Connecticut's Statewide
Health Information Technology Plan

December 2021

**Prepared by
CedarBridge Group**

A Letter from the OHS Executive Director and Health Information Technology Officer

Dear Governor Lamont and Members of the Connecticut General Assembly:

We are pleased to submit the Connecticut's Statewide Health Information Technology Plan (Health IT Plan), in accordance with Connecticut General Statute (C.G.S.) 17b-59a. Through your leadership the Office of Health Strategy (OHS) engaged with more than 600 health and human services organizations across our state. More than 1,200 stakeholders participated in interviews, electronic surveys, and virtual forums to provide the needed insights that shape the Health IT Plan. Together, we developed this roadmap for advancing Connecticut's use of technology and data to improve patient and community health outcomes, promote efficiency in the healthcare delivery system, and provide resources for whole person-centered systems of care that reduce health disparities and address patients' health-related social needs.

The Health IT Plan builds upon the work of the Office of Policy Management and Department of Administrative Services in promoting Governor Lamont's vision for more effective use of IT systems through the Information Technology Optimization Process. Further, the Health IT Plan arrives at an opportune time, as Connecticut's Statewide Health Information Exchange, Connie, recently commenced operations. Connie already has gained significant momentum toward connecting healthcare providers and serving as Connecticut's centralized care coordination utility.

The Health IT Plan sets a bold but practical vision and an actionable plan for optimizing technology, data, and data exchange to realize a future where our most vulnerable neighbors have access to the best care and community supports possible. We look forward to working with you in the coming years to undertake this important work.

Sincerely,

Victoria Veltri JD, LLM   **Sumit Sajnani**
Executive Director   Health Information Technology Officer

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Introduction

In accordance with Connecticut General Statute (CGS) 17b-59a, the Office of Health Strategy (OHS) is tasked with implementing a Statewide Health Information Technology Plan (Health IT Plan) for Connecticut, to be executed over a five-year timeframe with periodic reviews and updates required in statute. Connecticut's Health Information Technology Advisory Council (HITAC), in its advisory capacity to the Executive Director of OHS and Connecticut's Health Information Technology Officer (HITO), provides guidance on health information exchange (HIE) activities and other health IT projects, meeting monthly since its inception. Members of the HITAC are named in statute and/or appointed by Connecticut's Governor and General Assembly leaders; they represent healthcare consumers or consumer advocates, both bodies of Connecticut's legislative branch of government, a dozen state and quasi-governmental agencies, independent providers, multi-specialty, primary care and behavioral healthcare practices; hospitals, home care organizations; health insurers, and subject matter experts in health information technology, health analytics, and state healthcare reform initiatives.

Within this context of oversight and governance, Connecticut's Health IT Plan has been developed over the course of 2021, beginning with an extensive scan of Connecticut stakeholders to understand the readiness for, the availability, and the use of health IT and HIE services by Connecticut healthcare and social service organizations, state and local agencies, and consumers. Over 1,200 individuals and organizations were engaged through webinars, focus groups, surveys, and interviews, resulting in the Environmental Scan and Draft Recommendations Report, presented to the HITAC and OHS in June 2021. During the summer of 2021, stakeholders were invited to provide feedback on the Report; those insights were incorporated into the Health IT Plan in the pages below. Connecticut's Health IT Plan is a living document; annual reviews will take place to ensure ongoing alignment with state priorities and incorporate technology advancements over time.

Health IT Plan Strategic Focus Areas

The six strategic focus areas in Connecticut's Health IT Plan, individually and together will contribute to Connecticut's healthcare reform initiatives by, 1) improving the availability of data to support better care, more coordinated services, and more accurate measurement of healthcare cost and quality, 2) advancing the adoption and use of health IT and HIE services, and 3) bolstering the readiness of individuals and organizations to use information technology to make better decisions when providing or receiving care. The focus areas include an intentional concentration on systems, supports, and technologies that help address health equity for marginalized communities. The sex focus areas are designed to guide Connecticut's investments, governance, strategies, and drive implementation of innovative technology and systems of care for improving health outcomes for individuals and communities.

Focus Area 1	Sustain and increase use of statewide HIE services
Focus Area 2	Implement systems to improve health equity and address health-related social needs
Focus Area 3	Improve service coordination and data sharing across state HHS agencies
Focus Area 4	Support behavioral health providers with the adoption of EHR and HIE services
Focus Area 5	Protecting individuals' health information privacy
Focus Area 6	Establish electronic data standards to facilitate development of integrated electronic health information systems

Focus Area 1	Increase and Sustain Use of Statewide HIE Services

Sustainability of Connie must be a top priority for Connecticut healthcare leaders and policymakers. While HIE sustainability is often thought of as a plan for comprehensive funding strategies, in truth sustainability means ensuring HIE organizations like Connie have the technical and business capabilities to provide services with tangible value to the organizations they serve (i.e., healthcare providers, consumers, state programs, payers, researchers, and policymakers) on an ongoing basis. Connie must position its suite of HIE services as a critical public utility to Connecticut consumers with centralized access to their health records, to clinicians with timely access to information about their patients, to city, county, and state officials in public health crises, and to community-based organizations for streamlining and coordinating healthcare and social services. Connecticut's HITAC members can apply their individual and shared expertise to support Connie's strategic plan and evaluate technology for a statewide shared services infrastructure that can accelerate innovation.

Key Considerations for Agency Leaders

→ Leverage Connie as a public health hub to streamline access to public health registries using funding from the CARES Act.

→ State agencies must play key roles in breaking down data silos preventing whole person-centered care. Agency Data Officers must champion the appropriate exchange of client information to improve service coordination and actively seek ways for using Connie services to improve data availability and reporting to state-operated data systems.

Key Considerations for Legislators

→ Small and rural provider practices need extra assistance to adopt, use, and pay for IT systems.

→ Incentives and/or mandates for Medicaid providers to encourage use of Connie services.

→ Requirements for health plans that provide coverage to state employees and retirees to incentivize the use of Connie services in value-based contracts.

→ Study the feasibility of shared identity management services as a public utility.

→ Connie will likely require continuous state funding beyond FFY 2023.

Increase and Sustain Use of Statewide HIE Services

Key Implementation Activities

→ Assess utilization of Connie by providers, focusing on how providers use Connie as a clinical decision support tool to improve the quality and efficiency of care.

→ Launch a HITAC Sustainability Workgroup to evaluate strategies, analyze options for shared public utility services, and recommend actions.

→ Validate functional requirements for a centralized clinical quality measurement and reporting system for supporting value-based payment programs.

→ Conduct evaluation of Connie's "in-house" technical and business analyst resources to determine funding needs for developing and supporting a centralized clinical quality measurement and reporting system for providers and health plans in value-based payment models.

→ Establish payment incentives from payers for HIE onboarding and regional extension centers for smaller provider practices to access HIE technical assistance and trainings.

→ Conduct a public education campaign to improve public awareness of Connie.

→ Educate healthcare providers on the Final Federal Rule on Information Blocking to encourage greater portability and interoperability of patient health information.

→ Determine a mix of funding sources for a statewide quality measurement and reporting system, including conducting procurement.

Success Metrics

→ Patients will have electronic access to their health information stored on Connie.

→ OHS will develop a legislative concept paper with Connie to establish a quality measurement and reporting system for value-based payment models.

→ OHS will establish clear guidelines for how Federal Final Rule on Information Blocking will be monitored and enforced.

→ The HITAC Sustainability Workgroup will present a comparative analysis of HIE sustainability practices and shared service utility options and makes recommendations to OHS.

→ Connecticut will begin HIE technical assistance and training for small practices.

Underway at Connie

→ The team at Connie is accelerating work to design, develop, and implement a patient access solution, to ensure Connecticut residents have ready access to their health information through the HIE.

→ Connie is leveraging the work of HITAC's Medication and Polypharmacy Committee (MRPC), and the research done by CedarBridge Group on sources of medication fill data, by creating a *Best Possible Medication History Workgroup to* explore additional or alternative fill data sources, single sign-on, and a thorough legal and regulatory analysis governing access and use of Connecticut Prescription Monitoring and Reporting System (CPMRS).

Most primary care providers, specialists, and the vast majority of hospitals in the U.S, have received incentives for adopting and using electronic health record systems. Meanwhile, community-based organizations (CBOs) are resource-starved, without adequate resources to acquire and maintain the types of IT systems that will reliably track clients and manage referrals. Many healthcare delivery systems are motivated by value-based payments to look closely at how substance use, environmental factors, traumatic experiences, race, ethnicity, language barriers, and poverty contribute to higher lifetime healthcare costs and poor health outcomes. Few examples exist however, where healthcare and social service organizations are effectively coordinating services with information technology systems for consent management, person/provider attributions, closed-loop referrals, shared care plans across organizations, and analytics. Connecticut must support CBOs with resources to acquire, implement, and train staff to use IT systems. In addition to expansion of referral management platforms, OHS should explore of the use of Connie as a centralized community information exchange (CIE) to capture longitudinal social risk data and coordinate care and services across Connecticut's communities. HITAC should build upon the extensive work already under way with Health Enhancement Communities, standardize collection of Race Ethnicity and Language data, as well as the newly formed Commission on Racial Equity in Public Health to ensure standards for the collection and storage of race, ethnicity, and language (REL) data are incorporated with other initiatives.

Key Considerations for Legislators

→ Funding is needed for social service agencies, CBOs, and other community partner organizations participating in the Health Enhancement Communities (HECs) program to support implementation, training, and technical assistance for using care coordination data systems.

→ Funding is needed for Behavioral Health providers to hire staff with technical skills for support, train users, manage vendors, and operate technology systems.

Key Considerations for Agency Leaders

→ Providers, CBOs, researchers, and businesses are forming HECs to improve community health and wellness. State agency leaders should explore mechanisms exchange of information in state data systems.

→ Connecticut should adopt industry best practices for standardization of social needs assessments following The Gravity Project's efforts to develop interoperability standards for social data.

→ Community information exchange initiatives should work to minimize duplicative demands on CBOs.

Success Metrics

→ *HITAC Social Risk Data Design Group* will be appointed and a workplan finalized.

→ The public facing Health Equity Dashboard will go-live.

→ The first IT infrastructure funds will be allocated to CBOs and social service agencies.

→ HITAC will present statewide data standards recommendations for social needs assessments.

→ A CIE Feasibility Planning Committee will be chartered.

→ A blueprint report will be published for Connecticut General Assembly related to the establishment of a CIE shared services hub.

Key Implementation Activities

→ Appoint a HITAC Social Risk Data Design Group to analyze current social needs screening processes, referral management options, and community-based organization (CBO) data sharing capabilities to support statewide social risk data standards.

→ Explore support for CBOs and social service agencies to adopt IT systems that help track and coordinate care, and to support staffing, training, and ongoing technical assistance.

→ Convene stakeholders for consideration of a statewide CIE shared services hub governance and management needs, including establishment of statewide shared CIE services (e.g., a master directory of healthcare providers and social service organizations, master person index, attribution tables, consent management services). Develop a blueprint report on the findings.

→ Develop a Health Equity Dashboard with a public facing web interface to identify health disparities at the community level and monitor interventions.

→ Establish a neutral CIE Feasibility Planning Committee to validate functional requirements and evaluate existing CIE infrastructure in Connecticut for shared services.

There are significant opportunities to improve the lives of vulnerable individuals and families in Connecticut by improving information technology systems and advancing electronic data sharing between programs and across agencies serving different needs of the same people. State agency officials and state leadership recognize the importance of providing a client-friendly, provider-friendly Digital Government Services (DGS) experience and are actively planning interagency data integration to effectively "hide the seams" for end-users of state systems and services. Connecticut's Preschool Through Twenty Workforce Information Network (P20 WIN) initiative and Two Generational (2Gen) Initiative have demonstrated early successes in interagency data integration and data sharing. Despite recognition of the need for appropriate and secure integration of data within state systems, the primary barrier communicated by state officials is the complex environment of federal and state regulations around data use within and among agencies. Connecticut's Office of Policy Management (OPM) has established a toolkit for agreements between state agencies for data sharing and a Data Sharing Playbook; these assets should be shared with the leaders of Connie and plans should be set forth to evaluate the HIE's readiness to act as a hub for certain state HHS data systems to connect through. Benefits can accrue quickly from improving point-to-point data sharing between systems, and from standardizing data fields such as individual demographic data at the time of data collection. Better training of state program field workers and home health aides around the importance of careful data entry and building a culture of collaborative care will also help break down data silos.

