

Draft Environmental Scan Report

Connecticut Five-Year Statewide Health Information Technology Plan

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CEDARBRIDGE
GROUP

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Executive Summary

Connecticut has made great strides in improving the health and well-being of its residents through the deployment of health information technology; however, much remains to be done. The state's five-year statewide health information technology plan, to be finalized in December 2021, will lay out a bold but achievable vision for the future.

As a first step in the development of the final plan, this draft environmental scan report outlines the current state, the desired future state, and draft recommendations based on the input of over 1,200 stakeholders across state. Key findings include:

- ❖ Stakeholders are cautiously optimistic about the future of [Connie](#), the statewide health information exchange (HIE), and interoperability of healthcare data in the state more generally. There is general consensus that Connie should initially focus on establishing interoperability fundamentals such as the exchange of admit, discharge, and transfer data and also prioritize additional priority use cases with a focus on public health.
- ❖ Advocates and consumers remain concerned about the [security and privacy](#) of their data and [consent](#). As new infrastructure is developed, leaders at the state and throughout the delivery system must pay heed to protecting privacy and maintaining security. Building the confidence and trust of consumers will be essential to the success of future technology and interoperability endeavors.
- ❖ [State data systems](#) are siloed and difficult to use, whether sending or querying for data. Significant investments of time, money, and leadership will be required to enable more seamless flow of data to inform programs, policymaking, research, and support improvements in care delivery.
- ❖ Stakeholders are very enthusiastic about the potential for more [social needs data](#) to be available among healthcare and social services providers to improve screening and assessments of social needs and health risks, increase referrals between disparate organizations, and improve the efficiency and effectiveness of service delivery. Although substantial investments have been made in the state, additional outlays will be required to bring community-based organizations the core information technology resources and training needed to provide whole-person coordinated care.
- ❖ [Telehealth](#) is here to stay. The public health emergency of COVID-19 provided the impetus for Governor Ned Lamont's [Executive Order 7G](#) on March 10, 2020, expanding flexibility to healthcare organizations for the provision of technology-aided healthcare services. On May 10, 2021, Governor Lamont extended those provisions through June 30, 2023 by signing [House Bill 5596](#) into law.
- ❖ [Public health](#) information technology infrastructure lags well behind other parts of the health and healthcare system. With a once-in-a-generation infusion of federal funds and the development of a cohesive strategic vision, Connecticut could leverage technology to improve the lives of its citizens while strengthening the public health infrastructure. Technology investments could help bring greater uniformity in reporting, surveillance, and population health improvements across local public health departments.

Based on stakeholder input, there are a series of draft recommendations focused on the following domains:

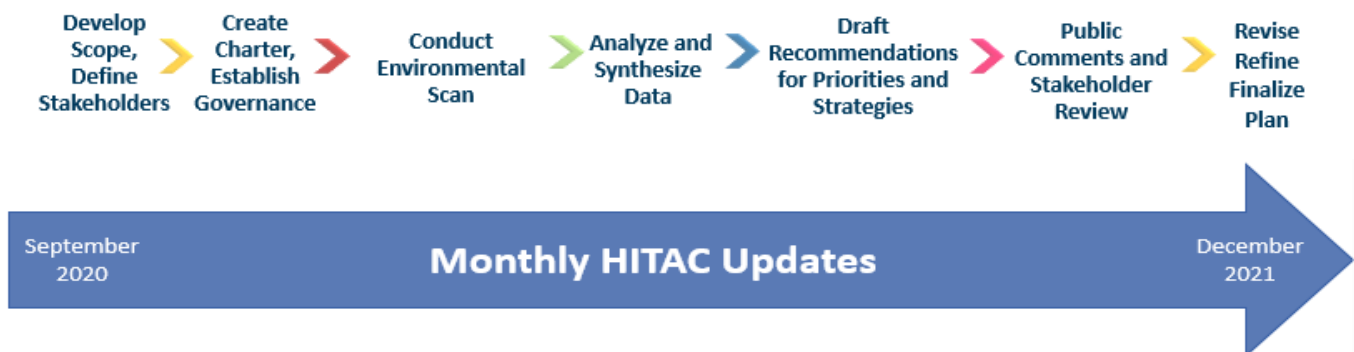
- Strengthening and sustaining Connie
- Fostering systems to support the social determinants of health needs of Connecticut residents
- Enabling better coordination and data integration among state agencies
- Fostering electronic health records (EHR) adoption
- A best possible medication history HIE service, connected through Connie
- Strengthening privacy of health information for patients and families

The proposed recommendations provide a roadmap for Connecticut to lead the nation in adopting technology and interoperability tools to create a healthier, safer, and more equitable citizenry.

Introduction

The [Connecticut State Office of Health Strategy](#) (OHS) has a mission “to implement comprehensive, data driven strategies that promote equal access to high quality health care, control costs and ensure better health for the people of Connecticut”. Among other things, OHS is directed to create a statewide health information technology (health IT) plan in accordance with [Connecticut General Statute \(CGS\) 17b-59a\(3\)\(c\)](#) which states “[t]he 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...implement and periodically revise the state-wide health information technology plan...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”. The statute requires inclusion of content related to security, privacy, and data content, structures, and format. Pursuant to state statute, OHS must consult with the [Health Information Technology Advisory Council \(HITAC\)](#), a body which meets monthly to advise the Health Information Technology Officer (HITO) and coordinate health IT activities for health reform initiatives in Connecticut, as the five-year statewide health IT plan is finalized.

Process and Timeline for Statewide Health IT Plan



OHS engaged CedarBridge Group (CedarBridge) to support the creation and adoption of the statewide health information technology plan. This environmental scan provides a summary of input received from over 1,100 stakeholders and residents in the state and provides insight on both the historic successes and present pain points with respect to health IT. In addition, we provide draft recommendations for consideration by stakeholders, including the HITAC and OHS, in the coming months.

Past and Present Health IT Landscape

2021 has become a watershed year for the state of Connecticut with the implementation of a fully functional statewide Health Information Exchange (HIE), [Connie](#), and the development of a comprehensive Five-Year Statewide Health Information Technology Plan (Health IT Plan) with input from more than six hundred Connecticut health and human services organizations, along with input from more than five hundred Connecticut residents. It is also the first year of Connecticut’s groundbreaking [Cost Growth Benchmark](#) initiative designed to curb the rate of increase in healthcare costs for Connecticut families. With so much progress, it is

important to reflect on how the state of Connecticut arrived at this juncture to inform health IT strategies for the upcoming five years.

Statewide Health Information Exchange in Connecticut

Connecticut has emerged successfully in its pursuit of statewide HIE services through Connie after three attempts to deliver a statewide HIE between 2007 – 2017. This was enabled by thoughtful leadership from OHS, the Department of Social Services (DSS), the HITAC, as well as countless stakeholders across the state. A successful outcome of DSS' efforts led to the establishment of [Project Notify](#), a technology platform that provides near real-time alert notifications to providers when a Medicaid patient is either discharged or admitted into a hospital. Project Notify has subsequently been absorbed into the Connie HIE to be leveraged for continued use at the statewide level.

2017 Health IT and HIE Environmental Scan

In 2017, Connecticut contracted with CedarBridge Group to conduct a statewide environmental scan to assess the current state and inform future strategies to advance Connecticut's health information technology and exchange capabilities for the development of the statewide HIE. Due to the tireless efforts of state leaders, legislators, and community stakeholders, several recommendations have come to fruition since 2017, including the development of a "neutral, trusted organization" to operate HIE services with a governance framework; an increased focus on privacy and security of health data; and the development of the HITAC. Other recommendations from the [2017 Environmental Scan and Recommendations Report](#) require ongoing diligence and focus including the implementation of core technology among state agencies that complements those used by private sector organizations and ensuring that patients and consumers are the central focus of health IT and HIE efforts in the state.

Current Office of Health Strategy Technology Initiatives

In addition to the strategic guidance and shepherding of statewide HIE services through Connie, OHS has also led several health IT initiatives that have helped to improve healthcare delivery, quality, cost savings, and price transparency. Below is a list of key OHS health IT initiatives that have had a direct impact on the health IT landscape of the state:

- ❖ From 2014 – 2018, the Center for Medicare & Medicaid Innovation awarded Connecticut a four-year, \$45 million [State Innovation Model \(SIM\) Test Grant](#). Connecticut's SIM (CT SIM) had the objective to improve Connecticut's healthcare system for the majority of residents by establishing a whole-person-centered healthcare system, [described in documents](#) at the Connecticut Office of Health Strategy, that improves community health and eliminates health inequities. Initiatives advanced through CT SIM include:
 - [Health Enhancement Communities](#)
 - [Primary Care Modernization](#)
 - [Community and Clinical Integration Program](#) & [Response to Concerns](#)
 - [Value-Based Insurance Design](#)
 - [Person-Centered Medical Home Plus \(PCMH+\)](#) & [Participant Data](#)
 - [Prevention Services Initiative](#)
 - [2020 CT SIM Final Evaluation Report](#)

- ❖ Created in 2012 by [Public Act 12-166](#), Connecticut's All Payer Claims Database (APCD) was established as a program to receive, store, and analyze health insurance claims data. The Act requires health insurers to submit medical and pharmacy claims data, as well as information on providers and eligibility. [Healthscore CT](#) is a free site that provides trusted information to help Connecticut residents get more for their healthcare dollars. The cost information on Healthscore CT comes from insurance claims data and shows wide variation in costs of the same diagnostic screening or procedure.
- ❖ In May 2018, the Connecticut General Assembly passed [Special Act 18-6](#) establishing the [Medication Reconciliation and Polypharmacy Committee \(MRPC\)](#) under the purview of the HITAC. MRPC is chartered to provide strategic guidance, recommendations, and ongoing support to the HITAC and OHS for the development and implementation of patient-centered and evidence-based best practices necessary to contribute to the development and maintenance of a best possible medications history (BPMH), supported by communication, education, and user-friendly digital tools.
- ❖ Triggered by unsustainable growth in healthcare costs in Connecticut, Governor Lamont signed [Executive Order \(EO\) #5](#) in January 2020, charging OHS to create a [Cost Growth Benchmark \(CGB\)](#) for 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. Once calculated, Connecticut will be the fifth state to have a statewide cost growth benchmark. EO #5 also requires OHS to establish targets for increases in primary care spending, which will be advised by the [OHS Primary Care and Community Health Reforms \(PCCHR\) Workgroup](#).
- ❖ The [Health Systems Planning \(HSP\)](#) office administers the [Certificate of Need \(CON\) program](#), prepares the [Statewide Health Care Facilities and Services Plan](#), and conducts hospital financial reviews and reporting. The CON program promotes appropriate health facility and service development that addresses a public need. The CON program strives to ensure accessibility for needed services while limiting duplication or excess capacity of facilities and services. HSP has statutory authority to gather and analyze significant amounts of hospital financial, billing and discharge data. Information collected, verified, analyzed, and reported on includes hospital expenses and revenues, uncompensated care volumes, and other financial data as well as hospital utilization, demographic, clinical, charge, payer, and provider statistics. The office produces an annual acute care hospital financial stability report and biennial utilization study reflective of these data analyses.
- ❖ In the 2021 legislative session, the Connecticut General Assembly considered [House Bill 6662](#), and passed [Senate Bill No. 1](#), with the goal of addressing racism as a public health crisis. Among other things, it will establish a Commission on Racial Equity in Public Health and requires the collection of race and ethnicity data for providers “capable of connecting to and participating in State-wide Health Information Exchange” under the auspices of the Office of Health Strategy which is given responsibility for standards development and an implementation plan.
- ❖ Governor Lamont has proposed allocations of the [Coronavirus State Fiscal Recovery Fund](#) under Subtitle M of the [American Rescue Plan Act of 2021](#). In it, \$73 million will be allocated in 2022 to “support the breadth of Local Health Department operations, including, but not limited to: inspections and enforcement, contact tracing, building testing capacity, epidemiology, strategies to ensure equitable

administration of COVID-19 vaccines and enhanced virus surveillance capacity at the local level, and public health emergency preparedness and planning activities”. In addition, funds are allocated to make investments in broadband infrastructure, including a \$15 million grant program to enable low-income residents to connect to broadband or replace outdated wiring. One of the goals of this effort is to enable more ubiquitous access to telehealth.

