

Health Information Exchange Strategic Plan 2023-2027 Plan (2024 Update) *Submitted: November 1, 2024*

Submitted by the Agency of Human Services

18 V.S.A. § 9351(a)(1) The Department of Vermont Health Access, in consultation with the Department's Health Information Exchange Steering Committee, shall be responsible for the overall coordination of Vermont's statewide Health Information Technology Plan. The Plan shall be revised annually and updated comprehensively every five years to provide a strategic vision for clinical health information technology.

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Key Terms

Act 167¹ (2022) – An act relating to health care reform initiatives, data collection, and access to home- and community-based services.

Advancing All-Payer Health Equity Approaches and Development (AHEAD)² – The States Advancing All-Payer Health Equity Approaches and Development (AHEAD) Model is a new federal program that would allow Medicare to join Vermont’s health care reform efforts to improve the health of Vermonters, advance health equity so that everyone can reach their full potential for health, and reduce the growth of healthcare costs. Vermont was selected to participate in the AHEAD Model in July 2024.

Advanced Planning Document (APD) – A brief written plan of action that requests funding from the Centers for Medicare & Medicaid Services (CMS) to accomplish the planning activities necessary for a state agency to determine the need for, feasibility of, projected costs and benefits of an information system or services acquisition, plan the acquisition of information system equipment and/or services and to acquire information necessary to prepare an Implementation Advance Planning Document (IAPD).

Agency of Human Services (AHS) - AHS was created by the Vermont Legislature in 1969 to serve as the umbrella organization for all human service activities within state government.

All Payer Claims Database (APCD) – Are databases that include data on health insurance claims which can include medical claims, pharmacy claims, dental claims, and eligibility and provider files collected from private and public payers³.

Application Programming Interface (API) – APIs are mechanisms that enable two software components to communicate with each other using a set of definitions and protocols.

Assistant Secretary for Technology Policy and Office of the National Coordinator for Health Information Technology (ASTP/ONC) – ASTP/ONC is at the forefront of the administration’s health IT efforts and is a resource to the entire health system to support the adoption of health information technology and the promotion of nationwide, standards-based health information exchange to improve health care. ASTP is organizationally located within the Office of the Secretary for the U.S. Department of Health and Human Services (HHS).

ASTP is the principal federal entity charged with coordination of nationwide efforts to implement and use the most advanced health information technology and the electronic exchange of health information. The position of National Coordinator was created in 2004, through an Executive Order, and legislatively mandated in the Health Information Technology for Economic and Clinical Health Act (HITECH Act) of 2009.

Center for Disease Control and Prevention (CDC) – The CDC is one of the operating components of the Department of Health and Human Services. Their mission is to serve as a data-driven service organization that protects the public’s health⁴.

Centers for Medicare & Medicaid Services (CMS) – CMS combines the oversight of the Medicare program, the Federal portion of the Medicaid program and State Children's Health Insurance Program, the Health

¹ [Act 167](#)

² [The AHEAD Model](#)

³ [All-Payer Claims Databases | Agency for Healthcare Research and Quality \(ahrq.gov\)](#)

⁴ [About CDC | About | CDC](#)

Insurance Marketplace, and related quality assurance activities.

Comprehensive Primary Care Plus (CPC+) is a multi-payer advanced primary care medical home model that was launched by CMS in 2017. It uses a combination of clinical and claims data to track and measure the performance of participating practices and to inform payment adjustments.

Data at the Point of Care (DPC) – Is a pilot program run by CMS that enables providers to deliver high quality care to Medicare beneficiaries by helping fill in the gaps in their patient’s history by providing Medicare claims data at the point of care.

Data Governance – Data governance is a system of decision rights and accountabilities for information-related processes, executed according to agreed-upon protocols which describe who can take what actions with what information and when, as well as under what circumstances, using what methods. It clearly identifies the roles and responsibilities of those who take part in those processes and how they should interact.

Data Integration – Data integration is the process of combining data from different sources into a unified view or format.

Electronic Health Records (EHR) – a digital version of a patient’s paper chart. EHRs are real-time, patient centered records that make information available instantly and securely to authorized users.

Fast Healthcare Interoperability Resources (FHIR) – a national standard for interoperability designed to enable health data, including clinical and administrative data, to be quickly and efficiently exchanged.

Health Data Utilities (HDU) – Are statewide entities that combine, enhance, and exchange electronic health data across care and services settings for treatment, care coordination, quality improvement, and public and community health purposes.

Health information – Information created during care delivery and/or in a social service setting which supports coordination of care, reimbursement, public health and quality reporting, analytics, and the policy and governance surrounding management of the healthcare system.

Health information exchange (HIE) verb – The action of appropriate and confidential sharing of health information across facilities, organizations, and government agencies supporting treatment, payment, and healthcare operation activities according to national standards. HIE is often used as shorthand for programs, tools, and investments that help aggregate and exchange health information.

Health Information Exchange (HIE) noun – An organization that collects health information electronically, manages it, and makes it available across the healthcare system. There is at least one HIE in almost every state in the nation, and HIEs can offer a variety of services. In Vermont there is one HIE, referred to as the Vermont Health Information Exchange (VHIE), which is operated by Vermont Information Technology Leaders (VITL).

Health Information Technology for Economic and Clinical Health (HITECH) – The Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted as part of the American Recovery and Reinvestment Act of 2009, was signed into law on February 17, 2009, to promote the adoption and meaningful use of health information technology. This Act expired in 2021.

Health System – A “system” can be understood as an arrangement of parts and their interconnections that come together for a purpose. A health system has many parts. In addition to individuals and families, health providers, health services organizations, pharmaceutical companies, government, and other

organizations play important roles. The interconnections of the health system can be viewed as the functions and roles played by these parts. The health system includes all activities focused on promoting, restoring, and maintaining health.⁵

Implementation Advance Planning Document (IAPD) – A written plan of action requesting to acquire and implement information system services and/or equipment from Centers for Medicare & Medicaid Services.

Information Technology (IT) – A broad professional category covering functions including building communications networks, safeguarding data and information, and troubleshooting computer problems.

Medicaid Data Warehouse and Analytics Solution (MDWAS) – The MDWAS project is a transformative initiative that will enhance the way we access and utilize Medicaid data in Vermont. By leveraging new and existing technologies, we aim to improve the accessibility, security, integrity, and utility of the State's Medicaid data for AHS departments involved in Medicaid service delivery.

Operational Advanced Planning Document (OAPD) – Used to request funding for maintenance and operations from the Centers for Medicare & Medicaid Services of information systems when no major development or enhancements are being done.

Outcomes-Based Certification – For all systems that comprise the Medicaid Enterprise System (MES), the Streamlined Modular Certification (SMC) approach to Outcomes-Based Certification (OBC) is designed to: demonstrate measurable improvements to a State's Medicaid program. This is achieved through data collection and testing to enable operational reporting of performance and functionality. OBC also reduces the burden on states and CMS during the certification process without compromising CMS's responsibility to ensure systems satisfy all requirements.

Request for Proposal (RFP) – A request for proposal is a document that solicits a proposal to potential suppliers / vendors through a bidding process by an entity (or government agency) interested in procuring a service or commodity.

Social Drivers of Health (SDoH) – Social drivers of health (sometimes referred to as Social Determinates of Health) are nonmedical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life⁶.

Total Cost of Care (TCoC) – The process of holding states accountable for quality and population health outcomes, while constraining costs of healthcare services delivered in a state or specified sub-state region. As applied by the CMS Innovation Center, this process takes place across all healthcare payers, including Medicare, Medicaid, and private health insurers and plans.

Unified Health Data Space (UHDS) – Vermont's Health Information Exchange has evolved from a "first generation" HIE which was focused on sending and receiving clinical records to a "second generation" HIE with a more robust assortment of data types and services offered. With this transition and with the completion of the technology work, the ecosystem of the health information exchange is referred to as the Unified Health Data Space. As such, we will no longer be referring to Collaborative Services and instead will use the term Unified Health Data Space. This more accurately captures the second-generation

⁵ [World Bank. \(2007\). *Healthy Development: The World Bank Strategy for Health, Nutrition, and Population Results*. Washington, DC. World Bank.](#)
License: CC BY 3.0 IGO.

⁶ [Social Determinants of Health at CDC | About | CDC](#)

function and needs of the HIE and as such will be used throughout this plan when referring to the ecosystem of the HIE.

United States Core Data for Interoperability (USCDI) – is a national standard set of health data grouping and elements for nationwide interoperable health information exchange.

Value-Based Care (VBC) – Designing care so that it focuses on quality, provider performance and the patient experience. Value-based care is a term that Medicare, doctors, and other healthcare professionals sometimes use to describe healthcare that is designed to focus on quality of care, provider performance and the patient’s experience. The “value” in value-based care refers to what an individual values most. In value-based care, doctors and other healthcare providers work together to manage a person’s overall health, while considering an individual’s personal health goals.

Vermont Department of Health (VDH) – VDH is the department within AHS responsible for promoting the physical, mental, and social well-being of people in Vermont by advancing equity, protecting against disease and injury, and preparing for health emergencies.

Vermont Information Technology Leaders (VITL) – VITL is the legislatively designated operator of the Vermont Health Information Exchange (sometimes written VHIE and pronounced Vee-high), a secure infrastructure that gives healthcare organizations in Vermont the ability to electronically share and access their peoples’ health information to improve the quality, safety, and cost of care.

Work Breakdown Structure (WBS) - A WBS is a deliverable-oriented hierarchical decomposition of the work to be executed by the project team to accomplish the project objectives and create the required deliverables.

A note on the name of this plan: 18 V.S.A. § 9351 calls for a Health Information Technology Plan which “shall include the implementation of an integrated electronic health information infrastructure for the sharing of electronic health information among healthcare facilities, healthcare professionals, public and private payers, and patients.” The term *Health Information Exchange* describes the act of sharing health information, often electronically, while the term *Health Information Technology* is a broad term that describes the technical capabilities and equipment an individual or organization might use to meet any variety of health-related needs. Therefore, to best align with the focus of this plan to provide a transparent view of the State’s health information exchange needs and challenges, this plan is hereafter referred to as the Health Information Exchange Plan, or the HIE Plan for short.

Executive Summary

The HIE Strategic Plan is guided by Vermont law ([18 V.S.A. § 9351](#)), which sets clear goals to meet the needs of various stakeholders, including people, providers, payers, public health officials, and policymakers. The plan is updated annually and includes five key inputs this year:

- Strategic planning from the HIE Steering Committee
- The Federal Health Information Technology Plan
- Act 167 and its resulting report
- The AHEAD (All-Payer Health Equity Approaches and Development) Model
- Current year's achievements

By law, the plan must provide a "strategic vision" and include the components required by statute. The Agency of Human Services (AHS), in consultation with the HIE Steering Committee, is responsible for managing the plan. This includes designating VITL to operate the HIE (18 V.S.A. § 9352(c)(1)) and overseeing its implementation, standards, and operations, as detailed in the legislation (18 V.S.A. § 9351 and [18 V.S.A. § 9352](#)).

There are four HIE goals that underpin the strategy:

HIE Goals

1. **Create One Health Record for Every Person** – Support optimal care delivery and coordination by ensuring access to complete and accurate health records.
2. **Better Health Outcomes** – Promote health and wellness for individuals and communities.
3. **Improve Healthcare Operations** – Enrich healthcare operations through data collection and analysis to support quality improvement and reporting with the goal of reducing healthcare costs and provide insight to improve the delivery and experience of care.
4. **Use Data to Enable Investment and Policy Decisions** – Bolster the health system's ability to learn and improve by using accurate, comprehensive data to guide investment of time, labor, and capital, and inform policy making and program development.

As the HIE has matured and developed, it has grown from a first generation HIE, focused on sending and receiving clinical data, to a unified health data utility. A health data utility is a statewide entity that combines, enhances, and exchanges electronic health data across care and services settings for treatment, care coordination, quality improvement, and public and community health purposes. Health Data Utilities have emerged as an industry standard best practice for HIEs. Health Data Utilities provide the capability for essential functionality of health information exchange across the healthcare system while also providing the capability for people to engage with their health information, enhances public health responses, keeping communities healthier and safer, and providing opportunities to manage healthcare with an eye to improved outcomes.

The plan will highlight the current year’s accomplishments and strategic vision. The State has funding, staffing, and VITL capability for 2025 items that are part of this HIE Strategic Plan. The HIE Strategic Plan is aligned with the Assistant Secretary for Technology Policy and Office of the National Coordinator for Health Information Technology (ASTP/ONC) approach for HIEs. As such, there are four components that work in concert with each other and contribute collectively to the success of the HIE. These four components include: funding, governance, policy, and technology. The following section provides updates on progress made (2024) and identifies planned activities (2025) regarding each of these components.

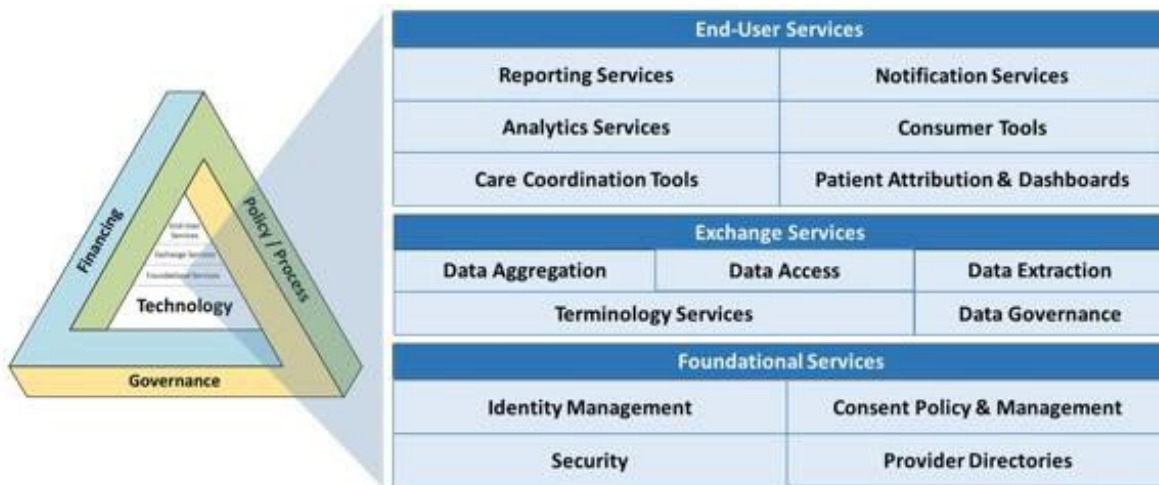


Figure 1: HIE Ecosystem - The Components

Updates

Funding: As mentioned in previous HIE Strategic Plans, Vermont's HIE was one of the first states in the country to achieve CMS Certification. As a result of this certification, Vermont's HIE is eligible for funding from the Federal Government's Medicaid Management Information System (MMIS). As such, Vermont's HIE continues to be in strong financial standing. The balance of the funding is from the State providing matching dollars as required. These matched State dollars are derived from the Health Information Technology Fund (HIT-Fund), which is funded through a portion of the healthcare claims tax or from grants.