Key Considerations for Legislators

→ The pandemic has led to a large influx of one-time public health funding for modernization of public health registries. The General Assembly should ensure ongoing state funding that leverages the modernization initiatives at the state and local level for the initial investments.

→ Previous legislation and statutes fostering greater data sharing across agencies have laid significant groundwork. The focus moving forward will be on implementation and evaluation of data sharing initiatives.

Key Considerations for Agency Leaders

→ Connie is a powerful new resource that Agency Data Officers must consider leveraging for existing HHS agency data assets.

→ Department of Administrative Services (DAS), OPM, and OHS are partnering to assist HHS agencies with data sharing and integration challenges.

Improve Service Coordination & Data Sharing Across State HHS Agencies

Key Implementation Activities

→ Dept. of Public Health (DPH) and OHS collaborate to evaluate local public health IT infrastructure needs and provide recommendations; and evaluate the feasibility of a central Public Health Gateway for reporting and querying high-priority public health registries; consider pros/cons of a gateway hosted by DPH, and also by Connie.

→ A joint working group of various health and human service agencies wishing to connect to Connie for data sharing will evaluate and set appropriate policies and procedures, system integration standards, data elements, data fields, and data sets to be shared, consent requirements, and other details to accelerate agency data systems ability to connect to Connie.

→ Establish and facilitate the Person-Centered Services Collaborative (PCSC), a multi-agency working group of state health and human service program managers and IT staff with the objective of delivering more efficient and coordinated care and services with more accurate identity matching of vulnerable individuals and families receiving services from multiple agencies and programs. The PCSC will identify pilot initiatives and implement cross-agency data sharing policies, workflows, and technical integrations between high priority data systems.

→ Establish a workgroup devoted to technical interoperability of state health and human services data systems including development of standards for procuring new systems and upgrading existing systems.

Success Metrics

→ A *Public Health Gateway Evaluation Report* will be developed and shared with HITAC for guidance.

→ At least two *Person-Centered Services Collaborative (PCSC)* pilots will be sharing data.

→ OHS, in collaboration with DAS, OPM, and other agencies, will establish interoperability standards for connecting state agency data systems to Connie.

→ OPM and DAS, supported by OHS, will establish state standards for procuring and maintaining state health and human service data systems with interoperability requirements.

Some sectors of the healthcare delivery system continue to lag in terms of EHR adoption, notably behavioral health providers in Connecticut. Compared to other stakeholder groups, many behavioral health providers expressed a strong desire to exchange data with other behavioral health providers, and to a lesser extent, with other types of medical care providers. During the environmental scan in the first half of 2021, a considerable number of survey respondents – about a quarter -- indicated with similar fervor, strong opposition to any type of data sharing, citing patient confidentiality as the reason. Given the diversity of opinion among behavioral health providers, more research and outreach will be required for Connecticut policymakers and agency leaders to better understand both the opportunities and the challenges related to the use of information technology and electronic information exchange in this specialty area. In recent years, EHR and care coordination platform vendors have made huge strides in product support for behavioral health providers, but because this domain was left out of the Medicare and Medicaid EHR Incentive Programs, there are a significant number of independent and small practice providers who generally are not documenting care outside of their handwritten visit notes. With the strong push for primary care and behavioral health care integration, in large part due to the common occurrence of comorbidities such as depression and chronic disease, it is imperative for practitioners of this specialty to receive support in the form of education, technical assistance, mentorship, and most of all, financial incentives for adoption and use of certified EHR technology.

Key Considerations for Legislators

→ Behavioral health provider incentives should leverage federal funding sources and ensure adequate privacy and security protocols for building client/patient trust.

→ Consider the growth of telehealth in the behavioral health realm, and include requirements, as well as funding, for an audit program (inclusive of telehealth providers and practices) as part of any EHR incentive program or hosted EHR offering.

Key Considerations for Agency Leaders

→ It is essential for policy and program leaders to better understand the perspectives and needs of behavioral health providers before implementing new policies, funding, or other incentives.

→ Providing a hosted EHR option for behavioral health practices accepting Medicaid payments may be beneficial; look for consent management services as part of that package.

Support Behavioral Health Providers with Adoption of EHR and HIE Services

Success Metrics

→ Connecticut will determine which option to pursue: 1) offer incentive payments for adopting EHR system from a list of approved EHRs, or 2) offer a hosted EHR system for Medicaid behavioral health providers, managed by DMHAS.

→ Technical assistance and training for behavioral health providers will be established to help them adopt EHRs and onboard to Connie.

→ Medicaid-focused provider incentives for EHR adoption and HIE participation will be offered.

→ Behavioral health provider and patient education campaigns will be provided.

→ Connecticut will finalize implementation plans for a behavioral health provider training and technical assistance program.

Key Implementation Activities

→ Conduct town hall listening sessions with behavioral health providers and their patients around the use of information technology and HIE services while maintaining confidentiality to provide coordinated whole person care.

→ Plan financial incentive program for behavioral health providers.

→ Conduct an analysis of cloud-hosted behavioral health EHR systems and review eScan survey data to understand current EHR adoption rates for this specialty. Determine whether provider incentive payments or access to a state-hosted system is a better option.

→ Plan, develop, and implement a technical assistance and training program for behavioral health providers.

→ Based on feedback from the listening sessions, develop an educational campaign for providers and patients on the benefits and risks of health information exchange, focusing on ways to ensure data privacy while making sure healthcare providers and other members of an individual's care team have the right information at the right time to provide the best care possible.

Protecting Individuals'
Health Information Privacy

In Connecticut and around the country, there are distinct concerns about having personal health information stored in electronic health record systems, with individuals who object to efforts underway to make health data systems interoperable so health information can be shared more easily for treatment and care coordination purposes. Critical to the establishment of trusted health information exchange services are assurances that patient privacy wishes are respected, and every individual's protected health information is kept secure, whether at rest (within a system) or in transit (between systems). Providing individuals with electronic means to express their choices around the use of their personal health data, with easy ways for providing or denying consent, as well as revoking consent for sharing or using health information will be one of the most important activities the state, Connie, and organizations participating in health information exchange can undertake during the lifespan of the Health IT Plan. Connie has already done significant work in this area, including an opt-out provision. The recommendations herewith build upon these efforts and seek to further strengthen consent in Connecticut.

Key Considerations for Legislators

→ Connecticut has a long legacy of consumer advocacy among legislators, which is laudable. In addition, HITAC can serve as an important venue for discussions between legislators and other stakeholders on developing appropriate safeguards and ensuring those are in place to protect consumers.

→ Creating a neutral office for consumers' digital privacy rights and/or expanding the role of Connecticut's Office of the Healthcare Advocate would make Connecticut a leader nationally in addressing patient privacy concerns. In addition to health privacy, such an office could provide information and consumer protection services for other types of personal data at risk everyday of being improperly captured through our digital activities.

Key Considerations for Agency Leaders

→ State agency leaders should prioritize funding to make consumers more aware about how data is currently shared, and the rights patients have to protect their data.

→ Protecting the privacy of individuals served by Connecticut health and human service agencies is an essential priority, yet many times a more difficult burden for beneficiaries is providing affirmative consent for information to be shared appropriately with care teams and/or caregivers. It is recommended that OPM and OHS collaborate on issuing a Request for Information (RFI) process to assess the capabilities of consent management vendors and consider a Request for Proposals (RFP) process if RFI responses are promising.

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Protect Patient and Families Health Information Privacy

Key Implementation Activities

→ Plan and conduct consumer town halls / listening sessions on health information exchange with state officials, Connie leadership, and interested individuals across the state.

→ Provide recommendations on standardized consent management protocols.

→ Consider establishing a new *Patient Health Information Protection Office* within Connecticut state government.

→ Conduct Request for Information (RFI) process to assess electronic consent management software solutions for state agency needs.

→ Request for proposals (RFP) process if agency leadership wishes to move forward with this option.

→ Develop and disseminate educational materials and media on privacy directed at consumers

Success Metrics

→ A facilitation vendor will be procured to support privacy town halls.

→ An RFI process for consent management vendor solutions will be completed.

→ Support and funding for creation of Patient Health Information Protection Office will be established.

→ Agency leaders will decide whether to conduct an RFP to select a consent management solution.

Establish Electronic Health Data Standards

The OHS Executive Director, with the Commissioner of the Department of Social Services and the Health Information Technology Advisory Council, is statutorily obligated to establish electronic data standards to facilitate development of integrated electronic health information systems for use by healthcare providers and institutions that receive state funding. This includes provisions related to security, privacy, data content, structures and format, vocabulary, and transmission protocols. The statute requires limitation on the use and dissemination of an individual's social security number, require encryption of any social security number, and require privacy standards no less stringent than HIPAA. Protected Health Information (PHI) must be traceable by an electronic audit trail, be compatible with any national data standards, and permit the collection of health information in a standard electronic format. To meet the provisions of the statute in present day, and into the future, a standing subgroup to the HITAC should be formed of stakeholders with a cross-section of relevant expertise in clinical care and healthcare delivery, digital health technologies, health analytics, health policy, data privacy and security, and with state and federal regulations and reporting requirements for the healthcare and social services sectors. It will be critical for a member or members of this group to have strong familiarity with international and national healthcare standards development and standards implementation organizations (e.g., HL7, ISO, DirectTrust, Sequoia Project, Argonauts, CARIN Alliance, and others) and with the ONC's Interoperability Standards Advisory (ISA) and Standards Version Advancement Process (SVAP). This Standards Advisory Committee in Connecticut should meet quarterly to weigh options and provide guidance to the OHS Executive Director, DSS Commissioner, and HITAC members, ensuring the responsible parties named in statute have the information they need to provide relevant guidance, set appropriate policies, and can communicate knowledgeably with members of the Connecticut General Assembly and the Executive branch of government on the challenges and opportunities inherent in these state requirements.

Key Considerations for Legislators & Agency Leaders

→ Strong coordination between the HITAC Standards Advisory Committee, OHS, and the General Assembly to ensure ongoing alignment between federal and state data standards. The HITAC Standards Advisory Committee can serve in a coordination function as federal standards evolve, along with OHS staff assigned to the committee.

→ The ONC has taken a cautious approach to regulations of health IT systems and HIE technology, choosing to provide guidance whenever possible. Several federal agencies however are beginning to include interoperability requirements in funding opportunity announcements (FOAs); these types of actions can begin to drive vendors to move develop solutions using standard application program interfaces (APIs), for example, rather than building proprietary interfaces that are more costly to maintain or connect to.

Establish Electronic Data Standards

Focus Area 6

Success Metrics

→ The HITAC Standards Advisory Committee will recommend statutory changes related to health data standards to the OHS Executive Director.

→ As needed, legislative concept papers will be submitted by OHS to the Connecticut General Assembly with recommendations on changes to statute related to health data standards, particularly based on federal requirements and opportunities.

→ Opportunities for advancing standards in state technology procurements, upgrades, and in data exchange pilots will be leveraged.

1.

Key Implementation Activities

→ Establish a HITAC Standards Advisory Committee to review changes to federal standards and assess alignment with current Connecticut General Statutes.

→ Make recommendations as needed to update state statute and/or required legislation.

→ Deliver annual recommendations to the OHS Executive Director on any necessary revisions to Connecticut General Statutes relative to data standards.

→ Monitor regulatory environment and policy guidance development at the national level.