Federal and State Health IT Funding Landscape

Health IT funding in Connecticut is derived from a combination of state and federal dollars. OHS expenses are primarily covered by the State General Fund; the state’s [Insurance Fund](#) supplements other expenses, including underwriting ten staff positions and some policy initiatives.

To date, development of Connie has been largely financed through the [Health Information Technology for Economic and Clinical Health Act \(HITECH Act\)](#), an expansive federal program which funded one hundred percent of the incentive payments to hospitals and eligible medical professionals for adopting and using certified EHRs and has covered ninety percent of the costs of planning and implementing CMS-approved health IT and HIE initiatives. Federal HITECH funding is set to expire on September 30, 2021. As a result of the sunset of this funding stream, the state will be responsible for a higher portion of Connie’s administrative costs moving forward. Federal funding requests are being prepared in partnership with DSS to transition from HITECH federal funding to [Medicaid Management Information Systems \(MMIS\)](#) operations and [implementation Advanced Planning Documents \(APDs\)](#) to optimize federal dollars in the post-HITECH federal funding environment.

Existing Strategies and Governance Plans for State Data Assets

The [Office of Policy Management \(OPM\)](#), through the [Chief Data Officer \(CDO\)](#), and the [Connecticut Chief Information Officer \(CIO\)](#), based in the [Department of Administrative Services \(DAS\)](#), have established critical planning documents that will shift the landscape for how Connecticut’s information technology systems are managed, expanded, integrated, and funded.

STATE OF CONNECTICUT IT STRATEGIC PLAN FOR FISCAL YEAR 2021

The [State of Connecticut Information and Telecommunications Strategic Plan for Fiscal Year 2021](#) – mandated by [CGS § 4d-7, as amended by P.A. 14-202](#) lays out a vision for improving outcomes in Connecticut through the efficient use of technology systems, processes, and workforce, through secure and cost-effective operations. The plan responds to Governor Ned Lamont’s proposal to make Connecticut the first “all-digital government” through the acceleration of DAS’ Digital Government Services team and investments in systems and processes that create a user-friendly system for Connecticut residents using government services.

The plan outlines a clear picture of the work that lies ahead for the State of Connecticut given the large portfolio of existing, disparate state systems and an aging technology workforce:

“One substantial result of the continued program-specific and agency-specific focus is the high number of applications in the state’s portfolio. Thirty-seven of the largest state agencies reported 705 applications in the portfolio. Although the state reduced the number of applications from 762 in 2018 to 705 in 2020, a substantial

improvement, there are still too many applications. Most of these applications have been in place for several years (average age 9.2years old) and represent a major drain on resources for support.

Unfortunately, many of these applications have no connections to other systems. They capture information for specific programs but share very little of that information with other related programs. This lack of integration is a substantial impediment that prevents agencies from seeing greater efficiency and from using more of our rich data for analysis of trends and correlation of data across programs. This lack of integration also creates additional work for our constituents as they must enter the same data into multiple different state systems.”

The plan seeks to consolidate IT resources in Connecticut to make better use of disparate data assets in ways that “hide the seams” of various government interaction for Connecticut residents as they access services, and to prevent a looming retirement cliff within the Connecticut state technology workforce. “Over forty-six percent of the IT workforce is over the age of fifty-five. This represents a critical risk for the state as talented professionals become more apt to elect for retirement and take critical knowledge out with them”, states Connecticut CIO, Mark Raymond.

CONNECTICUT STATE DATA PLAN

The [Connecticut State Data Plan](#) – mandated by [CGS § 4-67p](#) creates, “a framework for the state’s executive branch agencies to engage in a consistent approach to data stewardship, use, and access. It is not just an open data plan, but one that is applicable to all data in the custody and control of executive branch agencies.” In accordance with statute, the plan has the following requirements:

- Establish data management and analysis standards,
- Include specific achievable goals,
- Make recommendations to enhance standardization and integration of data systems and data management practices,
- Review legal issues and concerns related to data sharing, and
- Set goals for improving the open data repository.

Health and human services agency stakeholders, including Connecticut residents receiving services from the [Department of Mental Health and Addiction Services \(DMHAS\)](#), DSS, [Department of Children and Families \(DCF\)](#), [Department of Public Health \(DPH\)](#), the [Office Early Childhood \(OEC\)](#), [Department of Developmental Services \(DDS\)](#), [Office of the State Comptroller](#) (including state employee health benefits), and the [Department of Aging and Disability Services \(ADS\)](#) stand to benefit from broader integration of state data systems which can help service providers and state agencies collaborate to deliver whole-person centered services.

The [Preschool through Twenty and Workforce Information Network \(P20 WIN\)](#) initiative, sponsored by lead agency OEC, has demonstrated early success in bringing together data from the [Department of Education](#), [Department of Labor](#), [Connecticut State Colleges and Universities \(CSCU\)](#), OPM, and other sources to securely share longitudinal data across participating agencies to ensure individuals successfully navigate supportive services and educational pathways into the workforce. This, and other state initiatives such as the [Two-Generational \(2Gen\) Initiative](#) will seek to bring on additional state agencies to support more powerful and impactful uses of data to improve health and wellness outcomes for Connecticut communities.

Environmental Scan Activities

The primary goal of the 2021 environmental scan has been to engage a broad representation of stakeholders across Connecticut's healthcare and community service ecosystem in a comprehensive assessment to gather input in two main categories:

Identify Domains

Identify Stakeholders in Domains

Define Scope of Topics

Establish Input Mechanisms

Review Background Documents

Gather Input

Analyze & Synthesize

- The current state of health IT initiatives in Connecticut, examining stakeholders' views of HIE/CIE business and technology services, including policies, regulations, sustainability strategies, technical assistance and user education/training needs, communications, and other inputs.
- The desired future state priorities for health IT and HIE/CIE services to meet the needs of Connecticut, identifying policies, governance, operational and technical improvements, opportunities for creating efficiencies across entities, and developing innovative partnerships.

Stakeholder Domains & Discovery Modes

To reflect the diverse and varied perspectives on health IT and HIE services in Connecticut, CedarBridge and OHS collaborated to identify stakeholder domains representative of sectors and groups across Connecticut's healthcare and social service



delivery ecosystems.

Leaders from government, private sector, nonprofit and community-based organizations were actively engaged to inform the recommendations for the statewide health IT plan.

Dedicated outreach to thousands of stakeholder organizations across eleven public and private sector domains took place, inviting broad participation in the process. Outreach efforts included communications on the OHS website, regular email communications from OHS, DSS, and CedarBridge, phone calls to dozens of organizations, and presentations to associations and advisory groups, informing, seeking input, and soliciting partnerships.

Stakeholder Domains
Ambulatory Provider Practices
Behavioral Health Providers
Community-Based Organizations
Consumers (Patients, Clients, Caregivers)
Emergency Services Providers
Health Plans and Payers
HIE and Health IT Organizations
Hospitals and Health Systems
Long-Term Post-Acute Care Providers
State Agencies
Public Health

Virtual Interactive Forums

Six interactive virtual forums were organized by CedarBridge to engage stakeholders across various domains. The forums included facilitated discussions with audience participation, instant polling technology, and use of the chat function in the online conferencing tool as an additional way to encourage discussion and participation among attendees.



Over three hundred participants attended the virtual interactive forums; discussions included what is currently working well with Connecticut’s health IT and HIE service infrastructure, and what types of improvements should be included in the Health IT Plan. Topics included types of data shared, accessed, and used; issues related to consent, privacy, and security of health IT systems; how to improve the information available at the point of care; and how technology can be leveraged to improve health outcomes and access to care through use of data and analytics for planning, budgeting, actuarial analysis, and quality measurement.

Participants were asked about their desires for the future state of health IT and HIE as healthcare moves to value-based reimbursement methodologies and population health management. During each of the forums, participants contributed thoughts on future state “wish lists” for technology investments; improvements to functionality; priorities for data types and sources; policies and standards; and other actions or supports that would improve the adoption, use, and usability of health IT systems and HIE services in Connecticut.

Electronic Surveys

Electronic survey responses numbered 1,181 from stakeholders and organizations throughout the state. Surveys were sent by association partners to their members and to contact lists of state agency departments. Surveys included

specific questions related to each of the domains, as well some standard questions across all stakeholder domains. The survey questions focused on how organizations are currently collecting, sharing, and using data related to the individuals and populations they serve, and the types of investments and improvements they would like to see in the next five years,

including policies, guidance, technical assistance, regulations, and collaboration. Survey respondents ranked the barriers to adoption of health IT and exchange of data, including lack of interoperability between systems and the need for standards, particularly around collecting information about social determinants of health (SDoH). Other questions focused on workforce and technical assistance needs,

Virtual Interactive Forums
Behavioral Health & Everyone Else: Sharing Sensitive Data Without Compromising Privacy
Integrating Social Needs Data: Knowing the Person Really Matters when Delivering Person-Centered Care
Prepare, Care, Protect, Measure, and Monitor: Technology and Data Needs for a Strong Public Health System
Connecting the Dots to Improve Outcomes: Eliminating Barriers to Protect and Care for Children in Need
Timely Information Moving Between Long Term Care, EMS, Hospitals, and Primary Care
Prioritizing and Governing Investments: Secure, Person- Centered Health IT for Residents of Connecticut

security, and privacy concerns, and managing consent for sharing sensitive or specially protected data. Additional information about the electronic surveys can be found in *Appendix E*.

Key Informant Interviews

Interviews took place with more than one hundred individuals representing organizations across all identified stakeholder domains serving healthcare and social service needs of Connecticut residents. CedarBridge



leveraged the professional networks of HITAC members and OHS staff and turned to statewide provider associations to identify key leaders among their members for interviews. In addition to the stakeholder domains listed above, interviews were held with community-based social service organizations; public safety representatives; advocacy groups; university officials; Connecticut-based health IT vendors; leaders of state agency program areas; and HIE service organizations, including an interview with the leadership and staff of Connie. Interviews were conducted one-on-one, in small groups, and in focus groups, where representatives and

members of healthcare professional associations discussed their organizations' current state and future needs in the way of health IT and HIE services, including members of [Connecticut Hospital Association \(CHA\)](#), Connecticut ambulatory provider groups, and ACOs. A complete list of organizations interviewed can be found in *Appendix C*.

Additional Outreach and Engagement

In addition to the engagement activities described above, the OHS and CedarBridge project teams presented to, and collected information from, several other groups during regular association meetings and events. Presentations, discussions, and facilitated focus groups held with groups across Connecticut brought informed insights to the environmental scan.

The virtual technology used by CedarBridge for engaging stakeholders and conducting real-time polling have worked well; however, some key stakeholders did not have capacity to provide input due to pandemic job responsibilities. Additional efforts to build deeper understandings of the program requirements, data challenges, workforce needs, and desired functionality of priority IT systems supporting state programs, will take place prior to finalizing the Health IT plan strategies and action steps. Further, because the Health IT plan must be maintained as a living document, progress reviews, adjustments, and refinements to the strategies and action steps will be an ongoing process.