As of June 2024, the design, development, and implementation (DDI) rate is 84.6/15.4 federal/state match. The 15.4% state match is funded by the Health IT-Fund. For maintenance and operations (M&O) the federal/state match is 70.5/29.5. The 29.5% state match is also funded by the Health IT-Fund.

Additionally, the HIT-Fund was extended by Act 144 of 2024 to amend the sunset date of the Health IT-Fund from July 1, 2025 to July 1, 2026, and Vermont's HIE financial outlook is strong. Continuing to strengthen the HIE's financial position is a priority for the Agency of Human Services, specifically ensuring maintenance and operations activities are cost competitive, particularly as the scope of ongoing work is expanded as data and capabilities are expanded. The Agency of Human Services will continue to work closely with VITL to understand the organization's desire to diversify the funding streams in future years.

2024: The financial outlook for both the HIE and the HIT-Fund continues to remain strong.

2025: Planned activities:

1. Continue to focus ensuring on cost competitiveness for maintenance and operations (M&O) costs.
2. Ongoing discussions to support VITL's desire to diversify their funding model (targeting 2025).

Data Governance: As included in last year's strategic plan, data governance has remained a priority for the HIE, with a well-established HIE Data Governance Council since 2023. Since last year, domain teams have been meeting regularly and moving forward, including the 42 CFR Part 2 and Social Drivers of Health (SDOH) domain teams. Documentation for all HIE data governance activities is publicly posted on our website at healthdata.vermont.gov. Additionally, all HIE Data Governance Council meetings are open to the public and posted by the Department of Libraries. In 2025, the HIE Data Governance Council will collaborate with accessibility specialists within AHS to do a review to ensure that meetings and meeting materials are accessible to ensure equitable opportunities for engagement.

2024: The HIE Data Governance space made significant progress in establishing domain teams and formalizing its work, including:

1. Ongoing operations of the HIE Data Governance Council through public meetings.
2. Ongoing operations of 42 CFR Part 2 domain data governance subcommittee.
3. Completing work with a consultant to establish a framework for Social Drivers of Health (SDOH) data governance.
4. Bi-State provided health data literacy education to their community health centers and VITL continued its commitment to providing patient education.

2025: Planned activities

1. Begin operations of Social Drivers of Health (SDoH) Data Governance subcommittee.
2. Ongoing operations of 42 CFR Part 2 domain data governance subcommittee.
3. Ongoing operations to continue to provide health data literacy education to patients and expand health data discussions to the provider community.
4. Ongoing operations of the HIE Data Governance Council through its public meetings as well as its various federated and domain teams.
5. Complete an accessibility review with AHS accessibility specialists to ensure equitable engagement opportunities.

Policy/Process: The HIE plan is aligned to support various State laws as well as Federal laws, rules, and regulations. With Vermont’s current HIE structure and future enhancements, it is well positioned to assist in addressing the health equity needs across the state and within communities. From a public health and policy position, the HIE can provide data to address the unique needs of the underserved and disadvantaged individuals who disproportionately carry the burden of severe chronic diseases, mental health needs, and socioeconomic barriers that challenge health outcomes, by changing how we develop and use digital technology and data. Health Information Exchanges play a key role in achieving these goals.

From a strategic perspective, there are key items the HIE program will focus on over the course of the next few years. These include continuing to diversify the data sets in the HIE – clinical, social drivers of health, public health, person generated data, etc. This supports the sustainability of the HIE and the HIE as a health data utility.

Additionally, the HIE will support ongoing work by the Agency of Human Services to meet statutory requirements for Act 167 and the application that Vermont has made to participate in the States Advancing All-Payer Health Equity Approaches and Development (AHEAD) Model through the Center for Medicare and Medicaid Innovation (CMMI) within the Centers for Medicare and Medicaid Services (CMS).

2024: Ongoing support and implementation of policies.

1. In support of [18 V.S.A. § 1129](#), the HIE will continue implementation of bi-directional exchange of immunization data between the Vermont Department of Health (VDH) and providers Electronic Health Records (EHRs) through the VHIE. So far, in 2024 VITL has completed 13 connections. They anticipate completing an additional 7 in 2024, bringing the anticipated total to 20. VDH has continued to report positive feedback from providers who are connected, and we are exploring how this model could be used for other data sets. This work establishes a model that can be expanded over time with a particular focus on reducing the provider burden.
2. Completed development of the VDH-VHIE Integration Strategy, led by VDH, with actionable next steps that were incorporated in VITL’s new contract. The first data set that is being integrated from VDH into the VHIE is manual entry and bulk upload immunizations into the Immunization Registry. This will ensure that the VHIE has a full picture of immunizations within Vermont. The second data set being integrated is all birth records from the Birth Registry to be ingested into the VHIE, to be paired with the existing Death Registry data within the VHIE. This work aligns with the Federal direction through CDC’s work with public health departments and their focus on health equity and population health.
3. All Designated Agencies (DA) within Vermont, who provide a variety of services including

substance use disorder and mental health support, are now contributing production data to VITL.

2025: Planned activities

1. Complete Phase 1 of VDH-VHIE Integration by ingesting the first two data sources from VDH into the VHIE, including birth records and immunization data from batch uploads and manual entry. The VHIE already receives death data from VDH’s Electronic Death Registration System (EDRS) and immunization data transmitted via HL7 messages to the Immunization Registry (IMR). The project team will also begin planning for Phase 2 of the VDH-VHIE Integration to start in mid-2025.
2. Complete the SDOH Strategic Roadmap, in collaboration with our internal and external partners to align the with the Federal direction on treating the “whole person”⁷.
3. Complete incentive payments to providers to connect more of the health systems electronically through moving from paper charts to EHRs and connecting them to HIE (this work item is known as Medicaid Data Access and Aggregation Program (MDAAP)). This work is scheduled to be completed in 2025.
4. Continue work with the Data Completeness Subcommittee to make incremental improvements on data completeness in the HIE. This includes the completeness of EHR records for certain data elements and robustness of data types available.
5. Complete scoping, including gathering requirements for an advanced analytics layer for the UHDS and begin implementation.
6. Continue discussions regarding expanding participation in national networks, specifically the Trusted Exchange Framework and Common Agreement (TEFCA), led by Assistant Secretary for Technology Policy and Office of the National Coordinator for Health Information Technology (ASTP/ONC).
7. Explore designation of the HIE as a Health Data Utility, to align more closely with our HIE activities.
8. Begin initial phases of scoping and gathering requirements for the procurement of a care coordination and referral platform with a broad stakeholder group. This work was slated to begin in 2024 but was pushed to 2025, in 2025 initial stakeholder and requirements gathering will be completed.

Technology:

While many core components to the fundamental HIE technology stack are in place, the HIE will continue to require enhancements to keep up to date. As outlined in 18 V.S.A. § 9351 (b)(6), the Unified Health Data Space is well positioned to ensure reuse of technology to make the most efficient use of resources. Per the statute, the HIE will: “incorporate the existing healthcare information technology initiatives to the extent feasible in order to avoid incompatible systems and duplicative efforts”⁸. Some of these include creating and applying an analytics layer to best optimize the data usability with appropriate role-based access; planning for ease of use through applying single sign on capability; and ensuring bidirectionality of data flow as it aligns with Federal and State laws and data security guidelines.

⁷ [CMS Behavioral Health Strategy | CMS](#)

⁸ [18 V.S.A. § 9351 \(b\)\(6\)](#)

Additionally, as a cornerstone of AHS’s healthcare transformation strategy, the UHDS is in a strong position to support AHS in both Act 167 and the CMS AHEAD Model. Act 167⁹ and its resulting report¹⁰ seek to restructure Vermont’s healthcare delivery system while the AHEAD model¹¹ focuses on healthcare affordability and improving outcomes through innovative care models. Act 167 and AHEAD complement each other, as both initiatives emphasize a robust data infrastructure needed for data-driven decision-making, cost containment, and optimized resource allocation. The UHDS will play a pivotal role in this work by leveraging existing infrastructure to meet the requirements of both Act 167 and AHEAD.

The UHDS will be an integrated, comprehensive data repository, combining data from multiple sources including clinical, claims, SDoH, etc. (see page 13 for UHDS diagram). Medicaid is implementing a data lake, data warehouse, and analytics solution as a leading-edge platform, which will be scaled to include data from Vermont’s general population, in accordance with state and federal law, regulation, and policy. By scaling its capabilities, the UHDS leverages this infrastructure and investment to serve as a critical enabler for policymaking and healthcare delivery in Vermont. Through this integrated data infrastructure, AHS will have access to real-time, actionable insights needed to implement the goals of both Act 167 and the AHEAD model and facilitating data-driven decisions.

2024: Ongoing successful operations.

1. On track to achieve the goal of 114 interfaces in 2024. VITL is completing more diverse and complex connections than in previous years. The connections include establishing connections with new EHR vendors, as well as expanding the sharing of public health data through supporting electronic lab reporting (ELR) connections to VDH and implementing bi-directional exchange of immunization data.
2. Ongoing successful maintenance and operations of the HIE.

2025: Planned activities:

1. Complete foundational technology improvements to enable national standards for Fast Healthcare Interoperability Resource (FHIR) Application Programming Interfaces (APIs). These APIs establish the foundation for future HIE technological enhancements. This work was started in 2024 but was only partially completed due to VITL’s selected vendor not being able to agree to standard State terms and conditions. AHS and VITL have been proactively collaborating on moving this work forward to be completed in 2025.
2. Expansion of VITL Access Single Sign On (SSO) and Multi-Factor Authentication (MFA) for providers to access the VHIE is in progress to help reduce the provider burden and increase efficiency, as outlined in the Act 167 report.
3. Implement security labeling (tagging) for exchanging sensitive data, including 42 CFR Part 2 Data, capturing, applying and managing granular consent.
4. Expand UHDS data capabilities by scaling (and reusing) the platform Medicaid is building, that already includes Medicaid data sets such as clinical, claims (including pharmacy), and SDoH. This expansion will include incorporating additional clinical, SDoH, mental health, substance use data, etc. to address population health issues. This expansion will enable reporting to meet the needs of diverse populations, including for providers. This work is being paired with the analytics layer work (page 20 for details), which includes requirements gathering and

⁹ [Act 167](#)

¹⁰ [The final report for the Community Engagement project](#)

¹¹ [The AHEAD Model](#)

stakeholder engagement from across the healthcare space within Vermont.

5. Conduct an assessment to analyze the viability and impact of using UHDS data, reporting, dashboards, etc. to enable decision makers to support data-driven decisions in line with Act 167 recommendations.
6. Conduct a feasibility and readiness assessment review of Vermont's needs related to potentially establishing a State-wide EHR solution.
7. Continue to explore options to provide support to smaller health practices / rural providers for their health information technology needs to provide technical assistance in implementing and operating EHRs.

Vermont's Unified Health Data Space Model

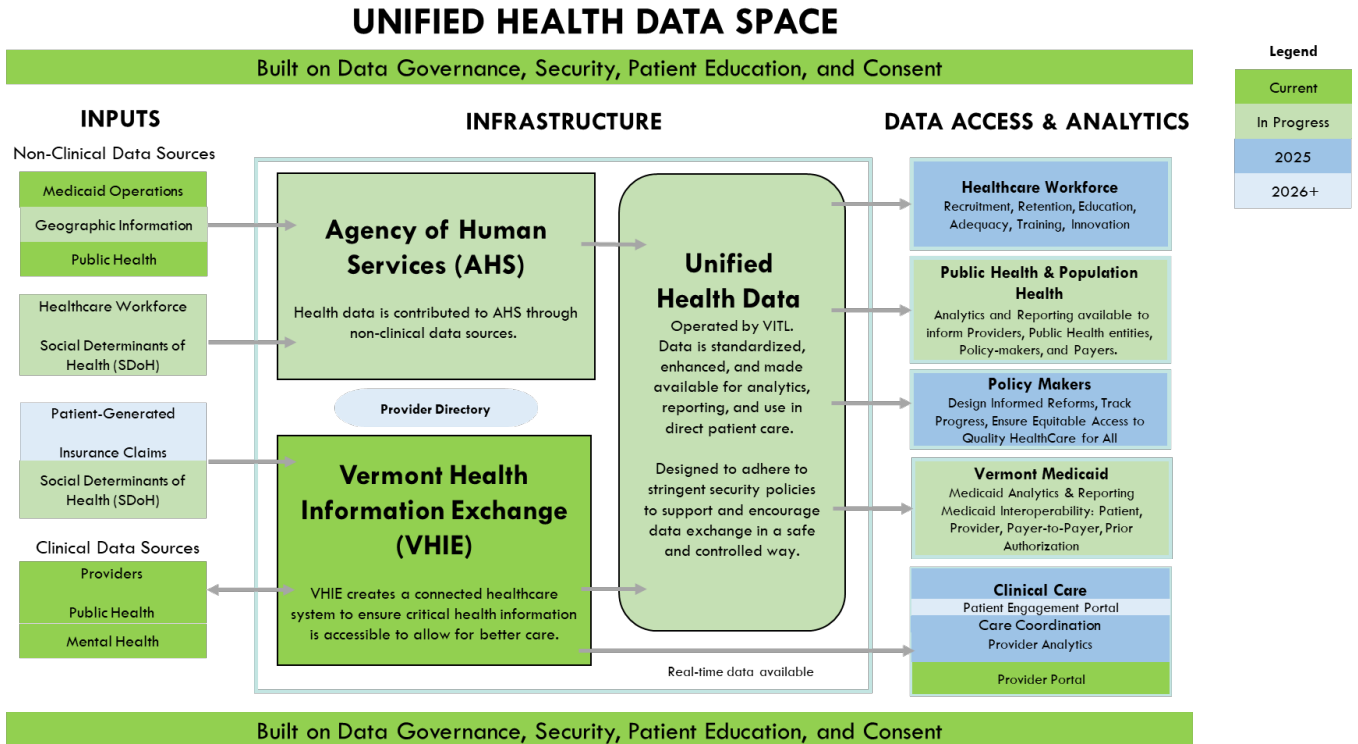


Figure 2: Vermont's Unified Health Data Space Model

2024 Accomplishments

Goal	Current Status	Outlook for Dec 2024 Status	On Track
Data Governance			
SDoH Data Governance	100%	100%	Yes
Patient Education & Provider Outreach			
Ongoing focus on patient education and provider outreach by VITL.	80%	100%	Yes
Data Completeness, Quality, and Standardization			
Data Standardization	100%	100%	Yes
Medicaid Data Access and Aggregation (MDAAP) Implementation	25%	65%	Yes
Maintenance & Operations Cost Focus			
Focus on cost competitiveness for M&O costs - KPI development	15%	25%	Yes
Connectivity			
Provider connections/interfaces	88%	100%	Yes
Part 2 Data - all Designated Agencies are connected to the HIE	100%	100%	Yes
Development work to start for HIE to serve as the Medicaid Data Warehouse			
VITL to be operator of Unified Health Data Space (data warehouse)	45%	50%	Yes
Application Programming Interfaces (APIs)			
Implement FHIR APIs	25%	40%	Partial
SDOH Roadmap			
Complete engagement with NORC on the development of an SDOH Roadmap for AHS.	50%	75%	Yes
Integrate Dept of Health data into the HIE			
VDH-VHIE Integration Strategy	100%	100%	Yes
Analytics Layer			
Stakeholder and requirements gathering RFP	25%	50%	Yes
Care Coordination & Referral Management			
Scoping, Requirements Gathering, & Procurement	0%	0%	No
Provider Directory			
Scoping & Requirements Gathering, Procurement, Data Governance and Implementation	0%	5%	Partial
Explore Options - Rural/Smaller Independent Providers			
Scoping & Stakeholder Identification	15%	25%	Yes

Table 1: 2024 Accomplishments

Strategy: Funding

Update: In 2025, the HIE Program will continue to focus on ensuring that the VHIE has a cost competitive structure for maintenance and operations. The goal is to position the HIE to remain cost competitive as the scope and scale of work increases. The actions associated with this are: ensuring alignment of VITL team members on the necessary technical and data management activities and projects; ensuring new and renewed contracts are negotiated at competitive rates; and finding opportunities to build more technical competency in-house at VITL to reduce the dependency on contractors.