Connecticut Statewide Health IT Plan Summary Table

The next five years in Connecticut provide an opportunity for building on the momentum created through the successful implementation of Connie as the statewide HIE. Additionally, Connecticut state agencies' comprehensive restructuring toward a digitized government will establish the conditions for data sharing and whole-person centered service coordination across siloed state data systems and programs. The following tables summarizing the strategic focus areas of the Health IT Plan.

	Description	Activities
Focus Area 1	**Sustain and increase use of statewide HIE services**	HIE Sustainability Workgroup
		Connie Patient Access Portal
		Evaluate centralized quality measurement
		Evaluation of in-house resources to support central quality measurement
		HIE onboarding payment incentives and technical assistance
		Determine funding sources for statewide quality measurement and reporting
		Provider education on ONC Information Blocking Rule
Focus Area 2	**Implement systems to improve health equity and address health-related social needs**	Social Services Design Group
		CIE Feasibility Planning Committee
		Health Equity Dashboard
		IT infrastructure, staffing, and training
		Statewide CIE Shared Services Governance
Focus Area 3	**Improve service coordination and data sharing across state HHS agencies**	Public Health Gateway Assessment
		HHS Person-Centered Services Collaborative
		IT workforce planning and investments
		Connecting HHS Data Assets to Connie Collaborative
		Technical HHS Interoperability Workgroup
Focus Area 4	**Support behavioral health providers with the adoption of EHR and HIE services**	Behavioral health provider listening sessions on EHR / HIE concerns
		Provider and patient educational campaign
		Behavioral health provider EHR / HIE technical assistance and training
		Behavioral health provider financial incentive program
		Citizen town halls on HIE and health data rights

Focus Area 5	**Protecting individuals' health information privacy**	RFI on state agency consent management solution
		Recommendations on standardized statewide HIE consent protocols
		RFP for state agency consent management solution
		Consider establishing the Patient Health Information Protection Office
		Educational webpage and media on HIE and health information privacy
Focus Area 6	**Establish Electronic Health Data Standards**	Establish a HITAC Health Data Standards Workgroup
		Workgroup recommendations on health data standards
		Propose legislative concepts on health data standards, as needed
		Monitor and assess national and federal data standards policy developments

Appendix A – Sustainability Strategies

Sustainability Strategies for Publicly Funded Health Information Technologies and Exchange Services in Connecticut

Introduction

Sustainability of health information exchange, both the action of exchanging such information and the entities (HIEs) designated to enable that exchange, is a long-standing challenge for the healthcare system and for health information technology (health IT) infrastructure. With the recent establishment of the Connecticut HIE, Connie, there are significant opportunities to leverage the state's new information exchange infrastructure to make progress toward the Triple Aim. This is no small task given health information is extensive in both type and quantity with hundreds of granular data elements.

HIE organizations are challenged by their board of directors or other oversight entities to develop sustainability plans and strategies. Historically, there has been a reliance on infusions of federal dollars through the Office of the National Coordinator for Health Information Technology (ONC) and the Centers for Medicare and Medicaid Services (CMS) programs associated with the Health Information Technology for Economic and Clinical Health (HITECH) Act, which ended on September 30, 2021. There have been and continue to be a stream of one-time funds to support health IT and HIE, including programs such as the State Innovation Model (SIM); however, these programs do not address the long-term sustainability of technology investments.

Connecticut is positioned to have a high-functioning HIE organization supporting improved health outcomes in the state through HIE services. Consider that the HIE organization, Health Information Alliance, Inc., or Connie:

a. Has state-designated entity (SDE) status
b. Is integrated into a governance model that supports relationships with both the Department of Social Services (DSS) and the Office of Health Strategy (OHS)
c. Has established a position in the Medicaid Enterprise as a component that DSS will employ for several anticipated use cases (an initial use case is awaiting certification from CMS)
d. Has a path to funding for the next two years through the OHS budget, allowing time to complete and implement a sustainability plan.

Areas of ongoing concern for Connie include vertical integration among health systems, health system expansion, vendor-initiated advancements in information sharing across instances of specific vendor implementations, and other duplication of service implementations occurring in a federated HIE landscape. Connie is participating in this environment with provider organization relationships reflected in its board of directors and the participants in an Operational Advisory Committee. However, some of this participation is forced, as there are legislative mandates for all hospitals to connect to Connie within one year of commencement of operations, followed by connections to healthcare practices within two years. To address

the broader competitive threats, Connie must work to demonstrate value to its customers so as to mitigate any potential risks if legislative mandates are removed in the future.

To that end, Connie should be a trusted neutral party to support the data and some analytic needs in support of Medicaid value-based payment effective and may find application with other participants as well. Connie's vendor, CRISP, is integrated into Connie's operations and provides subject matter support to Connie, as well as to use case and funding request developments with DSS and OHS collaboration. Connie is working on all fronts and is focused on acquiring additional connections, making connections to major data sources such as the PDMP and Connecticut's largest hospital health systems, and pursuing an agreed upon sequence of use case development with DSS. Connie should consider how resources can be allocated to track the federal opportunities not just with DSS, but also with other state agencies.

For the broader context of data sharing in Connecticut the state should build upon the State CIO's Information and Telecommunications Strategic Plan for Fiscal Year 2021, and in the State Data Officer's State Data Plan 2021-2022. The recommendations published in the Draft Environmental Scan Report – Connecticut Five-Year Statewide Health Information Technology Plan provide crucial input to inform the vision, mission, and objectives to drive broad data sharing and work has been initiated to discuss interagency data sharing.

implementations. Demonstrated success with Medicaid should help to achieve similar participation with other payers. Connie's use case services, beginning with alert notifications, should be recognized as

HIE Sustainability Strategies

Sustainability of publicly funded HIE services must be a top priority for Connecticut leaders. Sustainability includes comprehensive funding strategies; however, it must also rapidly ensure there is tangible value to clinicians through user-friendly interfaces that can be readily and efficiently incorporated into clinical workflows. Connie must position its suite of HIE services as a critical public utility for clinicians, public health crises response, and for coordination of community support services. The Connecticut Health IT Advisory Council, an important oversight committee for publicly funded health IT and HIE services, can provide strategies for the successful deployment and sustained operations of Connie.

Strategies for Increasing the Use and Sustainability of Connie

HIE organizations such as Connie are challenged to position themselves to provide unique services and supports that contribute to information exchange and improved health outcomes while remaining viable organizations. There are local, regional, and statewide considerations that can be served by Connie, including:

HIE Organizations Support Local Needs	Community Health Records	Public Health Utility Functions
Integrating SDoH Data for Care Coordination	Curated Regional Data Repositories	Health Data Utility Model

→ Local needs are not all met by national exchange or vendor-driven solutions. Health systems with large geographical footprints still do not include all types of providers who may be involved in patient care. These are gaps that Connie can address.

→ Community health records integrating other data sources can be served by Connie. This tool would allow community health care providers to access aggregated patient records from multiple hospitals and medical labs throughout a community.

→ Connie can serve public utility applications including electronic case reporting and participation in disaster response. One system for emergency response is the Patient Unified Lookup System for Emergencies (PULSE) which can support the information needs of a field hospital set up in an emergency, when the patients are remote from their normal hospitals and provider systems. In a PULSE implementation the HIE would be participating with a national exchange entity to support this service.

→ Incorporating SDoH data into care coordination models requires local interactions with a wide variety of social agencies and community organizations. Solutions may be varied but they will require close coordination of integration and connections with a wide variety of organizations with varying levels of technical capabilities.

→ Connie can provide or facilitate normalized curated repositories of regional data. The data may come from several different systems and while the data may not reside at the HIE, the HIE is a natural hub for receipt and processing of such data.

→ Connie could participate in a Health Data Utility model (HDU). HDUs overlay public and population health with HIE organizing principles. HDUs address the exchange, curation, and analysis of data not typically provided by an HIE. For example, a combination of HIE, PDMP, All Payer Claims Database (APCD), syndromic surveillance, public health registries.

Partner with the State Medicaid Agency

State Medicaid Agencies (SMAs), including DSS, are highly motivated to utilize HIE services in support of transitioning to modular Medicaid Enterprise Systems (MES) and as part of new initiatives. Connie should continue to strengthen its relationship with the Medicaid agency and should also have in-house subject matter expertise in the federal funding mechanisms discussed below related to the certification process and the development of funding request documents. Collaboration with DSS will be more effective if Connie can demonstrate its awareness of these processes, procedures, and terminologies.

There will be statutory and policy guidance issued by both CMS and ONC that will impact the SMA and the HIE needs to be aware of current updates. For instance, the CMS interoperability and patient access final rule requires SMAs to make Medicaid claims and some clinical data available to individuals through an API that can access Medicaid data. ONC provides the accompanying technical requirements for an API interface.

A successful relationship with DSS, supported by subject matter expertise and awareness of current statutory and policy directions, can lead to federal funding that could contribute 25% or more of the HIE operational budget. CMS has recently adopted an outcomes-based certification (OBC) model to promote progress with

enterprise technologies. The OBC model focuses on achieving identified and approved outcomes, supported by appropriate metrics, and demonstrated in a production environment before certification is granted. Once certified, however, the module or use case that is certified qualifies for maintenance support at a Federal Financial Participation (FFP) level of 75%, cost allocated to reflect a "fair share" for the SMA and to make sure that other payers are paying their fair shares for using the module.

Cost allocation can vary from use case to use case. If the use case is developed by the SMA strictly for a purpose that serves only the SMA then the cost allocation is 100% Medicaid and the FFP will be 75% of the actual cost to maintain the use case. As another example, if a use case applies to an entire population of state residents, then the cost allocation for the SMA might be based on the percentage of state residents who are Medicaid beneficiaries. That percentage will vary from state to state but might be in a range of 20-30% or higher. In this example, the cost allocation for the SMA would be, say, 25% and the FFP for ongoing maintenance of the use case would be 75% of 25% of the cost of maintenance. If the use case costs $1,000,000 to maintain, the Medicaid share would then be 18.75% of the total, or $187,500. This will require states to allocate more dollars for the state share in order to draw down federal match funding, an increasingly challenging proposition as state legislators and governors are faced with competing demands.

CMS continues to work closely with SMAs to support and shepherd them through the process. However, all the states and territories are now going through the transition from HITECH funding to cost allocated MES funding at the same time, severely testing CMS capacity to manage the certification reviews and to review the associated funding requests.

SMAs, including DSS, work with CMS to propose use cases and associated OBC outcomes and metrics. Use cases needing additional planning, development, and support may receive 90% FFP, cost allocated. When a use case is finally implemented in production the FFP is reduced to an administrative level of 50% for a required six-month operating period while metrics are gathered. Following this operating period, a certification review will hopefully result in a formal CMS certification approval. Once certified the FFP is elevated to the 75% cost allocated maintenance level and is applied retroactively to the date the use case went into production.

These processes for use case proposals and certification, and for the cost allocated FFP, are necessary to ensure that FFP is being legitimately applied to initiatives that benefit only the Medicaid programs supported by CMS. There is an associated burden on the states and designated HIE organizations to continue operations and use cases put into place with HITECH support and to fund development and operations of OBC initiatives during these transitional processes.