Analysis and Synthesis of Information

The initial analysis of the input collected during the interactive online forums was completed in April 2021 after concluding six online forums. For the other modes of discovery described in the methodology above, data analysis began in May and extended through the submission of this document. Input collected from stakeholder

forums, surveys, interviews, and focus groups was analyzed by the CedarBridge team, with data organized into key themes and findings summarized in the sections below. Survey responses provided more concrete



comparisons across stakeholder domains than the online polling and discussion data from the virtual forums. The dialogue however, between stakeholders during the virtual forums, and with CedarBridge consultants during key informant interviews, is invaluable to interpreting nuanced survey responses.

There are aspects of empirical review in this report, but the environmental scan is not simply a statistical analysis. The number of stakeholders across domains and subjective nature of some data requires stakeholder responses be reviewed in totality to discern where

collective statewide experience is prevalent, and where nuanced variations of stakeholders' experiences exist across domains and geographical regions; both can result in valid and important findings.

Major Themes and Findings

Statewide Health Information Exchange – Connie

Stakeholders reported being cautiously optimistic about the implementation of Connie during key informant interviews and focus groups, although there is sense of weariness among some stakeholders and some concerns expressed by long-time advocates regarding the short timeline for Connie to prove sustainability. There is broad support for Connie's executive leadership team and CRISP as the underlying data exchange technology vendor.

There is variance among stakeholder domains for Connie's use case priorities, but all domains shared a commonality in the expectation that providers must have access to full patient records at the point of care. Support is particularly strong for medical image exchange and expansion of the ADT feeds to include hospital outcomes information. It is not surprising in Connecticut, with Connie just kicking off services, that across stakeholder domains there is low use of electronic information exchange, with the exception of the fax machine. For example, only twenty-six percent of ambulatory care survey respondents reported participating in some form of HIE services. This percentage drops to fifteen percent for behavioral health providers. Surprisingly, thirty-three percent of long-term and post-acute care (LTPAC) providers reporting participation in an HIE, which may be explained by the number of skilled nursing facilities purchased by large hospital systems in their efforts to reduce readmission rates. A sizable percentage of respondents across domains reported not being sure if they were participating in an HIE, demonstrating the critical need for a widespread communication

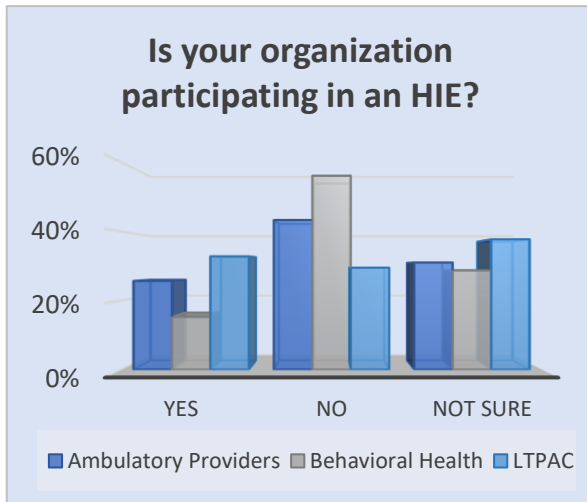
"Most people in Connecticut either don't know we have one or they assume it'll never happen, or they believe it's going to happen, but it's so abstract it's hard to see the benefit.... People ask me: 'what's the difference between HIE, APCD, and EHRs..."

So (there's) really not a good understanding of what HIE is doing and could do."

– State Official

campaign with educational and training opportunities offered on an ongoing basis by Connie and other HIE

service providers. Several stakeholders expressed a desire to learn more about Connie and hoped to receive marketing or informational distributions from Connie or the state.



Across ambulatory care providers, LTPAC providers, and emergency services (EMS) providers, the highest need for information exchange is with other medical care organizations. The need for exchange with hospitals is highest among EMS and LTPAC providers, averaging eighty percent. Others, including LTPAC providers, report a high need to coordinate with primary care clinics within the medical care organizations option.

Behavioral health providers differ from other groups in that they primarily need to exchange information with other behavioral health providers. More than three quarters of the behavioral health survey respondents expressed a need to exchange information with outpatient mental health clinics. This result may be reflective of the fact that most behavioral health respondents reported they are individual practitioners working at a private behavioral health practice. They may require maturity in coordination within their own field before they can focus on integration and coordination with other health disciplines. Generally, there was not a significant percentage of providers expressing a need to exchange information with “other groups” such as public health and community-based organizations, with the exception of LTPAC providers, who stated they would like to have tools for exchanging information with home and community-based services and social service organizations.

State agency officials are hopeful Connie will play a role in providing a centralized health information access point that reduces the information gap Connecticut health and human services (HHS) stakeholders experience due to disconnected, disparate state data systems that often serve the same clients and populations. For example, one state official

reported epidemiologists have to cultivate relationships with individual hospitals in order to access needed information from within EHRs. This could be addressed on a more systematic basis through the statewide HIE;

“Hospitals’ ability to share and collectively analyze data is robust.

We think...the state should be looking at how to facilitate broader data sharing, integration, and connectivity among non-hospital providers.

How do we really start to get at overall health and wellness of communities? There are data pockets out there not readily accessible and visible. Would like the state to put more investment there”

- Hospital Executive

many Connecticut agencies, and the individuals and families they serve, would benefit with efficiencies for providers, payers, agency staff, and consumers. State agencies would likely see substantial improvements in program effectiveness as well, with better information available for care delivery and more coordinated services across health and social service programs.

Hospitals, health plans, Federally Qualified Health Centers (FQHCs), and other large primary care groups are aware of Connie's implementation and of the services currently slated. Twenty-eight hospital Chief Information



Officers attended a virtual forum conducted as part of the environmental scan, and while supportive of the state's HIE efforts, the majority feel their organizations currently have robust data sharing capabilities. The most prevalent priority of the hospital forum representatives is for Connie to make connections to smaller and independent provider groups that are not participating in a national information exchange network like [CareQuality](#) or [CommonWell Health Alliance](#). In contrast, the LTPAC providers, behavioral health providers, EMS providers, physician specialists, and local public health directors interviewed during the

environmental scan were mostly unaware of Connie and the emerging HIE services. When interviewees from these domains were given a basic description of Connie and HIE services, all could see a high value in connecting to Connie to improve patient care, although many expressed strong concerns around added costs for interfaces and participation fees, which, without subsidizing their participation ongoing, could be an insurmountable barrier for HIE participation by these groups. Some stakeholders expressed the need for the state to require meaningful data exchange through Connie, expressing trepidation that some provider groups would consider their organization being "connected" after simply executing a legal agreement.

When interviewed, most HITAC members offered support for Connie's current opt-out policy, however the favorable position is far from unanimous. A number of HITAC members expressed some confusion about the Council's advisory role in guiding a statewide consent policy and pondered whether the policy will be taken up by the Connecticut General Assembly. Substantive written questions and comments were submitted to the consulting team by a HITAC member expressing strong concerns with Connie's opt-out policy due to availability of individual-level data to HIE vendors and staff in the course of their job, and potential misuse of sensitive patient health information. All parties support a comprehensive education campaign to make consumers aware of the benefits and risks of health information exchange in an unregulated environment. To that point, a group of FQHCs expressed concerns about the potential for data to be used to harm patients and families, such as the disclosure of undocumented status to federal agencies. Consensus was found in the complex issue area of consent about the need for a common consent management service, offered by Connie or by another independent entity with strong oversight by the state.



Interagency Data Sharing and Integration

Connecticut is effectively utilizing state statutes to mandate connections and reporting to statewide systems to help ensure completeness and availability of critical health information. In [Connecticut Public Act 18-91](#) the state General Assembly mandated all Connecticut hospitals connect to Connie within one year and all Connecticut providers connecting within two years of Connie becoming operational in a strong show of bipartisan commitment for a statewide HIE organization. There are also several statutory mandates for reporting to DPH data systems, including to Connecticut's new immunization registry, [CT WiZ](#), the [Connecticut Emergency Medical Services Tracking and Reporting System \(CEMSTARS\)](#), and [Connecticut's Electronic Disease Surveillance Systems \(CT EDSS\)](#) a dated legacy system also known as Maven.

Hundreds of disparate state data systems exist in Connecticut originally designed to meet individual programmatic needs. State agencies and Connie have expressed interest in collaborating to provide centralization of some provider-facing health information exchange and reporting needs, and to facilitate

“Our in-agency tech is exceptional, but the program we use for reporting does not work optimally with the (technology) the state Department of Developmental Services is using because Connecticut has failed to make adequate investment in its own services.”

- **Social Services Organization Executive**

integration of client information across the myriad disparate, disconnected state data systems. Stakeholders expressed a desire for Connie to operate as the “convenor” of health information needed by state agencies from providers. In addition, agencies and state leadership have communicated a need to plan for leveraging existing and new data systems strategically as statewide data assets.

There are a number of significant technology workforce issues within state agencies that, if not proactively addressed, could significantly impact not just the health IT landscape of Connecticut but also the delivery of care to its most vulnerable populations. With close to forty percent of the state's information technology staff projected to retire within the next

year, it is imperative for the General Assembly and executive branch of Connecticut to make state employment attractive to a new generation of IT talent, with salaries and benefits commensurate to private sector positions.

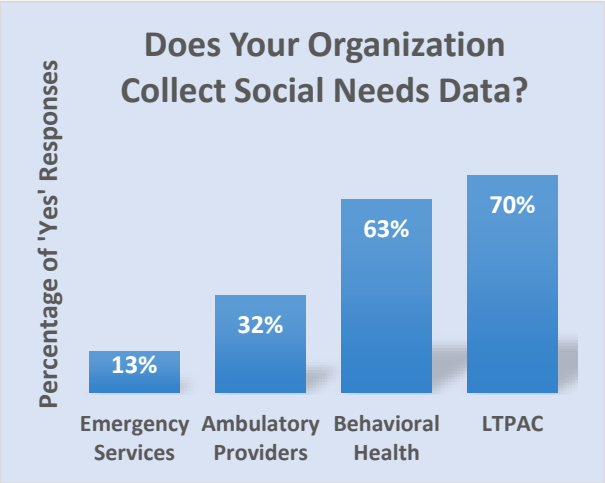
Extensive stakeholder frustration was communicated in interviews and virtual forums regarding existing state data systems in use by health and human services agencies, particularly with DPH and DHMAS systems. Some provider organizations expressed a desire to move toward more integrated delivery models, with services focused on physical, mental, and oral health, as well as on the social needs of individuals and families, but most are hesitant about the risks created by heavily siloed state data systems. While some bright spots of data sharing have emerged since the 2017 environmental scan for the HITAC identified similar issues, there are still multiple log-in and password requirements for local public health staff to use the Maven system (CT-EDSS) for reporting and duplicative eligibility determination and enrollment requirements for families in need of assistance, interfering with seamless and efficient service delivery.

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 [P20 WIN](#) initiative and 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, and agency policies. Agency officials expressed how difficult it is to navigate data sharing even within their own department, let alone with other state agencies. These discussions require extensive review and navigation from agency attorneys, who too often becomes a halting force on needed data integration and coordination. Connecticut’s OPM has established a toolkit for agreements between state agencies for data sharing that can provide a more simplified pathway. OPM has also produced a [Data Sharing Playbook](#) and is the lead sponsoring agency for the [Connecticut Open Data](#) portal.

