during the provider and hospital attestation process</td>
<td>during the provider and hospital attestation process</td>
<td>during the provider and hospital attestation process</td>
<td>during the provider and hospital attestation process</td>
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<tr>
<td></td>
<td>Perform routine post-payment audits based</td>
<td>Perform routine post-payment audits based</td>
<td>Perform routine post-payment audits based</td>
<td>Perform routine post-payment audits based</td>
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<td>2011</td>
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<tr>
<td>significant percentage of the number of attesting providers.</td>
<td>significant percentage of the number of attesting providers.</td>
<td>significant percentage of the number of attesting providers.</td>
<td>significant percentage of the number of attesting providers.</td>
<td>significant percentage of the number of attesting providers.</td>
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</tr>
</tbody>
</table>
G. Appendices

G.1 Acronyms and Definition of Terms

ACD: Automated Call Distribution.

AIDS: Acquired Immune Deficiency Syndrome.

A/I/U: Adopt/Implement/Upgrade.

American Recovery and Reinvestment Act of 2009 (ARRA): This Act is a $787.2 billion stimulus measure, signed by President Barack Obama on February 17, 2009 that provides aid to states and cities, funding for transportation and infrastructure projects, expansion of the Medicaid program to cover more unemployed workers, health IT funding, and personal and business tax breaks, among other provisions designed to “stimulate” the economy.


BAA: Business Associate Agreement.

CADAP: Connecticut AIDS Drug Assistance Program

CAH: Critical Access Hospital.

CCD: HL7 Continuity of Care Document.

CCHI: Connecticut Community Healthcare Initiative.

CDA: Connecticut Dental Association.

CDC: Centers for Disease Control and Prevention.

CEDSS: Connecticut Electronic Disease Surveillance System.

CEN: Connecticut Education Network.

Centers for Medicare and Medicaid Services (CMS): A federal agency within the United States Department of Health and Human Services that administers the Medicare program and works in partnership with state governments to administer Medicaid, the State Children’s Health Insurance Program (SHIP), and health insurance portability standards.

CMSO: Center for Medicaid and State Operations.

CHC: Community Health Centers, Inc.

CHA: Connecticut Hospital Association.

CHIP: Children’s Health Insurance Program.
CHPL: Certified HIT Product List.

CIRTS: Connecticut Immunization Registry and Tracking System.

CMS: Center for Medicare and Medicaid Services.

COLD: Computer output to laser disk.

Connecticut State Health Information Exchange Cooperative Agreement Program: A program established as part of the ARRA through the ONC. The purpose of this program is to continuously improve and expand HIE services over time to reach all health care providers in an effort to improve the quality and efficiency of health care. Cooperative agreement recipients evolve and advance the necessary governance, policies, technical services, business operations and financing mechanisms for HIE over a four year performance period. This program is intended to build off of existing efforts to advance regional and state level HIE while moving toward nationwide interoperability.

ConnPACE: Connecticut Pharmaceutical Assistance Contract to the Elderly and Disabled.

COTS: Commercial Off-the-Shelf.


CPMRS: Connecticut Prescription Monitoring and Reporting System.

CPOE: Computerized Physician Order Entry.

CRM: Customer Relationship Management.

CRV: Common Requirements Vision.

CSSD: Court Support Services Division

CT: Connecticut

CT-HITE: Connecticut Health Information Technology and Exchange.

CTMS: Contact Tracking Management System.

CT-SITE: Maven instance with childhood and adult blood lead, and newborn screening data.

DDS: Department of Developmental Services.

Distributed ‘net-centric’: A distributed net-centric system consists of multiple autonomous computers that communicate through the Internet.

DMHAS: Department of Mental Health & Addiction Services.

DOIT: Department of Information Technology.

DPH: Department of Public Health.
DPS: Department of Public Safety.

DPUC: Department of Public Utility Control.

DPW: Department of Public Welfare – Pennsylvania

DSS: Department of Social Services.

DURSA: Data Use and Reciprocal Support Agreement.

EDRS: Electronic Death Registry System.

EDSS: Electronic Disease Surveillance System


EHR: Electronic Health Record is an electronic record of health-related information regarding an individual that conforms to nationally recognized interoperability standards and that can be created, managed, and consulted by authorized clinicians and staff across more than one health care organization.

Electronic Prescribing (ePrescribing): A type of computer technology whereby physicians use handheld or personal computer devices to review drug and formulary coverage and to transmit prescriptions to a printer or to a local pharmacy. E-prescribing software can be integrated into existing clinical information systems to allow physician access to patient-specific information to screen for drug interactions and allergies.

ELR: Electronic Laboratory Reporting.

EP: Eligible Provider. An EP can be defined as one of the following: A physician, a dentist, a certified nurse-midwife, a nurse practitioner, a physician assistant practicing in a Federally Qualified Health Center (FQHC) led by a physician assistant or a Rural Health Clinic (RHC), that is so led by a physician assistant.

EPHT: Environmental Public Health Tracking.

FAQs: Frequently Asked Questions.

FFP: Federal Financial Participation

FFS: Fee-For-Service.

FTE: Full Time Equivalents.

FQHC: Federally Qualified Health Center.

GAAP: Generally Accepted Accounting Principles.

GBPCAG: Bridgeport Primary Care Action Group.

GUID: Global Unique Identifiers.
**HEDSS**: Hospital Emergency Department Syndromic Surveillance

**Health Information Exchange (HIE)**: As defined by the Office of the National Coordinator and the National Alliance for Health Information Technology (NAHIT), Health Information Exchange means the electronic movement of health-related information among organizations according to nationally recognized standards.