However, once a use case is certified it is part of the Medicaid enterprise and ongoing maintenance support is available with much less procedural effort. Metrics must continue to be gathered and some reporting is required but the heavy lift of achieving certification and achieving a known level of ongoing stable funding has been accomplished. This predictable level of FFP is a valuable component of an overall funding strategy for the SMA and a designated HIE organization.
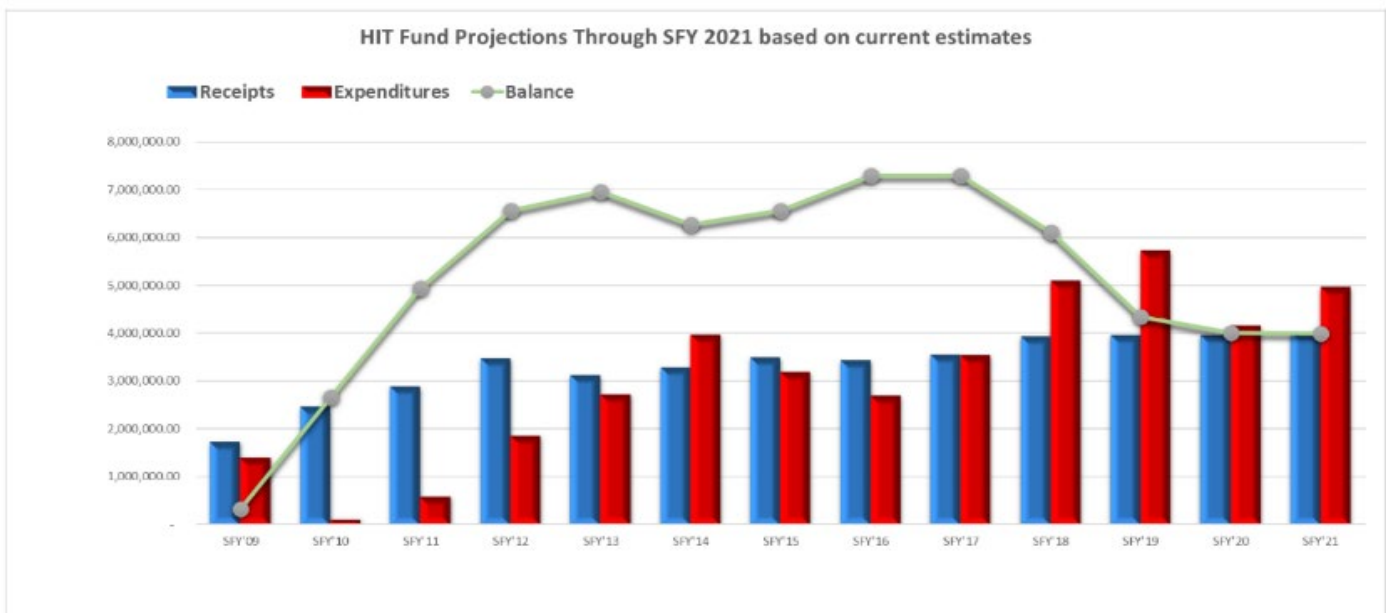
Understand Lessons Learned from Existing Sustainable HIE Organizations

Several HIE organizations consider themselves to be sustainable and these organizations provide examples of services and initiatives that contribute to sustainability. In a panel discussion at HIMSS19 three HIE organization leaders discussed the topic of sustainability and each discussed an example that applied to their organization. Brandon Neiswender, Vice President and COO of CRISP (Chesapeake Regional Information System for our Patients) talked about a small lightweight platform to store information to notify people, such as managed care status, provider and phone number, discharge status, and more. These can be available in a query portal or via an API. Charles Scagline, CEO and Executive Director of Bronx RHIO has found analytics to be a valued service, but single sign on and data availability alerts have the greatest impact on HIE usage. John Kansky, President and CEO Indiana Health Information Exchange talked about to benefit of incremental value growth and not fearing the inevitable failures that come when organizations prioritize rapid innovation.

Other best examples from existing HIE organizations include funding strategies and approaches. In Vermont, the state has determined that there needs to be some level of state financial support to ensure ongoing availability of HIE services. A state HIT fund is established in statute with funds raised from a small (0.199 of 1%) health care claims tax paid by

> ### *John Kansky, IHIE*
>
> "We talk a lot about home runs and base hits," Kansky said. "In our 10-plus year history, we are figuring out what our market wants and needs and will pay for. We need to get away from just wanting to hit home runs. Something that's talked about in the tech start-up world, and less in the HIE world, is "fail fast,"— if you try to hit a home run and you bet so many resources and two years of development on this huge thing and screw that up, that's an existential threat. If you do incrementalism, add small value, and figure out which pieces work and not work quickly. And it needs to be okay to fail. With more things coming into the marketplace to add value, it's okay to have some failures."

Figure: HIT Fund Projections Through SFY 2021 based on current estimates. Receipts, Expenditures, Balance across SFY'09 through SFY'21.

the health insurers on private health insurance claims in Vermont. Through the years Vermont has leveraged the HIT fund to match federal dollars through the HITECH Act, the State Innovation Model Program, and Vermont's Medicaid Global Commitment Waiver.

In Maine, HealthInfoNet (HIN) is an independent, nonprofit information services organization that manages the statewide HIE in Maine. A recent strategic plan document identifies priorities and strategies for sustainability, including adding new data sources, developing new enterprise assets, obtaining new revenue streams, and several strategies associated with a related priority of developing partnerships and value propositions. This strategic plan is notable on two fronts – it is intentionally brief, and it covers an 18-month period, citing the rapid changes that are occurring in HIE and the need to revisit strategies on a frequent cadence.

Integrate HIE with Vital Public Health Services

There are several public health services and data management and reporting requirements that can benefit from HIE services. Public health registries for immunizations, cancer, and other diseases can have information submitted through an HIE organization and other HIE participants can query these registries in a patient encounter setting. Electronic case reporting related to syndromic surveillance can be supported by HIE organizations based on the use of triggers and APIs associated with monitored lab results. Substance use disorders are a public health concern and a connection to a PDMP can inform providers of current and historical prescription records as patients are being treated.

HIE organizations are playing a critical role in several state responses to COVID-19. They have responded quickly and effectively to work with state public health and other agencies in an urgent need for information to track the spread of cases, the strain on hospitals and resources, and patient-specific information to inform treating providers of existing chronic conditions and medication histories.

HIE Organizations Respond to the Pandemic
- Analyzing COVID-19 testing results
- Calculating demographic trends
- Capturing relevant comorbidities
- Enhancing contact tracing capabilities
- Providing a mechanism for credentialed clinicians to order tests at drive-through locations

HIMSS Article

Public health agencies have struggled to upgrade their technical infrastructures. Many of the programs and related data assets have been established through legislative or regulatory mandates as standalone programs tied to specific funding. Agencies are planning modernization efforts that will upgrade their capabilities and support integration and sharing of the data. Connie can help with such efforts and several HIE organizations

have established public health gateways to support bi-directional data flows with public health registries. Connecticut should consider exploring HRSA opportunities, such as the current ARP Act Maternal, Infant, and Early Childhood Home Visiting (MIECHV) innovation awards.

Support Value-Based Payment Models

Value-based payment models build on or replace fee-for-service models of provider reimbursement for care delivery. CMS has been transitioning to VBP models in its administration of the Medicare program and actively encourages states to implement VBP models in state Medicaid programs. For Medicare the Quality Payment Program (QPP) includes variations of a Merit-Based Incentive Payment System (MIPS) for providers and Alternative Payment Models (APMs) for health organizations. Private payers have also been adopting such models across their networks of payers.

A State Medicaid Directors (SMD) letter issued in September, 2020 provides extensive guidance to states to engage in VPB models for Medicaid administration (SMD #20-004 RE: Value-Based Care Opportunities in Medicaid). This move to VBP models will continue. This SMD letter reflects on the Medicare programs and refers to the Health Care Payment Learning and Action Network (HCP-LAN) framework for alternative payment methodologies as additional guidance to state Medicaid agencies. The SMD urges Medicaid agencies to align with the Medicare programs underway and to consider multi-payer alignment as well. Commercial payers are pursuing their own VBP programs with their provider networks.

All of these VBP scenarios share some common needs for implementation and support that can be met through HIE organizations. Fundamental resources include patient or individual identity management and provider information. Attribution or the identification of a provider's cohort of patients is critical support for a provider engaging in VBP programs. Quality measures support the value-determining outcomes when feedback reports are developed, and those measures require the aggregation of data and the use of analytic tools. HIE organizations with advanced analytic capabilities to support standardized and custom quality measurement may hold the key to multi-payer alignment on VBP models and transformative care strategies. Lack of VBP model alignment among payers creates significant resource challenges for providers who are customarily contracted with several public and private health care purchasing organizations (i.e., Medicare, Medicaid, managed care plans, commercial health plans, etc.).

Additional opportunities exist for Connie to support the workflow of care delivery to achieve better outcomes while reducing overall costs. One of these opportunities is support for care coordination through provider portals and/or care coordination tools that provide access to entire care coordination teams of providers. Event notification to providers and care team members when a patient has an ED visit or is admitted to or discharged from a hospital is another opportunity. Note that these examples require the underlying relationship of providers to patients provided through attribution support. Integration of data from some of the other sustainable opportunities already discussed – public health data, and SDoH data – can also improve outcomes and support the progress of VBP models.

Integrate Data Associated with Social Determinants of Health

As VBP models expand, traditionally segregated providers (within healthcare and across health and non-health sectors) increasingly need to work together to improve the coordination, quality, and effectiveness of health and social services. In addition, stakeholders need to be able to measure performance consistently across settings and organizations to assess value and success of payment reform. This is especially relevant in the context of SDoH. As risk gets transferred to healthcare providers, the benefits for them and the people they care for will depend on their ability to share and effectively use actionable data and information with providers in other arenas, including but not limited to human services, restorative justice, and housing programs.

In the context of state Medicaid programs, managed care contracts are beginning to include requirements to screen for social needs and link patients to community services. There is also a growing focus on performance improvement and quality assurance in the context of Medicaid managed care contracting. Underlying these new value-based initiatives is the need to use SDoH data in conjunction with healthcare data to support whole person-centered care strategies and program operations, monitor performance, and to guide ongoing quality improvement.

Certification criteria for EHR systems now include criteria on social, psychological, and behavioral health. The Office of the National Coordinator (ONC) Interoperability Standards Advisory identifies standards for the following attributes of social, psychological, and behavioral health:

- Alcohol Use
- Depression
- Drug Use
- Exposure to Violence (Intimate Partner Violence)
- Financial Resource Strain
- Food Insecurity
- Housing Insecurity

> ### *Potential SDoH Use Cases*
>
> - Longitudinal care management – complex needs
> - Episodic care management – unexpected events and needs
> - Coordination across medical neighborhood and community providers
> - Outreach and prevention for general and targeted populations
> - Performance measurement to guide quality initiatives and VBP models
> - Evaluation of program impact
> - Predictive models to meet health, quality, and cost goals
> - Integrated care delivery – universal SDoH screenings and targeted screenings for patients with complex needs
> - Establish and maintain a database of community and social services with referral tracking and ability to monitor service outcomes
> - Track and measure success rates of linkages to community resources
> - Establish community health indicators through population-based analytics
> - Identify common social risk factors at the zip code level contributing to higher rates of mortality and morbidity

- Level of Education
- Physical Activity
- Social Connection and Isolation
- Stress
- Transportation Insecurity

It is key to understand and identify the data, technology and interoperability needed to support the priority use cases related to SDoH. Importantly, how will SDoH data be used to meet the use case goals? Understanding how the data will be used will help with planning which data elements are needed to adequately identify populations of interest, and to support linkage of multi-sector data from various sources. HIE organizations are not mentioned much in the literature on integrating SDoH but the need to exchange disparate data elements is essential to addressing SDoH. Recent work in standards and terminology services (the Gravity Project) and the potential of APIs will lead to a more prominent role for HIE organizations. States are identifying SDoH use cases for certification in their MES programs which will help to address the funding requirements. In addition, ongoing federal discussions of SDoH and the integration of SDoH into healthcare, including alternative payment models should be actively monitored as this field is rapidly evolving.

Inter-Agency Data Normalization and Sharing

States ready to support and pursue broader data exchange have a few opportunities to do so. Health and human services agencies can continue to expand their efforts to incorporate SDoH into medical and other assistance programs, leveraging VBP and other program models supported by CMS, SAMHSA, Centers for Disease Control and Prevention, and other federal agencies. The types of SDoH data can be expanded as well. Geographically, states can work with bordering states to normalize the exchange of data across state lines to support their citizens who live close to contiguous states and cross the border for medical and other health-related care.