Addressing Social Determinants of Health and Health Equity

Screening for social determinants of health within provider practices is a developing strategy in Connecticut with varying degrees of screening across different provider sectors. Slightly less than a third of ambulatory providers reported conducting SDoH screenings in their practices, while the numbers are nearly double for behavioral health and more than double for LTPAC organizations.

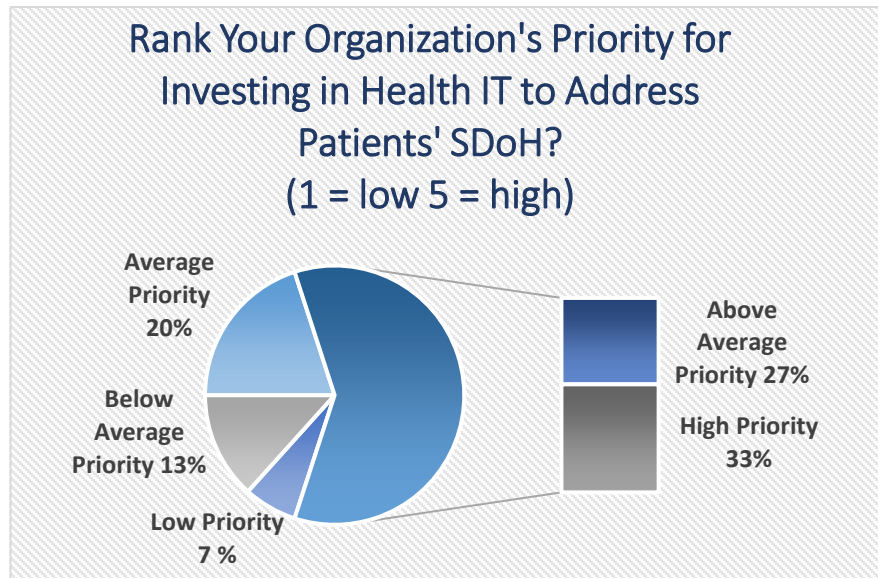


Likewise, most provider groups are not currently utilizing closed-loop referral platforms for management of referrals to community-based organizations and social services. These are emerging technology platforms that allow healthcare providers and community-based organizations to electronically refer clients for social and community services, coordinate services, and monitor the outcomes of services delivered. The Connecticut Hospital Association has invested heavily in the closed-loop referral

platform Unite Us, forming a collaborative called [Unite Connecticut](#). The service is offered for free to community-based organizations and is currently in use by a majority of hospitals in Connecticut. Despite this, a majority of hospitals at the CedarBridge/CHA hosted hospitals CIO virtual focus group rated their current capabilities for closed-loop referrals as low or moderate. In terms of their priority for improving their capabilities in the future, most indicated it is a moderately high priority for their organizations.

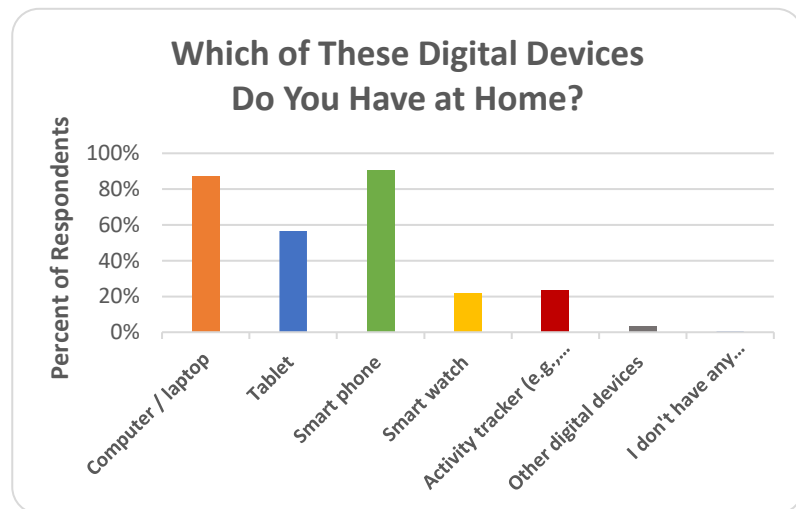
[Health Enhancement Communities](#) are a promising emergent model for improving community health. Recently, the North Hartford Triple Aim Collaborative HEC was awarded a [Robert Wood Johnson Foundation](#) sponsored Data Across Sectors for Health – Learning and Action in Policy and Partnerships ([DASH-LAPP](#)) grant to study existing state data systems and infrastructure to support community health collaboration among healthcare providers and social services organizations. The [North Hartford Triple Aim Collaborative](#) is partnered with OHS, CHA, and Connie for the grant.

During the virtual forum on data exchange for care coordination between healthcare and social service organizations, participants ranked **“investments in data infrastructure for community-based organizations”** as their highest priority for inclusion in the Health IT Plan. The healthcare delivery system is increasingly referring members to community-based organizations (CBOs) to help address identified socioeconomic risk factors; however, unlike healthcare providers, funding for basic information technology systems to capture client data and coordinate services lags far behind.



United Way of Connecticut, which operates the Connecticut [2-1-1 Referral System](#), and the [Connecticut Coalition to End Homelessness](#), which operates the state [Homeless Management Information System \(HMIS\)](#) are key entities eager to accelerate integration of community-based information systems with broader healthcare and public health systems for a community/whole-person view of health status and needed interventions.

Virtual forum series participants communicated the importance of maintaining and reimbursing for audio-only/phone visits during and after the COVID-19 pandemic to improve health equity for distant patient



populations in rural areas lacking transportation or reliable internet services, and low-income populations that may struggle to afford consistent and reliable internet services. About twenty-five percent of consumer survey respondents reported “often” or “sometimes” struggling to afford internet. Twenty-four percent of Connecticut residents who responded to the consumer survey indicated their annual household income is less than \$35,000. Most respondents reported having a smart phone and computer at home, however with the survey being delivered

electronically, the self-reported figures for technology in the home are likely higher than if the survey had been conducted by phone. With new access points for healthcare services emerging through telehealth, it will be

important to ensure internet access is available and high-speed broadband is kept affordable to low-income populations in Connecticut, so not to inadvertently increase health disparities through expanded telehealth services. The [Coronavirus Response and Relief Supplemental Appropriations Act 2021](#) includes funding for states to expand and upgrade broadband, as well as funds to help offset internet fees for low-income households.

Public Health Infrastructure

COVID-19 pandemic has brought renewed focus to public health infrastructure systems, with significant funding for states from the federal [CARES Act](#) for investments in modernizing public health infrastructure and information systems. Leaders within the Department of Public Health are currently engaged in planning for upgrades of several data systems that are essential for tracking and measuring disease outbreaks, identifying population health trends, and providing critical insights for policymakers, program managers, healthcare providers, and Connecticut residents. Interviews with public health officials revealed a need to ensure local public health departments have the right technological infrastructure to coordinate needed services with community-based organizations. Public health forum participants indicated there currently is insufficient data in the areas of SDoH, racial disparities, and other health inequities, as well as dashboards for population health indicators, according to public health forum participants.

“Being able to query other systems or a central, longitudinal data repository would be very helpful.”

- Local Public Health Official



Key informants representing local public health departments and provider groups expressed a need for the state immunization registry (CT WiZ), to establish bidirectional interfaces that are more seamless at the point of care. It was reported by stakeholders that the system does not allow for a population level view of data and can only be queried by individual patient. This is a limiting factor on the ability of local public health to conduct critical vaccine administration planning and execute community interventions where they are needed.

Another system reported by stakeholders to be cumbersome and inefficient is the financial reporting system ([CORE CT](#)). Local public health would benefit from quicker turnaround times for requests of the state public health department and additional training for local public health departments on how to use the system. At the public health virtual forum, stakeholders in attendance were asked to rank Connecticut’s use of data to support COVID-19 response activities on a scale from one to five with a response of one being “limited or lacking”, and a response of five being “exceptional”. Two-thirds of the answers were three and below, correlating with input from public health stakeholders around the need for better analytic tools for population health monitoring, and for technical assistance and training support for public health staff. Public health professionals reported

significant limitations in their ability to exchange critical information in a timely manner with DPH information systems, especially the CT WiZ immunization information system and CT EDSS/MAVEN for disease surveillance. However, one local health department director indicated the new DPH syndromic surveillance system, [EpiCenter](#) is a bright spot which is providing local health departments with hospital-based information that allows for community health status evaluations. The considerable number of towns and local governments with authority over public health functions (e.g., contact tracing and disease surveillance) can be onerous and creates coordination challenges. Each local health department (60+) often have their own information systems that do not communicate with other health departments or lack information systems altogether.

Telehealth Services

At the virtual forum on prioritizing and governing state health IT investments, “maintaining provider reimbursements for telehealth services after the pandemic” was voted by participants to be the top priority for the Health IT Plan to address.

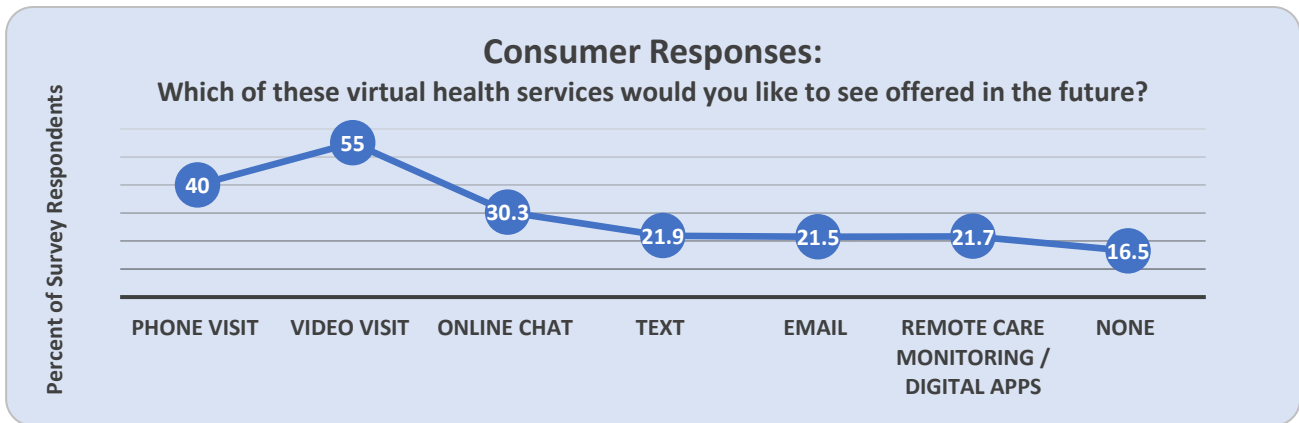


95%

of behavioral health survey respondents reported offering video visits, compared with sixty-four percent of LTPAC providers.

There is a considerable drop in the percentage of behavioral health and LTPAC providers offering phone visits, compared to video visits. About half of consumer respondents indicated they had a video visit and a phone visit in the prior twelve months with their health care provider.

Of the Connecticut residents who responded to the consumer survey, about a quarter reported using a personal health/activity tracking device or a smart watch. Large majorities reported having a smart phone or computer at home, but a sizable portion of Connecticut residents surveyed indicated they “sometimes” or “often” have difficulty paying for internet and/or mobile phone services with an internet connection.



Privacy, Consent, and Security for Patient Data Sharing

In Connecticut, stakeholders describe a culture of distrust within the healthcare delivery system, especially as it pertains to the use and disclosure of patients' protected health information (PHI). Connecticut is not unique in terms of states grappling with establishing sustainable statewide HIE services while protecting patient privacy and ensuring patients' have the ability to provide informed consent for how their personal health information is shared and used.