**HIEN**: Health Information Exchange Network.

**HII**: Health Information Infrastructure.

**Health Insurance Portability and Accountability Act (HIPAA)**: An Act enacted by Congress in 1996. Title I of HIPAA protects health insurance coverage for workers and their families when they change or lose their jobs. Title II of HIPAA, known as the Administrative Simplification (AS) provisions, requires the establishment of national standards for electronic health care transactions and national identifiers for providers, health insurance plans, and employers. The Administration Simplification provisions also address the security and privacy of health data. The standards are meant to improve the efficiency and effectiveness of the nation’s health care system by encouraging the widespread use of electronic data interchange in the U.S. health care system.

**HIS**: Hospital Information Systems.

**Health Information Technology (HIT)**: As defined in the ARRA, Health Information Technology means hardware, software, integrated technologies or related licenses, intellectual property, upgrades, or packaged solutions sold as services that are designed for or support the use by health care entities or patients for the electronic creation, maintenance, access, or exchange of health information.

**HITEAC**: Health Information Technology and Exchange Advisory Committee.

**Health Information for Economic and Clinical Health (HITECH) Act**: Collectively, health information technology provisions included at Title XIII of Division A and Title IV of Division B of the ARRA.

**HITE-CT**: Health Information Technology Exchange of Connecticut.

**HIV**: Human Immunodeficiency Virus

**HL7**: Health Level 7.

**HP**: Hewlett-Packard.

**HTTP**: Hypertext transfer protocol.

**HUSKY**: Healthcare for Uninsured Kids and Youth.

**I-APD**: Implementation – Advanced Planning Document.

**IHS**: Indian Health Service

**Interface**: A means of interaction between two devices or systems that handle data.
Interoperability: Interoperability means the ability of health information systems to work together within and across organizational boundaries in order to advance the effective delivery of health care for individuals and communities.

IRTPA: Intelligence Reform and Terrorism Prevention Act.

Last-Mile: It is the final leg of delivering connectivity from a communications provider to a customer. The actual distance of this leg may be considerably more than a mile, especially in rural areas.

LIMS: Lab Information Management Systems.

LIS: Laboratory Information System.

LOINC: Logical Observation Identifiers Names and Codes

LRS: Longitudinal Record Service.

MAPIR: Medical Assistance Provider Incentive Repository.

MARS: Management and Administrative Reporting Subsystem

MCO: Managed Care Organization.

Middle-Mile: It is the segment of a telecommunications network linking a network operator's core network to the local network plant, typically situated in the incumbent telco's central office, that provides access to the local loop, or in the case of cable television operators, the local cable modem termination system. This includes both the backhaul network to the nearest aggregation point, and any other parts of the network needed to connect the aggregation point to the nearest point of presence on the operator's core network.

MITA: Medicaid Information Technology Architecture.

MITA S-SA: MITA State Self-Assessment.

MMIS: Medicaid Management Information System.

MOA: Memorandum Of Agreement.

MOU: Memorandum of Understanding.

MPI: Master Patient Index; or Master Provider Index.

MS: Messaging System.

MSS: Messaging Subscription Service.

Meaningful Use (MU): The American Recovery and Reinvestment Act of 2009 (Recovery Act) authorizes the Centers for Medicare & Medicaid Services (CMS) to provide reimbursement incentives for eligible professionals and hospitals who are successful in becoming “meaningful users” of certified electronic health record (EHR) technology. The Medicare EHR incentive program will provide incentive payments to eligible professionals (EPs), eligible hospitals, and
critical access hospitals (CAHs) that are meaningful users of certified EHR technology. The Medicaid EHR incentive program will provide incentive payments to eligible professionals and hospitals for efforts to adopt, implement, or upgrade certified EHR technology or for meaningful use in the first year of their participation in the program and for demonstrating meaningful use during each of five subsequent years. The CMS regulations announced on 07-13-2010 specify the objectives that providers must achieve in payment years 2011 and 2012 to qualify for incentive payments; the ONC regulations specify the technical capabilities that EHR technology must have to be certified and to support providers in achieving the “meaningful use” objectives.

**MOSS:** Misys Open Source Solutions.

**Nationwide Health Information Network (NHIN):** A national effort to establish a network to improve the quality and safety of care, reduce errors, increase the speed and accuracy of treatment, improve efficiency, and reduce health care costs.

**NCPDP:** National Council on Prescription Drug Plans.

**NEDSS:** National Electronic Disease Surveillance System.

**NEJM:** New England Journal of Medicine.

**NHIN:** The Nationwide Health Information Network (NHIN) is a set of standards, services and policies that enable secure health information exchange over the Internet. The project itself will not run health information exchange services.

**NHIN Direct:** The NHIN Direct project develops specifications for a secure, scalable, standards-based way to establish universal health addressing and transport for participants (including providers, laboratories, hospitals, pharmacies and patients) to send encrypted health information directly to known, trusted recipients over the Internet. The NHIN Direct project will expand the standards and service descriptions available to address the key Stage 1 requirements for Meaningful Use, and is intended to provide an easy "on-ramp" for a wide set of providers and organizations looking to adopt.

**NLR:** National Electronic Disease Surveillance System.

**NPI:** National Provider Identifier.

**N-Tier:** A system in which the presentation, the application processing, and the data management are logically separated processes.

**OHCA:** Office of Health Care Administration, part of the Department of Public Health

**OPM:** Connecticut Office of Policy and Management.

**OTC:** Over-the-counter

**P-APD:** Planning-Advance Planning Document.

**PAC:** Picture Archiving and Communications systems for storing and managing clinical images

**PHIN:** Public Health Information Network
**PHL:** Public Health Laboratory.

**Personal Health Record (PHR)** – An electronic record of health-related information regarding an individual that conforms to nationally recognized interoperability standards and that can be drawn from multiple sources while being managed, shared, and controlled by the individual. **PHR:** Personal Health Record.