Interagency data sharing requires sponsor and convener roles as a starting point and policy and legislative work that should occur up front. This effort will no doubt require cost-benefit analysis to support the state budget. However, there may be healthcare-related use cases that might apply to the Medicaid Enterprise, as an example, and cost allocated federal participation may be available in some cases.

The cross-agency data sharing opportunity should eventually branch out beyond the administrative boundaries of state government. While it has an aspect of being citizen-centric in terms of state services, citizens also have relationships with other entities like commercial insurance providers and the state should consider its position as an entity participating in an even larger ecosystem of potential data sharing with federal and commercial entities.

States are approaching issues of data management and data sharing from a few related perspectives. State chief information officers (CIOs) have huge responsibilities for data management, cost control, optimization, and cybersecurity and risk management, among others. An emerging priority for these CIOs is in the area of digital government/digital services, the concept of a portal for citizen access, and digitizing the citizen experience with accessibility and identity management. Consolidation and centralization of IT assets and

services supports these identified priorities and the process of analyzing opportunities for consolidation has led to inventories of state agency IT systems and data.

While the state CIO has broad IT responsibilities which include elements of data management, many states are also establishing the role of the State Data Officer. According to the Beeck Center at Georgetown University, the state Chief Data Officer (CDO) role is now established in 25 states, all since 2011 beginning with Colorado. Broadly speaking, CDOs consider data assets within the state government enterprise and seek to identify new applications of that data to provide new information resources for the missions of state government agencies (CIOs ensure the safe, secure, and reliable delivery of that information). The opportunity for partnership between the CDO and the CIO is clear, but the CDO is not the subject matter expert of determining the need for innovative information products that might be possible from the data sources being cataloged.

Working with individual agencies to explore their needs and working across agencies to bring multiple data sources to bear on unique problems or applications is similar to the process of developing use cases as practiced by HIE organizations. Ultimately, Connecticut will benefit from a formal governance approach to establishing a statewide data sharing ecosystem. States can begin by identifying a sponsor and a convener to begin organizing this effort. The Beeck Center's State CDO Network site offers guidance in the form of legislation examples to help with "storming and forming" effort.

Many of the potential applications for cross-agency data sharing are in the domain of healthcare including some with specific healthcare alignment such as health data registries (immunizations, prescription drugs) and others with related SDoH alignment (housing, other social services assistance).

Appendix B – Data Standards Strategy

Introduction

Connecticut General Statute (CGS) 17b-59a addresses the development of uniform information and technology standards and regulations in the context of health information technology (health IT) and health information exchange (HIE). Definitions are provided for "electronic health information system", "interoperability", and "standard electronic format".

Subsection (b) states that "(b)The Commissioner of Social Services, in consultation with the executive director of the Office of Health Strategy, established under section 19a-754a, shall (1) develop, throughout the Departments of Developmental Services, Public Health, Correction, Children and Families, Veterans Affairs and Mental Health and Addiction Services, uniform management information, uniform statistical information, uniform terminology for similar facilities, uniform electronic health information technology standards and uniform regulations…".

Subsection (c) states that "The executive director of the Office of Health Strategy shall, in consultation with the Commissioner of Social Services and the State Health Information Technology Advisory Council, established pursuant to section 17b- 59f, implement and periodically revise the state-wide health information technology plan established pursuant to this section and shall establish electronic data standards to facilitate the development of integrated electronic health information systems for use by health care providers and institutions that receive state funding. Such electronic data standards shall: (1) Include provisions relating to security, privacy, data content, structures and format, vocabulary and transmission protocols; (2) limit the use and dissemination of an individual's Social Security number and require the encryption of any Social Security number provided by an individual; (3) require privacy standards no less stringent than the "Standards for Privacy of Individually Identifiable Health Information" established under the Health Insurance Portability and Accountability Act of 1996, P.L. 104-191, as amended from time to time, and contained in 45 CFR 160, 164; (4) require that individually identifiable health information be secure and that access to such information be traceable by an electronic audit trail; (5) be compatible with any national data standards in order to allow for interstate interoperability; (6) permit the collection of health information in a standard electronic format; and (7) be compatible with the requirements for an electronic health information system."

Finally, subsection (e) states that "The state-wide health information technology plan, implemented and periodically revised pursuant to subsection (c) of this section, shall enhance interoperability to support optimal health outcomes and include, but not be limited to (1) general standards and protocols for health information exchange, and (2) national data standards to support secure data exchange data standards to facilitate the development of a state-wide, integrated electronic health information system for use by health care providers and institutions that are licensed by the state. Such electronic data standards shall (A) include provisions relating to security, privacy, data content, structures and format, vocabulary and transmission protocols, (B) be compatible with any national data standards in order to allow for interstate interoperability, (C) permit the collection of health information in a standard electronic format, and (D) be compatible with the requirements for an electronic health information system."

These three subsections of CGS 17b-59a identify the responsibility and mandate the development of a wide-ranging set of standards and regulations related to health information data management. The notes that follow identify standards currently in use or emerging as a starting point for beginning this work of setting standards. Suggestions are also made for considerations of participation and process to establish standards.

The statutory requirements in CGS 17b-59a are outlined below:

Responsible Party or Parties	Assigned Area of Responsibility
DSS Commissioner with **OHS Executive Director**	***Develop uniform management information, statistical information, terminology for similar facilities, electronic health information standards, and uniform regulations for:*** **Departments of:** - Developmental Services - Public Health - Corrections - Children and Families - Veterans Affairs - Mental Health and Addiction Services
OHS Executive Director with **DSS Commissioner** and **HITAC**	***Establish electronic data standards to facilitate development of integrated electronic health information systems for use by health care providers and institutions that receive state funding.*** **Requirements** Include provisions related to: - Security - Privacy - Data content - Structures and format - Vocabulary - Transmission protocols → Limit the use and dissemination of an individual's SSN → Require the encryption of any SSN → Require privacy standards no less stringent than HIPAA → Require that PHI be secure → Require access to PHI be traceable by an electronic audit trail → Be compatible with any national data standards to allow for interstate interoperability → Permit the collection of health information in a standard electronic format

	→ Be compatible with the requirements for an electronic health information system

Statewide Health Information Technology Plan	*Include general standards and protocols for HIE; include national data standards to support secure data exchange data standards to facilitate the development of a state-wide, integrated electronic health information system*
	
	Requirements
	Standards shall include provisions relating to
	  ■ Security
	  ■ Privacy
	  ■ Data content
	  ■ Structures and format
	  ■ Vocabulary
	  ■ Transmission protocols
	
	→ Be compatible with any national data standards to allow for interstate interoperability
	
	→ Permit the collection of health information in a standard electronic format
	
	→ Be compatible with the requirements for an electronic health information system

The development of cross-agency uniform requirements, standards, and regulations (item 1) is beyond the scope of the Five-Year Statewide Health Information Technology Plan (Health IT Plan). Items 2 and 3 are related in that the inclusion of general standards and protocols for HIE in the Health IT Plan (item 3) can inform the establishment of electronic data standards (item 2).

There is substantial activity in Connecticut related to all the topics mentioned above. Providers and hospitals are using EHR systems which incorporate a number of standards required for their certification. HIPAA and security standards in the area of information technology are in widespread practice. Connie, the state designated entity for HIE, is operating and has implemented its standards to support its operation and safeguard data being exchanged with participants. Major health systems exchange data across scores of participants in large geographical areas.

Recommendation

Establishing electronic data standards to satisfy the requirements listed in the statute will require a significant effort with stakeholder participation and a coordinated managed process to track content and consensus. These examples of health IT activity underscore the need for collaboration and stakeholder engagement as electronic data standards are established. In some instances, a single standard may not be practical, and a number of standards may be acceptable.

OHS should create an ad hoc HITAC stakeholder workgroup that meets at least once a year to ensure that Connecticut statute is aligned with the constantly evolving federal standards, allow for interstate compatibility, permit the collection of health information in a standard electronic format, and be compatible with the requirements for an electronic health information system. The workgroup, with OHS staff support, should:

- Review changes to federal standards and assess alignment with current Connecticut general statutes in the following domains: security, privacy, data content, structures and format, vocabulary, and transmission protocols
- Ensure alignment with Connie-specific policymaking relating to standards
- Make recommendations to the OHS Executive Director on any necessary revisions to Connecticut general statutes to ensure consistency with federal standards
- Obtain a periodic update from OHS on the revisions

Background & Context: General Standards and Protocols for Health Information Exchange

The Office of the National Coordinator for Health Information Technology (ONC) is a good starting point for consideration of health IT standards. "ONC is working to enable the health IT community to convene and rapidly prioritize health IT challenges and subsequently develop and harmonize standards, specifications and implementation guidance to solve those challenges. ONC is also responsible for curating the set of standards and specifications that support interoperability and ensuring that they can be assembled into solutions for a variety of health information exchange scenarios."[2]

ONC publishes the Interoperability Standards Advisory (ISA) as a way of recognizing interoperability standards and implementation specifications for industry use to fulfill specific clinical health IT interoperability needs. The ISA is available as an annual document but because standards are frequently being added or changed the website version of the ISA is the current version. ONC supports printing the website version to generate a complete ISA as of the current date.

The following brief discussions of the topics identified in CGS 17b-59a will help to identify resources to inform the standards development. These discussions, including linked pages, also expose the complexity of setting standards that can gain traction and support across the community of participants. For that reason, \we recommend that guiding principles be established for each of the identified topics in the statute. These principles can be informed by the available resources at the ONC website, and others and standards can then be recommended in alignment with the principles. As an example, HITAC established a consent management working group which developed a set of principles for consent management. Those principles can inform consent policy and subsequent implementation standards. A similar process can be applied to the other topics and support the standards development activity.

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[2] https://www.healthit.gov/topic/standards-technology/health-it-standards

Security

The ISA incorporates existing standards for different aspects of health IT and helps to cross reference similar standards coming from different standards organizations. However, the work of cataloging and trying to establish a standard is daunting. The requirement to include provisions relating to just one topic – security – is very challenging; a page in the ISA identifies security standards as found in the following publications:

- ASTM International – American Society for Testing and Materials
- ISO – Information Organization for Standardization
- NIST – National Institute for Standards and Technology
- Open ID Connect 1.0 – identity layer for the OAUTH protocol
- OAUTH 2.0 – protocol for identity authorization
- IHE International – Integrating the Healthcare Enterprise
- HL7 International – Health Level 7

Privacy

The Health Insurance Portability and Accountability Act of 1996 (HIPAA or the Kennedy–Kassebaum Act) is the primary and fundamental standard addressing the privacy needs of individuals with respect to their personal health information (PHI) HIPAA generally prohibits healthcare providers and healthcare businesses, called covered entities, from disclosing private information to anyone other than a patient and the patient's authorized representatives. It does not restrict patients from receiving information about themselves, prohibit them from voluntarily sharing their private health information however they choose, or – if they disclose private medical information to individuals – legally require those non-covered people to maintain confidentiality.

The HIPAA Privacy Rule is composed of national regulations for the use and disclosure of Protected Health Information (PHI) in healthcare treatment, payment, and operations by covered entities. The HIPAA Privacy Rule regulates the use and disclosure of PHI held by "covered entities" (generally, health care clearinghouses, employer-sponsored health plans, health insurers, and medical service providers that engage in certain transactions) By regulation, the HHS extended the HIPAA privacy rule to independent contractors of covered entities who fit within the definition of "business associates". PHI is any information that is held by a covered entity regarding health status, provision of health care, or health care payment that can be linked to any individual. This is interpreted rather broadly and includes any part of an individual's medical record or payment history.

A covered entity may disclose PHI to certain parties to facilitate treatment, payment, or health care operations without a patient's express written authorization. Any other disclosures of PHI require the covered entity to obtain written authorization from the individual for the disclosure. In any case, when a covered entity discloses any PHI, it must make a reasonable effort to disclose only the minimum necessary information required to achieve its purpose.