Key informant interviews with Connecticut stakeholders revealed acute pain points related to those in favor of comprehensive informed consent prior to any sharing of health information by healthcare providers, and those in favor of establishing HIE services with a binary opt-out policy, with the expectation consent policies and consent management services are expected to evolve over time. While some consumer advocates expressed significant concerns with how patient information is shared generally, and Connie's opt-out policy specifically, most HITAC members and state leaders are generally supportive of the opt-out policy. Nationwide, state HIEs are dependent on their ability to reach a critical mass of patient health data to ensure providers find value in connecting and exchanging information. The logistical constraints of getting patients to opt-in to the HIE create burdens that threaten the financial and operational sustainability of the service, absent significant, sustained government funding. In 2016, the last year ONC published data on state policies for consent, twenty states utilized [opt-out policies](#) compared with nine utilizing opt-in policies. Since that time, some states, including [Vermont](#), have retooled their consent policies and regulations, and more changes are expected as the business environment continues to evolve, and technology solutions mature.

"It took Vermont 9 years to figure this out, and now their HIE is finally getting off the ground."

- HITAC Member

Other environmental scan activities, such as electronic surveys and virtual forums led to quantified findings related to perspectives on patient privacy and consent, although forum related percentages are reflective of a small number of respondents. Hospital CIOs at the hospital virtual forum indicated blanket patient consent is most frequently requested from patients at the start of hospital treatment through paper forms, and that it is a moderate to high priority to improve their capabilities for collecting patient consent for sharing health information electronically.

"Another area to highlight [are Connecticut] laws around sensitive data which create barriers. We think there is an opportunity to better align what we do in this state with federal standards like HIPAA because these data are critical to creating health for populations."

- Hospital Executive

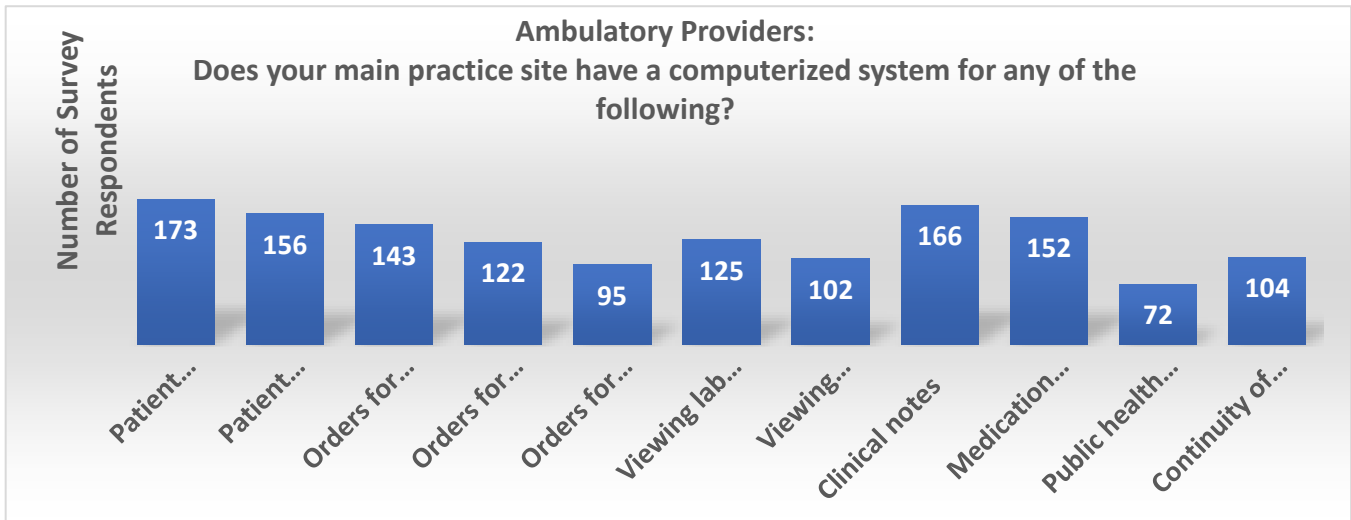
Most respondents within the virtual forums and surveys report collecting patient consent through paper forms, as opposed to electronic forms

submission or web portals. Eighty percent of respondents at the behavioral health virtual forum indicated they feel the privacy and security of clients' behavioral health data is adequately protected in Connecticut. Within the consumer survey, more than eighty percent of respondents reported feeling comfortable sharing information on their health conditions, diagnostic information, procedures, and vaccinations with healthcare workers involved with their care.

Sector Specific Findings

Ambulatory Care

Ambulatory care providers report they already have significant access to patient demographic data, patient problem and medication lists, clinical notes, and orders for prescriptions. Access to radiology results, lab results and images are less ubiquitous. Systems to support public health reporting appears to be a major gap.



Less than a quarter of respondents indicated their EHR system is integrated with a hospital system. Among the low percentage of respondents who reported using an HIE, [EPIC CareEverywhere](#) was the most common selection at twenty-seven percent. Fax remains the most common means of sending and receiving patients' health information between external providers.

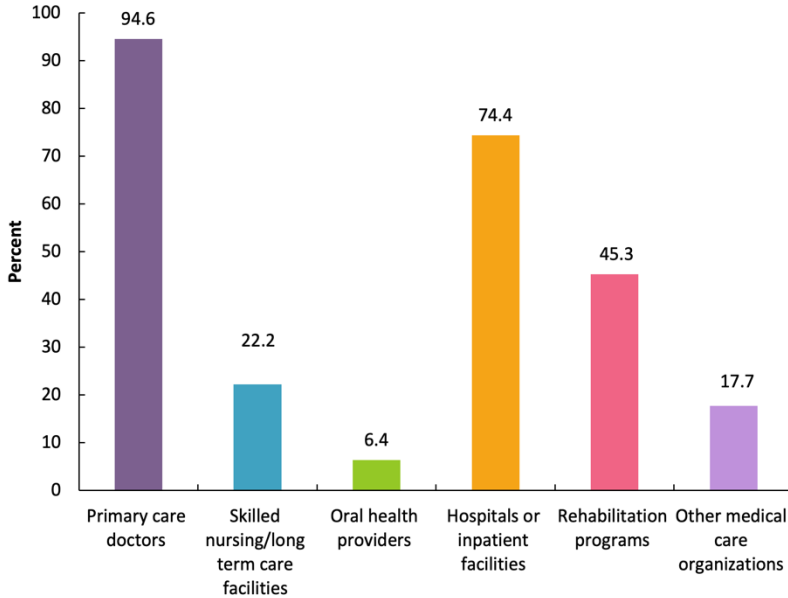
Behavioral Health

Three hundred sixty-nine behavioral health providers provided responses to the electronic survey; of those, nearly half are independent, solo practitioners. Thirty-two percent of the behavioral health survey respondents indicated they do not have an EHR currently and twenty-six percent of those do not intend to implement one. Many of those who do not intend to use an EHR raised concerns about patient privacy and confidentiality. Among those that did use EHR systems, [Therapy Notes](#), [Simple Practice](#), and [Theranest](#) were the most common systems among behavioral health providers.

"My groups are protective of their members' data. Privacy is always a top concern. I think people are scared because they don't understand how it [the HIE] works."

- Behavioral Health Administrator

Behavioral Health Providers: Which Medical Providers Are You Most Likely to Need to Share Clinical Information With (Other than Other BH Providers)



Compared to other stakeholder groups, many behavioral health providers expressed an ardent desire to exchange data with other behavioral health providers, and to a lesser extent, with other types of medical care providers. In direct contrast, a considerable number of survey respondents indicated with similar fervor, strong opposition to any type of data sharing, citing patient confidentiality as the reason. For those providers wanting to share data with other providers for clinical care purposes, outpatient mental health clinics were identified as the highest priority type of behavioral health provider with which there is a need to exchange data.

Overall, use of an HIE is exceptionally low amongst behavioral health

providers, although a sizeable portion answered, “I’m not sure” to the question “Does your organization participate in an HIE?”. Many behavioral health practices lack general awareness of health information exchange and have no reference for HIE services such as Connie and Project Notify.

Sixty-three percent of survey respondents are collecting SDoH data. However, most report they do not use a closed-loop referral system. This indicates closed-loop referral systems are not ubiquitous in Connecticut. Survey respondents reported SDoH screening and trauma history, access to patient care records, and medication history as their highest priority use cases for health information exchange.

“Of course, there would be value for providers to have a more complete picture of their client’s health. The problem is that the reimbursement rates are already so low that providers feel like they are doing charity as it is. Time and money are the root problems.”

- Behavioral Health Provider

Community-Based Organizations and Social Services

There is a strong desire among stakeholders to obtain and use closed-loop referral platforms to improve service coordination and outcomes for clients, and although access to [Unite Connecticut](#) is available free of charge to CBOs, most organizations who participated in the stakeholder engagement process report they are not using a closed-loop referral platform.

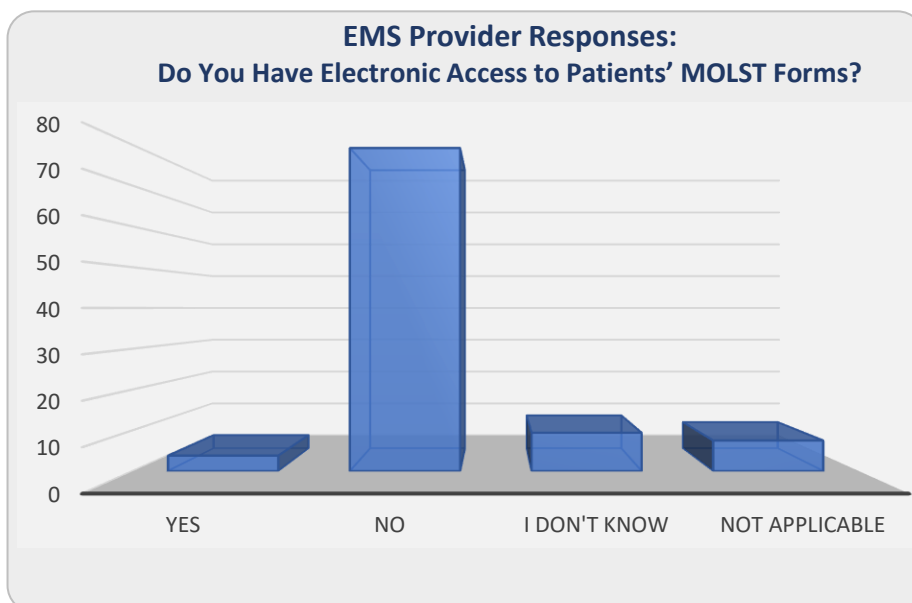


Community-based organizations are overstretched in terms of both financial and human resources, even as the need for their services grows. Many community-based organizations would like to have greater technology and data exchange (including real-time clinical data) to support their day-to-day service delivery operations but are limited in terms of their ability to pay for and integrate modern technology platforms.

"I've been a broken record on this topic for years, which is funding, funding, funding... We don't even get reimbursed adequately for delivering services, never mind any funding that would support the infrastructure"

-Social Service Provider

Emergency Services



The [Office of Emergency Services](#) within DPH requires EMS providers to electronically submit data to CEMSTARS, the EMS tracking and reporting system. Most EMS providers report using an [Electronic Patient Care Reporting \(ePCR\)](#) system. Respondents indicated access to patient records and medication histories as high priorities, as well. Connecting EMS ePCR systems to exchange data with local hospitals and the statewide health information exchange were

identified as key next steps for future planning work conducted by the [Connecticut EMS Advisory Board \(CEMSAB\) Data Committee](#).

Few EMS providers indicated having access to an electronic [Medical Orders for Life Sustaining Treatment \(MOLST\)](#) registry. This is an area of high priority for EMS providers in the state.

“We are currently forced into heartbreaking decisions when family members cannot produce the MOLST form.”

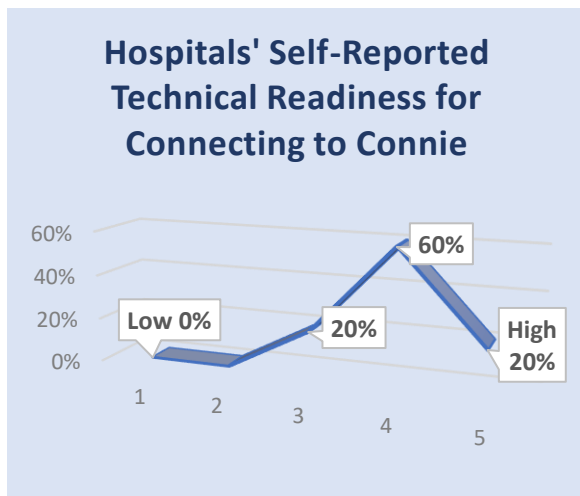
- EMS Provider

Hospitals and Health Systems

In May 2021, CedarBridge conducted a focus group in coordination with the Connecticut Hospital Association with twenty-eight representatives of hospitals and health systems from across the state. Several themes

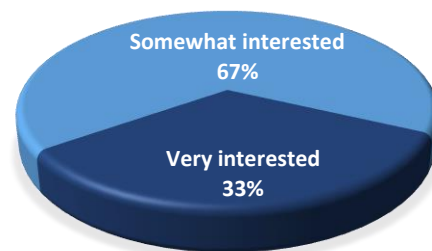
emerged from the discussion regarding the future of health information technology and data exchange in Connecticut.

CIO respondents indicated that Connie’s greatest value-add is in connecting smaller provider groups and hospitals, who often have limited resources for implementing modern technologies. Among hospital CIOs, health information exchange is seen as a positive development. Their current state of technology capacity makes them confident in their capability to easily connect to Connie. Connie must ensure it is adding value for hospitals beyond what is already offered through their usage of HIE services and tools such as [PatientPing](#) and [CareEverywhere](#).



Hospital CIOs report primarily receiving medication fill data through third-party vendors, primarily [DrFirst](#) and [Surescripts](#). They indicate significant interest in acquiring medication and prescription data from the PDMP, the [Connecticut Prescription Monitoring and Reporting System \(CPMRS\)](#) but only if it were to expand its data to all prescriptions and medication fills, instead of just controlled substances. When asked how likely they would be to use the CPMRS in this hypothetical situation, three CIOs indicated they would be “somewhat likely” to use it.

HOSPITALS' INTEREST IN USING CPMRS FOR ALL MEDICATION HISTORY



Between June 2021 – September 2021, the Medication Reconciliation and Polypharmacy Committee (MRPC) will conduct research on medication fill data sources, including but not limited to options for leveraging the CPMRS as a resource for a Best Possible Medication History (BPMH) HIE service, as part of Connie’s technology stack. The MRPC, supported by CedarBridge Group and UCONN Health, will prepare a report with recommendations to inform the statewide health IT plan on the options for the BPMH HIE service for submission to OHS, and the MRPC recommendations will be presented to the HITAC at the Council meeting on September 23, 2021.

Long-Term and Post-Acute Care

CedarBridge conducted a focus group comprised of several of the leading statewide associations and CIOs from member facilities for the LTPAC sector in April 2021. In addition, a survey was conducted with sixty-one responses from facilities across the state. About one-fifth of LTPAC survey respondents reported not having an EHR. Among those that did use an EHR, [Epic](#), [MatrixCare](#) and [PointClickCare](#) were the most common systems in use. Almost half of all survey respondents indicated that they did not know about the existence of a statewide health information exchange.

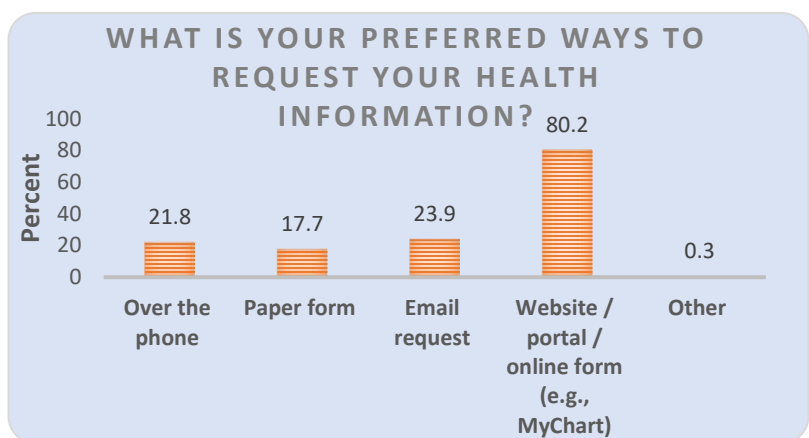


LTPAC providers indicated a desire to send and receive more information on the behavioral health conditions of their patients. Respondents reported common use of phone, mail, and fax as the most common means of communicating with other providers.

Seventy percent of LTPAC providers reporting conducting SDOH screenings. LTPAC providers commonly use tools such as the [Outcome and Assessment Information Set \(OASIS\)](#), which is a patient-specific, standardized assessment used in Medicare home health care to plan care, determine reimbursement, and measure quality. Focus group participants indicated the need to reduce providers’ administrative reporting burden by establishing greater interoperability, especially with state data systems where manual data entry is required or there are redundant data submissions.

Patients and Families

A survey of a representative sample of Connecticut residents received 502 responses. This survey, along with a focus group conducted with the [Office of Health Strategy’s Consumer Advisory Council](#) informed key findings from the perspective of consumers.



Most consumers feel providers have enough information on their medical history to provide quality care. This aligns with what was heard from one state official during a key informant interview who indicated most consumers already expect that their health information is automatically traveling electronically to their various care providers.

More than a quarter of consumer survey respondents reported sometimes or often having trouble affording the internet. This is one example of the socioeconomic risk factors that continue to create inequities in access to care. **About a quarter of survey respondents reported having annual household income less than \$35,000.**

Consumers want flexibility in terms of how they request and view their medical records (including phone, mail, and fax), but prefer online access through a provider-offered patient portal, such as [Epic's MyChart](#) portal.



Payers

Adoption of value-based care is a significant driver of health information exchange and data sharing when providers have financial incentives to coordinate services with extended care teams and improve the quality of care and patient health outcomes. Payers indicated the COVID-19 pandemic has renewed providers' interest and willingness to enter into contracts with alternative payment methodologies (APMs) and value-based payments (VBPs). These include quality incentive payments for achieving performance targets related to cost, quality, access, and health outcomes. Looking forward, Connecticut health plans and provider groups are slowly transitioning to value-driven payment models. [Liz Fowler, Director of the Center for Medicare and Medicaid Innovation \(CMMI\)](#) recently [signaled](#) more mandatory value-based payment models are on the way under the Biden administration.

DSS and the Office of the State Comptroller (OSC) have made some inroads to delivering value-based care for Medicaid members and state employees, respectively. SIM initiatives between 2014 – 2018, such as the [Primary](#)

“Reliance on claims data for population health management [is] not ideal. The data is not clean. We have an RFI out to begin the process to procure a system for intake and analysis of clinical data.”

- State Agency Official

[Care Modernization](#) initiative and [Advanced Medical Home Program](#), played key roles in establishing the [Person-Centered Medical Home Plus \(PCMH+\)](#) program at DSS and the [Health Enhancement Program \(HEP\)](#) at OSC. PCMH+ practices have requirements to screen for SDoH and coordinate closed-loop referrals.

Both Medicaid and OSC highlighted areas where there are data gaps or inaccuracy due to a reliance on claims data and have

expressed a need to layer in analytics using clinical data to make a greater impact on overall population health. Commercial health plans and public payers such as DSS and OSC expressed a need for clinical data, as opposed to claims data, to conduct more comprehensive population health analytics.

Most payers were generally supportive of the implementation of Connie as the statewide HIE and expressed a hopefulness that Connie could provide payer-neutral interoperability of patient health records for their providers to see the full picture of their members' health status. One commercial health plan shared that HIEs failures to fulfill their value-proposition, while seeking health plan funding for their operation, has recently resulted in a decision to sunset their participation with HIEs in several states.

“HIEs need to think about NCQA, and the data chain of custody with aggregate data from HIEs. ... and the cost – I will sunset two HIEs this year, because they want me to keep their lights on by funding them, but they do not add value.”

- Commercial Health Plan Executive

Overall commercial health plans expressed a need for greater state leadership in creating innovation through policy levers and holding technology vendors accountable to the vision for statewide HIE. Most payers described internal initiatives where they are accelerated care model advancements absent a more statewide approach.

Innovations described by payers include:

- ❖ Requirements for SDoH screening and closed-loop referrals with CBOs by PCMH+ practices
- ❖ Industry leading innovation toward creating a payer-agnostic prior authorization platform at no cost to providers
- ❖ Use of artificial intelligence symptom checkers through an online web portal to triage needed follow-up care with a connected physician
- ❖ Use of Medicaid funds to reimburse housing services providers for services coordinated with PCMH+ practices
- ❖ Through the Connecticut HEP, state employees benefit from cost sharing reductions by committing to annual physicals, age and gender appropriate screenings and exams, and other healthcare activities

“If someone is going to provide services, infrastructure, technology, don’t sell yourself short. Skate to where the puck is going and hold HIEs and vendors to the vision of modernized healthcare delivery.

People writing requirements only think about a horse going faster and riding it until it drops. They don’t think about getting rid of horses and going to trucks or trains or planes.”

- Commercial Health Plan Executive

Accountable Care Organizations (ACOs), researchers, and larger provider organizations participating in quality improvement initiatives are hopeful the APCD can fill in data gaps they experience when attempting to measure quality, costs, and population health indicators. Based on key informant interviews with users of payer data, they expressed expectations for the APCD have yet to be met. Some stakeholders indicate payers are reluctant to share claims data and may contribute to data inaccuracy in the APCD.

In terms of accessing APCD data directly, several stakeholders stated they have experienced difficulties accessing APCD data, primarily citing issues with a lack of timely data when submitting data requests.

Conclusion

With the extensive stakeholder input to the environmental scan from more than six hundred organizations representing Connecticut's diverse health and social services ecosystem, and well over five hundred consumer responses, several key themes emerged that led to the recommendations included in the following section, based on the needs and priorities of Connecticut. The themes are:

- ❖ **Strategies for Widespread Use and Sustainability of Connie**
- ❖ **Systems and Strategies to Support Needs Related to Social Determinants of Health**
- ❖ **Service Coordination and Data Integration Across State Agencies**
- ❖ **Support Adoption of EHRs and HIE Services by Behavioral Health Providers**
- ❖ **A Best Possible Medication History HIE Service, Connected Through Connie**
- ❖ **Health Information Privacy to Protect Individuals and Families**

The draft recommendations, prepared independently by CedarBridge Group for OHS and the HITAC, are intended to be **a starting place for larger conversations** on the ways interoperable health IT systems and HIE services in Connecticut can improve individual and community health by **supporting more efficient and effective healthcare and social services, with lower costs and better outcomes**.