The Agency of Human Services will continue to evaluate maintenance and operations (M&O) costs to contain costs as new capabilities are added. The reason for this is there are known M&O costs increases which include: each year interfaces and contracted projects transition to maintenance and operations mode; cyber threats regularly shift and grow, leading to increases in security costs, increase in cybersecurity insurance costs. An example of this work is the implementation of FHIR APIs, which will establish modern inbound and outbound connections with the VHIE.

These known M&O future costs are the reason it is critically important to focus on cost competitiveness. This will help manage the M&O cost increases year to year, which will be important for HIE financial sustainability.

VITL and AHS are continuing to explore cost competitiveness metrics for maintenance and operations, baseline discussions have been held and VITL and AHS are working to incorporate these in 2025.

Strategy: Governance

Update: There was significant work and progress in the data governance space in 2024. There will be three key initiatives in 2025 related to data governance.

1. Continue operations of SDOH Data Governance to mature our work in this area through proactive engagement with internal and external stakeholders.
2. Continued operations to provide health data literacy education to patients and expand health data communications to the provider community.
3. Ongoing operations of the HIE Data Governance Council.

Data Governance: In 2025 the HIE will continue the ongoing operations of the HIE Data Governance Council. Ongoing data governance is indispensable for the HIE because it ensures the reliability, accuracy, security, and usability of the data year after year. Health data is dynamic, subject to constant updates and additions, and changes as patients receive care from various providers. Data governance processes must be responsive and adaptable to respond to the evolving landscape. Healthcare regulations and standards also evolve, necessitating continuous compliance monitoring and adjustments to data handling practices. Moreover, as healthcare technologies advance, new data sources and formats emerge, demanding ongoing governance efforts to integrate, standardize, and secure these diverse data types. By continually upholding data governance practices, the HIE can maintain data quality, protect patient privacy, and uphold the trust of both patients and healthcare providers in the long term. Further

information can be found at: <https://healthdata.vermont.gov/vermont-health-information-exchange-data-governance>

Health Data Education: One of the primary areas of focus in the digital healthcare domain is enhancing digital health data awareness for providers and patients. Addressing data literacy can unlock the full potential of digital health data, thereby enriching the quality of care, and patient empowerment.

Through a health equity lens, it is particularly crucial that Vermonters possess the skills to access, comprehend, analyze, and utilize their data to make informed health choices. For healthcare providers it is equally important to understand the HIE data. The HIE believes patients are at the center of their health data and should be able to make decisions about how their health data is used. By integrating digital health data literacy into health data governance and outreach initiatives we can ensure that the digital transformation of healthcare is both inclusive and equitable. This involves harnessing Health Information Exchange access portals and other outreach platforms as tools for education and empowerment, utilizing them to build a better understanding of user needs.

Furthermore, establishing Key Performance Indicators (KPIs) and measurable benchmarks will provide a roadmap for progress, ensuring that our initiatives are impactful and accountable. These efforts will pave the way for true digital inclusion, fostering shared decision-making, and ultimately reducing disparities in healthcare delivery in Vermont.

To help guide the HIE Steering Committee in addressing these complex issues, the Office of Health Equity within the Vermont Department of Health has been invited, and accepted, to participate in our HIE Steering Committee. This Office brings significant experience and knowledge to the HIE Steering Committee around understanding and addressing disparities in Vermont.

Strategy: Process/Policy

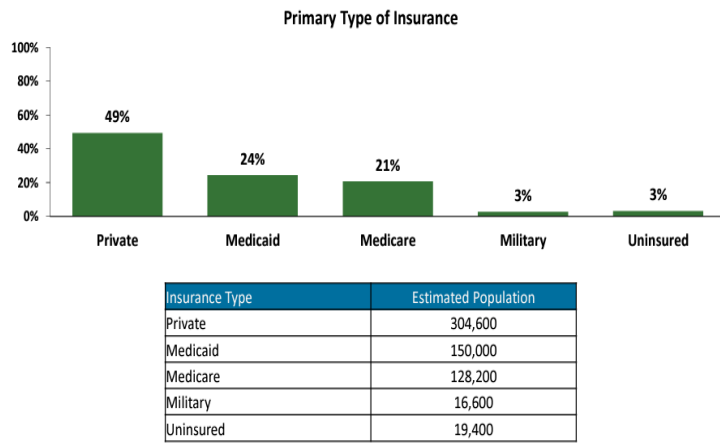
Update: AHS has successfully ingested Medicaid clinical data and claims data in the Medicaid Data Lake. By July 2025, this data will be ingested into the data warehouse and will be linked to enable reporting on linked Medicaid clinical and claims information in late 2025.

This significant milestone is designed to demonstrate that linking clinical and claims data is possible and will evaluate the linkage of the Medicaid claims data to clinical data currently in the VHIE. The project team for that work will continue to move forward while AHS explores how it can scale the solution to potentially include Medicare claims data through possible AHEAD Model participation.

According to the 2021 Vermont Household Health Insurance Survey¹², issued in March 2022, shows that in 2021 97% of Vermonters report having a primary source of health insurance. It is important to note that some Vermonters also have other secondary sources of health insurance, these figures are only looking at primary sources. About 49% of Vermonters have private (also known as commercial) insurance,

¹² [2021 Vermont Household Health Insurance Survey](#)

24% have Medicaid, 21% have Medicare and 3% have Military (see Figure 3). AHS’s ability to link Medicaid clinical and claims, will cover about 24% of Vermont’s population, with the potential addition of Medicare



claims data (21%) through AHEAD model participation, assuming the evaluation demonstrates value in linking these data sets. Through this, AHS would be able link clinical and claims data for the primary insurance type of about 45% of Vermonters. Additionally, AHS will continue to explore adding commercial claims data to further advance the UHDS goal of creating one health record for every person.

Figure 3: Primary Type of Coverage, VT HHIS 2021 Survey Report

Vermont Department of Health – VHIE Integration: The Department of Health completed work with a vendor in late 2023 to identify opportunities and develop a plan to integrate public health and HIE data. The plan includes recommendations on the data sets to integrate, the priority of those integrations, along with specific strategies to accomplish the integrations. The recommendations were reviewed, collaboratively prioritized, and the project team will begin to complete strategic planning for implementations for the coming years with the appropriate data governance. It will take several years to implement all recommended data integrations; however, we expect to make progress towards leveraging investments and bringing public health into the UHDS.

In 2025, the VHIE will expand existing Electronic Laboratory Report (ELR) interfaces, including validating results for all Vermont reportable conditions beyond the established COVID-19 ELRs. This work enables results delivery of electronic laboratory messages to VDH and supports VDH’s ongoing modernization initiatives in line with CDC requirements. Additionally, VDH will provide immunization and birth data for integration into the VHIE via flat files. This will enrich existing data in the VHIE to become more comprehensive.

Lastly, the VHIE will integrate the measurement of blood iron levels from the VHIE into the Women, Infants, and Children Nutrition Program (WIC) vendor's system on a recurring basis. This integration will build upon an existing API developed by WIC’s vendor with another member state's HIE to implement it in Vermont. This work also aligns with VDH’s modernization efforts and will reduce staff burden and will reduce in-person visits to field offices for participants, enabling VDH to utilize provider collected data.

Medicaid Data Warehouse:

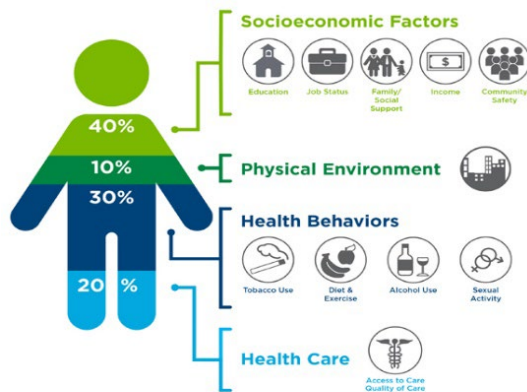
The Medicaid data warehouse will begin implementation in late 2024 or early 2025, with VITL taking over operations in late 2026 or early 2027. This will include providing Medicaid clinical information already within the HIE, leveraging the existing technology of the HIE including master patient index (MPI) and terminology services, and providing the data for the analytics solution for required reporting and analytics.

Having these data warehouse functions paired with the VHIE aligns to 18 V.S.A 9351 (6). During the

development phase, the state will own the contract with the vendor to develop the data warehouse. Once the data warehouse is implemented VITL will assume operations of it. This is a beneficial strategy as there are some financial contractual terms associated with contractual requirements for the development of the data warehouse that would be challenging for VITL to commit to (e.g. not receiving up to 25% of payment until CMS certification). These issues are not present in the maintenance and operational phase.

Social Drivers of Health: Engagement has begun with a consultant to develop an implementable strategic roadmap for Social Drivers of Health. This aligns with the Federal direction on treating the whole person.

What Goes Into Your Health?



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Programs (October 2014)

The Bridgspan Group

Image Source: The Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Programs (October 2014)

Background: Social Drivers of Health (SDoH)

The Healthy People 2030 initiative by the U.S. Department of Health and Human Services (HHS), designed to guide national health promotion and disease prevention efforts to improve the health of the nation, defines an overarching goal specifically related to SDoH: “Create social, physical, and economic environments that promote attaining the full potential for health and well-being for all.”

The HIE strives to improve our collection and use of comprehensive, interoperable, standardized individual-level demographic and SDoH data. As stated in CMS Framework for Health Equity 2022–2032, increasing our understanding of the needs of those we serve, including social risk factors and changes in

communities’ needs over time, gives us instruments to leverage quality improvement and ensure all individuals have access to equitable care and coverage.

Data is the key to building a robust and efficient Social Drivers of Health strategy, which is needed to address health and healthcare disparities and achieve health equity. CMS Framework for Health Equity 2022–2032 also identified Priority 1 as expanding the collection, reporting, and analysis of standardized data.

In September 2024, the HIE completed a milestone related to SDOH, VITL in collaboration with Acentra Health, the operator of the Vermont Chronic Care Initiative’s (VCCI) Care Management Platform, were able to successfully manually ingest SDOH screenings from the Care Management Platform into the FHIR Data Repository. In October 2024, this manual process will become an automated monthly process. This data set will grow over time and includes New To Medicaid and General Assessment screenings for Medicaid members who are VCCI eligible.

Medicaid Data Access and Aggregation Program (MDAAP): MDAAP is an incentive program to provide financial incentives, technical assistance, and business supports to home and community-based providers who would like to digitize their health records and forge new connections directly interfacing with the HIE or viewing health data through VITLAccess.

In 2023, AHS hired a vendor to survey and conduct focus groups with home and community-based providers like mental health, substance use disorder treatment, and long-term services and supports providers within Vermont, as well as to gather knowledge from other states implementing similar programs. This work was drafted into a stakeholder evaluation and assessment, lending its insights into the MDAAP program design and MDAAP Payment Protocol, approved by CMS in fall 2023.

MDAAP consists of different tracks to help providers achieve different health information technology goals. The primary focus is on meeting providers where they are and helping them to meet milestones to increase data capacity and completeness, data sharing, and lessening provider burden. Since fall 2023, MDAAP has successfully provided incentive payments, business support to implement new data systems and connections, and outreach activities. Nearly one million dollars have been paid out to thirty organizations so far, and participants continue to advance to additional digitization and connectivity milestones within their track. MDAAP is continuing to accept additional applicants as communication materials are posted and word of mouth spreads.

Data Completeness: Data completeness, including quality and standardization, can be assessed through the presence or absence of data elements. In some cases, these are elements that are expected to be present, even if they are not needed for any specific task. In other situations, the elements examined are dependent upon the task at hand by determining whether the EHR data were complete enough for a specific purpose. Data completeness is the most assessed dimension of data quality.

Analytics:

Update: The analytics layer was discussed in last year's strategic plan with a start date of 2024. In 2024 we started to conduct initial phases of scoping and gathering requirements across a broad stakeholder group for an advanced analytics layer per last year's HIE Plan's schedule. This work from scoping and requirements gathering will be completed in early 2025. This analytics layer will be procured and implemented once the initial phases are completed, with VITL operating this analytics layer as part of the UHDS.

Context: The analytics layer will service a broad user group, utilizing role-based access control, to enable direct access by HIE stakeholders including payers, hospitals, mental health and substance use disorder Designated Agencies, providers, Federally Qualified Health Centers, Accountable Care Organizations, the Blueprint, long term care solutions, home health, public health, Green Mountain Care Board, the AHS Office of Healthcare Reform, and compliance reporting.

Adoption and utilization of the UHDS will depend on the ease with which users can access the information they need. Providers will need a Single Sign-On (SSO) that is integrated into their workflow and expanding existing SSO functionality is ongoing. They will also look to have VHIE data available within their standard workflow and tools. Stakeholders will seek interactive dashboards to enable data analysis based on certain person's characteristics, health, or geography. The ability to analyze and use the data (often called data literacy) from the UHDS will vary across user groups. Strategic investments in technology for the HIE will involve acquiring and integrating modern, easy-to-use analytic tools to facilitate the effective use of the unified health data space, enabling staff without training to generate meaningful insights from the data. It will also be important to clearly communicate what tools and resources are available to users.