**PH:** Public Health.

**PHS:** Public Health Systems.

**PIX:** Patient Identifier Cross Referencing.

**Privacy:** In December 2008, the Office of the National Coordinator for Health IT released its “Nationwide Privacy and Security Framework For Electronic Exchange of Individually Identifiable Health Information,” (“Framework”) in which it defined privacy as, “An individual’s interest in protecting his or her individually identifiable health information and the corresponding obligation of those persons and entities that participate in a network for the purposes of electronic exchange of such information, to respect those interests through fair information practices.” This language contrasts with the definition of privacy included in the National Committee on Vital and Health Statistics’ (“NCVHS”) June 2006 report, entitled, “Privacy and Confidentiality in the Nationwide Health Information Network.” In its report, NCVHS recommended the following definition for “privacy”: “Health information ‘privacy’ is an individual’s right to control the acquisition, uses, or disclosures of his or her identifiable health data.”

**Provider:** A person who performs services upon other persons for the purpose of bettering their physical or mental state. Professions encompassed in this include physicians, physician assistants, dentists, nurses, nurse practitioners, pharmacists, dietitians, therapists, psychologists, chiropractors, optometrists, paramedics, and a wide variety of others.

**Regional Extension Center (REC):** As set out in the ARRA, Regional Health Information Technology Extension Centers will be established and may qualify for funding under ARRA to provide technical assistance and disseminate best practices and other information learned from the Health Information Technology Research Center to aid health care providers with the adoption of health information technology.

**RDBMS:** Relational database management system.

**RFP:** Request for Proposal.

**RHC:** Rural Health Clinic.

**RLS:** Record Locator Services.

**SAGA:** State Administered General Assistance.

**SCHIP:** State Children’s Health Insurance Program

**SDE:** State Designated Entity.

**SDE:** State Department of Education.
SDM: Systems Development Methodology.


SMHP: State Medicaid Health Information Technology Plan.

SNOMED: Systematized Nomenclature of Medicine-Clinical Terms.

sFTP: secure File Transfer Protocol.

SOA: Service Oriented Architecture. SOA is an architectural style that results in systems that are easier to change and have higher levels of leveraged assets. SOA for applications exhibits five definitional characteristics:

- It’s modular.
- Its modules can be distributed across multiple computers.
- Software developers have written or generated interface metadata that specifies explicit contracts, so other developers can find and use the services.
- Service interfaces are separate from the implementations (code and data) of the service provider’s components.
- Services can be shared — that is, they can be invoked successively in disparate consumer applications serving different business purposes.

These characteristics collectively make the application loosely coupled, which is an essential characteristic for distributed applications that may have some components that are developed, owned and managed by different organizations.


SURS: Surveillance and Utilization Review Subsystem.

UCONN: University of Connecticut.


U.S. Department of Health and Human Services (HHS): The federal government department responsible for protecting the health of all Americans and providing essential human services. HHS, through CMS, administers the Medicare (health insurance for elderly and disabled Americans) and Medicaid (health insurance for low-income people) programs, among others. The Office of the National Coordinator for Health Information Technology is also organizationally located within the Office of the Secretary of HHS.

U.S. Department of Health and Human Services – Office of the National Coordinator for Health Information Technology (ONC): This office serves as principal advisor to the Secretary of HHS on the development, application, and use of health information technology; coordinates HHS’s health information technology policies and programs internally and with other relevant executive branch agencies; develops, maintains, and directs the implementation of HHS’ Strategic Plan to guide the nationwide implementation of interoperable health information
technology in both the public and private health care sectors, to the extent permitted by law; and provides comments and advice at the request of OMB regarding specific Federal health information technology programs. ONC was established within the Office of the Secretary of HHS in 2004 by Executive Order 13335.

**VA**: U.S. Department of Veterans Affairs

**XDS**: Cross-Enterprise Document Sharing.

**XML**: Extensible Markup Language.

**3C3**: Collaboration, Coordination and Cooperation between DPH, DSS and the State REC (eHealthCT).
G.2 Health Care Services Provided by the State

Department of Social Services

The Connecticut Department of Social Services (DSS) is dedicated to providing a broad range of services to the elderly, people with disabilities, families and individuals who need assistance in maintaining or achieving their full potential for self-direction, self-reliance and independent living.

The Department administers over 90 legislatively authorized programs and one-third of the state budget. By statute it is the state agency responsible for administering a number of programs under federal legislation, including the Rehabilitation Act, the Food Stamp Act, the Older Americans Act, and the Social Security Act. The Department is also designated as a public housing agency for the purpose of administering the Section 8 program under the federal Housing Act.

The Department is headed by the Commissioner of Social Services, and there is a deputy commissioner for programs. There is a regional administrator responsible for each of the three service regions. By statute, there is a statewide advisory council to the Commissioner, and each region must have a regional advisory council.

The agency administers most of its programs through offices located throughout the state. Within the Department, the Bureau of Rehabilitation Services provides vocational rehabilitation services for eligible individuals with physical and mental disabilities at 23 offices throughout the state. For the other programs, services are available through 12 offices located in the three regions, with central office support located in Hartford. In addition, many services funded by the agency are available through community based agencies, including the 156 senior centers throughout Connecticut. The agency has outstationed employees at hospitals to expedite Medicaid applications, and funds healthy start sites which can accept applications for Medicaid for pregnant women and young children. Many of the services provided by the Department are available via mail or phone call.