The Privacy Rule requires covered entities to notify individuals of uses of their PHI. Covered entities must also keep track of disclosures of PHI and document privacy policies and procedures. They must appoint a Privacy

Official and a contact person responsible for receiving complaints and train all members of their workforce in procedures regarding PHI.

From this brief description it is clear that only individuals and entities involved in treatment, payment, or operations related to an individual can disclose PHI, and then the disclosure would only be to another entity with a similar relationship requirement. In particular, a provider in a medical practice who is not treating a patient seeing another provider at that practice should not be accessing that patient's medical records in the common system that practice may be using.

Data Content; Structures and Format

The image below shows the data content high level categories identified in the ONC ISA.

Figure 1 Data Content/Structure - ONC ISA

The category of Admissions, Discharge, and Transfer (ADT) is shown in expanded format. These expanded options are links to standards and the standards related to the second bullet – sending a notification of a patient's ADT status to a provider – is shown in the figure below.

Figure 2 Sending a Notification of a Patient's ADT Status to Other Providers

Type	Standard / Implementation Specification	Standards Process Maturity	Implementation Maturity	Adoption Level	Federally required	Cost	Test Tool Availability
Standard	HL7 2.5.1 (or later) ADT message	Final	Production	●●●●●	No	Free	No
Implementation Specification	IHE Patient Administration Management (PAM) Integration Profile	Final	Feedback requested	Feedback Requested	No	Free	No
Implementation Specification	HL7® FHIR® DaVinci Unsolicited Notifications Implementation Guide	Balloted Draft	Pilot	●○○○○	No	Free	No
Emerging Implementation Specification	*Carequality Subscription Implementation Guide for Push Notifications*	*In Development*	*Pilot*	*Feedback Requested*	*No*	*Free*	*No*

Note that there is not a single standard that applies, and none of these possible standards are federally required. Even though the HL7 2.5.1 or later standard is widely adopted, the emphasis at the implementation level today is for the HL7 FHIR standard (Fast Healthcare Interoperability Resources). The Column labeled Standard/Implementation Specification is populated with links to detailed standards documentation.

This example illustrates the way that Connecticut can utilize the ISA to identify and explore current and emerging standards across the spectrum of data types and structures. It also illustrates the complexity of setting standards across the health IT ecosystem and supports an argument for focusing on principles as a first step.

Vocabulary

The vocabulary and coding of observations, diagnoses, treatment, and results is covered by a number of maintained code sets. Refer to the ISA vocabulary tab to explore the detail and variety. A few of the code sets that are widely used are listed here:

- SNOMED CT – Systematized Nomenclature of Medicine – Clinical Terms
- LOINC – Logical Observation Identifiers, Names, Codes
- CPT – Current Procedural Terminology

The Health Information Management and Systems Society (HIMSS) has a brief overview with links of some of the common terminology standards used in health information and technology.

The 21st Century Cures Act introduced the USCDI – the United States Core Data for Interoperability. Health IT developers will use the USCDI as a standard for defining data elements within their systems. Following such a standard approach will support the interoperable use of exchanged data.

Transmission Protocols

The ADT example described above in the data content topic identified HL7 V2.5.1 or higher as a widely implemented protocol for transmitting messages with health information. The FHIR standard is emerging and is the focus of current implementations. Other transmission protocols may apply to specific situations such as

public health reporting to the Centers for Disease Control (CDC). When EHR systems are not in use the DIRECT protocol is available for secure messaging similar to email, with encryption.

Appendix C – Environmental Scan Recommendations

Strategies for Widespread Use and Sustainability of Connie

Sustainability of Connie must be a top priority for Connecticut leaders. Sustainability includes comprehensive funding strategies; however, it must also rapidly ensure there is tangible value to clinicians through a user-friendly interface that can be readily and efficiently incorporated into clinical workflows. Connie must position its suite of HIE services as a critical public utility for clinicians, public health crises response, and for coordination of community support services. The Connecticut Health IT Advisory Council, an important oversight committee for publicly funded health IT and HIE services, can provide strategies for the successful deployment and sustained operations of Connie.

→ Recommend Connecticut Health IT Advisory Council continue to provide advisory support to the Executive Director of the Office of Health Strategy (OHS) and the Health Information Technology Officer (HITO) in evaluating options to help ensure long-term sustainability of Connie's HIE services, and support the fulfillment of the responsibilities of OHS as described in Connecticut General Statute (CGS) Section (Sec.) 17b-59g(a)(3).

→ Create a HITAC-appointed stakeholder workgroup to review options and provide advice to the OHS Executive Director and the HITO on ways the State can support Connie's sustainability, including, but not limited to, legislation and/or regulatory actions to encourage participation in Connie, with potential funding sources to project Connie as a critical public utility focused on providing health information exchange services, governance or oversight needs for the management of statewide master data services, and progression of OHS responsibilities outlined in CGS Sec. 19a-754a.

The sustainability workgroup's advisory role should be clearly delineated from the oversight role of Connie's Board of Directors and the operational roles of Connie's executive leadership. The workgroup should:
- o Evaluate sustainability strategies of long-standing HIE organizations in other states.
- o Develop a comparative analysis showing where savings are accrued across domains (payers, providers, hospitals, state agencies, etc.) when a critical mass of provider organizations are participating in one or more of Connie's use cases.
- o Recommend executive, legislative, agency, and program-level actions to help ensure Connie's sustainability.

→ Connie should consider adoption of a single statewide ADT notification system, rather than the multiple systems presently used in the state (e.g., Project Notify and PatientPing).
- o Connie could consider conducting a survey of users of the competing ADT notification systems in Connecticut to assess the satisfaction of organizations with the system they use.

- Connie could also consider conducting a Request for Information (RFI) process to evaluate options for connecting multiple notification systems through a master data management service with application program interfaces (APIs).

→ Payment incentives should be included in contracts between payers and providers to build a critical mass of organizations onboarded and exchanging health information to improve clinical care. In addition to payment incentives, a regional extension center-styled initiative should be instituted to ensure smaller practices and provider groups have the technical supports and training to onboard and utilize the statewide HIE.

→ When exploring expansion of the Connecticut Prescription Monitoring and Reporting System (CPMRS) for a source of medication fill data for a Best Possible Medication History service offered by Connie, a thorough and transparent evaluation of the current laws and policies governing access and use of CPRMS for law enforcement activities must be conducted to determine whether legal and/or policy changes are needed, including but not limited to consent requirements and the ability for individuals to opt-out. Potential disruptions and/or interruptions to current CPMRS functionality for prescribers must also be evaluated.

→ Explore additional or alternative medication fill data sources, including variability in data quality and completeness, timeliness, and cost of various data sources.

→ Establish Single Sign-On (SSO) capabilities between Connie and CPMRS for ease of access to PDMP data for Connecticut providers which has started with the integration and may be complete Summer, 2021. Support for the Gateway integration beyond the current 2-year limited funding should be explored which will allow for a Single Sign-On (SSO) to be leveraged and the full value of the CPRMS to continue to be realized.

→ A Connie workgroup for the Best Possible Medication History (BPMH) use case should integrate expertise from the Medication Reconciliation and Polypharmacy Committee and include leadership of the CPMRS program. The BPMH workgroup should have the opportunity to provide feedback to the CPMRS program on potential expansion of the PDMP to additional drug classes and drug types.

→ The Office of Health Strategy should conduct a provider education campaign on the Office of the National Coordinator (ONC)'s Final Rule on Information Blocking to encourage greater portability and interoperability of patient health information. This should be followed by clear guidelines for how compliance with the information blocking rules will be monitored and enforced.

→ The Office of Health Strategy should engage Connecticut leaders from accountable care organizations (ACOs) and members of the Primary Care and Community Health Reforms Workgroup to evaluate the use of Connie as a centralized clinical quality measurement and reporting service to support providers' participation in value-based payment models.

→ In conformance with legislative intent and stakeholder feedback, Connie should prioritize the development of a consumer/patient portal. The portal should be offered to individuals for accessing their own health records, without barriers or fees.

→ To increase the value of HIE services, Connie should explore ways to accelerate provider participation in clinical data (e.g., lab, pharmacy, radiology reports, medical images, behavioral and oral health records, etc.).

Systems and Strategies to Address Social Determinants of Health

Connecticut should allocate technology funding for community-based organizations to support the acquisition of needed technology to coordinate SDoH screening and referrals for individuals with the health care and human services ecosystem in the state. This includes, but is not limited to, fulfilling the requirements of Public Act Number 21-35 Section 11 related to the collection and storage of race, ethnicity, and language (REL) data, expansion of the utilization of Unite Connecticut, and exploration of other tools to capture social risk factors and coordinate care across communities.

→ The Office of Health Strategy and the HITAC should charter a working group with representatives of community-based organizations, social service agencies (state and local), and provider organizations to establish best practices for capturing social needs and social determinants of health when conducting screenings/assessments. The working group should:
  o Analyze current screening assessment tools in use in Connecticut
  o Evaluate technology options for mapping similar data elements between different screening/assessment forms currently in use in Connecticut to common standards
  o Engage stakeholders to consider available options
  o Develop proof-of-concept pilots to test new workflows for data collection, test new screening/assessment tools, and test tools to map similar data elements to common standards

→ Align with efforts to develop national standards for SDoH data elements and Z-codes in electronic health record systems (The Gravity Project , SIREN)

→ Explore the development of a community information exchange, leveraging state resources in place such as Connie, Health Equity Solutions, Connecticut Health Foundation, the Health Enhancement Communities (HECs), Unite Connecticut, the Homeless Management Information System, and United Way's 2-1-1 Referral Directory,

→ Facilitating broad collection of race, ethnicity, and language (REL) data, in accordance with Public Act No. 21-35, as a vehicle to better understand the needs of communities of color and develop a holistic strategy to address health disparities through data availability and analytics to create health insights at the point of care. The Office of Health Strategy should create a Health Equity Dashboard to understand the prevalence of specific health disparities and evaluate the effectiveness of interventions. Make Health Equity Dashboard tools publicly available and create online training resources to support users.

The Connecticut General Assembly should ensure adequate funding for hiring and training personnel to manage and operate technology assets. (Refer to similar topic in Recommendation #3.)

The Connecticut General Assembly should provide funding for ongoing education and technical assistance to ensure a technically competent workforce.

Service Coordination and Data Integration Across State Agencies

→ The Connecticut General Assembly should ensure adequate funding and resources are available to the Connecticut Department of Health and local public health departments for current and ongoing work to protect and improve the health of Connecticut's population.

→ The Office of Health Strategy should conduct a survey of healthcare providers and local public health departments to determine the highest priority public health information systems for implementing bidirectional connectivity through a gateway interface. OHS should also conduct research to evaluate the pros and cons for managing a gateway interface within the Department of Public Health vs. offering the gateway service through Connie.

→ The Office of Policy and Management and the Office of Health Strategy should charter a technical workgroup to develop interoperability standards for state agencies when procuring new information technology systems and/or upgrading legacy information technology systems and evaluate technology options to support electronic data exchange between existing data systems. The technical workgroup should initiate their work immediately to support the Department of Public Health meet the interoperability requirements embedded in the Coronavirus Response and Consolidated Appropriations (CARES) Act and the American Rescue Plan Act (ARPA) for public health data system modernization.

→ Create a Health and Human Service Person-Centered Services Collaborative (HHS-PCSC) as a standing workgroup of the HITAC, building on the work of the Governor's Task Force on Housing and Supports for Vulnerable Populations, Connecticut's Two Generational (2-Gen) Initiative, and other related initiatives. The HHS-PCSC should be charged with identifying priority scenarios where individuals and/or families receiving care and services from multiple state agencies and/or state-funded community based organizations could benefit from the implementation of interagency data sharing strategies for better coordination of care. Because significant work has been done in Connecticut to understand the legal protections around data collected by various state agencies and the legal issues to interagency data sharing, the workgroup should focus on:
  o Developing policies and repeatable processes to lower the barriers for interagency data sharing

- o Developing best practice policies for maintaining transparent and rigorous consent management protocols for the sharing of personally identifiable information across HHS agencies, patients and families, and service providers

→ The Office of Policy and Management and the Office of Health Strategy should create a state agency data collaborative to explore the appropriate and legal connection of HHS agency data systems to Connie with the objectives of improving clinical care, improving coordination of services, and improving secure and efficient access to information by providers and organizations providing care and services to individuals and families in Connecticut. This collaborative should, among other things, build institutional capacity for data governance within and among state agencies.

→ The Office of Policy and Management and the Office of Health Strategy should build on existing research and incorporate emerging data on workforce trends to develop a report for the Connecticut General Assembly and Office of the Governor on the agency information technology workforce needs to support the state's health priorities, including the health IT and HIE initiatives in the Five-Year Statewide Health IT Plan. The General Assembly should provide funding for HHS agencies to develop formal contingency plans for addressing the impending loss of institutional knowledge and experience in the current information technology workforce due to state employee retirements and changing employment trends, with actionable strategies to employ a new generation of talent in state government.

→ The Connecticut General Assembly should provide funding for the Department of Health for creation and dissemination of educational materials and training programs for all local public health departments to become more sophisticated in the use of new and existing IT systems for both public health and financial reporting.

Support Adoption of EHR and HIE Services by Behavioral Health Providers

Some sectors of the healthcare delivery system continue to lag in terms of EHR adoption, notably behavioral health providers in Connecticut.

→ The Office of Health Strategy, in partnership with Connecticut's Department of Mental Health and Addiction Services, Department of Social Services, and stakeholder groups representing behavioral health providers, should develop and implement an educational campaign to break down the cultural resistance expressed by many behavioral health providers around the use of information technology solutions, including EHRs and HIE services. Strategies to address concerns around the privacy of sensitive health information and potential associated liability should be included as part of the educational campaign. OHS and partnering state agencies should begin this work by conducting a series of listening sessions to understand the unique challenges of behavioral health

providers and their patients, when considering setting goals for the adoption of EHR and HIE services. Listening sessions should inform educational efforts.

→ Funding from the state budget should be earmarked for technical assistance and ongoing training for behavioral health providers to support the transition to more integrated models of care where electronic closed loop referrals and bidirectional data exchange are required.

→ Financial incentives for data exchange and quality reporting should be included in payer contracts, including those executed by self-insured employers and Medicaid.

Health Information Privacy to Protect Individuals and Families

Critical to the establishment of trusted health information exchange services is the assurance that patient health information is secure, restricted only to view by appropriate healthcare providers, and updated to reflect the patient's consent preferences for the disclosure of their health information.

→ Include educational materials and media directed toward providers to assist them in establishing consent management processes for sharing patient information, and best practices for talking to patients about providing informed consent and their health data rights.

→ Host town hall meetings with state government leaders providing information and education to members of the public on their rights to provide informed consent for the electronic sharing of their health information.

→ Appropriate funds through the legislature to establish a Patient Health Information Protection Office (PHIPO) tasked with:
   o Establishing and evolving state policy for the use and disclosure of patient health information through health information exchange services
   o Monitoring, analyzing, and reporting on trends in patient complaints around inappropriate disclosures of health information, and overall experience and knowledge of health information exchange services
   o Enforcing penalties and fines for inappropriate disclosures of patient health information"

→ Propose legislation that would require healthcare providers to use consistent protocols for the collection of patient consent preferences, inclusive of the creation of statewide paper and electronic consent forms offering more granular consent options that includes the provider to whom consent is given, reason for consent and a timeframe for consent.

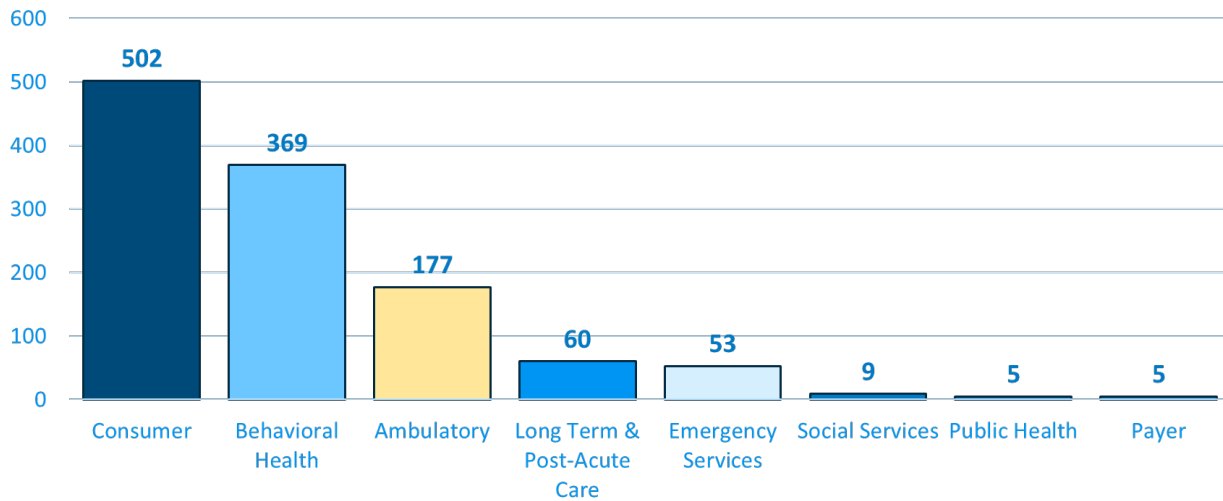# Appendix D – Environmental Scan: Virtual Forum and Interview Participants

	Stakeholder Organization	Engagement Type
1.	Advanced Behavioral Health, Inc.	Virtual Forum
2.	Aetna	Interview
3.	African Caribbean American Parents of Children with Disabilities	Virtual Forum
4.	Agency on Aging of South Central Connecticut	Virtual Forum
5.	American Ambulance Services, Inc.	Virtual Forum
6.	Anthem	Virtual Forum, Interview
7.	Apple Rehab	Interview
8.	Avanta Clinic	Interview
9.	Aware Recovery Care	Virtual Forum
10.	Bailit Health	Interview
11.	Beacon Health Options	Virtual Forum
12.	BHcare, Inc.	Virtual Forum, Interview
13.	Bristol Hospital	Interview
14.	Central Connecticut Health District	Interview
15.	Cerner State & Local Government Services	Virtual Forum
16.	Child and Family Agency	Virtual Forum
17.	Child Health Development Institute	Interview
18.	Clifford Beers Clinic	Virtual Forum, Interview
19.	Coalition to End Homelessness	Interview
20.	Community Health Center Association of Connecticut	Interview
21.	Community Health Center Inc.	Interview
22.	Community Health Network of Connecticut	Virtual Forum
23.	Community Health Resources	Virtual Forum
24.	Community Medical Group	Interview
25.	Community Mental Health Affiliates, Inc.	Interview
26.	Community Renewal Team	Virtual Forum
27.	Connecticut Legal Rights Project	Virtual Forum
28.	ConnectedCare, Inc.	Virtual Forum
29.	Connecticut Coalition of Taft-Hartley Health Plans	Interview
30.	Connecticut Alliance	Virtual Forum
31.	Connecticut Association for Healthcare at Home	Interview
32.	Connecticut Association of Ambulance Providers	Interview
33.	Connecticut Association of Health Care Facilities, Inc.	Interview
34.	Connecticut Children's Medical Center	Virtual Forum
35.	Connecticut Community Care	Virtual Forum
36.	Connecticut General Assembly	Virtual Forum, Interview(s)

	Stakeholder Organization	Engagement Type
37.	Connecticut Health Foundation	Virtual Forum
38.	Connecticut Health Foundation	Virtual Forum
39.	Connecticut Health Policy Project	Virtual Forum
40.	Connecticut Hospital Association	Interview
41.	Connecticut Institute for Primary Care Innovation	Interview
42.	Connecticut Orthopaedic Partners	Interview
43.	Connecticut Psychological Association	Interview
44.	Connie	Virtual Forum, Interview
45.	Council of State Governments- East	Virtual Forum
46.	CVS	Interview
47.	Danbury Department HHS	Interview
48.	DataHaven	Virtual Forum, Interview
49.	Department of Aging and Disability Services	Virtual Forum
50.	Department of Children and Families	Interview
51.	Department of Consumer Protection	Interview
52.	Department of Corrections	Interview
53.	Department of Developmental Services	Virtual Forum, Interview
54.	Department of Mental Health and Addiction Services	Virtual Forum, Interview
55.	Department of Public Health	Virtual Forum, Interview
56.	Department of Social Service	Virtual Forum, Interview
57.	Department of Administrative Services	Interview
58.	Donaghue Foundation	Virtual Forum
59.	EmblemHealth	Virtual Forum
60.	Ent'racte Advisory Group	Interview
61.	EPAM Systems	Virtual Forum
62.	Essex Ambulance	Interview
63.	Farmington Valley Health District	Interview
64.	Griffin Health System	Interview
65.	Hartford Healthcare	Virtual Forum, Interview
66.	Health Equity Solution	Virtual Forum
67.	Health Information Technology Advisory Council	Virtual Forum, Interview(s)
68.	Health Tech Solutions	Virtual Forum
69.	HEALTHspital Foundation CT	Virtual Forum
70.	IPRO	Virtual Forum
71.	Khmer Health Advocates	Interview
72.	LabCorp	Interview
73.	LeadingAge CT	Interview
74.	LYNXIQ LLC	Virtual Forum
75.	Middlesex Health	Virtual Forum, Interview
76.	Midwestern Connecticut Council of Alcoholism	Virtual Forum, Interview
77.	Myers and Stauffer, LC	Virtual Forum

	Stakeholder Organization	Engagement Type
78.	Mystic River Ambulance	Interview
79.	New Britain EMS, Inc.	Virtual Forum, Interview
80.	Office of Health Strategy	Virtual Forum, Interview
81.	Office of Policy Management	Virtual Forum, Interview
82.	Office of the Healthcare Advocate	Virtual Forum, Interview
83.	Office of the State Comptroller	Interview
84.	Optum	Virtual Forum
85.	Orange Health Department	Virtual Forum
86.	Patient Ping	Virtual Forum
87.	Pfizer, Inc.	Virtual Forum
88.	Phillips Metropolitan CME Church	Virtual Forum
89.	Planned Parenthood of Southern New England	Virtual Forum
90.	ProHealth	Interview
91.	Pullman & Comley	Virtual Forum
92.	Quality Council	Virtual Forum
93.	Quinnipiac University	Virtual Forum
94.	Radiological Society of CT	Interview
95.	RES Health Strategies, LLC	Virtual Forum
96.	Rome Smith & Lutz Government Relations	Virtual Forum
97.	Sage70, Inc.	Virtual Forum
98.	Senior Resources Agency on Aging	Virtual Forum
99.	Signify Health	Virtual Forum
100.	Stamford Health Dept.	Interview
101.	Starkowski Consulting LLC	Virtual Forum
102.	Sullivan & LeShane, Inc.	Virtual Forum
103.	SUNY Downstate/ CSG-East	Virtual Forum
104.	SureScripts	Interview
105.	SWCAA	Virtual Forum
106.	Team Rehab	Virtual Forum
107.	Thames Valley Council for Community Action	Virtual Forum
108.	The Arc of Connecticut, Inc.	Virtual Forum
109.	The Child and Family Guidance Center	Virtual Forum
110.	The Connecticut Oral Health Initiative, Inc.	Interview
111.	UBUN2-Two Are Better Than One	Virtual Forum
112.	UConn Health	Virtual Forum, Interview
113.	UConn School of Medicine	Virtual Forum
114.	UConn School of Pharmacy	Interview
115.	United Methodist Homes	Interview
116.	United Way of Central and Northeastern Connecticut	Interview
117.	United Way of Connecticut	Interview
118.	UnitedHealthcare	Virtual Forum, Interview