It will be important to present each stakeholder with data fields that will be useful and in a format that is

meaningful. Enhancing ease of use for the consumers will elevate data literacy skills. Within each user group, it will be important to identify processes to simplify access to data based on role-based access. Data must be accessible to stakeholders that are contributing data to the warehouse, in alignment with policies, laws, and data security guidelines.

Care Coordination and Referrals:

Update:

A care coordination and referral platform is a comprehensive system designed to enhance the coordination of care for individuals with complex healthcare needs. These platforms play a pivotal role in the domain of healthcare, particularly in the context of managing patients with chronic conditions or complex medical histories. At its core, a care coordination and referral platform act as a centralized hub that connects healthcare providers, care managers, community partners, and patients fostering efficient communication and collaboration.

Care coordination and referrals were discussed in last year's strategic plan update with a start date of 2024. In 2024, we were not able to conduct initial phases of scoping, gathering requirements across a broad user group. This work of scoping and gathering requirements will be pushed to begin in early 2025, and likely will take the majority of 2025. The care coordination platform will be part of the UHDS. This care coordination platform will be integrated so it can send / receive clinical data in real time and embed it into providers with EHRs. Part of the 2025 work will be to evaluate the landscape of care coordination and referral platforms in the state to either leverage existing tools or consider appropriate consolidation.

Strategy: Technology

Update:

1. **API Capability:** In early 2024, VITL brought on a vendor to complete this work, unfortunately that vendor was not able to ultimately agree to State standard terms and conditions, so negotiations were not successful. AHS and VITL are collaborating on a path forward to completing this critically important work in 2025. This foundational technology enables alignment with national standards for API capability. This creates the foundation for future technology enhancements.
2. **Health Equity for Technology:** Continue to explore options to provide support to smaller health practices / rural providers for their health information technology needs. This is both in staffing and support for health information technology needs. This is a challenge due to the rural nature of Vermont.
3. **Provider Directory:** Initial phases of scoping and gathering requirements for a future statewide Provider Directory were not able to be completed and will be pushed out until 2026/2027 based on other existing priorities outlined in this plan based on input from the HIE Steering Committee. The VHIE will enable new functionality in 2025 to perform Medicaid provider matching for the Medicaid Data Warehouse utilizing the MPI vendor, who will be able to also match Medicaid providers and produce unique identifiers for Medicaid providers. This work will help lay a foundation for a provider directory in the future.

Technology Enhancements and Application Programming Interfaces (APIs): Updated network

infrastructure, in the form of new Application Programming Interfaces (APIs) and related services, will allow the HIE to operate in compliance with current Federal standards for health information exchange. Just as world wide web (<https://www.>) standards supported a more uniform and efficient way for people and organizations to search for and share information across the internet, current Federal standards have been developed to make it easier and more efficient for patients, providers, payers, and other healthcare stakeholders to request and share healthcare information while maintaining security and privacy. These API standards (per [45 CFR Section 170.215](#)) set common, nationwide expectations for how to structure healthcare data, how to transmit it for individual patients, how to transmit it for large populations of patients, what minimum core healthcare data all EHR systems are expected to share with authorized users, and the security methods to be used for requesting access to data, authenticating or verifying the identity of users, and providing access to the appropriate subsets of data. The goals of this work are that the new APIs will provide a standard and more efficient way for HIE stakeholders to exchange data and that they will enable patients to access their data electronically.

Health Equity: Technology assistance and support for rural/smaller providers. Rural healthcare providers and small practices often face significant challenges when it comes to supporting electronic connectivity within the overall health system. These challenges stem from several factors unique to their settings and resources.

Firstly, limited infrastructure and technology resources pose a hurdle. Small practices may lack the financial resources to invest in robust IT infrastructure. These limitations can hinder their ability to electronically connect with the greater health system overall.

Secondly, limited technical expertise and staff resources can impede electronic connectivity efforts. Rural healthcare providers and small practices may have a shortage of IT professionals with the necessary skills to implement and maintain EHRs. This shortage can result in slower adoption of technology and difficulties in troubleshooting technical issues. Moreover, smaller practices often have limited staff, allocating resources for training and ongoing IT support can be challenging.

In addition, financial barriers play a significant role. Rural healthcare providers and small practices often operate on tight budgets. The cost of maintaining, upgrading, troubleshooting and ensuring data security can be prohibitive. This exacerbates the health equity challenge rural providers face.

To meet these challenges, the HIE Steering Committee in 2025 will continue to explore options to better support our rural providers in a sustainable way. This will involve continued collaboration from various entities and providers and government agencies at both the Federal and State level.

Strategy: Next Steps

How does the HIE Strategic Plan support Value-Based Care?

The HIE Strategic Plan provides a comprehensive framework that directly supports Value-Based Care (VBC) and the management of Total Cost of Care (TCOC). Here are specific examples:

1. **Integration of Diverse Data Sets:** The HIE plan emphasizes the integration of diverse data sets, including clinical, SDOH, person-generated data, etc. which supports the goal of Value Based Care – improving health outcomes and reducing unnecessary healthcare costs. This comprehensive data collection is crucial for VBC as it provides a holistic view of a patient's health, enabling healthcare providers to deliver personalized and effective care. For instance, understanding a patient's Social Drivers of Health can help providers address non-medical factors that impact health outcomes, such as housing or food insecurity.

2. **Analytics Layer Development:** The plan includes the development of an analytics layer with role-based access for each stakeholder. This allows for the analysis of data based on certain person's characteristics, health, or geography. Such data analysis can identify patterns and trends in healthcare delivery and outcomes, supporting decision-making in VBC. For example, analytics could reveal that a certain treatment approach leads to better outcomes for a specific patient population, guiding providers to adopt this approach and thus improving value.

4. **Integration of Public Health Systems:** The plan outlines the integration of public health systems into the HIE. This integration supports VBC by providing a more comprehensive view of population health and trends enabling effective interventions.

5. **Incentive Payments for Digitization and Connections:** The HIE plan includes providing incentive payments to providers to connect to the health system electronically. This can encourage providers to adopt electronic health records, new connections, and other technologies that improve data sharing and coordination of care, both of which are key to VBC and managing the total cost of care.

In the following months, AHS with the HIE Steering Committee will build out an action plan for each 2025 Strategic Goal item from Roadmap and track progress

Ongoing coordination across all stakeholders will support the implementation and operations of the HIE Strategic Plan. Operational updates will be communicated in the HIE Steering Committee meetings throughout 2025.

Goal	Foundational	Value Based MGT	Focus on Health Equity	Create 1 Health Record for Every Person	Better Health Outcomes	Improved Healthcare Operations	Use Data to Enable Investment and Policy Decisions
Ongoing support for Data Governance	✓		✓				
Patient education and ongoing support for Health Data Literacy. Provider outreach for HIE awareness	✓		✓				
Focus on data completeness, quality, and standardization . Connect more providers to the HIE through provider incentive payments .	✓	✓	✓	✓	✓	✓	✓
Enable HIE to adopt analytics to empower individuals, address patient's full range of health needs, and facilitate better health outcomes for individuals and communities	✓	✓	✓		✓	✓	✓
Focus on cost for maintenance and operations.	✓						
Capability for care coordination and referral management		✓	✓		✓	✓	
Strategic Roadmap for Social Drivers of Health		✓	✓				
Integration VDH Data into the HIE			✓	✓	✓		
Explore options to provide technical assistance to rural providers/small practices .	✓		✓	✓		✓	
Ongoing technology enhancements: Promote portability of EHI through standards-based APIs and enabling providers to utilize single-sign on (SSO) .	✓					✓	

Table 2: HIE Themes & Goals

WBS	TASK NAME	2025												2026
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
1	Data Governance													
2	Patient Education & Provider Outreach													
3	Connectivity													
4	Data Completeness, Quality, Standardization													
5	Analytics Layer													
5.1	<i>Scoping & Requirements Gathering</i>													
5.2	<i>Procurement</i>													
5.3	<i>Implementation</i>													
6	Maintenance & Operations Cost Focus													
7	Care Coordination & Referral Management													
7.1	<i>Scoping & Requirements Gathering</i>													
7.2	<i>Procurement</i>													
8	Strategic Roadmap - SDoH													
8.1	<i>Analysis and Development of Strategic Roadmap Recommendation</i>													
8.2	<i>Implementation Recommendations from the Strategic Roadmap</i>													
9	VDH-HIE Integration													
9.1	<i>Phase 1: Pilot (Birth Records, Manual & Bulk Upload Immunizations)</i>													
9.2	<i>Phase 2: (In Planning)</i>													
10	Explore Options - Rural/Smaller Independent Providers													
11	FHIR APIs													
11.1	<i>Implementation</i>													
12	Security Tags													
12.1	<i>Implementation</i>													
13	Medicaid Data Access and Aggregation Program													
13.1	<i>Implementation</i>													
13.2	<i>Closeout</i>													
14	National Exchange Participation													
14.1	<i>Scoping & Requirements Gathering</i>													
15	Act 167 & AHEAD Model Support													
15.1	<i>Scale data platform (including metrics and dashboards)</i>													
15.2	<i>Viability and impact assessment</i>													
15.3	<i>State-Wide EHR Feasibility and Readiness Assessment</i>													

Table 3: 2024 HIE Roadmap

Appendix A: Protocols for Access to Protected Health Information on VHIE

Protocols for Access to Protected Health Information on VHIE

Section 1 – Purpose

Upon approval by the Green Mountain Care Board, this addendum shall be incorporated into and become part of Vermont’s Health Information Technology Plan (the “Plan”). Vermont law requires that the Plan include standards and protocols for the implementation of an integrated electronic health information infrastructure for the sharing of electronic health information among healthcare facilities, healthcare professionals, public and private payers, and individuals receiving care. In particular, 18 V.S.A. § 9351(a)(3)(B) requires that:

The Plan shall provide for each patient's electronic health information that is contained in the Vermont Health Information Exchange to be accessible to healthcare facilities, healthcare professionals, and public and private payers to the extent permitted under Federal law unless the patient has affirmatively elected not to have the patient's electronic health information shared in that manner.

This addendum is intended to give effect to these provisions.

As required by statute, Vermont Information Technology Leaders, Inc. (VITL) has been designated to operate the Vermont Health Information Exchange (VHIE) in accordance with standards and protocols that are consistent with those adopted under the Plan.

Notwithstanding the annual review and approval of the HIE Plan as a whole, these Protocols shall remain in effect for the existence of the VHIE until superseded or modified with approval of the Green Mountain Care Board.

Section 2 - Definitions

“Consent” means an Individual’s decision to permit access to the individual’s Protected Health Information on the VHIE by participating healthcare organizations and by public or private payers for permissible purposes. No affirmative action is required from an individual to establish their consent. Individuals shall be considered to have given their consent until and unless the individual affirmatively opts out.

“De-identified” means that all identifying information related to a person as set forth in the HIPAA Privacy and Security Rules are removed from the Protected Health Information.

“Healthcare Operations” means any of those activities identified by Federal regulations at 45 C.F.R. § 164.501, as may be amended, including but not limited to, quality assessment and improvement, evaluations relating to the competence of treating providers or necessary administrative and management activities.

“HIPAA” means the Health Insurance Portability and Accountability Act of 1996, as may be amended, and its implementing rules promulgated in 45 C.F.R. Parts 160, 162, and 164, as may be amended.

“HIPAA Privacy Rules” means those privacy rules described in 45 C.F.R. Part 164, Subpart E, as modified and enlarged by the Health Information Technology for Economic and Clinical Health (HITECH) Act and any other subsequent amendments to the Rules.

“HIPAA Security Rules” means those security rules described in 45 C.F.R. Part 164, Subpart C, as modified and enlarged by the HITECH Act and any other subsequent amendments to the Rules.

“HITECH Act” means the Health Information Technology for Economic and Clinical Health Act of 2009, as may be amended, and its implementing rules promulgated at 45 C.F.R. Parts 160, 162, and 164, as may be amended.

“Medicaid State Plan” means that there is an agreement between a state and the Federal government describing how that state administers its Medicaid programs. It gives an assurance that a state will abide by Federal rules and may claim Federal matching funds for its program activities.

“Medical Emergency” means a condition that poses an immediate threat to the health of any individual and which requires immediate medical intervention. The term “Medical Emergency” specifically is intended to include an “Emergency Medical Condition” which is defined as a medical condition manifesting itself by acute symptoms of sufficient severity such that the absence of medical attention could reasonably be expected to result in (1) placing the health of the individual in serious jeopardy or (2) serious impairment to bodily functions or (3) serious dysfunction of any bodily organ or part.

“Opt-Out” means a Person’s affirmative election to withhold Consent, communicated to VITL through designated process.

“Participating Healthcare Organization” means the individual hospital, medical practice, physician practice, home healthcare agency or other healthcare provider who has entered into a VHIE Services Agreement. Healthcare Organization is either a recipient of Data or a supplier of Data, or both, with respect to Data available through the VHIE. The term “Participating Healthcare Organization” shall include all the individual providers and authorized staff employed or otherwise legally associated with the entity or organization.

“Part 2 Provider” means a Participating Healthcare Organization provider that has notified VITL that the organization or a unit or staff member within its organization, meets the definition of a Program under 42 C.F.R. Part 2, presently located in 42 C.F.R. § 2.11.

“Part 2 Lawful Holder” means any entity other than a Part 2 Provider that has notified VITL that the records it has provided to VITL consist or are reasonably expected to consist, in whole or in part, of records protected by 42 C.F.R. Part 2.

“Patient”, “Individual” or “Person” means an individual whose personal demographic information or Protected Health Information is stored or transferred by the VHIE. The term includes a personal representative who has the authority to authorize the disclosure of a Person’s Protected Health

Information pursuant to 45 C.F.R. § 164.502 (g) and any other applicable state or Federal laws.

“Payment” means any activity undertaken to obtain or provide reimbursement for the provision of healthcare items or services to a Person.

“Permissible Purposes” means Treatment, Payment, Healthcare Operations, consistent with HIPAA and Vermont law.

“Protected Health Information” and the abbreviation “PHI” shall have the same meaning as the term “protected health information” in 45 C.F.R. § 160.103, limited to the individually identifiable health information created or received by or on behalf of a Participating Healthcare Organization. Such term shall also include Electronic Protected Health Information.

“Public Health Authority” means an agency or authority of the United States or a State that has been granted authority and responsibility to protect public health and to prevent or control disease, injury or disability, and, as such, that is authorized by law to collect or receive such information for the purpose of preventing or controlling disease, injury, or disability.

“Significant Public Health Risk” shall have the same the meaning as the term “significant public health risk as” in 18 V.S.A. § 2 (12).

