2020

Annual Report: Health Information Exchange

A REPORT PURSUANT TO CONN.GEN.STAT §17-59a FOR THE CONNECTICUT GENERAL ASSEMBLY

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OHS
CONNECTICUT
Office *of* Health Strategy

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Acronyms

ACO	Accountable Care Organization
APCD	All-Payer Claims Database
ARRA	American Recovery and Reinvestment Act
CCIP	Community and Clinical Integration Program
CDAS	Core Data Analytics Solution
CMMI	Center for Medicare and Medicaid Innovations
CMS	Centers for Medicare and Medicaid Services
CQM	Clinical Quality Measure
DPH	Department of Public Health
DSS	Department of Social Services
eCMS	Electronic Consent Management System
eCQM	Electronic Clinical Quality Measure
EHR	Electronic Health Record
FFY	Federal Fiscal Year
FQHC	Federally Qualified Health Center
Health IT	Health Information Technology
HEC	Health Enhancement Communities
HIE	Health Information Exchange
HIPAA	Health Insurance Portability and Accountability Act of 1996
HITECH	Health Information Technology for Economic and Clinical Health Act
HITO	Health Information Technology Officer
HITRUST	Health Information Trust Alliance
IAPD	Implementation Advance Planning Document
IAPD-U	Implementation Advance Planning Document Update
IIS	Immunization Information System
LDS	Limited Data Set
OHS	Office of Health Strategy
ONC	Office of the National Coordinator for Health Information Technology
OPM	Office of Policy and Management
OSC	Office of the State Comptroller
PCMH	Patient Centered Medical Home
PDMP	Prescription Drug Monitoring Program
PSI	Prevention Service Initiative
R & D	Research and Development
RFA	Request for Applications
SDLC	Systems Development Life Cycle
SIM	State Innovation Model
SIM PMO	State Innovation Model Program Management Office
SMHP	State Medicaid Health IT Plan
SMMS	Statewide Medication Management Services
TA	Technical Assistance
TEFCA	Trusted Exchange Framework and Common Agreement
UCFM	Use Case Factory Model
UConn	University of Connecticut
UConn AIMS	UConn Analytics and Information Management Solutions
VBID	Value-based Insurance Design

Introduction and Background

Under 19a-754a(b) of the Connecticut General Statutes, the Office of Health Strategy (OHS) is charged with the following responsibilities[1]:

(1) Developing and implementing a comprehensive and cohesive healthcare vision for the state, including but not limited to, a coordinated state healthcare cost containment strategy;
(2) Promoting effective health planning and the provision of quality healthcare in the state in a manner that ensures access for all state residents to cost-effective healthcare services, avoids the duplication of such services and improves the availability and financial stability of such services throughout the state;
(3) Directing and overseeing the State Innovation Model Initiative and related successor initiatives;
(4) (A) Coordinating the state's health IT initiatives; (B) seeking funding for and overseeing the planning, implementation, and development of policies and procedures for the administration of the all-payer claims database (APCD) program established under C.G.S. Sec. 19a-775a; (C) establishing and maintaining a consumer health information Internet web site under C.G.S. Sec. 19a-775b; and (D) designating an unclassified individual from the office to perform the duties of Health Information Technology Officer (HITO), as set forth in C.G.S. Sec. 17b-59f and C.G.S. Sec. 17b-59g;
(5) Directing and overseeing the Health Systems Planning Unit, established under section 19a-612, and all of its duties and responsibilities; and
(6) Convening forums and meetings with state government and external stakeholders, including but not limited to, the Connecticut Health Insurance Exchange, to discuss healthcare issues designed to develop effective healthcare cost and quality strategies.

C.G.S. Sec. 17b-59a(f) also requires the Executive Director of OHS, in consultation with the statewide Health IT Advisory Council, to submit a report to the joint standing committees of the Connecticut General Assembly concerning:

(1) The development and implementation of the Statewide Health IT Plan and data standards, established and implemented by the Executive Director of OHS;
(2) The establishment of the statewide Health Information Exchange (HIE); and
(3) Recommendations for policy, regulatory, and legislative changes and other initiatives to promote the state's health IT and exchange goals.

In order to promote Connecticut's vision to align the adoption and effective use of health IT, C.G.S. Sec. 17b-59g requires that OHS establish program to develop a neutral and trusted HIE entity, established under C.G.S. Sec. 17b-59d, to assist the state, consumers, healthcare providers, insurance carriers, physicians, and all stakeholders to empower stakeholders to make effective healthcare decisions, promote patient-centered care, improve the quality, safety, and value of healthcare, reduce waste and duplication of services, support clinical decision-making, keep

[1] https://www.cga.ct.gov/current/pub/chap_368dd.htm

confidential health information secure and make progress toward the state's public health goals, as well as help to fulfill the responsibilities of OHS, as specified in section 19a-754a.

The incorporation of these initiatives into OHS' overarching mission include the Health IT Advisory Council, with the aim of enhancing overall coordination of health IT efforts. A list of members of the Health IT Advisory Council can be found in Appendix A. Funding for consulting services to facilitate and support the Health IT Advisory Council as well as accelerate investments to promote health information exchange services supporting clinical quality measure production and data analytics is provided by OHS, in part through the Health Information Technology for Economic and Clinical Health (HITECH) Act administrative funding, enacted as part of the American Recovery and Reinvestment Act (ARRA) of 2009.[2] This 90/10 HITECH administrative funding is provided by the Centers for Medicare and Medicaid Services (CMS).

Allan Hackney was designated as the HITO by the Executive Director of OHS in June 2018. The HITO and the statewide Health IT Advisory Council developed a strategic road map to include activities of (1) stakeholder engagement; (2) environmental scan; (3) use case development and prioritization; and (4) the development of an HIE plan. The Health IT Advisory Council continues to provide advisory support and guidance to the HITO and the Executive Director of OHS for the establishment of a statewide HIE and alignment of the state's health IT initiatives.

As reported in the 2019 Annual Report, the Health IT Advisory Council chartered a *Governance Design Group* to develop high-level recommendations for how to best establish an overall HIE governance framework for Connecticut. The Governance Design Group provided recommendations that serve as guideposts for establishing the HIE entity, constructing the board of directors of the HIE entity, adopting a sound set of policies and procedures, developing and executing trust agreements that codify common "rules of the road", and implementing effective management and operations infrastructure. An update on the status of HIE development is discussed later in this report.