Stakeholder Organization	Engagement Type
119. Value Care Alliance	Virtual Forum, Interview
120. Veteran's Health Administration	Interview
121. Visiting Nurses Association	Interview
122. Visiting Nurses Association of Southeastern Connecticut	Virtual Forum
123. Western Connecticut Area Agency on Aging	Virtual Forum
124. Wheeler Clinic	Interview
125. Yale New Haven Health System	Virtual Forum
126. Yale University Center for Medical Informatics	Virtual Forum

Connecticut eScan Survey Counts

1,181 total surveys completed

Appendix G – Glossary

Term	Definition
42 CFR Part 2	42 CFR Part 2 is a federal regulation that applies to all records relating to the identity, diagnosis, prognosis, or treatment of any patient in a substance abuse program that is conducted, regulated, or directly or indirectly assisted by any federal department or agency, and establishes how consent for those records must be managed.
ACO	Accountable Care Organization. An ACO is a healthcare organization characterized by a payment and care delivery model that seeks to tie provider reimbursements to quality metrics and reductions in the total cost of care for an assigned population of patients.
APCD	All-Payer Claims Database. Created in 2012 by Public Act 12-166, APCD was established as a program to receive, store, and analyze health insurance claims data. The Act requires health insurers of health care services to submit medical and pharmacy claims data, as well as information on providers and eligibility. Information derived from this data seeks to improve the health of Connecticut's residents through the collection and analysis of data and the promotion of research addressing safety, quality, transparency, access, and efficiency at all levels of health care delivery.
CareQuality	CareQuality is a national public-private collaborative that facilitates agreement among diverse stakeholders to develop and maintain a common interoperability framework enabling exchange between and among data-sharing networks. CareQuality is coordinated by The Sequoia Project.
Closed-loop Referral Platforms	Technology platforms that enable referral tracking for the referral sending organization to find out what happened after a referral is made including referral acceptance, patient contact, receipt of services, especially between healthcare and community-based organizations for the coordination of services that address individuals' social determinants of health.
CommonWell	CommonWell is a non-profit trade association of EHR vendors working to achieve cross-vendor interoperability that assures provider access to personal health information.
CBO	Community-based organization. Organizations or institutions who are not traditional healthcare providers but whose work intersects with the healthcare system.
Connie	Connecticut's statewide health information exchange established pursuant to CGS Sec. 17b-59d to empower consumers to make effective health care decisions, promote patient-centered care, improve the quality, safety, and value of health care, reduce waste and duplication of services, support clinical decision-making, keep confidential health information secure and make progress toward the state's public health goals.
CGB	Cost Growth Benchmark. Triggered by unsustainable growth in healthcare costs in Connecticut, Governor Lamont signed Executive Order #5 in January 2020, charging OHS to benchmark total healthcare expenditures growth in the state. OHS, in consultation with a technical team and advisory committees, will create a per annum rate-of-growth for health care spending.
CMS	Centers for Medicare and Medicaid Services. CMS is the federal agency within the US Department of Health and Human Services (HHS) that administers the Medicare program and works in partnership with state governments to

Term	Definition
	administer Medicaid, the Children's Health Insurance Program (CHIP), and health insurance portability standards.
CPMRS	Connecticut Prescription Monitoring and Reporting System. CPMRS is a state-run electronic database used to track the prescribing and dispensing of controlled prescription drugs to patients. Operated and administered by the Department of Consumer Protection.
CEMSTARS	Connecticut Emergency Medical Services Tracking and Reporting System. Operated and administered by the Department of Public Health.
CT EDSS	Connecticut Electronic Disease Surveillance System. Operated and administered by the Department of Public Health.
CT WiZ	Connecticut's Immunization Information System. Operated and administered by the Department of Public Health.
DSS	Department of Social Services. Includes administration of the Connecticut Medicaid program, Husky Health.
Direct Messaging	Direct messaging is a secure, encrypted web-based communication system for physicians, nurse practitioners, physician assistants, and other authorized users to share protected health information.
eCQM	Electronic Clinical Quality Measures. eCQMs are tools that help measure and track the quality of health care services provided by providers within the healthcare system. To report CQMs electronically from an EHR, electronic specifications must be developed for each CQM. The specifications can be captured or stored in the EHR so that the data can be sent or shared electronically.
eHealth Exchange	The eHealth Exchange, formerly the Nationwide Health Information Network Exchange, is a community of exchange partners (including federal agencies, private healthcare organizations, and HIEs), that share information under a common trust framework and a common set of rules. The Sequoia Project is the non-profit organization under which the eHealth Exchange operates.
EHR	Electronic Health Record. An EHR is an electronic version of a patient's medical history, maintained by a provider over time, which usually includes key clinical data relevant to that person's care under a particular provider, including demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data, and radiology reports.
Encounter Alerts	An encounter alert is a notification sent to an attributed provider that a patient has been admitted, discharged, or transferred from a hospital.
e-Prescribing	e-Prescribing is a provider's ability to electronically send a prescription directly to a pharmacy from the point of care.
Health Equity	Health equity is the attainment of the highest level of health for all people. Achieving health equity requires valuing individuals equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities.[1]
HEC	Health Enhancement Community. Aimed at supporting the health and well-being of Connecticut residents in all communities across the state by improving community health and health equity and preventing poor health. This would be achieved through establishing HECs to operate throughout the entire state. The HECs would work collaboratively to improve the social, economic, and physical conditions within communities that enable individuals and families to meet

Term	Definition
	their basic needs, achieve their health and well-being goals, and thrive throughout their lives.
HIE	Health Information Exchange. The term "HIE" can be used as a verb (the electronic exchange of health-related data) or as a noun (organizations dedicated to the secure exchange of health-related data). HIE organizations (or groups of organizations) are responsible for coordinating the exchange of protected health information in a region, state, or the nation. HIEs are also known as Health Information Organizations (HIOs).
HIPAA	Health Information Portability and Accountability Act. The HIPAA Privacy Rule establishes national standards to protect individuals' medical records and other personal health information and applies to health plans, healthcare clearinghouses, and healthcare providers that conduct certain healthcare transactions electronically. The Rule requires appropriate safeguards to protect the privacy of personal health information and sets limits and conditions on the uses and disclosures that may be made of such information without patient authorization. The Rule also gives patients certain rights over their health information, including rights to examine and obtain a copy of their health records and to request corrections.
HITO	Health Information Technology Officer. Responsible for coordinating all state health information technology initiatives and may seek private and federal funds for staffing to support such initiatives.
HITAC	The Health Information Technology Advisory Council. Established through Public Act 16-77, and later 17-2, to advise the Health Information Technology Officer and coordinate health IT activities for health reform initiatives in Connecticut.
HITECH	The Health Information Technology for Economic and Clinical Health Act. Enacted as part of the American Recovery and Reinvestment Act of 2009 and signed into law on February 17, 2009, to promote the adoption and meaningful use of health information technology. Subtitle D of the HITECH Act addresses the privacy and security concerns associated with the electronic transmission of health information, in part, through several provisions that strengthen the civil and criminal enforcement of the HIPAA rules.
HMIS	Homeless Management Information System. Beginning in 2008, CT HMIS data has been used to provide information on homelessness in Connecticut, and conduct analysis of the effectiveness of current efforts to prevent and end homelessness.
Interoperability	Interoperability refers to the ability for systems to exchange data and operate in a coordinated, seamless manner.
LTPAC	Long-Term Post-Acute Care. Long-term and post-acute care settings include inpatient rehabilitation facilities, assisted living facilities, skilled nursing facilities, nursing homes, and home health agencies, among others who provide care services to patients for an extended period.
MOLST	Medical Orders for Life-Sustaining Treatment.
MPI	Master Patient Index. MPIs store, and cross-reference, unique patient identification for every patient in an HIE or health system.
MRPC	Medication Reconciliation and Polypharmacy Committee. The charter for the MRPC is to provide strategic guidance, recommendations, and ongoing support to the HITAC and the OHS for the development and implementation of patient-centered and evidence-based best practices necessary to contribute to the

Term	Definition
	development and maintenance of a best possible medications history (BPMH), supported by communication, education, and user-friendly digital tools.
MSSP	Medicare Shared Savings Program. The MSSP was established by the Affordable Care Act to facilitate coordination and cooperation among providers to improve the quality of care for Medicare Fee-For-Service (FFS) beneficiaries and reduce unnecessary costs. Eligible providers, hospitals, and suppliers participate in the MSSP by creating or participating in an ACO.
P20 WIN	Preschool through Twenty and Workforce Information Network. The vision for P20 WIN is to inform sound policies and practice, through the secure sharing of critical longitudinal data across the participating agencies to ensure that individuals successfully navigate supportive services and educational pathways into the workforce. The participating agencies include: the Connecticut State Department of Education (CSDE), the Connecticut State Colleges and Universities (CSCU), the University of Connecticut (UConn), the Connecticut Department of Labor (DOL), the Connecticut Conference of Independent Colleges (CCIC), and the Office of Early Childhood (OEC). P20 WIN are working to onboard new agencies, with data on social services, child welfare, higher educational financial aid, and homelessness in 2021.
PBM	Pharmacy Benefit Manager. A PBM is a third-party administrator of a prescription drug program. PBMs are primarily responsible for developing and maintaining formularies, contracting with pharmacies, negotiating discounts and rebates with drug manufacturers, and processing and paying prescription drug claims.
PCMH / PCMH+	PCMH+ provides person-centered, comprehensive, and coordinated care to HUSKY members. PCMH+ builds on Connecticut Medicaid's Person-Centered Medical Home program which works to improve the quality of care received by members. The PCMH+ program works to improve HUSKY member's overall health and assists with access to services like access to healthy food, transportation to appointments and assistance in finding community agencies supporting housing or employment.
PHI	Protected Health Information. PHI refers to all individually identifiable health information held or transmitted by a covered entity or its business associate, in any form or media, whether electronic, paper, or oral. PHI is protected by the requirements of the HIPAA Privacy Rule.
Provider Directory	A provider directory is a listing of healthcare providers or organizations in a directory format.
Query-based exchange	Query-based exchange is the ability for providers to search for and/or request a patient's health information from another provider using electronic technology services.
SIM	State Innovation Model. The State Innovation Models initiative partnered with states to advance multi-payer health care payment and delivery system reform models. Each state-led model aimed to achieve better quality of care, lower costs, and improved health for the population of the participating states or territory. The initiative provided substantial funding to state governments to utilize policy and regulatory levers to accelerate health system transformation to meet these aims.
SDoH	Social determinants of health are factors in the environments in which individuals are born, live, learn, work, play, worship, and age that affect a wide range of health, function, and quality-of-life outcomes and risks. Examples of

Term	Definition
	social determinants include socioeconomic conditions; access to educational, economic, and job opportunities; public safety; and access to healthcare services.
SSA	Social Security Administration. The SSA is an independent agency of the US government that administers a social insurance program consisting of retirement, disability, and survivors' benefit. The SSA is the largest social welfare program in the US.
Telehealth	The use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health, and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.
Unite Connecticut	An initiative in Connecticut sponsored by the Connecticut Hospital Association, to offer the Unite Us closed-loop referral technology platform for coordination of service delivery between healthcare providers and community-based organizations.
Whole-Person Care	Whole-person care is the coordination of health, behavioral health, and social services centered around a patient with the goal of improved health outcomes and more efficient and effective use of resources.
VA	US Department of Veterans Affairs. The VA is responsible for providing services to US veterans. The VA provides healthcare services and benefits programs to former military personnel and their dependents.
VBP	Value-Based Payment. Models that aim to drive system change towards greater efficiency and improved health outcomes. In contrast to traditional fee-for-service payment models that are based on the volume of care provided, value-based payment models reward providers based on achievement of quality goals and, in some cases, cost savings.