“Revoke” or “Revocation” of Opt-Out means a Person’s withdrawal of a previous election to Opt-Out.

“Substance Use Disorder Identifying Records” or “SUD Identifying Records” means records obtained from a Part 2 Provider or Part 2 Lawful Holder that meet the applicability provisions for restrictions on disclosure in 42 C.F.R. Part 2, presently located in 42 C.F.R. § 2.12(a)(1).

“Treatment” means the provision, coordination, or management of healthcare and related services by one or more Healthcare Organizations.

Section 3 –Access by Participating Healthcare Organizations

A. General. Each individual's electronic Protected Health Information that is contained in the Vermont Health Information Exchange shall be accessible to participating healthcare organizations to the extent permitted under law unless the Individual has affirmatively elected not to have the Individual's electronic Protected Health Information shared in that manner.

Participating Healthcare Organizations shall access Protected Health Information on the VHIE only for permissible purposes and only with respect to individuals with whom they have, had, or are about to commence, a Treatment relationship.

B. Responsibilities of Participating Healthcare Organizations. Participating Healthcare Organizations shall–

- (i) execute a VHIE Service Agreement addressing the terms of providing Patient PHI for exchange on the VHIE and the Participating Healthcare Organization’s Access to Patient Records
- (ii) cooperate in good faith to execute all provider responsibilities under any processes

established by VITL to collect and record Individual elections to Opt-Out, and
(iii) have policies and procedures in place to ensure that only those individuals involved in Treatment, Payment or HealthCare Operations may access a Persons' PHI on the VHIE.

C. VITL Responsibilities. In addition to the obligations provided elsewhere in this addendum, VITL, as the operator of the VHIE, shall–

- (i) enter into a Business Associate Agreement (BAA), including, if applicable, a Qualified Service Organization Agreement (QSOA), with Participating Healthcare Organizations addressing the terms of VITL's use and disclosure of Individual PHI obtained from the Participating Healthcare Organization and
- (ii) ensure mechanisms exist to ensure records of patients who have Opted Out are not available, except in the event of Medical Emergencies as in Section D.

D. Emergency Access to PHI on the VHIE. Notwithstanding a Persons' choice to Opt-Out, a Participating Healthcare Organization may access the Individual's PHI through the VHIE for use in Treatment of the Individual if:

- (i) during the patient encounter, the Individual verbally consents to the Health Care Organization accessing the Individual's PHI in the VHIE; or
- (ii) The Treatment is addressing a Medical Emergency and the Individual is unable to give the Health Care Organization verbal consent for such access. The Health Care Organization should document the circumstances regarding the need to access the Individual's PHI on the VHIE. After a Participating Health Care Organization accesses the PHI of an Individual who has Opted-Out, the Organization must provide the Individual with written notice informing them of the access, and provide the Individual with information on how they may contact VITL if they choose to Revoke their Opt-Out.

Section 4 – SUD Identifying Records

A. Protections necessary to prevent disclosures. The regulations set forth in 42 C.F.R. Part 2, governing records of covered substance use disorder treatment providers, require additional protections to prevent disclosure of SUD Identifying Records.

B. VITL Responsibilities. In addition to the obligations provided elsewhere in this addendum, including those in Section 3.C, VITL, shall–

- (iii) work with AHS, Part 2 Providers, and Part 2 Lawful Holders to identify and meet all applicable technical and programmatic requirements before allowing parties to access SUD Identifying Records under Sections 3, 5, or 6,
- (iv) take reasonable care to prevent unpermitted disclosure of SUD Identifying Records, including working with Part 2 Providers to appropriately identify, store, and manage, as required by law, SUD Identifying Records transmitted to VITL, and
- (v) disclose SUD Identifying Records as permitted by law and authorized by the Part 2 Provider or Part 2 Lawful Holder or as required by law.

Section 5 – Public Health Access

Patient PHI that is contained in the VHIE shall be accessible to a Public Health Authority for public

health purposes to the extent that access is authorized under state and Federal law. This access shall not be limited by the patient's election not to share data with Participating Healthcare Organizations and public and private payers under 18 V.S.A. § 9351(a)(3)(B). A Public Health Authority that receives PHI for a public health activity or purpose may only disclose such PHI to the extent permitted by state and Federal law.

Section 6 – Payer Access

A. General. Each Individual's electronic Protected Health Information that is contained in the Vermont Health Information Exchange shall be accessible to public and private payers to the extent permitted under Federal and state law unless the Individual has affirmatively elected not to have the Individual's electronic Protected Health Information shared in that manner.

Public and Private Payers shall access Protected Health Information on the VHIE only for Permissible Purposes and only with respect to Individuals with whom they have or had a relationship.

B. Payer Responsibilities. Payers shall–

- (i) enter into a Data Use Agreement addressing the terms of their Access to Individual Records and
- (ii) have policies and procedures in place to ensure that only those individuals involved in Payment or Healthcare Operations may access a Person's PHI on the VHIE.

C. VITL Responsibilities. In addition to the obligations provided elsewhere in this addendum, VITL, as the operator of the VHIE, shall–

- (i) if receiving PHI from the Payer entity, enter into a Business Associate Agreement (BAA) with payers addressing the terms of VITL's use and disclosure of Individual PHI obtained from the Payer,
- (ii) implement policies and procedures to prevent Payer Access through the VHIE to PHI of Patients who have Opted Out.

Section 7—National Exchange

A. General. Each Individual's electronic Protected Health Information that is contained in the Vermont Health Information Exchange shall be available for query-based exchange with national exchanges pursuant to Restatement II of the Data Use and Reciprocal Support Agreement (DURSA), August 13, 2019, and as amended in the future, unless a Participating Healthcare Organization elects to not make their data available or the Individual has affirmatively elected not to have the Individual's electronic Protected Health Information shared in that manner.

Participants in these exchanges shall access Protected Health information for permitted purposes pursuant to and as defined by DURSA to facilitate and protect eHealth Exchange.

Additionally, an individual's PHI contained on the VHIE shall also be provided for permissible purposes to other organizations as required by Federal law.

B. VITL's Responsibilities. VITL, in coordination with and subject to the approval of the HIE Steering Committee, shall participate in the DURSA and any successor agreements thereto and shall comply with the requirements of participation. VITL may also participate in the exchange of Protected Health Information with other state or regional health information exchanges under direct agreements so long as they are consistent with the DURSA's exchange framework and protections for the privacy, confidentiality, and security of the health data.

Section 8 – Individual Rights with Respect to Access

A. Education. VITL and the Department of Vermont Health Access shall develop, maintain, and administer a program of education that enables Individuals to fully understand their rights regarding the sharing of their Protected Health Information through the VHIE and provide them with ways to find answers to associated questions. Educational materials and processes shall be incorporated as appropriate with existing education obligations, such as Notice of Privacy Practices disclosure requirements under HIPAA, and shall aim to address diverse needs, abilities, and learning styles with respect to information delivery.

Education materials and processes shall clearly explain–

- (i) the purpose of the VHIE;
- (ii) the way in which Protected Health Information is collected;
- (iii) how and with whom Protected Health Information may be shared using the VHIE;
- (iv) the Permissible Purposes for which Protected Health Information may be shared using the VHIE;
- (v) how to Opt-Out and how to Revoke the Opt-Out; and
- (vi) how to contact the Office of the Healthcare Advocate.

B. Patient Opt-Out. With the exception of access by Public Health Authorities and access in a Medical Emergency, Patients shall be free to Opt-Out of participation in the VHIE at any time, which election shall remain in effect with respect to information requested by Participating Healthcare Organizations or Payers, unless and until the Patient Revokes such election in writing.

C. Patient Access to PHI. All patients shall be provided the right of access to their PHI contained in the VHIE to the extent permitted under applicable HIPAA rules.

D. Patient Request for Audit Report. A Patient may request and receive an audit report of access to their PHI on the VHIE by contacting VITL's Privacy Officer. VITL shall provide the requested audit report as soon as reasonably possible, but in no event longer than 30 days after request.

E. Revocation. A Patient who has Opted-Out shall be entitled to Revoke such Opt-Out at any time. VITL shall develop and administer one or more Revocation mechanisms for this purpose, including a mechanism by which the Patient's Opt-Out revocation may be documented by the Payer entity. It is the obligation of VITL to update records of the Patient's Consent status for the VHIE. A Revocation shall remain effective unless the Patient subsequently Opts Out.

F. Deidentified Data. De-identified patient information may be used for research, quality review, population health management and public health purposes, as permitted by HIPAA. No commercial use or sale of de- identified patient information is permitted.

G. VITL Responsibilities.

- (i) establish one or more user-friendly mechanism through which Patients may Opt-Out,
- (ii) maintain updated Consent-status records of all Patients who have Opted-Out, and
- (iii) ensure the ability to audit access to patient records to facilitate compliance by Participating Healthcare Organizations and participating payers with Accounting of Disclosure regulations under HIPAA.

Health Information Exchange Steering Committee Charter

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Purpose of the HIE Steering Committee

The HIE Steering Committee exists to:

1. Serve the needs of HIE users by advancing HIE use cases.
2. Strengthen the relationship between authority and accountability; and
3. Engage a broad range of stakeholders in strategic planning and oversight activities.

The Steering Committee's Vision & Mission

Vision: To enable health information exchange that promotes quality healthcare in Vermont.

Mission: To work across organizations and disciplines to create and endorse a shared view of the definition, purpose, and goals of HIE in Vermont.

Ultimately, the Steering Committee exists to support development of a state-wide strategic plan (the HIE Plan) and guide implementation of that plan. In 2018, the Steering Committee identified three overarching goals in the HIE Plan that are intended to guide the state's health information exchange work. The goals include:

1. Create One Health Record for Every Person
 - a) Support optimal care delivery and coordination by ensuring access to complete and accurate health records.
 - b) Reduce provider burden by aggregating essential data in one, useful location.
 - c) Provide people with a comprehensive understanding of their health and care.
2. Improve Healthcare Operations
 - a) Enrich healthcare practices with data collection and analysis to support quality improvement and reporting.
 - b) Align data aggregation and data quality efforts to support real need.
 - c) Reduce burden associated with reporting.
 - d) Allow providers to analyze their own data and put information into action.
3. Use Data to Enable Investment and Policy Decisions
 - a) Bolster the health system's ability to learn and improve by using accurate, comprehensive data to guide investment of time, labor, and capital, and inform policy making and program development.
 - b) Put data in the hands of program's serving population-wide needs.
 - c) Enable data-informed decision making.

The Steering Committee's Guiding Principles

- We commit to creating an HIE Plan that is accurate, reliable, and

actionable.

- We drive to use technology and data to support value-based care.
- We are accountable for meaningful work that furthers the goals of HIE.
- We work to optimize what exists today and be thoughtful about future developments.
- We are good stewards of limited public and private resources.
- We exist to develop systems that better the health and well-being of Vermonters.

Scope

In 2019 and beyond, the HIE Steering Committee will:

- Support development, execution, and oversight of Vermont's HIE Plan.
 - Annually, develop and/or update the HIE Steering Committee charter and bylaws to clearly define roles of members, voting procedures, and other essential operational functions.
 - Annually, update the State's HIE plan to support the health system's needs and priorities. The plan must comply with state law and guidance provided by the Green Mountain Care Board (GMCB) through the annual plan review process.
 - Develop and maintain a technical roadmap to support the State's HIE network and achieve the goals stated in the HIE Plan.
 - Oversee and manage activities set forth in the annual HIE plan.
- Continue to grow and evolve the HIE Steering Committee to best meet the State's needs.
 - Identify growth opportunities for the governance body and assign ad-hoc committees as needed (e.g., data governance, connectivity, finance, audit).
 - Act as the central point of review for new or adjusted priorities with HIE stakeholders. Identify alignment opportunities to further integrate the statewide data management architecture.
- Support the Department of Vermont Health Access (DVHA) and other stakeholders in focusing HIE investments to align with statewide HIE goals.
 - Define the portfolio of investments needed to further HIE goals and, annually, refine the HIE financial sustainability model through evaluation of progress made in the preceding year.
 - Note: The Committee does *not* approve or review public investments. Rather, they aid in the development of strategy that may guide both public and private investments in support of shared, statewide goals.
- Support development of processes and policies that enable achievement of statewide HIE goals.
 - Provide recommendations to the Legislature, GMCB and other stakeholders on actions they can take to support the State's HIE plans and goals and support the development of policy and legislation to further statewide HIE goals and objectives.
 - Identify priority policies that must be focused on to expand interoperability of health information.
 - Review and provide feedback on policies developed by AHS, the VHIE, and other stakeholders related to the exchange of health data.

- Engage stakeholders in the Steering Committee’s work.
 - Actively and consistently engage with existing stakeholder advisory groups to ensure that planning and implementation considers insights from impacted and interested parties.
 - Act as ambassadors of and liaisons to individuals’ respective population or organization represented as Committee members on matters discussed or pursued by the HIE Steering Committee.

Steering Committee Membership

The members of the committee were selected by the Chair to best enable HIE progress in Vermont. Membership is comprised of 14 voting members and 5 non-voting members. AHS’s HIE Unit will act as the Steering Committee’s administrative and operational support.

Name	Role	Population or Organization Represented
Will Dempsey	Chair / Voting Member	Vermont Agency of Human Services
Jessie Hammond	Voting Member	Vermont Department of Health
Jimmy Mauro <i>Blue Cross Blue Shield of Vermont</i>	Voting Member	Payer Representative
Simone Rueschemeyer <i>Vermont Care Partners</i>	Voting Member	Mental Health & Substance Use & Intellectual Developmental Disabilities Representative
Mary Kate Mohlman <i>Bi-State Primary Care Association</i>	Voting Member	Primary Care Representative
Rick Dooley <i>Health First</i>	Voting Member	Independent Provider Practices
Emma Harrigan <i>Vermont Association of Hospitals and Health Systems</i>	Voting Member	Hospital Care Representative
Victor Morrison	Voting Member	Representative of people who engage with the healthcare system
Jodi Frei <i>OneCare Vermont</i>	Voting Member	Accountable Care Organization Representative
Dr. John Saroyan	Voting Member	Blueprint for Health

Sandy Rouse <i>Central Vermont Home Health and Hospice</i>	Voting Member	Home Health and Hospice Representative
Helen Labun <i>Long Term Care Advocate</i>	Voting Member	Long Term Care Representative
Eric Schultheis	Voting Member	Healthcare Advocate
Song Nguyen	Voting Member	Health Equity Expert
James LaRock	Non-Voting Member	Privacy Expert
Steven Andrews	Non-Voting Member	The Green Mountain Care Board
Andrea DeLaBruere	Non-Voting Member	The Agency of Digital Services
Beth Anderson	Non-Voting Member	VITL, Vermont's Health Information Exchange Operator

Decision Making

Decisions will be made by a majority vote (unanimity minus 2). The committee will make attempts to bring in affected parties beforehand for their advice. Decisions will be logged by the scribe for that meeting, the Committee Coordinator or HIE Program Manager. The committee will produce a decision document that names, explains, and describes the impact of all decisions. Affected entities will be notified within 30 days.

Communications – Meetings

Note: In April 2020, the Steering Committee agreed to revise the in-person meeting structure considering the COVID-19 pandemic and the need to physically distance from others. The Committee agreed to the following:

- Maintain Regular Meetings
- Meet virtually
- Aim to keep meetings under 2 hours
- Strategically work through small groups (subcommittees) to ensure efficient management of timely activities
- Utilize Email More Often to conduct committee business e.g., consent updates
- Host meetings for special topics: individual or group meetings to get up-to-speed on topics like the 21st Century Cures Act

HIE Steering Committee Website

Meeting agenda, minutes, and resource materials will be posted on

<https://healthdata.vermont.gov/>. Draft materials may be sent via email from the HIE Unit directly to Steering Committee members.

Appendix C: Vermont Health Information Exchange (VHIE) Connectivity Criteria

The VHIE Connectivity Criteria have been revised this year to align with national standards for interoperability of health information technology and for health information exchange. Specifically, the VHIE connectivity tiers have been revised to align with versions of the United States Core Data for Interoperability (USCDI), as shown in the figure below.

Connectivity Criteria Maturity Model

VHIE Connectivity Criteria align with the United States Core Data for Interoperability (USCDI)

USCDI are nationwide standards that define the baseline set of data. They are updated annually to meet the evolving needs of interoperable health information exchange.

Criteria drive advancement, measure progress of each data contributor, and the maturity of the overall network

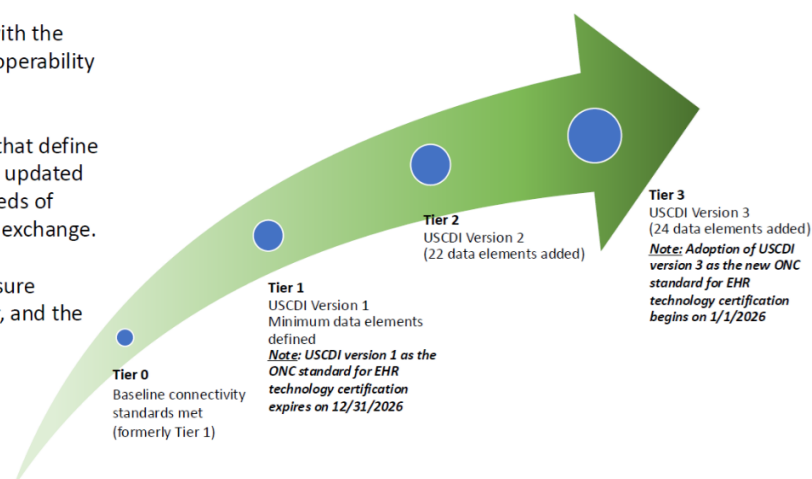


Figure 4: Connectivity Criteria Maturity Model

Detailed lists and specifications of the data classes and data elements for each United States Core Data for Interoperability (USCDI) version (corresponding to each similarly numbered VHIE connectivity tier) have been produced under the direction of the Assistant Secretary for Technology Policy and Office of the National Coordinator for Health Information Technology (ASTP/ONC), and are available at the following website:

<https://www.healthit.gov/isa/united-states-core-data-interoperability-uscdi>

Detailed comparative tables of these USCDI versions by data element are available from VITL and the HIE program.

VHIE Connectivity Criteria Certification Process



Vermont Information Technology Leaders

VHIE Connectivity Criteria Certification Process

Overview

The Vermont Health Information Exchange (VHIE) Connectivity Criteria establish the conditions for health care organizations or payers to connect to the VHIE. The VHIE is the technology that aggregates and facilitates the exchange of patient clinical and claims information. The criteria:

- are designed to be incremental in its approach to set a path for organizations to connect
- guide data contributors in meeting certain conditions to connect and share useful, secure data
- assist health care organizations and payers in selecting or maximizing electronic health information technology investments
- incorporate tools allowing health care organizations and payers to perform a self-assessment that will then be validated by Vermont Information Technology Leaders (VITL)

The VHIE Connectivity Criteria are incorporated into the Vermont HIE Plan and are reviewed and approved by the Green Mountain Care Board (GMCB).

When do Health Care Organizations or Payers complete the VHIE Connectivity Criteria?

Organizations need to complete the criteria when any of the following occur:

- Connecting to the VHIE for each interface contributing data
- Selecting/Purchasing/Implementing a new or replacement EHR
- HIT-related Certificate of Need requests to the GMCB
- Participating in a payment reform program and Data Quality Project (as requested); Programs include: OneCare Vermont care management and data analytics platform, Health Immunization Registry, Blueprint for Health, Medicaid and other programs as approved by the GMCB

VHIE Connectivity Criteria Process

Health care organizations or payers may need to engage their vendors to complete the VHIE Connectivity Criteria. Health care organizations and payers may need to complete the following steps:

VHIE Connectivity Work Plan

Organization Details

Date: MM/DD/YY

Organization Name:

Location Name(s):

Data Contributor Type (Physical Health and/or Mental/Behavioral Health or Claims):

Electronic Health Record or System:

Stakeholders: Blueprint for Health, OneCare Vermont, Vermont Chronic Care Initiative, Medicaid, and the Vermont Department of Health

Live Contributing Interfaces:

- Admission, Transfer, and Discharge (ADT)
- Continuity of Care Document (CCD)
- Immunization (VXU)
- Fast Healthcare Interoperability Resources (FHIR)
- Claims

VHIE Connectivity Criteria

- Required under 18 V.S.A. § 9352(i)(2)
- Establishes the conditions for health care organizations to connect to the Vermont Health Information Exchange (VHIE)
- Part of the State HIE Plan and annually reviewed and approved by the GVCB
- The Criteria measure progress of each organization in supporting point of care and payment and health reform program stakeholders.

	Met	Not Met
Tier 1—Meet baseline connectivity standards	<input type="checkbox"/>	<input type="checkbox"/>
Tier 2—Meet common data set and data quality standards for all stakeholders	<input type="checkbox"/>	<input type="checkbox"/>
Tier 3—Meet expanded data set and data quality standards for stakeholders	<input type="checkbox"/>	<input type="checkbox"/>

Criteria Evaluation

See [\[Filename for Data Set and Data Quality Standards Worksheet for this HCO\]](#) for data element evaluation.

Recommendations

This section will identify changes per location that are needed to meet Tier 2. It will include the organizations plan to achieve Tier 2 or Tier 3.

Common Scope:

- Example: Missing data elements will be addressed by an upgrade occurring in 6 months.

Location Specific Scope:

- Example: Location #1 – needs to update their custom template to map data elements to the CCD.

Short paragraph summarizing thoughts, efforts, needs, etc.

Timing

This section will detail the timing that the organization expects to complete the changes needed to meet Tier 2 or Tier 3 Connectivity Criteria.

Connectivity Criteria Stakeholder Matrix

Tier 0 – Baseline Connectivity Criteria

Tier	Customers	Stakeholders	Customer Responsibilities	Stakeholder Responsibilities	VHIE Responsibilities	Objective and Characteristics	Value in Connecting to the VHIE	Data Criteria	Security	Outcome
0 – Baseline Connectivity	<p>Health care organizations (HCO) contributing patient data for use at the point of care.</p> <p>HCOs and payers contributing data as required by health reform delivery and payment programs (Accountable Care Organization, Blueprint for Health, MU, Vermont Dept of Health, Medicaid, other programs)</p>	<p>Green Mountain Care Board (GMCB), Accountable Care Organization, Blueprint for Health, Vermont Dept for Health, Vermont Chronic Care Initiative (VCCI), Medicaid, etc.</p>	<p>Engage with VITL to meet the Baseline Connectivity Criteria; establish connectivity to the VHIE; build interfaces from the Health care or Payer organizations to the VHIE</p>	<p>Identify priority HCOs and their locations needing to contribute data</p> <p>Identify priority Payer organizations needing to contribute data</p> <p>Communicate to the prioritized HCOs and Payers the program’s need and use for data.</p>	<p>Establish and publish technical requirements that support secure, standard connections.</p> <p>Assess baseline data compliance for patient matching and message structure to share data using the Baseline Connectivity Criteria scoring worksheet</p> <p>Work with customer to establish connectivity and build interfaces from the HCO or Payer to the VHIE and from the VHIE to the Stakeholder’s system(s).</p>	<p>Interfaces are established that meet HL7 industry standards outlined in the VHIE Baseline Connectivity Criteria document.</p> <p>Interfaces to the VHIE are sufficient to support patient identity matching</p> <p>Interfaces to the VHIE are sufficient for transmitting data to Stakeholder(s)</p> <p>Access to patient data is supported by HIPAA and Vermont law, including patient consent</p>	<p>Clinician access to patient information integrated within the provider’s EHR or using the VHIE Provider Portal (VITLAccess)</p> <p>Electronic results delivery from the VHIE (e.g., hospital or third-party laboratory results) seamlessly integrated within a provider’s EHR.</p> <p>Data electronically delivered to and accessible within Vermont Immunization Registry</p> <p>Data facilitates timely and accurate Event notification systems</p>	<p>Meet the VHIE Baseline Connectivity Criteria which identifies requirements for patient matching and system specifications for sufficient, secure data exchange.</p> <p>Include the Connectivity Criteria tier achievement in HIT-related Certificate of Need requests to the GMCB</p>	<p>Complete VHIE Services Agreement to meet legal business, operational and security requirements.</p> <p>Attest to HIPAA Compliance.</p> <p>42 CFR Part 2 Data Compliance is needed when applicable.</p>	<p>Clinicians can access patient data across healthcare settings.</p> <p>Records are matched to the correct patients and duplicate patients are avoided.</p> <p>Data is used to analyze population health and support health reform</p>

Tier 1 – USCDI Version 1

Tier	Customers	Stakeholders	Customer Responsibilities	Stakeholder Responsibilities	VHIE Responsibilities	Objective and Characteristics	Value in Connecting to the VHIE	Data Criteria	Security	Outcome
1 – USCDI Version 1	<p>Participating HCOs in Accountable Care Organization, VCCI, Blueprint for Health, Bi-State, other programs</p> <p>Participating Payers involved in Health Reform efforts</p>	<p>Population Health Management and Quality care programs Accountable Care Organization; Blueprint for Health; Vermont Department of Health; other)</p> <p>Care management programs being supported (VCCI, Accountable Care Organization, others).</p> <p>Policy makers, clinicians and HCO administrators reliant on data reports from the Accountable Care Organization (ACOs); Blueprint for Health; Vermont Department of Health; Medicaid; other.</p> <p>Green Mountain Care Board (GMCB)</p>	<p>Capture data in discrete data fields in EHR.</p> <p>Capture discrete claims data to be shared with the VHIE</p> <p>Hold vendors accountable for sharing data for program(s) in which the HCO or Payer participates</p> <p>Complete the Data Set and Data Quality Standards Worksheet containing the common data set requirements</p>	<p>Establish common clinical and claims data set.</p> <p>Identify HCOs needing assistance in meeting Clinical Quality measures for their program.</p> <p>Partner with VITL and the HCO or Payer and the program(s) in data quality projects to improve data quality during and/or post-interface implementation.</p>	<p>Assess the ability of HCOs and Payers to document minimum data sets and their vendors capability to send that data using the Data Set and Data Quality Standards Worksheet.</p> <p>Facilitate the effort with HCOs and Payers to improve data quality at the documentation level or the technical level to meet stakeholder’s and customer’s minimum data requirements.</p> <p>Identify data delivery and standardization opportunities Resolve data delivery and standardization opportunities</p>	<p>Minimum clinical and claims data sets are complete, accurate.</p> <p>Clinical and claims data is standardized and therefore interoperable</p> <p>Expanded applications such as care management, claims and clinical data use can be supported to meet customer specified usage.</p> <p>Performance measurement, population health management, and health reform applications are enabled.</p>	<p>Same as Tier 0 with the addition of:</p> <p>Supports Care management tools (Vermont Chronic Care Initiative, etc.) by those engaged in the care continuum</p> <p>Reduces manual effort by enabling chart abstraction tools for quality measure and population health reporting (Bi-State FQHC, Blueprint for Health, Medicaid, etc.)</p> <p>Robust data analysis and reporting to measure performance (Blueprint for Health practice profiles, Accountable Care Organization, Medicaid, Qlik, etc.)</p>	<p>Participates in and complies with programs that have specific data quality requirements.</p> <p>Meet the common clinical and claims data set requirements in the Data Set and Data Quality Standards Worksheet</p> <p>Include the Connectivity Criteria tier achievement in HIT-related Certificate of Need requests to the GMCB</p>	Same as Tier 0	<p>Increased data quality enables usage and confidence in information for quality performance measurement, population management reporting, and health reform efforts.</p>

Tier 2 and Higher – USCDI Version 2 and Higher

Tier	Customers	Stakeholders	Customer Responsibilities	Stakeholder Responsibilities	VHIE Responsibilities	Objective and Characteristics	Value in Connecting to the VHIE	Data Criteria	Security	Outcome
2 and Higher – USCDI Version 2 and Higher	<p>Participating HCOs in Accountable Care Organization, VCCI, Blueprint for Health, Bi-State, other programs</p> <p>Participating Payers involved in Health Reform efforts</p>	<p>Population Health Management and Quality care programs</p> <p>Accountable Care Organization; Blueprint for Health; Vermont Department of Health; other)</p> <p>Care management programs being supported (VCCI, Accountable Care Organization, others).</p> <p>Policy makers, clinicians and HCO administrators reliant on data reports from the Accountable Care Organization (ACOs); Blueprint for Health; Vermont Department of Health; Medicaid; other.</p> <p>Green Mountain Care Board (GMCB)</p>	<p>Capture data in discrete data fields in EHR.</p> <p>Capture discrete claims data to be shared with the VHIE</p> <p>Hold vendors accountable for sharing data for program(s) in which the HCO participates</p> <p>Complete the Data Set and Data Quality Standards Worksheet containing the expanded data set requirements</p>	<p>Establish expanded clinical and claims data set</p> <p>Identify standardization issues to achieve interoperability</p> <p>Identify HCOs needing assistance in meeting Clinical Quality measures for their program</p> <p>Partner with VITL and the HCO or Payer and the program(s) in data quality projects to continuously improve data quality</p>	<p>Assess the ability of HCOs and Payers to document minimum data sets and their vendors capability to send that data using the Data Set and Data Quality Standards Worksheet.</p> <p>Facilitate the effort with HCOs and Payers to improve data quality at the documentation level or the technical level to meet stakeholder’s and customer’s minimum data requirements.</p> <p>Identify data delivery and standardization opportunities</p> <p>Resolve data delivery and standardization opportunities</p>	<p>Clinical and claims data sets are complete, accurate, standardized, and interoperable</p> <p>Performance measurement and population health management applications are optimized.</p>	<p>Same as Tiers 0 and 1 with the addition of:</p> <p>Data can be used for advanced end user tools and services (Care Management tools, custom data marts for customer use</p> <p>Advanced reporting driven by clinical and claims data (Comparative data sets, etc.)</p>	<p>Meet the clinical and claims data set requirements in the Data Set and Data Quality Standards Worksheet</p> <p>Scope of data collected supports performance measures, interoperability supports population health management and health reform efforts.</p> <p>Include the Connectivity Criteria tier achievement in HIT-related Certificate of Need requests to the GMCB</p>	Same as Tier 0	<p>Increased data quality enables usage and confidence in information to optimize quality performance measurement, population management reporting, and health reform efforts.</p>

Appendix D: Interface Prioritization Matrix

Highest Priority

- Large People Volume
- Easy Vendor
- Tier 2 Capable
- Site Ready
- No known Upgrade/switch in next 12 months
- Data Priority in alignment with HIE Steering Committee Direction
- FHIR Capable

Interface Prioritization – Lowest Priority

- Small People Volume
- Hard Vendor
- Not Tier 2 capable
- Site not willing
- Upgrading/Switching EHR in next 12 months
- Data Priority not in alignment with HIE Steering Committee Direction
- Not FHIR Capable

Interface Prioritization – Other Considerations/Tiebreakers

- Contributing Data
- Receiving Data
- Replacements in Past
- Programs supported
- Other special circumstances

Interface Prioritization Matrix - Clinical Key

Categories	Description	Criteria
Patient Volume	Site serves and generates data on a large patient population of unique lives from existing data in VHIE	Large (>10,000), Medium (5000-10,000), Small (<5000) or Unknown
Vendor Ease	Is the vendor one we have worked with in the past? Are they easy to work with?	Easy (1-3 months), Medium (3-6 months), Hard (6 + Months or custom formats needed), or Unknown if new vendor
Vendor/Site Tier 1 capable?	How capable is the vendor for Tier 1?	Yes, No, Not Evaluated Yet, or Vendor working on Tier 1 or Does not Apply
Site ready to engage?	Has the site been vetted yet by any group for willingness to proceed?	Yes, No, or Unknown if they have not been asked in last year
Known Upgrade/Switch in next 12 months?	Is the site planning on upgrading or replacing their EHR in the next 12 months? Note: for replacement interfaces this will be No, as we have already factored this into the filter	Yes or No
Data Category	What type or category of data does this organization generate, or what sector of healthcare are they in? Does it align with the HIE Steering Committee Priorities for the year?	Example: Hospital, Ambulatory, Pharmacy, Home Health, Long Term Care (LTC), Dental, Commercial Lab, COVID, SDoH, MH, BH, etc.
Contributing Data?	Is this site currently contributing some data to the VHIE?	No or the types of Data being Contributed already
Receiving Data?	Is this site currently receiving Results Delivery data from the VHIE?	No or the types of Data being Received already
Replacements in Past?	How many times has an interface been replaced by VITL?	# of times replacement interfaces were paid for by DVHA in the past

Categories	Description	Criteria
Programs supported	How many programs will this data serve in Vermont	OneCare Vermont (OCV), Blueprint (BP), Bi-State (FQHCs), Vermont Dept of Health Immunization Registry (VDH), Vermont Chronic Care Initiative (VCCI)
FHIR Capable	Is the vendor capable of connecting to the VHIE using FHIR interfaces?	Yes, No, Not Evaluated Yet
Other special circumstances?	Are there any other special reasons for this to move up in priority?	This can be they are contractually required to connect, or any others that emerge.
Highest Priority	Large Volume	
	Easy Vendor	
	Tier 1 Capable	
	Site Ready	
	No known Upgrade/switch in next 12 months	
	Data Priority in alignment with HIE Steering Committee Direction	
	FHIR Capable	
Lowest Priority	Small Volume	
	Hard Vendor	
	Not Tier 1 capable	
	Site not willing	
	Upgrading/Switching EHR in next 12 months	
	Data Priority not in alignment with HIE Steering Committee Direction	
	Not FHIR Capable	
Other Considerations	Contributing Data?	
	Receiving Data?	
	Replacements in Past?	
	Programs supported	
	Other special circumstances?	

Interface Prioritization Matrix - Claims Key

Categories	Description	Criteria
Patient Volume	Site serves and generates data on a large patient population of unique lives from existing data in VHIE	Large (>10,000), Medium (5000-10,000), Small (<5000) or Unknown
Vendor Ease	Is the vendor one we have worked with in the past? Are they easy to work with?	Easy (1-3 months), Medium (3-6 months), Hard (6 + Months or custom formats needed), or Unknown if new vendor
Site ready to engage?	Has the site been vetted yet by any group for willingness to proceed?	Yes, No, or Unknown if they have not been asked in last year
Known Upgrade/Switch in next 12 months?	Is the site planning on upgrading or replacing their EHR in the next 12 months? Note: for replacement interfaces this will be No, as we have already factored this into the filter	Yes or No
Contributing Data?	Is this site currently contributing some data to the VHIE?	No or the types of Data being Contributed already
Receiving Data?	Is this site currently receiving Results Delivery data from the VHIE?	No or the types of Data being Received already
Programs supported	How many programs will this data serve in Vermont	OneCare Vermont (OCV), Blueprint (BP), Bi-State (FQHCs), Vermont Dept of Health (VDH), Vermont Chronic Care Initiative (VCCI), DVHA
FHIR Capable	Is the vendor capable of connecting to the VHIE using FHIR interfaces?	Yes, No, Not Evaluated Yet
Other special circumstances?	Are there any other special reasons for this to move up in priority?	This can be they are contractually required to connect, or any others that emerge.
Highest Priority	Large Volume	
	Easy Vendor	

Categories	Description	Criteria
	Site Ready	
	No known Upgrade/switch in next 12 months	
	FHIR Capable	
Lowest Priority	Small Volume	
	Hard Vendor	
	Site not willing	
	Upgrading/Switching EHR in next 12 months	
	Not FHIR Capable	
Other Considerations	Contributing Data?	
	Receiving Data?	
	Programs supported	
	Other special circumstances?	

Interface Prioritization Matrix – Clinical Scoring

Categories (110 Pt Scale)	
People Volume (35 Pts)	
Large	35
Medium	20
Small	10
Vendor Ease (10 Pts)	
Easy	10
Medium	5
Hard	1
Vendor/Site Tier 2 capable? (20 Pts)	
Yes	20
No	0
Not evaluated Yet	10
Vendor working on Tier 2	15
Tier 2 Does Not Apply	20
Site ready to engage? (20 Pts)	
Yes	20
No - in 2019	5
Unknown	10
Data Category in Alignment (5 Pts)	
Yes	5
No	0
Replacements in Past? (5 Pts)	
0	5
1	2
2+	0
FHIR Capable (10 Pts)	

Yes	10
No	0
Not evaluated Yet	5
Other Circumstances (5 Pts)	
Up	5
None	0
Known Upgrade/Switch in next 12 months?	Not needed as locations were already removed from the proposed list this year
Highest Priority	Large Volume
	Easy Vendor
	Tier 2 Capable
	Site Ready
	No known Upgrade/switch in next 12 months
	Data Category Priority in alignment with HIE Steering Committee Direction
	FHIR Capable
Lowest Priority	Small Volume
	Hard Vendor
	Not Tier 2 capable
	Site not willing
	Upgrading/Switching EHR in next 12 months
	Data Category Priority not in alignment with HIE Steering Committee Direction
	Not FHIR Capable
Other Considerations	Replacements in Past?
	Other special circumstances?
Tiebreakers	Contributing Data?
	Receiving Data?
	Programs supported
NOTE: There are things out of VITLs control that could affect this system and may cause a need to re-rank. Ex: If aCOVID Vaccine becomes available in late Fall 2020.	

Interface Prioritization Matrix – Claims Scoring

Categories (90 Pt Scale)	
People Volume (35 Pts)	
Large	35
Medium	20
Small	10
Vendor Ease (10 Pts)	
Easy	10
Medium	5
Hard	1
Unknown	5
Site ready to engage? (20 Pts)	
Yes	20
No	0
Unknown	10
FHIR Capable (20 Pts)	
Yes	20
No	0
Not evaluated Yet	10
Other Circumstances (5 Pts)	
Up	5
None	0
Highest Priority	Large Volume
	Easy Vendor
	Site Ready
	No known Upgrade/switch in next 12 months
	FHIR Capable
Lowest Priority	Small Volume
	Hard Vendor
	Site not willing
	Upgrading/Switching EHR in next 12 months
	Not FHIR Capable
Other Considerations	Other special circumstances?
Tiebreakers	Contributing Data?

	Receiving Data?
	Programs supported
NOTE: There are things out of VITLs control that could affect this system and may cause a need to re-rank.	

Appendix E: Outcomes Based Certification Metrics

Direct Care/Care Coordination Outcomes

Direct Care/Care Coordination

Metric
1.1a Number of VITLAccess Users
1.1b Number of HCO VITLAccess Users/Number of Potential HCO Users
1.1c Number of Patient Queries through VITLAccess
1.2 Number of Medicaid patient records transmitted from the VHIE to the Medicaid care coordination tool

Direct Care/Care Coordination: Event Notification

Metric
3.1 Number of event notifications (ADT) messages sent to Patient Ping through VHIE connection
3.2 Master Patient Index: Percent Medicaid Match Rate

Direct Care/Care Coordination: Electronic Results Delivery

Metric
4.1 Number of LAB messages captured in the VHIE
4.2 Number of RAD messages captured in the VHIE
4.3 Number of TRANS messages captured in the VHIE

Public Health Outcomes

Metric
5.1 The percent of total immunization messages (VXU) provided by the VHIE to the Immunization Registry by HL-7
5.2 Percent of total death records transmitted from Death Registry to VHIE
6.1 LAB messages captured in the VHIE and transmitted to the Public Health Authority

Value Based Care Outcomes

Metric
7.1 Blueprint for Health Clinical Extract Report from the VHIE

Appendix F: Policy Background

- Brief Review of Vermont Policy Impacts on HIE -

In 2006, to support the data needs related to the Global Commitment Waiver, the Vermont General Assembly Passed legislation¹³ establishing policies and standards to govern the state's health information technology infrastructure.

In 2007, the General Assembly authorized VITL to "operate the exclusive statewide health information exchange network" and develop the State's Health Information Technology Plan (what is now called the HIE Plan).

In 2008, Vermont's General Assembly established the Health-IT (HIT) Fund to provide dedicated funding for "health information technology adoption and utilization." Revenue from the healthcare claims tax is paid by the health insurers on private health insurance claims, and the revenue collected from 0.199 of 1% of all health insurance claims is deposited into the General Fund, pursuant to 32 V.S.A. § 10402(b). The portion of the claims tax allocated for health information exchange activities amounts to approximately \$3.5M-\$4M annually. Each year since its establishment, the legislature has extended the HIT Fund for one or two additional years; the HIT Fund is now extended to July 1, 2023.

In 2011, the Green Mountain Care Board (GMCB) became statutorily obligated to review and approve Vermont's statewide Health Information Technology Plan.

In 2015, Vermont Act 54 charged the GMCB with oversight of VITL's budget.

In 2017, Vermont Act 73 required the State to conduct a comprehensive review of Vermont's HIT Fund, the Health IT Plan, the VHIE, and VITL. One of the outcomes of the evaluation was the creation of the HIE Steering Committee to address issues with fragmented governance.

In 2018, the General Assembly passed Act 187 requiring the State and VITL to operationalize the recommendations from the Act 73 Evaluation Report. Third party reports confirm that VITL and DVHA satisfactorily addressed all recommendations from the evaluation. The Act also authorized the HIE Steering Committee to develop the statewide Health Information Technology Plan and required DVHA to produce a report on the State's consent policy.

In 2019, Act 53 called for the adoption of an "opt-out" consent policy for the sharing of health information through the VHIE. DVHA and VITL were required to execute robust public education and provide substantial opportunities for public input in the process. The consent policy officially changed on March 1, 2020.

¹³ Act 191, *An act relating to healthcare affordability for Vermonters.* (2006).

In 2021, Vermont’s law on immunization records, 18 V.S.A. § 1129, was amended to allow immunization record sharing from the Department of Health’s Immunization Registry to the Vermont Health Information Exchange.

In 2022, Act 167 called for the HIE Steering Committee to “continue its work to create one health record for each person that integrates data types to include healthcare claims data; clinical, mental health, and substance use disorder services data; and social determinants of health data.” It mandated that, “In furtherance of these goals, the HIE Steering Committee shall include a data integration strategy in its 2023 HIE Strategic Plan to merge and consolidate claims data in the Vermont Healthcare Uniform Reporting and Evaluation System (VHCURES) with the clinical data in the HIE.” In order to facilitate and improve data integration efforts, Act 167 also repealed subsection (e) of 18 V.S.A. § 9410, which now allows for the collection of direct identifiers (such as patient name) into the secure VHCURES database. This change allows data submission by all payers (no longer just Medicare, but now also commercial and Medicaid payers) into VHCURES with direct identifiers (not hashing the identifiable data before submitting data).

In 2023, after an extensive rule-making process, the GMCB revised its VHCURES Reporting Manual effective February 1, 2023, to require participating healthcare data submitters to submit direct personal identifiers as part of their claims data submissions (instead of hashing, or encrypting, those identifiers as had been required previously). This change enabled the potential for substantially improved patient-record matching and allowed the VHCURES system to more reliably assign a single or common personal identifier to a patient’s records across sources (such as from different payers) and across time. Previously, any slight variations in the form or spelling of patient identifiers across sources or across time could lead to different hashed or masked ID values for an individual, and lead to much of a patient’s medical history being fragmented or lost in the dataset. This change also set the conditions to enable improved linkage of claims and clinical data, to provide a more complete and comprehensive medical record for individuals. Such claims/clinical linkage is necessary, for example, to calculate certain hybrid healthcare quality measures, such as the percent of patients with hypertension whose blood pressure is in control, or the percent of patients with diabetes whose blood sugar indicators (HbA1c) are in poor control.

- Brief Review of Federal Policy Impacts on HIE -

Policies set forth by the Federal government catalyzed digitization of health records systems – particularly the Health Information Technology for Economic and Clinical Health (HITECH) Act and the creation of the Office of the National Coordinator for Health IT (ONC), now the Assistant Secretary for Technology Policy and Office of the National Coordinator for Health Information Technology (ASTP/ONC)– and have acted as a driver of health system interoperability efforts. Recent Federal rules aim to take this one step further by putting people at the center of healthcare by giving individuals access to their personal electronic health information.

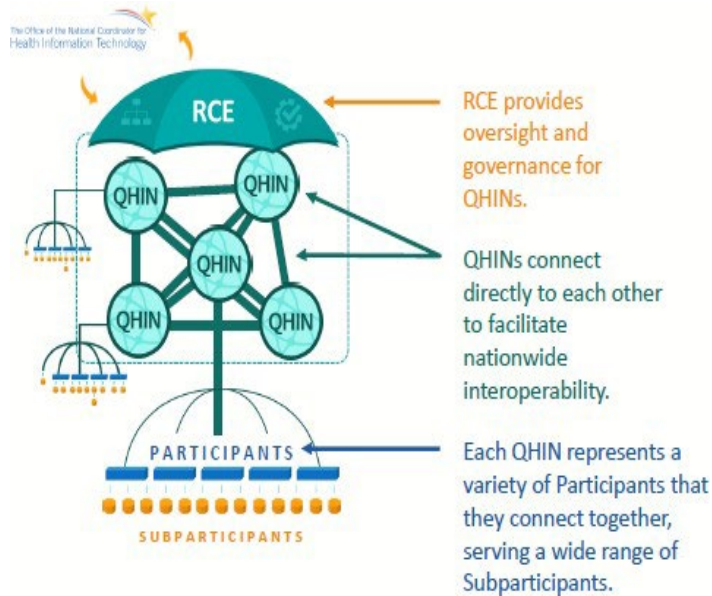
On March 9, 2020, the HHS Office of ASTP/ONC and Centers for Medicare & Medicaid Services (CMS) released two rules, which implement the interoperability and people access provisions of the Federal

21st Century Cures Act. Together, these rules mark the transition to more robust Federal healthcare data sharing policies from the Federal government, requiring both public and private entities to share health information with individuals while keeping information private and secure, thus allowing people unprecedented access to their health data and resources to research healthcare providers, ultimately empowering them to make informed decisions about their care.

The ASTP/ONC rule (the ASTP/ONC 21st Century Cures Act Final Rule), establishes a technical framework that sets standards for information sharing and penalties for information blocking. The CMS rule (the CMS Interoperability and Patient Access Final Rule) sets specific requirements of organizations funded by CMS to share health data with patients and among payers.

TEFCA: A Basis for Nationwide Interoperability

In support of its goal to expand access to health data to improve outcomes, in 2016 the US Department of Health and Human Services (HHS), Assistant Secretary for Technology Policy and Office of the National Coordinator for Health Information Technology (ASTP/ONC)



introduced the creation of the Trusted Exchange Framework and Common Agreement (TEFCA) as part of the 21st Century Cures Act. In early 2022, ASTP/ONC and the Sequoia Project, the Regional Coordinating Entity selected for implementation, published the Trusted Exchange Framework, Common Agreement version 1 and several Standard Operating Procedures (SOPs), that set the foundation for implementation. A Roadmap for future FHIR support was also released.

Fundamentally, TEFCA creates a nationwide system that enables secure sharing of health data through a network of networks, in compliance with the myriad of Federal and state health data privacy and

access laws. Interested participants, such as hospitals, primary care providers, health networks, and HIEs can connect through to-be-selected Qualified Health Information Networks (QHINs), that agree to abide by TEFCA technical standards (Trusted Exchange Framework) and operating terms (Common Agreement). The Recognized Coordinating Entity (REC) plays an overarching role in governing data exchange across the network.

Eventually, TEFCA will also provide a path for data exchange beyond traditional clinical providers, a tactic for improved health data use that Vermont is already pursuing. There are no mandates for participating in TEFCA and sharing data across regional partners, and there will be fees for local HIEs to connect to QHINs.

Appendix G: Data Governance Background

The governance approach for the Health Data Space should build upon the existing HIE framework and align with VHIE's existing governance structure to support the following key objectives:

- Improve data sharing across the Health Data Space
- Improve data quality.
- Provide the right data, at the right time, to the right stakeholder.
- Improve data analytic capacity and reporting.

It will be imperative that data be updated at a cadence that reflects the availability of new information. For individuals who will need a single longitudinal record such as providers or caregivers, it will be essential that they have actionable, current, information that reflects recent test results, medical procedures, and diagnoses. Another consideration will be the process by which data is accessed, which may vary across domains and systems. The method for organizing and accessing data (e.g., dashboard, portal) by different user groups must align with the data architecture and available resources. An important component of the HIE data governance is to ensure it is operational.

The State and HIE Steering Committee recognize the criticality of data governance. As the Unified Health Data Space is evolving, it is important that the data governance evolves with it. To realize the vision of an integrated health data infrastructure (Unified Health Data Space), Vermont needs data exchange policies and processes that recognize individualized needs while supporting holistic care, system measurement, and improvement. This section outlines the data governance model that will be established in 2023 and enhanced as necessary for a living and operational framework. The model ensures the appropriate structure for planning and governing the health data space, coordinating services, and appropriate use of the data to advance clinical and public health objectives.

The objectives of data governance include the following themes, originating from various stakeholders of the VHIE:

- Ensure **secure access** to all data provided through the Unified Health Data Space. The stakeholders know the challenges and restrictions of the diversity of data on the roadmap for this environment. It will take coordination and clear communication to maintain the security of Vermonters' health data and to allow the State to continue to operate as good stewards of that information.
- Ensure the quality of data provided in the environment. Combining data in this environment will have little value without confidence in its quality. The more data in the environment, the more challenging maintaining quality becomes. Governance is essential to guide the processes to **ensure quality data**.
- Accurately **unify data** into a single linkable record while maintaining integrity. Having a single record increases the value of data to the State and ultimately its people by introducing the ability to analyze problems beyond a single domain. Leverage unified data for the benefit of public health and individual care.
- **Enhance the usability** of data for social services and healthcare institutions across the State. In the end, data should be highly usable with as few barriers to access and understanding as possible. Data, when available, should have a very specific purpose or utility.

A data governance framework connects the organization’s data strategy and goals to the structure necessary to manage the data that will achieve those goals. It contains the rules, processes, and procedures to implement and maintain the program over time. These themes should live explicitly throughout the governance program as decisions are made, priorities are set, and projects are planned and implemented.

The data governance components for Vermont’s Unified Health Data Space are directly tied to the feedback and priorities identified by involved stakeholders. The themes listed above have been condensed to the following components: quality data, secure data, connected data, and purposeful data. Therefore, each decision made, and priority determined, should be in pursuit of these key components.

There are also key elements of data governance that enable the organization to realize the benefits of each component but are not components in and of themselves. For Vermont, these elements include communication, culture, and collaboration. For example, collaboration alone is not a sufficient goal in data governance but prioritizing the element of collaboration will enable the Unified Health Data Space to provide quality, secure, connected, and purposeful data. The HIE is committed to providing timely and effective communication. As such, the HIE Steering committee will contemplate open meetings for the Steering Committee, Data Governance Council, and Sub-Committees. The result of this discussion will be included in the 2023 HIE Plan. As mentioned in the 2020-2025 Federal Health Information Technology Strategic Plan, ‘in our everyday routines, we rely on technology to do a lot for us.’¹⁴ As such, the HIE will continue to leverage our website to provide transparency and effective communication. HIE Steering Committee materials are published in advance of the meetings, the meeting minutes are published, and any follow-up material is published. As part of normal course of business, the HIE continues to update and modernize the website to make it as useful and easy to navigate as possible. This website can be accessed at: <https://healthdata.vermont.gov>.

The figure below illustrates the four data governance components and how they are supported continually by the elements.

¹⁴ 2020-2025 Federal Health IT Strategic Plan, <https://www.healthit.gov/topic/2020-2025-federal-health-it-strategic-plan>

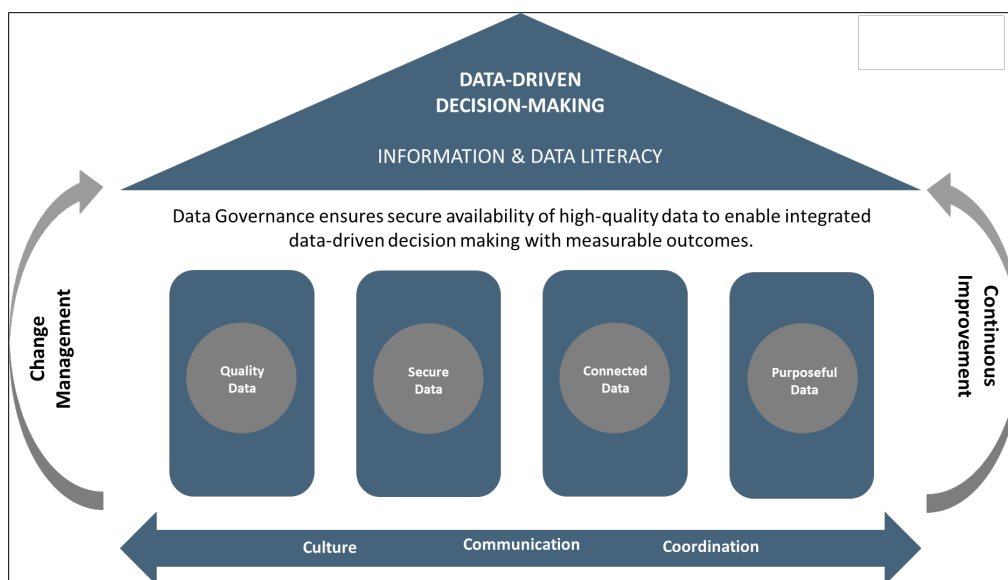


Figure 5: Data governance components

Governing by Domain

Categorizing information is one of the first steps in defining boundaries around information ownership and responsibilities for maintenance. Data domains are an industry standard used to segment data. A data domain is typically a logical business grouping of information, one that may likely go beyond the scope of a singular system. Domains are typically derived through the operations or functions an organization performs and subsequently the data used to support those functions.

In domain-centric governance structures, data is expected to be governed independently by the domain business owners - the group of people who manage the collection and operations of the business functions of the domain. Each domain is therefore responsible for maintaining the quality of its information. This is done with the understanding that the domain's data can then be consumed by other domains within the organization.

As more data domains are integrated into the Unified Health Data Space, it is helpful to refer to any existing standards around domain identification and categorization. Considering and/or conforming to said standards can allow for easier integration across the industry of healthcare systems, making the unified data even more valuable.

For the HIE, the recommended data governance structure is depicted below. As the utility of the Unified Health Data Space grows and evolves over time, the data governance structure will need to adapt accordingly. This structure has the following characteristics:

- Domain-centric ownership
- Operates on the assumption that data is managed by domain owners
- Central function to define standards for integrating and accessing data

- Outcomes-driven operation

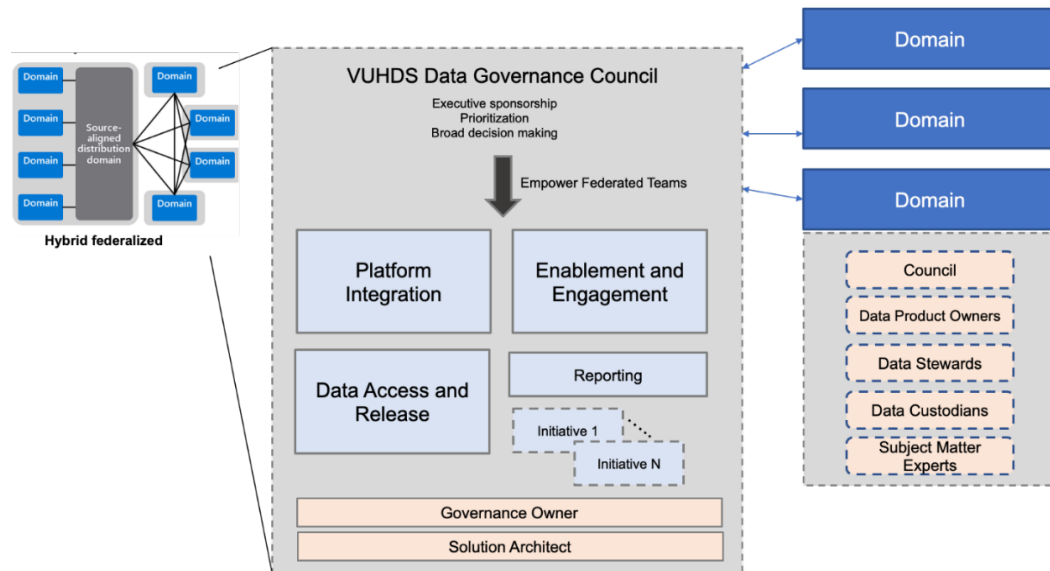


Figure 5: Data governance structure

Data Governance Council

A Data Governance Council provides executive sponsorship, prioritizes the goals, and is responsible for broad decision-making for the Unified Health Data Space. In short, it is the authority that manages the environment. A Unified Health Data Space Council is necessary to include responsible parties who own the data that will eventually live in the environment, which will extend beyond what is currently in the HIE. The Council also acts as an internal authority over how the data is integrated and managed for the environment.

The responsibilities of the Council include:

- Empowering and forming Federated Teams to support the execution and operations of data governance for the Unified Health Data Space.
- Monitoring program effectiveness by tracking the status of governance activities and initiatives. This can be managed by the Governance Owner, whose role is defined below, or by leveraging the Federated Teams.
- Setting priorities for the program by developing and/or evaluating use cases or outcomes for the benefit of Vermonters.
- Setting and approving policies. The Council should provide executive support for policy changes. The Federated Teams and subject matter experts should provide evidence-based support.
- Provide executive sponsorship, including but not limited to funding support, communications, and being an escalation point for Federated Teams.
- Communicate and educate data use and data governance across their respective stakeholder groups

HIE Steering Committee Model and Structure

The steering committee model is designed to identify where decision makers go for support, who is responsible for oversight, who provides HIE services, and how service providers are held accountable. It also calls for the Steering Committee to:

1. Define an HIE investment portfolio and monitor statewide investments in service of Vermont's HIE goals.
2. Assess the viability of investments, identify the needed level of investments, and consider the appropriate balance of public and private sourced funds.
3. Advance HIE use cases, ensure accountability of all parties involved in furthering the State's HIE goals, and engage a broad range of stakeholders in the strategic planning and oversight activities.
4. Receive the HIE Data Governance Council recommendations.

The Steering Committee's goals, commitments, and membership are included in its Charter in Appendix B. While the Steering Committee continues to hold the strategic vision for HIE, sub-committees provide subject matter expertise, operational support, and bring specific recommendations to the larger body. Subcommittees have proven to be an effective element of HIE governance. For 2023 there are four existing subcommittees currently identified. As needed, subcommittees will be created for their specific purpose and continue or complete as needed to help inform governance and project success. For some areas, these directly map to domains of data.