During the period of February 1, 2019 through January 31, 2020, OHS completed a number of activities in support of statewide health IT strategy and the establishment of a statewide HIE. At the time of this report, several activities are in-progress towards the stated goals. During this period, OHS, in consultation with the Health IT Advisory Council, completed, or is actively conducting, the activities described below.

Consent Design Group

The development, implementation, and management of a sound consent policy is foundational for the effective governance of health information exchange and an essential aspect of establishing a framework of trust. The Consent Design Group, created and sponsored by the Health IT Advisory Council, was comprised of volunteer stakeholders representing a wide range of subject matter expertise from across the healthcare industry. The Consent Design Group's

[2] https://www.medicaid.gov/medicaid/data-and-systems/hie/federal-financial-participation/index.html

work occurred over thirteen meetings from April through November 2019. The group conducted a broad review and analysis of existing consent policies and regulatory requirements, both within Connecticut and at the national level, and assessed the policy implications and considerations applicable to statewide health information exchange. Topics addressed included: a review of relevant State and Federal statutes, including HIPAA, core principles related to consent, specially protected health information, and tools for consent management.

The members of the Consent Design Group provided subject matter expertise and represented a broad array of stakeholder perspectives across the health care ecosystem. The members can be found in Appendix C. The Guiding Principles, which can be found in Appendix D, developed by the Consent Design Group and affirmed by the Health IT Advisory Council in December 2019, provide structured guidance to stakeholders from all sectors, including consumers, who are engaged in future policy planning. The design group also listed companion "additional considerations" for several of the Guiding Principles, and an interim approach to consent and data sharing that provides an opportunity for patients to opt-out of data being exchanged across the HIE during an interim time period, until the consent management solution is implemented allowing more granular modification to their degree of participation. The Guiding Principles serve as a basis for meaningful evaluation of policies and technologies that will provide individuals with choices regarding how their health data is shared and used. Before final adoption and use of the Guiding Principles for supporting the development of consent policy, the public will have an opportunity to review and provide comments. These comments will be thoughtfully considered, and the Guidelines may be revised after review with the Health IT Advisory Council. This process is planned for completion by the second quarter of calendar year 2020.

Medication Reconciliation and Polypharmacy

Medications are the first line treatment for 88% of chronic diseases.[3] The percentage of patients taking multiple prescription medications is also increasing. According to the most recent data available (2011-2014) from the Centers for Disease Control and Prevention (CDC), 40.7% of seniors (65 years or older) and 10.9% of the total population were taking five (5) or more prescription medications during the past 30 days. For seniors, this represents almost a three-fold increase from the period of 1988-1994 (13.8%). Because a patient's medication regimen is the basis for many treatment decisions, it is extremely important that medication lists are accurate in order to maximize therapeutic impact and prevent potentially life-threatening patient safety events.

Two major efforts have been undertaken to support the identification, planning and design of initiatives that positively impact medication reconciliation and the management of polypharmacy.

[3] Ekstrand, MJ. *Transforming "Med Wreck" into "Med Rec:" One Health System's Journey*. Webinar presentation: Pharmacy Quality Alliance; July 2017.

The first of these is the Medication Reconciliation and Polypharmacy (MRP) Work Group, as described below.

Medication Reconciliation and Polypharmacy Work Group Activities

In May 2018, the Governor signed Special Act 18-6[4], *An Act Requiring the HITO to Establish a Working Group to Evaluate Issues Concerning Polypharmacy and Medication Reconciliation.* The MRP Workgroup submitted a final report to the Governor and Connecticut General Assembly on July 1, 2019. Refer to Appendix F for a summary of the group's recommendations. The recommendations and goals, organized into eleven domains, are the result of a nine-month planning process by the MRP Work Group and its four subcommittees. These recommendations formed the foundation of the planning and design activities of the Medication Reconciliation and Polypharmacy Committee, chartered by the Health IT Advisory Council in September 2019, which will continue to provide guidance to the Council and continue the Work Group's recommendations, as discussed below.

Medication Reconciliation and Polypharmacy Committee Activities

As a result of MRP Work Group recommendation #11, the Health IT Advisory Council established the Medication Reconciliation & Polypharmacy Committee (MRPC) on September 19, 2019. The purpose of the MRPC is to provide strategic guidance, recommendations, and ongoing support to the Health IT Advisory Council and OHS for the development and implementation of patient-centered and evidence-based best practices in medication reconciliation, including the development of a best possible medication history (BPMH) supported by communication, education, and user-friendly digital tools**.** The MRPC will build upon the recommendations and areas of focus identified by the MRP Work Group.

Through September 2021, the MRPC has focused its efforts on the following project goals:

- ***Goal 1:*** Develop a detailed strategic approach for the creation of a BPMH, supported by active patient engagement, that results in near-term value for stakeholders while laying the foundation for a longer-term, more extensive and integrated solution.
- ***Goal 2:*** Create an online directory of medication management and medication reconciliation tools and solutions for communication of evidence-based, best practice medication tools; patient engagement strategies; technical advisories; subject matter experts; and policy and regulatory guidance documents.
- ***Goal 3:*** Serve as a resource to OHS, Health Information Alliance, Inc., Department of Social Services, and Department of Consumer Protection to support development and implementation related to: technical solutions and use cases; workflow integration; medication reconciliation pilot activities; stakeholder engagement; and measurement and evaluation.
- ***Goal 4:*** Develop an implementation plan for the Medication and Polypharmacy Work Group recommendations related to deprescribing transaction standards, including CancelRx.
- ***Goal 5:*** Support Implementation Advance Planning Document (IAPD) and Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and

[4] https://www.cga.ct.gov/2018/act/sa/pdf/2018SA-00006-R00SB-00217-SA.pdf

Communities (SUPPORT) Act funded initiatives and actively monitor funding opportunities related to the stated purpose and goals of MRPC.

Other goals may be considered to support the purpose and goals of the MRPC, as needed.

