Vermont Health Information Exchange (VHIE) Outcomes Overview

January 27, 2024

- The Vermont Health Information Exchange (VHIE) was one of the first Health Information Exchanges in the nation to be certified by the Centers for Medicare and Medicaid Services (CMS).

- Certification ensures continued federal funding for the Vermont Health Information Exchange, with CMS paying for most of both design, development and implementation (DDI) work and maintenance and operations (M&O) work.

- This deck walks through the outcomes the Vermont Health Information Exchange must have to maintain certification.

- Data within this deck is what was most recently submitted to CMS.

- Visit this link for all outcomes data: https://healthdata.vermont.gov/vhie-outcomes-based-certification-outcomes-and-metrics

Supporting the Medicaid Population
Direct Care & Care Coordination

Outcome: Improve Medicaid providers' ability to effectively treat and coordinate care for Medicaid beneficiaries by creating one health record for every Vermonter accessible to treating providers and care coordinators.

Outcome: Enable longitudinal, population-based evaluation of Medicaid patients to optimize Medicaid services and care delivery.

- A longitudinal health record provides a history of the patient's clinical experience to support optimal care delivery and coordination.

- A timely, accessible full view of a patient's history can aid in care decision making and reduce duplicative testing or services.

- Longitudinal health records can also enable data-informed population health management efforts, such as delivery system reforms and interventions executed by the Medicaid managed care plan.

Supporting the Medicaid Population
Direct Care & Care Coordination

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Outcome: Enable longitudinal, population-based evaluation of Medicaid patients to optimize Medicaid services and care delivery.

- Metric: Health records made available to treating providers through the VHIE demonstrated by use of the provider portal.
  - *Number of VITLAccess (the VHIE provider portal) users, number of health care organizations accessing VITLAccess over the number of potential health care organizations, number of unique patient queries through VITLAccess*

- Metric: Medicaid records transmitted from the VHIE to the Medicaid care coordination tool
  - *Number of Medicaid patient records transmitted from the VHIE to the Medicaid care management module*

- *IT Systems Enabling Outcomes: Rhapsody (integration engine), Master Patient Index, Provider Portal*, Clinical Data Repository*, Data Feed to Medicaid Care Management Module*

Supporting the Medicaid Population
Direct Care & Care Coordination: Event Notification

> **Outcome: Improve Medicaid providers' ability to effectively treat and coordinate care for Medicaid beneficiaries by alerting providers to admissions, discharges, and transfers of their patients.**

- The use of event notifications to inform healthcare providers when a patient is admitted to or discharged from an Emergency Department supports care coordination activities across disparate providers.

- Notifications provide information to receiving providers that should lead to early outreach and immediate follow up care which in turn improves patient outcomes.

- The *Patient Access & Interoperability Rule* establishes a new Condition of Participation (CoP) for all Medicare and Medicaid participating hospitals, that requires electronic notifications to other health care facilities or community providers or practitioners when a patient is admitted, discharged, or transferred.

Supporting the Medicaid Population
Direct Care & Care Coordination: Event Notification

> Outcome: Improve Medicaid providers' ability to effectively treat and coordinate care for Medicaid beneficiaries by alerting providers to admissions, discharges, and transfers of their patients.

- Metric: Event notifications exchanged through VHIE connection to event notification service, Patient Ping.
  - *Number of event notifications ("admission, discharge, and transfer", ADT) messages sent to Bamboo (event notification vendor) through VHIE connection*

- Metric: Master Patient Index Medicaid Record Match Rate
  - *Master Patient Index: Percent Medicaid Match Rate*

- *IT Systems Enabling Outcomes: Bamboo Health event notification service in partnership with the VHIE, Rhapsody (integration engine), Master Patient Index*

Supporting the Medicaid Population
Direct Care & