State Innovation Model
Health Information Technology Council

Summary of HIT Council work: 12/18/2014 – 6/17/2016

Overview

The State Innovation Model (SIM) Health Information Technology (HIT) Council ("SIM HIT Council") was established on December 18, 2014 to serve as an advisory body focused on State HIT investments as part of the SIM grant. Due to the recent legislative change related to Public Act 16-77, the scope of the SIM HIT Council was folded into that of the State Health IT Advisory Council with the aim of enhancing overall coordination of HIT efforts in Connecticut.[1] The SIM HIT Council held their last meeting on June 17, 2016.

During the last meeting, members recommended the following themes and topics that should be shared with the State Health IT Advisory Council. This report is intended to summarize these topics, and to provide a high-level description of the work of the SIM HIT Council. All council agendas, minutes, and presentations will remain on the SIM HIT Council page.

The SIM HIT Council membership included health plans, healthcare provider representatives, state agencies, a health foundation, and consumer representatives. The Council charter charged the members with making HIT-related recommendations to the SIM Healthcare Innovation Steering Committee, including technology solutions to accelerate the secure sharing of health information as well as solutions to advance the HIT infrastructure in the state. HIT requirements and technology components align with the Center of Medicare & Medicaid Innovation's (CMMI) expectations for SIM states and Connecticut's SIM vision, including:

- Support for SIM goals of healthier people, improved care, reduced cost and elimination of health inequities;
- Solutions that reach the majority of the state's population;
- Technologies that are scalable and based on national standards; and,
- Solutions that promote multi-payer engagement.

The council examined the $10.7 million dollars in proposed technology investments cited in the SIM Model Test Grant proposal and Budget Narrative, and as described in the following table. The implementation period for SIM investments will begin on October 1, 2016 and extend through September 30, 2019.

[1] See P.A. 15-146 and P.A. 16-77.

Proposed Investments	Description
Alert Notifications Engine	Real-time notifications for care coordination and quality improvement purposes when patients are admitted, discharged, or transferred to, from or within a hospital.
Care Analyzer	Reporting tool that continuously measures, monitors and manages performance measures, evaluates physician care effectiveness, and identifies gaps in care through health risk stratification.
Consent Registry	Registry that allows patients to provide consent to share their medical information. This information is then used to control access to medical data and provides the ability to share medical information with non-medical providers not covered under HIPAA.
Direct Messaging	National encryption standard for securely exchanging health information between health care entities (e.g. primary care physicians, specialists, hospitals, laboratories, long term care facilities) in a trusted network. It is easy to use, inexpensive and functions like regular email with additional security measures. Direct messaging (DM) allows the secure exchange of clinical documents such as discharge summaries, orders, and continuity of care documents. DM can be used to generate health alerts and reminders to improve care, especially for patients with chronic conditions.
Disease Registries	Collections of data related to patients with a specific diagnosis, condition, or procedure. This is also known as patient registries.
Edge Servers/Indexing/ eCQM	Provides the ability to capture data from Electronic Health Records (EHRs) and other database applications, file systems or websites and creates normalized indexes of data that are maintained by the original data source. Authorized users can then query, retrieve, extract, navigate, analyze and report across application data silos. This technology provides data normalization and aggregation across systems, and is non-disruptive to existing production data systems. It leverages existing data collection and analysis systems to deliver global views across all application repositories. The platform enables reuse of existing application repositories, the ability to plug in new analysis tools for new views, and interoperability among the index nodes spanning multiple databases and other information system applications.
EHR-SaaS	Provides access to a web-based EHR for entities who do not have an installed EHR model.
Enterprise Master Patient Index (eMPI)	Database that is used across a healthcare organization to maintain consistent, accurate and current demographic and essential medical data on persons. Each person is assigned a unique identifier that is used to refer to him or her across enterprises. The main objective is to ensure that each patient is represented only once across all technology systems.
Mobile Medical Applications	Are to be determined smartphone and tablet applications to provide access for patients to be alerted through mobile applications for reminders such as medicine refills, glucose tests, etc. This technology offering would support patient care coordination and chronic illness self-management.
Provider Directory	Supports the management of healthcare provider information in a directory structure. It classifies Individual providers (e.g. physician, nurse, pharmacist, etc.) and organizational providers (e.g. organizations that provide healthcare services such as hospitals, HIEs, managed care, etc.) by provider type, specialties, credentials, demographics and service locations.
Other	Other line items for SIM funding included: HIT Plan Development, Crowd sourcing, BEST hosting services, and APCD edge server linkage and integration of Medicaid data.

Edge Server Technology

Much of the Council's work since it began in December 2014 focused on the production of electronic Clinical Quality Measures (eCQMs). This is a major priority of Connecticut's SIM Test Grant in light of the national consensus that the continued evolution, use, and expansion of electronic quality measurement in quality reporting and performance initiatives are important factors in the transition from volume-based reimbursement to value-based reimbursement. The Center for Medicare and Medicaid Services (CMS) notes that measures developed from electronic data sources draw from a rich set of clinical data contained within Electronic Health Records (EHR) systems and other clinical sources, such as clinical registries. These measures can then be more widely used in value-based contracts between payers and providers; for public scorecards of the performance of accountable provider organizations; for performance reports/dashboards to providers; and for public health analytics and interventions.

Extracting this information outside of the clinical workflow expends valuable time and resources of providers and care teams. Although some commercial health plans may be able to collect certain clinical data, a robust infrastructure to efficiently collect data on a comprehensive set of meaningful measures does not exist currently. Medicare requires Pioneer and Shared Savings Program ACOs to report on a variety of eCQMs through their GRPO WI internet application, but this is not an automated process and the providers do not have access to data about their beneficiaries when they visit providers outside of the organization. Connecticut's Medicaid program collects some eCQMs for reporting through manual chart reviews, but this method is expensive and time consuming.

In the Test Grant, the State proposed building on the Department of Social Services' work with Zato Health to stand up a shared utility to produce electronic Clinical Quality Measures (eCQMs). Zato's edge-server technology would index clinical data repositories (e.g. EHRs, registries) to enable the automated extraction, integration and reporting across data silos of clinical quality measures. For the past year, SIM HIT focused on how the state could utilize edge serve technology/ indexing[2] as a shared utility model to support eCQMs in value-based payment arrangements.

In determining which measures to focus on, the HIT Council referenced the work of the SIM Quality Council[3] which proposed a core set of quality measures to promote voluntary alignment across payers' value-based payment arrangements. The Quality Council recommended two National Quality Forum (NQF)[4] endorsed quality measures for the SIM HIT council to test: (1) Hemoglobin A1c Poor Control (NQF 0059), and (2) Controlling High Blood Pressure (NQF 0018). The Quality Council also recommended

[2] Edge servers do not move or store data, but instead allow direct queries of the clinical data source which is in contrast to a centralized data repository approach.

[3] The Quality Council is a workgroup of the CT SIM. The Quality Council was tasked to identify and recommend a core measurement set for the use in the assessment of primary care, specialty, and hospital provider performance measures. The Council will also recommend a common provider scorecard format for public reporting. For more information about the Quality Council's work please see: http://www.healthreform.ct.gov/ohri/cwp/view.asp?a=2765&q=335322

[4] The National Quality Forum reviews and recommends quality measures. Measures that are endorsed by NQF meet minimum standards for reliability, validity and utility. Information about the National Quality Form can be found here: http://www.qualityforum.org

additional capabilities of the technology, including the ability to stratify the data by payer and race/ethnicity (Proof of Solution document, April 2015). The SIM HIT Council used this subset of eCQMs as a starting place to examine the capabilities of the edge server technology.

The HIT Council considered launching a pilot of the Zato edge server technology before committing to this technology as a scalable, enterprise wide solution. However, SIM HIT Council members wanted more information about the technology before approaching health plans and accountable healthcare organizations to participate in a pilot. A Long Term Solution Design Group was also formed to consider how the Zato technology could implement a more comprehensive set of capabilities in the longer term. The group considered whether a solution that might take more time to build, such as a statewide Health Information Exchange, would obviate the need for the edge server technology.

Note: SIM HIT Council members also considered whether the All Payer Claims Database (APCD) could serve as an alternative or supplementary solution, but decided that it could not, due to level of readiness and the APCD's current focus on claims data. Although new Level 2 claims submission codes and protocols could provide clinical information necessary to support some eCQMs, council members were skeptical that providers would reliably adopt such protocols on a statewide basis.

Technology Review

Zato delivered presentations to the HIT Council on 12/18/14, and on 1/15/16. Responses to members' questions were released in the following documents: 4/15/16, 6/8/2015, 4/17/2015. Members also asked to see a live demonstration or "demo" of how the technology works. The criteria for the demo can be found on slides 24- 29 of the 3/18/16 HIT Council presentation. Zato conducted two demos: on May 17, 2016 using de-identified data, and on May 23, 2016 using identified data.

Recommendations

Members' reactions to the Zato demonstration were mixed. Some expressed positive feedback regarding interoperability and auditability, while others expressed concerns including uncertainty about Zato's ability to:

- integrate data across disparate platforms and without adequate de-duplication of data;
- deploy in the healthcare setting;
- demonstrate data security;
- re-create query searches in an efficient way;
- perform systemic updates when there are changes to the EHR/data source; and
- implement its solution in the short term without additional development and testing.

Some members noted that there are other platforms already on the market that can combine claims and clinical data, run the data through an integration platform, and report out to payers and clinicians. Some members recommended releasing an RFP to understand all available technology options in the marketplace today. None of the members present recommended that the State proceed with a pilot of the Zato technology. Moreover, in the absence of a quorum, they agreed that the decision regarding next steps should be referred to the State Health IT Advisory Council. Council members should be presented with information on Zato's capabilities and a summary of the findings of the SIM HIT Council

in its review of this technology. Please see minutes from the 6/17/2016 meeting for the full discussion. All written feedback about the Zato demo from members who attended can be found here.

RECOMMENDATION:	**Defer to State Health IT Advisory Council.**

Value Based Insurance Design Pilot

Tom Woodruff, of the Office of the State Comptroller (OSC), presented on the OSC's Value Based Insurance Design (VBID) pilot (see summary). VBID is a type of health plan design that aims to reduce cost barriers for consumers to receive high-value healthcare services with the aim of improving healthcare outcomes and reducing unnecessary healthcare costs. The OSC's Health Enhancement Program (HEP) is one such plan, encompassing most state employees. The OSC is collecting quality measure data from the healthcare providers who provide care to state employees, and using dashboards to monitor the quality of care provided. The OSC is monitoring quality measures based on claims data received from private payers and is working on integrating data from EHRs with corresponding claims data. The EHR data is sent to the health plans, which match it with claims data, and then ships it to OSC's data warehouse. The proof-of-concept of integrating claims and clinical data and reporting is currently being piloted with Pro Health on a limited basis.

RECOMMENDATION:	**SIM HIT Council recommends the State Health IT Advisory Council review this presentation, as it pertains to the promotion of eCQMs.**

Other

HIT Investments by Other SIM States

The Chartis Group, consultants that provided support to the HIT Council, gave a presentation about SIM HIT investments made by other SIM states. The presentation included the following examples:

- AR, MA, ME, MN, VT, ID, MI, TN, WA, and others are expanding HIE capabilities.
- MA piloted and scaled an open source e-referral system for providers, and created a physician portal to promote linkages between PCPs and LTSS.
- OR established a Clinical Quality Metrics Registry for its Medicaid CCOs. MA invested in enabling the transmission of eCQMs through their HIE.
- VT's Central Clinical Registry collects clinical information from EHRs and their HIE produces care summaries and continuity of care documents and other reports.
- OR also invests in a statewide provider directory.
- VT piloted a telemedicine program, and integrated claims and clinical data to support new payment models.
- AR worked with health plans to create a multi-payer provider portal, where providers enter quality data and can access their reports.

RECOMMENDATION:	**SIM HIT Council recommends the State Health IT Advisory Council review this presentation, as it pertains to the expansion of HIE capabilities and the promotion of eCQMs.**

Need for stakeholder engagement

HIT Council members felt that more information and deeper engagement with stakeholders was needed to create a comprehensive HIT plan and ensure buy-in, scalability, and sustainability of proposed technologies. This includes understanding the technologies that currently exist in the state, the needs of stakeholders (e.g., health plans, accountable healthcare organizations and other providers, consumers, public payers such as OSC and DSS, and the Department of Public Health), which technologies they are planning to develop, and which technologies the State should develop as a shared-utility.

RECOMMENDATION:	**SIM HIT Council recommends a targeted stakeholder engagement to accelerate establishing technology and infrastructure to support SIM aims.**

Operational plan

The SIM PMO presented information regarding requirements for completing the HIT section of the SIM Operational Plan, due on August 1st.The Operational Plan outlines the timeline, risks, accountability targets, and deliverables for the next grant year, and, at a high level, the remainder of the test grant.

The HIT Section of the Operational Plan must include specific components, such as rationale, governance, policy, infrastructure, and technical assistance to be provided. HIT Section guidance from CMMI is included here, below the section dated June 19, 2015.

RECOMMENDATION:	**SIM HIT Council recommends that the Statewide Health IT Advisory Council align the State's HIE/HIT activities and leverage federal dollars to support HIT related improvements.**

Connecticut SIM Work Stream needs for Health Information Technology

The SIM Program Management Office ("PMO") provided regular updates on other SIM work streams, including quality measure alignment, and the Community & Clinical Integration Program (CCIP). The PMO also provided a logic model, organized around the four primary drivers of SIM: payment reform, care delivery transformation, consumer empowerment, and advanced population health planning. These drivers are hypothesized to lead to SIM aims of healthier people, better care, smarter spending, and health equity. The intent is for SIM HIT investments to align with the drivers and impact SIM aims.

The planning process for other SIM work streams revealed potential HIT-related areas of improvement across accountable healthcare organizations in the state, including the ability to:

- share health information efficiently across clinical and community partners;

- use e-referral, tracking and follow-up to effect clinical and non-clinical linkages to services and supports;
- receive timely information, such as Admission Discharge Transfer alerts;
- coordinate and communicate with inter-disciplinary team including patient, patient supports, clinical and non-clinical community partners;
- enable access by care teams to a comprehensive view of the patient and care plan; and
- enable analytic tools that use clinical systems to identify high risk populations and sub-population analyses (e.g., race, neighborhood, social factors) to support targeted continuous quality improvement

RECOMMENDATION:	**SIM HIT Council recommends supporting potential HIT related improvements across accountable healthcare organizations throughout the state.**