Health Equity Data Analytics

As part of the stakeholder outreach conducted during 2017, a top priority in the analysis of the outreach findings was "Connecticut must keep patients and consumers as a primary focus in all efforts to improve health IT or health information exchange, including addressing health equity and the social determinants of health (SDoH)." A clear priority is health equity, which arose from this stakeholder outreach and provided an opportunity to integrate data in an innovative and holistic manner, focusing on population health, consumer awareness, and quality improvement. In partnership with the Connecticut Health Foundation, the HITO established the Health Equity Data Analytics Project (HEDA).

The HEDA Project was tasked with identifying and defining the "vital few" health equity data elements relevant to health equity issues in Connecticut, and collaborating with the HIT architectural team, UConn AIMS, to incorporate those elements into the emerging health analytics architecture. The HEDA Project is broken into four phases:

- Planning
- Discovery & Analysis
- Incorporation of HIE data into the Core Data and Analytic Solution (CDAS) Architecture
- Pilot Use Case Development.

In the first two phases, the HEDA Project team conducted in-depth interviews with HIEs and health care/informatics experts across the US about current efforts to utilize SDoH in HIEs as well as providers in varied sectors across the state. In their final report[5] the HEDA Project team found that race/ethnicity, insurance status, and geocoded residential address as the "vital few" critical elements necessary to incorporate into any functionality in order to be able to identify and address health disparities. This phase also produced health equity user stories[6] that help to establish an initial foundation for designing analytic capabilities that respond to the needs of key end users working across various sectors to advance the health and well-being of all Connecticut residents.

The third phase called for race/ethnicity and insurance status from the All Payer Claims Database (APCD) to be added into CDAS. During early January 2020, the HEDA team was able to view these elements in a stratified manner, including the patterns of the vital few data with diagnoses and pharmacy claims data. This preliminary analysis of claims-only data found clear disparities and demonstrated the need to ensure the vital few are incorporated into every use case. Examining the APCD data also made it clear that claims data is an incomplete source for the vital few social demographic data, highlighting the critical need to ensure other sectors connect to the HIE including providers, state agencies, and community-based organizations. To be able to identify and address disparities, the CDAS must find other sources of truth to ensure a

[5] https://portal.ct.gov/-/media/OHS/Health-IT-Advisory-Council/Reports/Health-Equity-Data-Analytics-Report-Final.pdf?la=en

[6] https://portal.ct.gov/-/media/OHS/Health-IT-Advisory-Council/Reports/Health-Equity-User-Stories-Final.pdf?la=en

robust and accurate data set to be able to provide the utility of reporting and analysis to best serve the patient population.

Beginning in January of 2020 the HEDA team will embark on Phase 4 of the project, *Pilot Use Case Development,* by creating a data capture and enhancement plan. This phase will entail identifying other sectors, such as those outlined above to determine how these vital few are collected and stored, estimate the accuracy/completeness of their data, determine their readiness for transmission and identify any barriers such as statutory, technological, political, etc. in preparation for any technical assistance that may be provided to support the connection to the HIE. Concurrently, providers and health systems are being recruited to be "early adopters" for connection to the HIE and these vital few elements will be required for any use case that they sign on to.

Establishment of the Health Information Exchange Entity

During July 2019, Health Information Alliance, Inc. was incorporated as a nonprofit, nongovernmental entity to build and operate health information exchange services pursuant to C.G.S. Sec.17b-59d, 17b-59e and 17b-59g. Based on input from the HIT Advisory Council and broad stakeholder input, the entity's bylaws and operational structures are designed to establish a "neutral and trusted" organization to facilitate the objectives set forth for the statewide HIE in statute.

OHS has incubated the development of the necessary processes for the HIE based on best practices from other states, particularly Michigan. Additionally, OHS partnered with UConn to develop the Core Data and Analytics Solution (CDAS), discussed below, that will form that core of the HIE's platform.

HITECH Act funding and a description of the CDAS follow below in this report. OHS will contract with HIA, Inc. to fund the HIE's operations during early 2020. At that time, activities currently incubated by OHS will be transferred into the HIE, including the CDAS and other contractual support relationships.

Approval of HITECH Act Funding for HIE Development

The State of Connecticut, through a collaboration between OHS, DSS, and DPH, developed an IAPD Update (IAPD-U) funding request for FFYs 2019 and 2020 to continue to build on earlier investments. This IAPD-U was reviewed by the Health IT Advisory Council, submitted to CMS by DSS during January 2019 and approved by the CMS during October 2019. The request, as detailed below, builds on previous requests to support additional HIE implementation activities. The table below summarizes the current HIE request.

TOTAL BUDGET REQUEST: FFY 2019 & FFY 2020				
Year	Cost Category	Federal Share 90%	State Share 10%	Total 100%
FFY 2019	HIE	$ 22,351,071.25	$ 2,483,452.36	$ 24,834,523.62
	Immunization Registry	$ 1,175,465.70	$ 130,607.30	$ 1,306,073.00
	Total for FFY 2019	**$ 23,526,536.95**	**$ 2,614,059.66**	**$ 26,140,596.62**
FFY 2020	HIE	$ 25,277,543.08	$ 2,808,615.90	$ 28,086,158.98
	Immunization Registry	$ 1,524,534.30	$ 169,392.70	$ 1,693,927.00
	Total for FFY 2020	**$ 26,802,077.38**	**$ 2,978,008.60**	**$ 29,780,085.98**
Total (FFY 2019 - FFY 2020)		**$ 50,328,614.33**	**$ 5,592,068.26**	**$ 55,920,682.59**

Submission of 2020 SUPPORT Act IAPD Funding Request

In 2018, the *SUPPORT for Patients and Communities Act*[7], which includes important health reforms to combat the opioid crisis by advancing treatment and recovery initiatives, improving prevention, protecting communities, and more, was signed into law.