The draft recommendations are intended to inspire **longer-term visions grounded by incremental and inclusive planning**, with **transparent and collaborative processes** supported by **measurable milestones**.

The draft recommendations are intended to be **practical and innovative; implementation will require ongoing collaboration** among stakeholder domains and **strong leadership** from the private sector; from community organizations bringing consumers to the table; and from all branches of government.

Finally, the draft recommendations are intended to serve as **a proposed framework to build on**. The Office of Health Strategy leadership team and members of the Health Information Technology Advisory Council will review the environmental scan findings and draft recommendations for the statewide health IT plan at the Council's June 17, 2021, meeting, with additional discussion scheduled to take place at the following month's Council meeting on July 15, 2021.

Public feedback will be actively sought between June 17th and August 15th, with interactive webinars for open stakeholder discussions and public comment opportunities at the beginning of every monthly HITAC meeting, the Council meeting schedule can be found here: <https://portal.ct.gov/OHS/HIT-Work-Groups/Health-IT-Advisory-Council/Meeting-Materials>.

OHS will post the environmental scan report and draft statewide health IT plan recommendations for a thirty day public comment period; please watch for the posting here: <https://portal.ct.gov/OHS/HIT-Work-Groups/Five-Year-Statewide-Health-Information-Technology-Plan>

Please feel free to send any questions, comments, and suggestions to cthealthitplan@cedarbridgegroup.com
We welcome your feedback!

Draft Recommendations

There is a concerning lack of awareness by around the work underway in Connecticut to advance the use of health information technology and health information exchange services to improve the health and care of individuals across the state, and to help lower the escalation of healthcare costs impacting the budgets of state and local governments, businesses, and families in Connecticut. As Connie ramps up statewide HIE services and connects organizations and individuals to critical data sources, concerted outreach and engagement will be required to build understandings of the value associated with the use of health IT and HIE services and to develop across the ecosystems of healthcare and social services (both broadly defined), as well as with consumers, businesses, and government, Specific strategies are detailed throughout the draft recommendations below.

The recommendations are based on a synthesis of stakeholder input to produce key themes and major findings. Investigators also applied knowledge of literature and evidence supporting person-centered care delivery, experiences navigating complex health information technology initiatives nationwide, and the current state and federal health IT landscape.

Recommendation 1:

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.

- Connecticut Health IT Advisory Council 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 recommendations to the OHS Executive Director and the HITO for 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 baseline health information exchange services, supportive governance models to advance the public utility model, and progression of OHS responsibilities outlined in [CGS Sec. 19a-754a](#).
 - In addition, Connie should explore partnerships to foster earned revenue through fees.
- In the near-term, Connie should focus on HIE fundamentals (e.g., ADT notifications, lab results and image sharing, medication lists, etc.) with an eye toward useability and workflow integration and limit the number of use cases that will require additional patient consent. Key stakeholders and 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).
- 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.
- Connie should be leveraged for health information exchange between local public health departments, providers, and Connecticut's Department of Public Health to ensure centralized data access and streamlined reporting in public health crises, and ease the administrative burden

experienced by local public health departments and providers due to manual data entry, redundant reporting, and difficulty querying public health data systems.

Recommendation 2:

Systems and Strategies to Address Social Determinants of Health

The state, in concert with the Connecticut Hospital Association, should consider allocating technology funding and other resources 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](#) (An Act Equalizing Comprehensive Access to Mental, Behavioral and Physical Health Care In Response to the Pandemic), expansion of the utilization of Unite Connecticut, and exploration of other tools to capture social risk factors and coordinate care across communities.

- Explore the identification and systematic use of a single SDoH screening tool across healthcare settings, similar to the [North Carolina model](#).
- Establish common data standards in alignment with emerging SDoH standardization collaboratives such as [The Gravity Project](#) and [SIREN](#).
- Explore the development of a community information exchange, leveraging state resources in place such as Connie and its potential future deployment of CIE tools, [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.
- Facilitate 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 healthcare delivery system is dependent on social services and community-based organizations (CBOs) to improve community health and wellness through whole person coordinated care; social services and CBOs must be properly resourced and equipped to meet increasing demands for services as coordination with healthcare providers ramps up.
- Leverage state, federal, and private-sector funding to provide CBOs with information technology infrastructure to support coordination across disparate organizations sharing in the care of individuals and families.
- Hire and train personnel to manage and operate technology assets.

- Provide ongoing educational and technical assistance resources to ensure a technically competent workforce over time.

Recommendation 3:

Service Coordination and Data Integration Across State Agencies

- The state is benefitting from an infusion of one-time funding from the CDC and other federal sources for [public health data modernization](#); CT should continue with ongoing funding to ensure adequate staff resources are maintained within DPH and local public health departments.
- Create a Public Health Gateway within Connie for more seamless flow of information between local public health departments, other reporting providers, and the state's public health reporting systems
- Efforts should build upon [P20 Win](#), [CGS 4-67z](#), [CGS 17b-112l\(e\)](#), and other initiatives to build shared practices and tools among attorneys representing state agencies to help facilitate data sharing through implementation of standardized legal agreements and processes.
- Create a Health and Human Service Person-Centered Services Collaborative (HHS-PCSC) as a subcommittee of the HITAC charged with identifying priority scenarios where Connecticut residents' access multiple HHS services and programs. The workgroup should evaluate the intake, enrollment and case management processes, and existing methods for coordination, along with the use of IT systems and processes that facilitate service delivery across all involved agencies. Finally, the workgroup should design systems and data integration programs that "hide the seams" of government for priority scenarios identified
- Connect HHS agencies' data systems to Connie, where appropriate, through the creation of a state agency data collaborative designed for government use of Connie. This collaborative should, among other things, build institutional capacity for data governance within and among state agencies.
- Develop formal contingency plans within each HHS agency to address the impending loss of institutional knowledge and experience due to state employee retirements and create actionable strategies to employ a new generation of talent in state government.
- Create training programs for all local public health departments to become more sophisticated in the use of existing IT systems for both public health and financial reporting.

Recommendation 4:

Support Adoption of EHRs 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.
- Technical assistance and ongoing training should be provided to 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.

Recommendation 5:

A Best Possible Medication History HIE Service, Connected Through Connie

Stakeholders across the spectrum report a high need for access to medication data – something which is not widely available at the present time. Below are recommendations to address this need.

- Explore the expansion of the Connecticut Prescription Drug Monitoring Program (PDMP, CPMRS) through policy or legislation if needed, to require submission of all prescription and medication fill, and prescription related medical devices data from pharmacies, including long-term care pharmacies, and prescribers. These efforts should leverage existing data sources such as PBMs, EHRs, and pharmacy gateways.
- 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.
- Charge the Medication Reconciliation and Polypharmacy Committee with designing a glide path for expansion of the PDMP to additional drug classes and drug types.

Recommendation 6:

Health Information Privacy to Protect Individuals and Families

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

- Create a public video series highlighting what the statewide health information exchange is, and how protected health information is shared across healthcare providers and professionals.
- 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 for the Office of Health Strategy to establish a Patient Health Information Protection Office (PHIPO) tasked with:
 - Establishing and evolving state policy for the use and disclosure of patient health information through the statewide health information exchange;
 - Monitoring, analyzing, and reporting on trends in patient complaints around inappropriate disclosures of health information, and overall experience and knowledge of the statewide health information exchange; and
 - 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 A – Taxonomy of Legislation and Documents Reviewed

Document Title	Description	Document Author(s) / Prepared By	Year Published	Document Type
Sec. 19a-755a. All-payer claims database program	Legislation establishing Connecticut's All-Payer Claims Database program	Connecticut General Assembly	2017	Legislation
Public Act 18-91 Electronic health record systems. Connection to State-wide Health Information Exchange.	Legislation requiring certain healthcare providers to connect to the state-wide health information exchange once it becomes operational	Connecticut General Assembly	2015; amended 2016, 2017, 2018	Legislation
Public Act 18-91 State Health Information Technology Advisory Council.	Legislation establishing and governing the membership of the Health Information Technology Advisory Council	Connecticut General Assembly	2015 amended 2016, 2017, 2018	Legislation
Public Act 18-91 State-wide Health Information Exchange. Established.	Legislation requiring the establishment of a state-wide health information exchange	Connecticut General Assembly	2015 amended 2016, 2017, 2018	Legislation
Public Act 21-35 An Act Equalizing Comprehensive Access to Mental, Behavioral and Physical Health Care in Response to the Pandemic.	Legislation requiring standardized collection of race, ethnicity, and language (REL) data by state agencies and health care providers with electronic record systems	Connecticut General Assembly	2021	Legislation

Document Title	Description	Document Author(s) / Prepared By	Year Published	Document Type
	capable of connecting to the statewide HIE.			
Sec. 21a-254. Designation of restricted drugs or substances by regulations. Records required by chapter. Electronic prescription drug monitoring program.	Legislation establishing the Connecticut Prescription Monitoring and Reporting System as the state PDMP and governing records submission requirements for prescribers.	Connecticut General Assembly	2013	Legislation
Sec. 4-67p. Chief Data Officer. Duties. Designation of agency data officers. State data plan. Agency inventories of data. Open data access plans. Online repository. Voluntary compliance of other agencies or municipalities.	The State Data Plan is a framework for the state's executive branch agencies to engage in a consistent approach to data stewardship, use, and access. It is not just an open data plan, but one that is applicable to all data in the custody and control of executive branch agencies.	Connecticut General Assembly	2018	Legislation
Sec. 4d-7. Information and telecommunication systems strategic plan.	The State of Connecticut IT Strategic Plan for 2021 lays out a vision for improving outcomes in Connecticut through the efficient use of technology systems, processes, and workforce using secure and cost-effective operations.	Connecticut General Assembly	2018	Legislation

Document Title	Description	Document Author(s) / Prepared By	Year Published	Document Type
Sec. 17b-59a. Development of uniform information and technology standards and regulations. Health information technology plan. Electronic data standards. State-wide Health Information Exchange. Report.	Legislation requiring the Office of Health Strategy to create a health information technology plan.	Connecticut General Assembly	2018	Legislation
2019 CT Data Catalog	An online catalog of high value data inventories produced by Connecticut executive branch agencies.	Office of Policy Management	2019	Website / Web Export
Data Across Sectors for Health (DASH) - Learning and Action in Policy and Partnerships (LAPP) Project Profile	A grant award, sponsored by the Robert Wood Johnson Foundation, for the HEC, North Hartford Triple Aim Collaborative, to develop a <i>Data Framework and Glide Path for Community Collaboratives to Improve Population Health</i>	United Way of Central and Northeastern Connecticut	2021	Grant
Connie Update at April 2021 Health Information Technology Advisory Council	A presentation updating the HITAC on Connie developments including list of connected provider groups, Connie deployment timeline, onboarding progress, and consent operationalization.	Jenn Searls, Connie Executive Director	2021	Presentation

Document Title	Description	Document Author(s) / Prepared By	Year Published	Document Type
<p>Healthcare Cost Growth Benchmark and Primary Care Target Parameters Adopted by the Office of Health Strategy</p>	<p>The healthcare cost growth benchmark is a targeted annual growth rate that payers, providers, and the State should endeavor to stay below. The benchmark will be based on a calculated and pre-determined blend of the growth in the per capita potential gross state product (PGSP), which is a forecasted measure of growth in the economy, and the forecasted growth in median income of Connecticut residents.</p> <p>The primary care spending target aims to strengthen Connecticut’s primary healthcare services system by establishing a goal for increasing statewide primary care spending as a percentage of total healthcare expenditures; the target reaches 10 percent by Calendar Year 2025.</p>	<p>Vicki Veltri, Executive Director, Office of Health Strategy</p>	<p>2020</p>	<p>Report</p>

Appendix B – 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,

Term	Definition
	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 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.