Department of Public Health

The Connecticut Department of Public Health’s (DPH) mission is to protect and improve the health and safety of the people of Connecticut by:

- Assuring the conditions in which people can be healthy;
- Promoting physical and mental health, and
- Preventing disease, injury, and disability.

The organizational structure of the Department includes the following entities:

- Administrative Branch
- Public Health Initiatives Branch
- Planning Branch
- Healthcare Systems Branch
- Regulatory Services Branch
- Local Health Administration Branch
- Operations Branch
- Public Health Laboratory Branch
- Office of Oral Public Health
- Laboratory/Mobile and Surge Hospital Liaison
State Medicaid Health Information Technology Plan

- Affirmative Action also known interchangeably as Equal Employment Opportunity
- Office of Government Relations
- Office of Health Care Administration
- Office of Research and Development
- Office of Multicultural Health
- Office of Communications
- Office of Health Care Access

Department of Mental Health and Addiction Services

The Department of Mental Health and Addiction Services (DMHAS) promotes and administers comprehensive, recovery-oriented services in the areas of mental health treatment and substance abuse prevention and treatment throughout Connecticut.

While the Department's prevention services serve all Connecticut citizens, its mandate is to serve adults (over 18 years of age) with psychiatric or substance use disorders, or both, who lack the financial means to obtain such services on their own. DMHAS also provides collaborative programs for individuals with special needs, such as persons with HIV/AIDS infection, people in the criminal justice system, those with problem gambling disorders, substance abusing pregnant women, persons with traumatic brain injury or hearing impairment, those with co-occurring substance abuse and mental illness, and special populations transitioning out of the Department of Children and Families.

DMHAS is responsible for providing a wide range of services to adults in each of the five human service regions in Connecticut.
G.3 Connecticut interChange MMIS Description

The interChange MMIS provides the following technical and functional capabilities:

- **Interactive claim processing**—The interChange system fully adjudicates every claim type. The interChange system is designed to process high volumes of claims in a true interactive environment.

- **Configurable, table-driven design**—The interChange system provides the ability for non-staff to establish benefit plans or new programs by defining what procedure codes will be covered, what edits and audits will be applied, and what price will be in effect for a specific plan, all without programming changes.

- **Multiple program processing**—The interChange system supports multiple program groups and service delivery models. Each program can have its own eligibility criteria, reimbursement methodology and rules, medical policy and benefit structure, yet receive the same benefits of a shared system and operational environment.

- **Computer output to laser disk (COLD) capability**—Hyland’s OnBase product will provide an integrated solution supporting COLD, document management (document imaging, storage and retrieval), and workflow management. OnBase is fully integrated with the Data Capture system to provide intelligent character recognition of paper claims. Using COLD, the reports generated by the interChange MMIS will be available to the MMIS users based on user security configurations.

The interChange MMIS uses industry interoperability technology standards such as HTTP, XML, and Simple Object Access Protocol (SOAP) to support integration with internal and external systems. The n-tier, transaction-based architecture allows for interfacing with existing heterogeneous systems and MMIS modules. The interChange architecture is capable of queuing, exchanging information, error-handling, and file recovery.

The Connecticut interChange MMIS uses a secure, thin-client browser-based interface with technologies and interface capabilities to provide a single point of entry. The key to this interface is a standardized behavior model and presentation format across the functional areas. This interface includes navigation features, access to audit trail information, multiple levels of help, and user preference capabilities.

The interChange MMIS’ modular design provides consistent functionality throughout the system. For example, standard date editing routines are called by online Web pages to validate the format of dates used in the online user presentation. This means the dates will meet consistent date criteria when entered on any Web page throughout the system.

The interChange application was built using custom software, and third party software. The following are the custom software items:

- Unix source code, job scripts, and configuration files written in C programming language, Unix scripting language, and Structured Query Language (SQL)
- Windows source code, scripts, and configuration files written in.Net, windows scripting tools, SQL and HTML

Third-party software listing includes:

- Oracle 10g Enterprise Edition with partitioning
- Microsoft SQL Server
- Sybase EDI
• Sun Solaris
• Sun Workshop
• Hyland OnBase
• Imaging Automation Data Capture

The interChange MMIS is logically divided as follows:

• Online and batch—Maintains and reports data contained within the online database. A major subcomponent is the claims engine that receives claims from external sources, adjudicates them, and returns the appropriate response. Another subcomponent is the Contact Tracking and Management System for tracking provider and client calls and inquiries.

• History—Analyzes, reports, and supports the management of the activities that have occurred in online and batch

Integrated components of interChange include the following:

• InterVoice for the automated voice response system (AVRS)

• Hyland’s OnBase product to provide an integrated solution supporting COLD, document management (document imaging, storage and retrieval), and workflow management. OnBase is fully integrated with the Impression Technology’s Imaging Automation software to provide intelligent character recognition (ICR) of paper claims. Using COLD, the reports generated by the interChange MMIS are available to users based on user security configurations.

• Avaya’s Communication Manager automated call distribution (ACD) for the telephone system throughout the account. The Avaya Communication Manager ACD system provides proven advanced technology to support call routing, not just to other areas of the account but also to designated Department telephone numbers.

• Impression Technology Imaging Automation Data Capture for collecting images of scanned documents and forwarding the images to OnBase for long-term storage

Inputs and outputs are exchanged with a variety of external interfaces. The transaction-based design gives the system the flexibility to interface with a variety of input sources, such as value-added networks (VANs), the Internet (like interactive adjudication or batch claims submission), and AVRS. Once the system receives the transactions, it converts them from the external format to an internal format. Everything processes through a transaction service framework that is part of the Connecticut interChange. This service takes the appropriate action (or inquiry) on the transaction, applies it to the database, and then sends the response back. World Wide Web Consortium (W3C) standards for Extensible Markup Language (XML) are supported. W3C standards provide common functionality throughout the application. The user interface processing and communication is handled by software executing on the IIS servers. These servers pass transactions to the Sun servers, which execute the Connecticut interChange components, such as the claims and provider functional areas, and perform reads and writes to the integrated database.

**MMIS Portal**

The Connecticut interChange MMIS Portal facilitates information access and exchange between the Department of Social Services (DSS) and MMIS stakeholders. The Web portal is comprised of two separate applications that are referred to as the Public Web Site and the Secure Web
Collectively, these two sites support public and secure access that will provide an important and effective communication tool between DSS and stakeholders.

**Public Web Site**

The Public Web Site is the gateway for all Web site users. This site provides easy access to information that does *not* require user authentication using a personal identifier and password. Examples of information provided through this site include provider publications, provider search, hot topics, and HIPAA frequently asked questions.

For new providers, this site is accessed to complete the initial enrollment application and submission. After the application is approved, the provider receives a personal identification number (PIN) and password granting access to the Secure Web Site. For provider applications, the site is secured through the use of Hypertext Transfer Protocol/Secure (HTTPS). This protocol provides a secured site that allows clients and providers to request information and submit information. However, there is no authentication using a personal identifier and password as this site does *not* provide access to private health information.

The Public Web Site allows the following:

- Access the on-line provider handbook
- Receive bulletins and other information about the Medicaid program
- Initial enrollment in the Medicaid program (most of the application process is on-line).

**Secure Provider Portal**

The Secure Web Site provides a secure means of information access and exchange between authorized users and the MMIS, providing the benefits of the Internet while ensuring information remains confidential. This secure, web-based portal offers access for Medicaid providers to do the following:

- Provider re-enrollment in the Medicaid program (most of the application process is on-line).
- Submit claims
- Receive remittance advices
- Submit claims status inquiry/response
- Submit eligibility inquiry/response
- Prior Authorization Inquiry

This Secure Provider Portal can be leveraged for use in the Incentive Payment Program allowing providers secure electronic access for attestation purposes.
G.4 Program Activities and Schedule

The table below provides a summary of the high level program activities and a corresponding timeline. The schedule anticipates approval of the IAPD and the project start date to be January 2011.

Table 20. Program Activities and Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
<th>Projected Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Start-up and Planning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMHP planning activities</td>
<td>Planning activities as approved under the P-APD</td>
<td>June 2010 through Approval of IAPD (expected January 2011)</td>
</tr>
<tr>
<td><strong>Provider Communication</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMHP provider communication planning activities</td>
<td>Provider communication planning activities as approved under the P-APD</td>
<td>June 2010 through Approval of IAPD (expected January 2011)</td>
</tr>
<tr>
<td>Implementation communication activities</td>
<td>Provider communication, education, and outreach activities</td>
<td>Ongoing</td>
</tr>
<tr>
<td><strong>Staffing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff hiring</td>
<td>Hiring of the staff positions described in the Personnel Resource section of this IAPD.</td>
<td>January 2011 through June 2011</td>
</tr>
<tr>
<td>Staff training</td>
<td>Training of staff in broadening HIT experience through conferences and education. This activity includes training for existing staff as well as new staff.</td>
<td>January 2011 forward, ongoing</td>
</tr>
<tr>
<td>Establish governance</td>
<td>Establish SMHP Executive Committee and SMHP Advisory Committee. The composition of these committees is described in detail in Section C.2 of the SMHP.</td>
<td>January - March 2011</td>
</tr>
<tr>
<td>Implement governance</td>
<td>The SMHP Executive Committee and SMHP Advisory Committee will meet regularly to provide Incentive Program oversight, and decision making as applicable.</td>
<td>April 2011 forward, ongoing</td>
</tr>
<tr>
<td>Activity</td>
<td>Description</td>
<td>Projected Dates</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Implementation of Incentive Payment Program - MAPIR Design, Development and Implementation (DDI)</td>
<td>DSS receives core MAPIR Release 1 application from HP</td>
<td>February 2011</td>
</tr>
<tr>
<td></td>
<td>HP will deliver the core MAPIR application to states for integration with MMIS.</td>
<td></td>
</tr>
<tr>
<td>NLR connectivity testing</td>
<td>CT HP will begin connectivity testing with the National Level Repository (NLR).</td>
<td>February 2011</td>
</tr>
<tr>
<td>CT HP MMIS MAPIR customization of Release 1</td>
<td>CT HP will begin development of the customization necessary to integrate MAPIR with the CT MMIS.</td>
<td>April 2011</td>
</tr>
<tr>
<td>NLR data viewable by providers</td>
<td>Providers will be able to view their NLR data using the MAPIR application.</td>
<td>April 2011</td>
</tr>
<tr>
<td>CT receives core MAPIR Release 2 application from HP</td>
<td>HP will deliver the core MAPIR application to states for integration with MMIS.</td>
<td>May 2011</td>
</tr>
<tr>
<td>CT HP MMIS MAPIR customization of Release 2</td>
<td>CT HP will continue development of the customization necessary to integrate MAPIR Release 2 with the CT MMIS.</td>
<td>End of May 2011</td>
</tr>
<tr>
<td>Provider application date</td>
<td>CT can receive provider applications through MAPIR.</td>
<td>June 2011</td>
</tr>
<tr>
<td>Payments to providers</td>
<td>CT can make payments to providers</td>
<td>July 2011</td>
</tr>
<tr>
<td>Activity</td>
<td>Description</td>
<td>Projected Dates</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Implement Incentive Payment Program Key Processes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appeals implementation planning</td>
<td>Develop desk level procedures and appeal tracking functionality (MAPIR)</td>
<td>May 2011 – June 2011</td>
</tr>
<tr>
<td>Appeals process implemented</td>
<td>Implement appeals process in preparation for provider attestations.</td>
<td>July 2011</td>
</tr>
<tr>
<td>Develop pre-payment audit functionality</td>
<td>The audit of pre-payment data elements will be part of the customization of MAPIR with the MMIS.</td>
<td>May 2011 – June 2011</td>
</tr>
<tr>
<td>Implement post-payment audit</td>
<td>The post-payment audit plan will continue to be refined and updated. The first post-payment audit would take place 14-16 months after the first attestations.</td>
<td>2012</td>
</tr>
<tr>
<td>Program performance management and reporting</td>
<td>Monitor program performance and metrics as outlined in Section F.4 and F.5 of the SMHP</td>
<td>July 2011 forward, ongoing</td>
</tr>
<tr>
<td>Report on IAPD activities</td>
<td>Prepare regular status reports and IAPD as-needed updates</td>
<td>February 2011 ongoing</td>
</tr>
<tr>
<td>Report on provider Incentive Program participation metrics</td>
<td>Develop plan and implement Reporting on provider attestation and payment metrics</td>
<td>July 2011 forward, ongoing</td>
</tr>
<tr>
<td>Report on provider Incentive Program Meaningful Use metrics</td>
<td>Develop plan and implement Reporting on provider Meaningful Use metrics</td>
<td>January 2012 forward, ongoing</td>
</tr>
<tr>
<td><strong>Implementation of Data Warehouse Modifications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning and analysis</td>
<td>Develop functional and technical requirements for the extension of the MMIS data warehouse to collect data from different sources including providers’ EHRs, and external systems, e.g., DPH’s systems.</td>
<td>September 2011 through, December 2011</td>
</tr>
<tr>
<td>Implementation</td>
<td>Develop, test, implement requirements</td>
<td>January 2012 through December 2012</td>
</tr>
<tr>
<td><strong>Data Analytics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Description</td>
<td>Projected Dates</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Procure data analytics consulting services</td>
<td>Develop and award consulting contract for targeted health outcome research</td>
<td>January 2011 through June 2011</td>
</tr>
<tr>
<td>Execute consulting contract</td>
<td>Includes planning for the implementation of initiatives such as: decreasing</td>
<td>June 2011 through December 2011</td>
</tr>
<tr>
<td></td>
<td>preventable hospitalizations by expanding access and coordination of outpatient services, decreasing the rate of delivery of pre-term infants through improved obstetric management, decreasing the cost and improving the quality of neonatal intensive care, etc.</td>
<td></td>
</tr>
<tr>
<td>MITA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MITA SS-A Procurement</td>
<td>Procure a third-party consultant to conduct MITA Self-Assessment, Gap Analysis and Roadmap.</td>
<td>October 2011 through December 2011</td>
</tr>
<tr>
<td>MITA SS-A</td>
<td>Conduct MITA Self-Assessment, Gap Analysis and Roadmap. Deliverables will provide a business, technology, and information architecture for the Connecticut Medicaid.</td>
<td>April 2012 through September 2012</td>
</tr>
</tbody>
</table>
### G.5 Connecticut HIT Initiatives Master Project Plan

<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HIT Initiatives</td>
<td>540 days</td>
<td>Mon 3/8/10</td>
<td>Fri 3/30/12</td>
</tr>
<tr>
<td>2</td>
<td>CT HIE Strategic and Operational Plan</td>
<td>132 days</td>
<td>Mon 3/8/10</td>
<td>Tue 5/7/10</td>
</tr>
<tr>
<td>3</td>
<td>Phase 1 - HIE Business and IT Priorities</td>
<td>34 days</td>
<td>Mon 3/8/10</td>
<td>Fri 4/23/10</td>
</tr>
<tr>
<td>20</td>
<td>Phase 2 - Current Capabilities, Gaps and Strategic Plan Requirements</td>
<td>44 days</td>
<td>Mon 3/22/10</td>
<td>Thu 5/20/10</td>
</tr>
<tr>
<td>108</td>
<td>Phase 3 - Strategic Plan</td>
<td>62 days</td>
<td>Fri 4/23/10</td>
<td>Mon 7/19/10</td>
</tr>
<tr>
<td>109</td>
<td>Phase 4 - Operational Plan</td>
<td>60 days</td>
<td>Wed 5/6/10</td>
<td>Tue 5/7/10</td>
</tr>
<tr>
<td>88</td>
<td>Project Completed</td>
<td>0 days</td>
<td>Tue 9/7/10</td>
<td>Tue 9/7/10</td>
</tr>
<tr>
<td>90</td>
<td>CT DSS State Medicaid HIT Plan (SMHP) Development (v0.5)</td>
<td>111 days</td>
<td>Mon 6/14/10</td>
<td>Mon 11/15/10</td>
</tr>
<tr>
<td>91</td>
<td>Phase 1 - Planning &amp; Data Collection</td>
<td>22 days</td>
<td>Mon 6/14/10</td>
<td>Tue 7/13/10</td>
</tr>
<tr>
<td>105</td>
<td>Phase 2 - Current State and Future Vision</td>
<td>35 days</td>
<td>Mon 7/12/10</td>
<td>Fri 8/27/10</td>
</tr>
<tr>
<td>120</td>
<td>Phase 3 - SMHP</td>
<td>38 days</td>
<td>Thu 9/1/10</td>
<td>Tue 11/2/10</td>
</tr>
<tr>
<td>141</td>
<td>Phase 4 - RPD</td>
<td>19 days</td>
<td>Wed 9/15/10</td>
<td>Mon 10/25/10</td>
</tr>
<tr>
<td>165</td>
<td>Project Completed</td>
<td>0 days</td>
<td>Mon 10/25/10</td>
<td>Mon 10/25/10</td>
</tr>
<tr>
<td>168</td>
<td>Provide SMHP support including periodic check points with CMS, and as required in response to CMS questions and recommendations to ensure CMS approval</td>
<td>1 day</td>
<td>Wed 9/29/10</td>
<td>Wed 9/29/10</td>
</tr>
<tr>
<td>167</td>
<td>Provide JPD support as necessary in response to CMS questions and recommendations to ensure CMS approval</td>
<td>15 days</td>
<td>Tue 10/26/10</td>
<td>Mon 11/15/10</td>
</tr>
<tr>
<td>188</td>
<td>Project Completed</td>
<td>0 days</td>
<td>Mon 11/15/10</td>
<td>Mon 11/15/10</td>
</tr>
<tr>
<td>169</td>
<td>eHCT Regional Extension Center</td>
<td>322 days</td>
<td>Thu 4/1/10</td>
<td>Fri 3/30/12</td>
</tr>
<tr>
<td>171</td>
<td>Outreach &amp; Education</td>
<td>322 days</td>
<td>Thu 4/1/10</td>
<td>Fri 3/30/12</td>
</tr>
<tr>
<td>182</td>
<td>Vendor Selection</td>
<td>322 days</td>
<td>Thu 4/1/10</td>
<td>Fri 3/30/12</td>
</tr>
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<td>198</td>
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G.6 MAPIR High-Level Scope for Connecticut Integration Activities

BACKGROUND

Centers for Medicare & Medicaid Services (CMS) released a final rule, CMS-0033-F to Medicare and Medicaid programs for the Electronic Health Records (EHR) Incentive Program. The rule dictates to implement the provisions of the American Recovery and Reinvestment Act (ARRA) of 2009 that provide incentive payments to eligible professionals (EPs) and eligible hospitals participating in the Medicare and Medicaid programs that adopt and meaningfully use certified EHR technology.

The rule specifies:
- Eligibility requirements for EPs and eligible hospitals to qualify for an incentive payments
- Calculations of the incentive payment amounts
- Patient Volume – Minimum participation threshold for each individual Medicaid provider
- Other participation requirements; i.e. submission requirements to CMS in the first payment year
- Activities required to receive a payment
- EHR reporting Period
- Meaningful EHR User Requirements
- Meaningful Use Reporting Requirements
- Meaningful Use Payment Year
- Incentive Payments

EPs and Hospitals will register for the program through an appointed CMS National Level Repository (NLR) starting in early 2011. The NLR will send a daily batch file of registered providers to the States. The States are responsible for verifying the EPs and hospitals meet the requirements for registration and return a response and error file back to the NLR. Providers must register for the program directly with the NLR.

After the EPs and hospitals register they will request the EHR incentive payment and attest to meeting eligibility and meaningful use requirements (patient volume, certified EHR technology, etc.) for the payment year in which they are requesting the payment. EPs can receive a total of six payments, one per payment year. Hospitals can receive payments over a minimum of 3 years to a maximum of 6 years as determined by the Department. Payments can be made on nonconsecutive annual basis. Providers may receive incentive payments until year 2021, but may not receive their first payment after 2016. States are responsible for processing the payment requests, verifying the EP or hospital meets the CMS requirements for payment before the payment is made, track and report data back to CMS.

States are responsible for creating a process that allows the EPS and hospitals to apply for eligibility, payment amounts and determination of meaningful use. In addition, States are responsible for monitoring, verifying and periodic auditing of the requirements to receive the payments.
SOLUTION

Connecticut will be part of the centralized, stand-alone, Medical Assistance Provider Incentive Repository (MAPIR) solution. MAPIR will perform the provider transactions required to register for meaningful use, self-attest that they are eligible and have met the requirements for Stage 1 payments, and appeal if they are not found to be eligible. This includes the integration with the NLR that is required to complete these transactions. The application will also determine the amount of the payments. MAPIR will be integrated with the CT MMIS, interChange. InterChange will leverage the existing security, provider portal, internet, claims, financial payment and reporting functionality and the data warehouse interface to fully implement provider incentive payments for Connecticut providers.

The following documents the CT interChange subsystems that have been identified as requiring modifications to integrate MAPIR and support provider EHR incentive payments.

Provider

Process NLR registration records received via MAPIR (CO xxxx)

Validate the NLR data against the CT interChange provider database confirming the following about the provider: (not an exhaustive list of edits – need to understand record layout that will be received.)

1. The provider is on our database
2. is an eligible provider type (See Attachment A)
3. is an active billing provider, a performer or a network only provider (in the case of performer or network only provider additional steps are necessary)
4. Validate the Tax ID of the assignee. If it is not the provider’s validate that it is associated to an active provider.  Note: Concern that if it is the provider’s and the provider is only a performer, we will not have the ID on file.  How will we distinguish that from a true problem with the tax ID provided?

Create a response file to MAPIR that includes provider extract data for the providers that were successfully processed and error records for providers that failed an edit. (a report of NPI mismatches is still be considered).

Create Web Account for performing providers (CO xxxx)

Upon successful processing of a NLR provider transaction for network only and performing providers, complete the steps necessary to set up a secure provider portal account. This includes generating a provider ID and provider PIN letter. These providers will have access to MAPIR when they log into their account.

Also, if these providers are assigning the payment to themselves, they will need to be notified to complete the additional data elements. This notification would be a letter or possibility some type of on-line submission upon starting the MAPIR application process.

All other providers should have access to MAPIR added to the existing features available via the secure portal.

Create Welcome letters to providers (CO xxxx)

Create 2 different welcome letters. Both letters should state that they are successfully registered in the CT MAPIR database and can begin the application process. Also, the performers and network only providers should be given a portal ID and a notification that we also need FEIN and EFT information.
State Medicaid Health Information Technology Plan

Modify CT MMIS interChange Provider Database (CO xxxx)

Make changes to the provider database to support the additional data elements needed for performing providers and MCO network only providers requesting incentive payments. To date these elements include FEIN and EFT data. Also, the providers will need some unique identifier that will tell other areas of the system that they are eligible for internet access to MAPIR and payment for EHR incentives via an RA but no other type of payments. (Consider whether this information needs to be addressed in downstream processes such as re-enrollment.)

Create Provider Portal Panel (CO xxxx)

Create a panel to be presented via the portal to a subset of MAPIR eligible providers (performer only and network only) to capture provider data elements not currently in interChange necessary for payment. Providers will be allowed to skip the panel but at some point it will have to be required.

Support NLR file interface (CO xxxx)

The HP local staff will establish the necessary transfer process of CMS’ National Level Repository (NLR) file to the Connecticut interChange platform. The transfer protocol is Gentran which is currently used for other CMS file transfers.

Internet

Provider MAPIR access to EPs and Hospitals

Support access to MAPIR for all providers who have successfully registered with the NLR and CT has validated their provider information in interChange. MAPIR should be a new ‘subsystem’ or feature that a provider will be granted access via a security function.

Also, research options related to simplifying the resetting of IDs that are not used within the required number of days. This is needed since there is a high possibility that many users will not use there ID regularly after year 1 and the manual intervention of resetting these ids would be significant.

Support the ability to upload PDF attachments in MAPIR (CO xxxx)

Support the ability to handle uploading of attachments via the portal or via a fax transmission by the provider. This should include virus scanning of these documents, storing of these documents and the ability to retrieve and view the documents.

Support the ability to send emails to providers (CO xxxx)

MAPIR will send emails to the provider at various points in the application process. InterChange will have to be able to manage the distribution of these emails.

Customize MAPIR (CO xxxx)

There will be specific customization of the MAPIR panels.

Claims

Support a claim interface for EP providers (CO xxxx)

Support a claim interface for EP providers. For a predefined set of providers, use claim detail data to create summary information for specified time periods.
Support a claim interface for Hospital providers (CO xxxx)
Support a claim interface for hospital providers. This interface will provide hospital discharges and emergency department (ED) visits. The targeted source of this data is the OCHA data.

Create a panel to capture Hospital summary data (CO xxxx)
The MAPIR application needs inpatient claim data that is not readily available in interChange. Create a panel to enter this data. Examples of this data include discharges and ER visits for a specified time period.

Financial

Support a financial interface to MAPIR (CO xxxx)
InterChange will need to be able to process MAPIR incentive payments by accepting a payment transaction from MAPIR and creating a financial payout transaction. These transactions will appear on the RA and should be uniquely identifiable (new txn and/or reason code) for reporting. Note some of these transactions will be for providers who are not active billers.

The Financial subsystem must provide the details of the payment to the provider to MAPIR. This information will be stored in the MAPIR database as well as sent back to the NLR.

Support the ability to pay non-active providers (CO xxxx)
Performing providers and network only providers will be eligible for incentive payments. Modify the financial subsystem to allow payments to these providers for incentive payments but no other type of payment. This will include all processes that currently check for active providers. In addition to potential modifications to panel editing and reporting, confirm the impact to all financial processes such as RAs (PDF and 835s), 1099s, and Bulk Tin.

Modify Financial Reports (CO xxxx)
Modify financial reports to uniquely identify incentive payments within the CMS 64 reports.

Support the recovery of incentive payments (CO xxxx)
DSS will need to have the ability to recoup incentive payments. These transactions will be entered into MMIS but will need to be sent to MAPIR for reporting back to NLR. A specific reason code and or txn code will be needed.

Modify the Pre-Note process (CO xxxx)
Since some providers receiving incentive payments do not currently receive payments via the MMIS the ‘two step pre-note process’ will need to be modified so the first incentive payment can be made electronically to the provider via the EFT information provided during MAPIR sign in.

Data Warehouse
The MMIS team will create an extract of specific MAPIR tables to to be loaded into the Data Warehouse. The work for the Data Warehouse team to load it into the warehouse is not part of this effort. (CO xxxx)

Infrastructure
The current interChange infrastructure will need to be enhanced to ensure that the MAPIR application can operate efficiently within the interChange infrastructure. This analysis must take into consideration the function and features of MAPIR. They include:

1. Web interface of MAPIR application
2. Uploading of attachment documents
3. Virus scanning of uploaded documents
4. Storing and retrieval of documents
5. Email services
6. Integrate the MAPIR user component into CT interChange

Table 21. Eligible Providers and Associated Entities

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<tr>
<th>Provider</th>
<th>Type</th>
<th>Allowable Associated Entities</th>
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<td>Clinic/FQHC (08)</td>
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<td>Dental Group (76)</td>
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<td>Clinic/FQHC (08)</td>
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<td>Clinic/FQHC (08)</td>
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G.7 References


vi 2008 Data from Department of Public Health.


xvii Aseltine, et al.

xviii DPH Immunizations EMR Survey, Spring 2010.


xx Hing, et al.