On December 19th, 2019, DSS submitted a new IAPD to request $3,253,640 in 100% federal funds available under Section 5042 of the *SUPPORT for Patients and Communities Act*. This new IAPD details proposed activities that are intended to move Connecticut's Prescription Drug Monitoring Program (PDMP) toward becoming a "qualified" PDMP, a requirement of the Support Act, in support of the goal of decreasing the amount of opioid related negative outcomes. In addition to meeting these requirements, DSS, DCP, and OHS have identified several other use cases related to the use of SUPPORT Act funding, including:

- Adding connections to the PDMP and support development of usage by other state agencies such as the Department of Mental Health and Addiction Services and the Department of Public Health;
- Expanding the capacity of the PDMP by connecting providers through electronic health record (EHR) integration;
- Connecting the Health Information Exchange to the PDMP; and
- Planning and implementing a disaster recovery solution.

The importance of this database in combating the opioid epidemic has become increasingly clear over the past few years. Much more can be done to ensure Medicaid providers utilize the system, timely data is delivered to clinicians in useful and meaningful ways, and the effectiveness and outcomes of the PDMP usage can be measured.

[7] GovTrack.us. (2020). H.R. 6 — 115th Congress: SUPPORT for Patients and Communities Act. Retrieved from https://www.govtrack.us/congress/bills/115/hr6

Development and Uses of Core Data Analytics Solution

University of Connecticut (UConn) Analytics and Information Management Solutions (AIMS) group has made significant progress in the implementation of the Core Data Analytics Solution (CDAS), which serves as the data analytic hub for OHS, Health Information Alliance (HIA) and potentially other state agencies. The CDAS architecture is based on leading-edge technologies that have been implemented across many other industries and leverages open source and commercial-off-the-shelf (COTS) software components. This architectural approach, along with the technology components, provides a configurable solution, that can be changed over time to meet the needs of CT stakeholders. Key components of the CDAS include:

- Health Information Trust Alliance (HITRUST) - HITRUST is the healthcare industry's third-party validated security framework of choice. CDAS has been architected to the HITRUST Common Security Framework (CSF) from inception. Necessary third-party assessment will be conducted during 2020.
- Master Data Management (MDM) – CDAS incorporates a comprehensive MDM solution that offers modularity and flexibility to meet the needs of the State for collecting, aggregating, matching, consolidating, and distributing such data throughout an organization in order to ensure a common understanding and quality control.
- Data Governance – The amount of data and data variety in CDAS can apply to any number of domains and therefore a multi-domain MDM can offer an entire view of the relationship between data. An initial data governance framework strategy was developed to define a set of data rules, organizational role delegations, and processes.
- Clinical Risk Groupers (CRGs) – CDAS utilizes the 3M Health Information System (HIS) and its advanced categorical grouping and risk adjustment software, including the 3M™ CRGs, 3M™ Potentially Preventable Events (PPEs), and 3M™ All Patient Refined – Diagnostic Risk Category (APR-DRGs) classification systems. These tools enable the CDAS to calculate electronic Clinical Quality Measures (eCQMs) and Healthcare Effectiveness and Data Information Set (HEDIS), quality metrics used to monitor quality of care, gaps in care, population health and other analytics. With these tools, CDAS can calculate various quality measures, such as electronic Clinical Quality Measures (eCQMs) and Healthcare Effectiveness and Data Information Set (HEDIS), which will provide visibility into the person-centric quality of care. While the quality measures reside at the individual level, it will be aggregated to providers based on their panel as well as at a higher level, populations based on program enrollments
- Clinical Data Processing – CDAS is able to intake clinical data via Consolidated Clinical Document Architecture (C-CDA), enabling the enhancement and consolidation of clinical care events and data.

OHS, in collaboration with UConn AIMS, used the CDAS for the following applications during the reporting year:

- Health Cost Estimator - Healthscore CT is a website maintained by OHS providing cost and quality information to consumers, pursuant to C.G.S.Sec. 19a-755(a).[8] The purpose of the dashboard is to assist consumers in making informed healthcare decisions and promote cost transparency. The source of cost information in the Cost Estimator is derived from the All Payer Claims Database (APCD). During August 2019, UConn AIMS received a Limited Data Set (LDS) extract from OnPoint Health Data, the State's APCD data manager. The LDS was loaded into the CDAS and formed the basis of the cost estimates available on the site.
- RAND 3.0 - OHS partnered with RAND to provide data for the RAND 3.0 report, a National Hospital Price Transparency Study, that will measure and publicly report prices paid for hospital care against Medicare charged amounts. The CDAS was used to aggregate, filter and produce the required extract of the APCD LDS claims data.
- Health Equity Data Analytics (HEDA) – In collaboration with the OHS HEDA team, UConn AIMS developed a dynamic exploration dashboard using the CDAS to analyze the APCD LDS commercial population, enabling the team to visualize opportunities to address and potentially reduce health inequities in the state.
- Healthcare Affordability Standard Modeling – To develop a Healthcare Affordability Standard for the State, OHS partnered with UConn AIMS to analyze APCD LDS and data obtained from Access Health CT. The analysis risk-stratified individuals and total out-of-pocket (OOP) costs (copays, co-insurance and deductible payments) for medical services and prescription drugs by town, age group, sex, and risk category aggregation.

DSS and OHS Joint Steering Committee

On December 2nd, 2019, the DSS Commissioner and OHS Executive Director established the Department of Social Services (DSS) & Office of Health Strategy (OHS) Joint Steering Committee. The purpose of the Joint Steering Committee is to provide recommendations on conceptual and strategic matters, as well as to make decision on tactical and operational matters as defined through the Memorandum of Agreement. DSS and OHS agree that a successful collaboration recognizes both the HIE Entity's statutory charge for statewide HIE and DSS's authority and fiduciary responsibility as the Single State Agency administering the Medicaid and Promoting Interoperability programs. The agreement describes the joint vision of OHS and DSS working together and sets forth understanding of the steps and processes that will be used for the mutual benefit of both agencies, the HIE Entity, and other Connecticut stakeholders.

The Joint Steering Committee is initially chartered for the period December 2019 through September 2021. Meetings will be conducted in a collaborative manner consistent with the intent of the Joint Steering Committee charter. Please find the structure and position list for the committee in Appendix E.

[8] Healthscorect.com

Recommendations for Policy, Regulatory, Legislative Changes, and Other Initiatives Promoting the State's Health Information Technology

Health Information Exchange Board Composition

OHS and DSS have agreed to jointly support legislation to add the Commissioner of the Dept. of Social Services (DSS), or her designee, as an ex-officio voting member of the board of directors of Health Information Alliance, Inc., the designated nonprofit, nongovernment entity to build and deliver health information exchange services in accordance with CGS Sec. 17b-59g. This enables DSS to fulfill its fiduciary responsibilities under Federal funding programs related to the administration of Medicaid used to fund the creation and operation of the HIE. In addition, OHS may request that the CGS Sec. 17b-59g be amended to allow the HIE board of directors to add additional board members in accordance with its bylaws. This will provide flexibility to augment the skills necessary to ensure the ongoing success of the entity and provide the board operating flexibility.

All Payer Claims Database (APCD) Denied Claims

OHS, within the statutory authorities described in CGS Sec. 19a-755a regarding the APCD, OHS may require claims reporting entities to include denied claims in addition to paid claims that are currently submitted. Denied claims are a critical source of information regarding patterns of services requested and service accessibility that are unavailable by analysis of only paid claims.

Appendix A: Health IT Advisory Council Membership

Health IT Advisory Council			
	Appointment by	Name Appointment Date	Represents
1.	**Statute**	Allan Hackney	Health Information Technology Officer or designee
2.	**Statute**	Joe Stanford (designee)	Commissioner of Social Services or designee
3.	**Statute**	Elizabeth Taylor (designee)	Commissioner of Mental Health and Addiction Services or designee
4.	**Statute**	Cindy Butterfield (designee)	Commissioner of Children and Families or designee
5.	**Statute**	Cheryl Cepelak (designee)	Commissioner of Correction or designee
6.	**Statute**	Vanessa Hinton (designee)	Commissioner of Public Health or designee
7.	**Statute**	Dennis Mitchell (designee)	Commissioner of Developmental Services or designee
8.	**Statute**	Sandra Czunas (designee)	State Comptroller or Designee
9.	**Statute**	Mark Raymond	CIO or designee
10.	**Statute**	Robert Blundo (designee)	CEO of the CT Health Insurance Exchange or designee
11.	**Statute**	Vacant	An expert in state healthcare reform initiatives appointed by the Executive Director of OHS
12.	**Statute**	Vacant	CIO of UCHC or designee
13.	**Statute**	Ted Doolittle	Healthcare Advocate or designee
14.	**Governor**	Vacant	Representative of a health system that includes more than one hospital
15.	**Governor**	David Fusco	Representative of the health insurance industry
16.	**Governor**	Nicolangelo Scibelli	Expert in health information technology
17.	**Governor**	Patricia Checko	Healthcare consumer or consumer advocate
18.	**Governor**	Vacant	An employee or trustee of a plan established pursuant to subdivision (5) of subsection (c) of 29 USC 186

19.	**President Pro Tempore of Sen.**	Robert Rioux	Representative of a federally qualified health center
20.	**President Pro Tempore of Sen.**	Jeannette DeJesus	Provider of Behavioral Health Services
21.	**President Pro Tempore of Sen.**	Vacant	Physician licensed under C.G.S. Chapter 371
22.	**Speaker of the House of Rep.**	Lisa Stump	Technology expert who represents a hospital system
23.	**Speaker of the House of Rep.**	Vacant	Provider of home healthcare services
24.	**Speaker of the House of Rep.**	Tekisha Everette	Healthcare consumer or a healthcare consumer advocate
25.	**Majority Leader of the Sen.**	Patrick Charmel	Representative of an independent community hospital
26.	**Majority Leader of the House of Rep.**	Patrick Troy, MD	Physician who provides services in a multispecialty group and who is not employed by a hospital
27.	**Minority Leader of the Sen.**	Joseph L. Quaranta, MD (Co-Chair)	Primary care physician who provides services in a small independent practice
28.	**Minority Leader of the House of Rep.**	Alan D. Kaye, MD	Expert in healthcare analytics and quality analysis
29.	**President Pro Tempore of Sen.**	Dina Berlyn (designee)	President Pro Tempore of Senate or designee
30.	**Speaker of the House of Rep.**	Vacant	Speaker of the House of Representatives or designee
31.	**Minority Leader of the Sen.**	Vacant	Minority Leader of the Senate or designee
32.	**Minority Leader of the House of Rep.**	William Petit, MD	Minority Leader of the House of Representatives or designee
33.	**Chairs of the Health IT Advisory Council**	Stacy Beck	Representative of a commercial health insurer
34.	**Chairs of the Health IT Advisory Council**	Vacant	Health IT Advisory Council Co-Chairs Appointee
35.	**Chairs of the Health IT Advisory Council**	Vacant	Health IT Advisory Council Co-Chairs Appointee
36.	**Chairs of the Health IT Advisory Council**	Vacant	Health IT Advisory Council Co-Chairs Appointee

Appendix B: Medication Reconciliation and Polypharmacy Work Group Members

Medication Reconciliation and Polypharmacy Work Group			
	Member Name	**Organization**	**Membership Category**
1.	**Sean Jeffery, PharmD**	Integrated Care Partners – Hartford Healthcare	Expert in medication reconciliation
2.	**Nityu Kashyap, MD**	Yale New Haven Health	Expert in medication reconciliation
3.	**Kate Sacro, PharmD**	Value Care Alliance	Expert in medication reconciliation
4.	**Amy Justice, MD, PhD**	Dept. of Veteran Affairs, Connecticut Healthcare System	Expert in Polypharmacy
5.	**Janet Knecht, PhD, MSN**	University of Saint Joseph	Expert in Polypharmacy
6.	**Nathaniel Rickles, PharmD, PhD, BCPP**	UConn School of Pharmacy	Expert in Polypharmacy
7.	**Marghie Giuliano, RPh**	Connecticut Pharmacists Association	Pharmacist
8.	**Anne VanHaaren, PharmD**	CVS Health	Pharmacist
9.	**Thomas Agresta, MD, MBI**	UConn Health	Prescribing practitioner
10.	**Bruce Metz, PhD**	UConn Health	Member of the Health IT Advisory Council
11.	**R. Douglas Bruce, MD, MA, MSc**	Cornell Scott-Hill Health Center	Prescribing practitioner
12.	**Ece Tek, MD**	Cornell Scott-Hill Health Center	Prescribing practitioner

13.	**Lesley Bennett**	Consumer / Patient Advocate	Represents consumers
14.	**MJ McMullen**	Surescripts	Represents expertise in CancelRx Workflow
15.	**Jennifer Osowiecki, JD, RPh**	Connecticut Hospital Association	Represents expertise in law
16.	**Diana Mager, RN-BC**	Connecticut Association of Healthcare at Home	Represents LTPAC / Hospice
17.	**Jameson Reuter, PharmD, MBA, BCPS**	ConnectiCare	Represents payers
18.	**Jeremy Campbell, PharmD, MHI**	Boehringer-Ingelheim	Represents pharmaceuticals
19.	**Peter Tolisano, PsyD, ABPP**	Connecticut Dept. of Developmental Services	Represents a state agency
20.	**Rodrick Marriott, PharmD**	Connecticut Dept. of Consumer Protection	Representative of the Dept. of Consumer Protection
21.	**Barbara Bugella**	Connecticut Dept. of Mental Health and Addiction Services	Represents a state agency

Appendix C: Consent Design Group Members

	Member Name	Affiliation and Role
1.	Stacy Beck	Anthem, Clinical Quality Program Director
2.	Pat Checko	Consumer Advocate
3.	Carrie Gray	UConn, Director of Information Security, HIPAA Security Officer
4.	Susan Israel	Patient Privacy Advocate
5.	Rod Rioux	CHCACT, Network Director
6.	Rachel Rudnik	UConn, AVP, Chief Privacy Officer
7.	Nic Scibelli	Wheeler Clinic, CIO

Appendix D: Consent Design Group Guiding Principles[9]

Affirmed by HIT Advisory Council on December 19, 2019

Guiding Principles
Recommendation 1 ***Consent policies should require patients be provided clear and detailed information about health information sharing choices under applicable State and Federal law.*** • **Please refer to Additional Considerations for further comments on this Guiding Principle from one or more Design Group members.**
Recommendation 2 ***Consent policies should require Connecticut's Office of Health Strategy to develop an educational resource tool kit on health information sharing, leveraging and adapting content from recognized third-party resources.[10] Educational content should be reviewed and approved by the Health IT Advisory Council, and should not only include information for patients, parents and guardians, but also for providers, pharmacies, labs, health plans, state and local government agencies, and employers. The information should be translated for non-English speakers and should conform to the Web Content Accessibility Guidelines[11] developed by the Web Accessibility Initiative (WAI), part of the World Wide Web Consortium (W3C).[12]***
Recommendation 3 ***Information and educational resources on consent policies should be distributed broadly throughout Connecticut and be made widely available and easily accessible through a variety of sources including the Health Information Alliance, all health and human services agencies and departments in the state of Connecticut, and organizations participating in HIE services in Connecticut. The distribution process will be supported by HIA's partners, including the Office of Health Strategy (OHS).***

[9] Public comment will be solicited for these Consent Design Group Guiding principles, with subsequent revisions possible

[10] Adapted, with permission, from the CARIN Alliance Trust Framework and Code of Conduct (https://www.carinalliance.com/our-work/trust-framework-and-code-of-conduct/)

[11] https://www.w3.org/WAI/standards-guidelines/wcag/

[12] https://www.w3.org/WAI/

Recommendation 4

A review of consent policy considerations should be conducted for each HIE use case before an HIE use case is put into production, with a use case-specific consent policy developed if indicated from the review.

Recommendation 5

Notification of a healthcare organization's participation in electronic health information exchange(s) should be included in the Notices of Privacy Practices (NPP).

- **Please refer to Additional Considerations for further comments on this Guiding Principle from one or more Design Group members.**

Recommendation 6

Consent policies should result in the lowest possible burden on providers responsible for their implementation and maintenance, without compromising the need for sufficient patient understanding and ability to exercise meaningful consent.

Recommendation 7

Clearly written information about consent policy changes should be provided to patients, parents and guardians, state and local health and human service agencies, and all licensed healthcare entities in a timely manner when policies or practices have changed, adhering to the principles of broad dissemination and accessibility of information described above.

Recommendation 8

Mechanisms, including paper based and digital tools, for expressing consent policy preferences should be user-friendly and easily accessible.

- **Please refer to Additional Considerations for further comments on this Guiding Principle from one or more Design Group members.**

Recommendation 9

Consent policies should explain clearly and completely what happens if a patient revokes consent, including what happens with patient data and their previously expressed consent.

Recommendation 10

Third-party vendors and contractors supporting HIA, Inc. in its health information exchange activities should be contractually bound by HIA, Inc. to abide by the consent policies of HIA, Inc.

Recommendation 11 ***Consistent with federal and state law, including but not limited to HIPAA, consent policies should require safeguards be followed consistent with the responsible stewardship associated with protection of a patient's health information against risks such as loss or unauthorized access, use, alteration, destruction, unauthorized annotation, or disclosure.***
Recommendation 12 ***Consent policies shall address sensitive and specially protected data in alignment with federal and state statutes, as may change from time to time.***
Recommendation 13 ***Consent policies should be aligned with certain national interoperability initiatives, including the Common Agreement (CA) under development as part of Trusted Exchange Framework and Common Agreement (TEFCA), to support the ability to exchange data with entities outside the state.***
Recommendation 14 ***Consent policies should be reviewed periodically to ensure it is aligned with these principles and complies with any changes in best practices or federal or state law.***
Recommendation 15 ***Consent policies should provide a clear procedure for addressing complaints by individuals regarding the use of their data.***
Recommendation 16 ***Consent policies should require that patients have ample opportunity to review educational material before making a consent decision.***
Recommendation 17 ***Consent policies should require a consent decision is not used for discriminatory purposes.***
Recommendation 18 ***Assessments should be made periodically to ensure patients understand their health information sharing choices.***
Recommendation 19

Transparency and stakeholder input are foundational to the development of meaningful consent policies. While the HIA, Inc. Board has responsibility for overall governance of its health information exchange services, consent policy development should be led by the Office of Health Strategy (OHS), and advised by the Health IT Advisory Council. The process proposed is as follows:

a. ***The Health IT Advisory Council should draft, review and approve consent policies for the health information exchange that are conformant with these Guiding Principles and State and Federal law;***
b. ***The Health IT Advisory Council may choose to convene ad hoc or standing work groups to support consent policy development;***
c. ***Once consent policies have been endorsed by the Health IT Advisory Council, OHS should review the recommendations and determine any necessary statutory or regulatory actions that may be required;***
d. ***HIA, Inc. will be responsible for the implementation and maintenance of consent policies adopted by the State through OHS policy, statute or regulation;***
e. ***Should HIA, Inc. have concerns about any consent policies received from OHS, it may request a meeting with OHS to resolve those concerns; such resolution may require a review of proposed changes by the Health IT Advisory Council;***
f. ***All meetings of the Health IT Advisory Council are open to the public and the public is provided an opportunity to make comments at each meeting, including comments related to consent policies;***
g. ***All board meetings of the HIA, Inc. are open to the public; and***
h. ***Draft consent policies should be made available for a 30-day public comment period. In addition, an in-person session for public review and comment regarding draft consent policies may be considered prior to approval by the Health IT Advisory Council. The Health IT Advisory Council should review and consider recommendations or comments from the public to determine whether revisions to policies should be made.***

- **Please refer to Additional Considerations for further comments on this Guiding Principle from one or more Design Group members.**

Appendix E: DSS & OHS Joint Steering Committee Structure

Membership Structure
Section 1: Membership in the Joint Steering Committee shall represent individuals with appropriate subject matter expertise and decision-making authority. This will include, at a minimum, the following: DSS • CT METS Program Director • Chief Innovation Officer • Medicaid Director • Chief Financial Officer OHS • Fiscal Lead • Health Information Technology Officer • Health IT Program Manager • General Counsel
Section 2: Members of the Joint Steering Committee shall initially be appointed by the DSS Commissioner and Executive Director of OHS. Thereafter, the Co-Chairs, in consultation with the DSS Commissioner and OHS Executive Director, shall appoint members of the Joint Steering Committee.
***Section 3:* As determined by the Co-Chairs, additional subject matter experts (SMEs) or staff may be sought on a permanent or periodic basis for the areas identified and prioritized by the Joint Steering Committee.**
***Section 4:* Membership will be reviewed annually by the DSS Commissioner and OHS Executive Director to determine if membership is adequate to support the above stated purpose of the Joint Steering Committee. Recognizing that consistent participation in meetings is critical for success, each agency will make best efforts to ensure its representatives are available for meetings. Members should notify the Co-Chairs if they will be absent for any meeting.**
Officer Structure
***Section 1:* Each Agency shall designate a Co-Chair for the Joint Steering Committee prior to the first scheduled meeting.**
***Section 2:* As Co-Chairs, the selected individuals will be responsible for setting meeting agendas, establishing regular meeting schedules, appointing subcommittees as needed, and acting as liaison between other state agencies, the Health IT Advisory Council, and the Health Information Alliance, Inc.**

Appendix F: Medication Reconciliation and Polypharmacy Work Group Recommendations

Recommendation 1: Best Possible Medications History (BPMH)
Premise and Goal
It is well recognized by healthcare professionals, patient advocacy groups, and policymakers that an accurate list of active medications, medications history, and history of adverse reactions/side effects to medications are necessary to evaluate the efficacy, appropriateness, and safety of medications use. The importance of this information increases when the patient is on multiple medications (including over-the-counter medications, complementary alternative medications, and supplements), when the patient is seeing multiple prescribing providers, when providers do not share a common EHR platform, or when the patient needs the assistance of a caregiver for the patient's healthcare needs. Statewide databases like the Connecticut Prescription Monitoring and Reporting System (CPMRS) and networks like Surescripts have established feasible methods of maintaining and accessing prescription medication fill data and have largely addressed issues of privacy, data security, data storage, and data access. With appropriate resources and legal empowerment, these databases might form the basis of a centralized master list of active prescription medications and medication history. The MRP Work Group recommends an incremental approach to support BPMH that enables near-term, value-added solutions (for example, beginning with a best possible medications list of current medications rather than a full medications history), while working toward longer-term, more complete and integrated solutions that include decision support tools and a ledger of medication transactions (e.g., including current and prior-canceled prescriptions).
Recommendation 2: Patient Engagement
Premise and Goal
Engaging patients and their family and caregivers throughout the medication reconciliation process leads to better results. The MRP Work Group recommends the implementation of patient-centered and evidence-based best practices necessary to contribute to the development and maintenance of BPMH, supported by communication, education, and user-friendly digital tools.
Recommendation 3: Medication Reconciliation Process Improvements
Premise and Goal

As defined by the Joint Commission under its Ambulatory Health Care Accreditation Program, medication reconciliation is "a process of comparing the medications a patient is taking (and should be taking) with newly ordered medications. The comparison addresses duplications, omissions, and interactions, and the need to continue current medications. The types of information that clinicians use to reconcile medications include (among others) medication name, dose, frequency, route, and purpose."[13]

In addition, the Joint Commission recommends the following process for medication reconciliation:

1. Obtain and/or update information on the medications the patient is currently taking.
2. Define the types of medication information to be collected in different settings and patient circumstances.
3. Compare the medication information the patient brought to the organization with the medications ordered for the patient by the organization in order to identify and resolve discrepancies.
4. Provide the patient (or family as needed) with written information on the medications the patient should be taking at the end of the episode of care (for example, name, dose, route, frequency, purpose).
5. Explain the importance of managing medication information to the patient at the end of the episode of care.

The MRP Work Group endorses the Joint Commission definition and process for medication reconciliation, while emphasizing that this definition and process could be used in almost all care settings.

Recommendation 4: Team Approach

Premise and Goal

Team approaches to medication reconciliation are generally more accurate and provide more up-to-date medication lists than non-team approaches, where multiple data sources are needed to improve the quality of the medication reconciliation effort. When team approaches are supported by effective and integrated digital tools, results will be further enhanced. A team approach can only be effective when roles and accountability are clear, training is effective, and the team is properly resourced.

The MRP Work Group recommends the adoption of a team approach to medication reconciliation both within and across organizations, based on evidence-based best practices.