Term	Definition
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 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'

Term	Definition
	<p>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.</p>
HITO	<p>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.</p>
HITAC	<p>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.</p>
HITECH	<p>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.</p>
HMIS	<p>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.</p>
Interoperability	<p>Interoperability refers to the ability for systems to exchange data and operate in a coordinated, seamless manner.</p>
LTPAC	<p>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.</p>
MOLST	<p>Medical Orders for Life-Sustaining Treatment.</p>
MPI	<p>Master Patient Index. MPis store, and cross-reference, unique patient identification for every patient in an HIE or health system.</p>
MRPC	<p>Medication Reconciliation and Polypharmacy Committee. The charter for the MRPC is to provide strategic guidance, recommendations, and</p>

Term	Definition
	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 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

Term	Definition
	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 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.

Term	Definition
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.

Appendix C – Virtual Forum and Key Informant 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.	I PRO	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

Stakeholder Organization		Engagement Type
76.	Midwestern Connecticut Council of Alcoholism	Virtual Forum, Interview
77.	Myers and Stauffer, LC	Virtual Forum
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

Stakeholder Organization	Engagement Type
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
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

Appendix D – Virtual Forum Ranked Health IT Plan Priorities

Virtual Forum #1: Behavioral Health & Everyone Else

Virtual Forum Attendees’ Top Health IT Priorities	
Priority Options:	1. Full client health records at the point of care
	2. Integrating social risk data
	3. Adding connections to social services
	4. Focus on improving data quality
	5. Real-time access to bed availability
	6. Better defined data standards
	7. Better physical health coordination
	8. Protecting sensitive client data
	9. Receiving hospital event notifications
	10. Access to CT Prescription Monitoring & Reporting System (CPMRS) data
	11. Ability to make and track electronic referrals
Highest Ranked Priorities	
#1 – 31% of Respondents	
#4 – 19% of Respondents	
#9 – 13% of Respondents	

Virtual Forum #2: Integrating Social Needs Data

Virtual Forum Attendees’ Top Health IT Priorities	
Priority Options:	1. Investment in data infrastructure for community-based organizations
	2. Integrating social risk data with healthcare systems
	3. Establishing CBO/healthcare data sharing agreements
	4. Focus on improving data quality
	5. Systematic social needs screenings across healthcare and social services
	6. Better defined data standards
	7. A community-wide information exchange platform
	8. Protecting sensitive client data
	9. Receive information on the outcome of referrals to social services/CBOs
	10. Ability to make and track electronic referrals
	11. Availability of data/ reporting to identify social needs
Highest Ranked Priorities	
#1 – 33% of Respondents	
#2 – 20% of Respondents	
#7 – 20% of Respondents	
#8 – 20% of Respondents	

Virtual Forum #3: Technology and Data for a Strong Public Health System

Virtual Forum Attendees' Top Health IT Priorities	
Priority Options:	1. Improved interoperability of state public health systems with local health districts and providers
	2. Integrating social risk data with public health systems
	3. Investments in local public health infrastructure
	4. Focus on improving data quality and standards
	5. Real-time dashboards and population health analytics
	6. Simplification and efficiency in public health reporting
	7. Systems and data to improve the speed of response to public health crises and emergencies
	8. Investments in existing state data systems
	9. Investment in IT for emergency preparedness
	10. Investments in population health research and analytics
Highest Ranked Priorities	
#1 – 43% of Respondents	
#3 – 21% of Respondents	
#4 – 21% of Respondents	

Virtual Forum #4:

Eliminating Barriers to Protect and Care for Connecticut Children in Need

Virtual Forum Attendees' Top Health IT Priorities	
Priority Options:	1. Accessible school health data
	2. Data sharing between healthcare providers and community organizations
	3. Improved timeliness and accuracy of caregiver background information
	4. Investments in population health analytics and dashboards
	5. Linking community systems with state and local foster/child welfare systems
	6. Collecting and using data on adverse childhood experiences
	7. Technologies to support providers during home visits
	8. Systems to support integrated community information exchange
	9. Access to complete client medical records at the point of care
	10. Improved protections for client privacy and security of personal data
Highest Ranked Priorities	
#8 – 44% of Respondents	
#2 – 33% of Respondents	
#4 – 11% of Respondents	
#10 – 11% of Respondents	

Virtual Forum #5: Timely Information Moving Between
 Long Term Care, Emergency Medical Services, Hospitals, and Primary Care

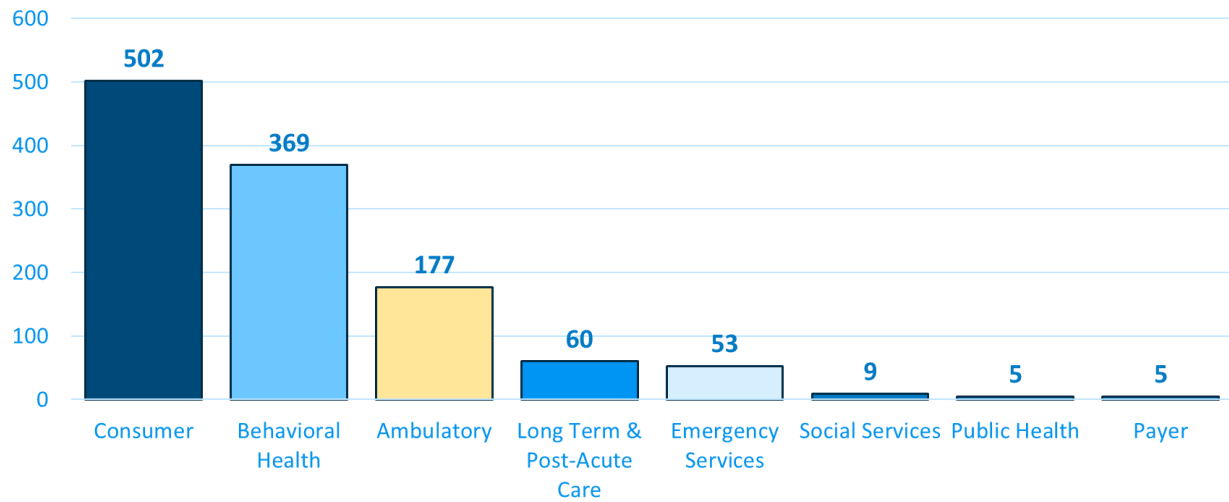
Virtual Forum Attendees' Top Health IT Priorities	
Priority Options:	1. Interoperable patient health records at the point of care
	2. Improved protections for maintaining the privacy of sensitive client information
	3. A community care coordination platform for care team members from disparate sectors and organizations
	4. Improved data standards and accuracy
	5. Access to electronic hospital event notifications (ADTs)
	6. Access to hospital outcomes data
	7. Systems to support EMS/LTPAC participation in value-based payment programs
	8. Improved state data systems and reporting capabilities
	9. Access to infectious & communicable disease data systems
	10. Population health analytic capabilities and dashboards
Highest Ranked Priorities	
#1 – 55% of Respondents	
#2 – 27% of Respondents	

Virtual Forum #6: Prioritizing and Governing Investments
 Secure Patient-Centered Health IT for Residents of Connecticut

Virtual Forum Attendees' Top Health IT Priorities	
Priority Options:	1. Identity management services (provider directory, master person index)
	2. Electronic registries for MOLST, advanced directives, power of attorney
	3. State agency data integration for eligibility and service coordination
	4. Statewide analytic/quality measurement capabilities
	5. Update state legacy systems for ease of reporting by stakeholders
	6. Access to complete patient medication histories
	7. Development of a statewide community information exchange
	8. Improved broadband connectivity and speed for all areas
	9. Maintaining provider reimbursement for telehealth post-pandemic
Highest Ranked Priorities	
#9 – 30% of Respondents	
#1 – 20% of Respondents	
#7 – 20% of Respondents	

Appendix E – Electronic Survey Participation by Stakeholder Domain

Connecticut eScan Survey Counts



1,181 total surveys completed

Appendix F – Past HITAC Design Group Outputs and Issue Briefs

HIE Use Case Design Group

The [Final Report and Recommendations of the HIE Use Case Design Group](#) is the work of a multi-stakeholder planning effort, which was chartered by the Health Information Technology Advisory Council (Health IT Advisory Council) on June 15, 2017. The Health Information Exchange Use Case Design Group (HIE Use Case Design Group) was chartered to:

1. Develop HIE use cases that align with Health IT Advisory Council recommendations
2. Establish value propositions to prioritize / sequence the use cases
3. Research and validate high-level business and functional requirements for prioritized use cases

Immunization Information System (IIS) Design Group

The [Final Report and Recommendations of the Immunization Information System Implementation and Alignment Design Group](#) is the work of a stakeholder IIS Design Group chartered by the Health IT Advisory Council on June 15, 2017. The objective of the IIS Design Group was to make recommendations to ensure alignment between the procurement and implementation of a new IIS platform and the planning for statewide HIE services in order to meet stakeholder needs. The IIS Design Group met its objectives by developing the following elements of the report:

1. Stakeholder and Value Proposition Overview
2. Priority use cases
3. Recommendations around next steps and future activities to be presented to the Health IT Advisory Council for further deliberation and approval at its August 17, 2017 meeting.

Electronic Clinical Quality Metric (eCQM) Design Group

The [Final Report and Recommendations of the Electronic Clinical Quality Measures Design Group](#) is the work of a multi-stakeholder Electronic Clinical Quality Measures Design Group, which was chartered by the Health IT Advisory Council on January 19, 2017 to make recommendations on a statewide system to support the reporting of clinical quality measures in an environment of alternative payment models (APMs). The Design Group met its objectives by developing a central value proposition for a system that is inclusive of all types of data and clinical quality measures (CQMs). It also produced three major deliverables foundational to the development of a statewide quality measurement system:

1. A graphic depiction of the critical components of a statewide quality measurement system;
2. A matrix of stakeholder business requirements and prioritized quality measurement use cases, based on different types of data, to support the business requirements; and
3. A list of functional requirements that can be used in the procurement of vendor services for the implementation of a statewide quality measurement system.

Assessing Connecticut's Health Information Technology and Health Information Exchange Services

The report, [Assessing Connecticut's Health Information Technology and Health Information Exchange Services: Summary Findings of Current State, Future Needs, and Recommendations for Action](#) is a summary of several documents developed for the Health Information Technology Program Management Office (HIT PMO), led by the Connecticut Health Information Technology Officer (HITO), with funding and supplemental support from the State Innovation Model Program Management Office (SIM PMO). In total, the collection of documents will form an environmental scan and assessment of the current availability and use of health information exchange (HIE) services and health information technology (health IT) tools in Connecticut by each stakeholder segment. The environmental scan also curates Connecticut stakeholders' understandings, attitudes, beliefs, aspirations, and levels of confidence in a future as envisioned by Connecticut Public Act No.16-77 (2016), where health IT and HIE services will support enhancements in the efficiency and effectiveness of healthcare.

Governance Design Group

Recognizing that successful and sustainable data sharing initiatives are built upon solid foundations of governance and trust, the Health IT Advisory Council chartered a Governance Design Group to develop high-level recommendations for how to best establish an overall health information exchange governance framework for Connecticut. Recommendations were presented to the Health IT Advisory Council on July 19, 2018. The Council unanimously approved these recommendations and commended the group for its outstanding work. The [Final Report and Recommendations of the Governance Design Group](#) represents the fulfillment of this phase of governance construction.