Recommendation 5: Implementation and Adoption of CancelRx

Premise and Goal

[13] https://www.jointcommission.org/ahc_2017_npsgs/

While medications can be beneficial for the health of an individual, they also pose potential health risks through side effects, adverse drug-drug, drug-food, or drug-disease interactions, and excessive dosing. These risks are increased when a medication that is intended to be discontinued is taken inadvertently.

The ability to cancel a prescription medication electronically has existed from a technical perspective for several years through a technical messaging standard (SCRIPT Standard 10.6) developed by the National Council for Prescription Drugs (NCPDP) and adopted by ONC.[14] However, there remains no requirement or incentive to incorporate this standard into EHRs and pharmacy information systems. As a result, adoption has been slow at both the pharmacy and provider side.

The MRP Work Group recommends the implementation of the findings and recommendations from the CancelRx Work Group. The recommendations of the CancelRx Work Group's Final Report can be found in Appendix G of this report.

Recommendation 6: Deprescribing

Premise and Goal

Once medication reconciliation is accomplished, medications identified as potentially inappropriate, no longer needed, or where the risk outweighs the benefit should be considered for discontinuation. However, scientific evidence supporting this decision-making process is limited. To date, providers are often caught between disease-specific guidelines recommendations, patient-specific needs, and concerns regarding polypharmacy and potential drug interactions. Because the evidence is limited and new evidence is likely to become available with time, the joint patient-provider decision to stop (deprescribe) specific medications requires clear and thoughtful communication between the patient and prescriber(s). Many medications may require slow tapers, as opposed to abrupt cancellation.

The MRP Work Group recommends the identification and adoption of best practices in deprescribing, along with support from tools such as risk algorithms and training materials that are regularly re-evaluated and updated as new evidence becomes available. The group also encourages active research to develop and validate best practices.

Recommendation 7: Technology

Premise and Goal

[14] https://www.ncpdp.org/NCPDP/media/pdf/NCPDPEprescribing101.pdf

Technology continues to advance in ways that can help redress the challenges of medication reconciliation, polypharmacy management, deprescribing and CancelRx. Progress toward BPMH is of highest priority, and near-term, high-value steps should be undertaken as soon as practical in support of Recommendation 1. In addition, artificial intelligence, blockchain, and clinical decision support tools should be evaluated for integration into these solutions. Patient-facing digital tools will become increasingly important for supporting patient engagement.

The MRP Work Group recommends an incremental approach to supporting Recommendation 1 (BPMH) be undertaken once requirements have been developed and funding is available. Future development should focus on integration of additional clinical data (e.g. OTC medications) and enhanced technical tools such as analytics and clinical decision support. In addition, ongoing surveillance of the industry should be conducted to identify promising solutions made possible through advancements in technology.

Recommendation 8: SUPPORT Act Funding and Planning/Design Process

Premise and Goal

Among its various funding opportunities, the SUPPORT for Patients and Communities Act[15] provides resources to better integrate and utilize state prescription drug monitoring programs (PDMPs), or PMP in Connecticut (CPMRS). The Department of Social Services (DSS), the Department of Consumer Protection (DCP), and OHS recently submitted a request to the CMS to fund a planning and design process to identify specific, tangible, value-added initiatives related to CPMRS.

The MRP Work Group recommends that the planning and design activities related to the SUPPORT Act be undertaken in close collaboration with the initiatives and future planning activities recommended by this Work Group.

Recommendation 9: Aligned Policy

Premise and Goal

Policies in the public and private sectors can support the achievement of the MRP Work Group's recommendations, as well as eliminate certain barriers to the achievement of those recommendations.

The MRP Work Group recommends an ongoing policy review to identify opportunities in both the public and private sectors, with initial areas of focus indicated below.

Recommendation 10: Planning/Design Process and Use of IAPD Funding

[15] https://www.congress.gov/bill/115th-congress/house-bill/6

Premise and Goal
As a component of the overall IAPD funding request to establish HIE services in Connecticut, funding is also being requested to provide subject matter expertise to facilitate the planning and development of digital tools to support the goals and objectives identified in these recommendations. This request provides $150,000 in FFY 2020 for the facilitation of design groups, development of business, functional, and technical requirements to support priority use cases, workflow mapping, and additional stakeholder engagement and outreach. The MRP Work Group recommends that a work plan be developed for these subject matter expertise / planning and development funds for those areas prioritized by the MRP Work Group for further research, planning, and design, as indicated below. This work should be done in a manner that complements the planning and design activities pursuant to funding provided to Connecticut through the SUPPORT Act (Recommendation 8).
Recommendation 11: Continuation of the MRP Work Group
Premise and Goal
The Medication Reconciliation and Polypharmacy (MRP) Work Group has demonstrated the ability to bring a diverse group of dedicated professionals together to tackle a daunting healthcare and public health challenge. The MRP Work Group recommends the continuation of the MRP Work Group as a standing committee of the Health IT Advisory Council.

Appendix G: CancelRx Work Group Recommendations

CancelRx Work Group
Recommendations:
1. Conduct a formal assessment of the Return on Investment for the CancelRx standard and other medication reconciliation recommendations to support the widespread adoption by pharmacies.
2. Conduct a formal assessment of the legislative / policy considerations associated with a mandate to require participation in the CancelRx standard by CT pharmacies and practitioners.
3. Explore the possibility of utilizing HIE funding to support onboarding, technical assistance, education, training, and implementation for pharmacies and practitioners.
4. Standardize pharmacy CancelRx workflows through technical assistance support.
5. Launch a statewide public health campaign to raise awareness for medication safety, CancelRx, medication reconciliation, polypharmacy, election prescriptions for controlled substances, etc.
6. Develop a business case for the sustainability of CancelRx that is endorsed and supported by the state's HIE effort and associated stakeholders (e.g. payers conducting cost containment analysis).
7. Develop incentive program to support the adoption and use of the CancelRx standard and conduct pilot programs to determine ROI for each organization.
8. Conduct analysis of funding opportunities available to help address polypharmacy and reduce opioid misuse.
9. Partner with the Connecticut PDMP, the Substance Abuse and Mental Health Services Administration (SAMHSA), and other organizations / stakeholders to determine how CancelRx can be supported by, or provide support to, relevant program efforts.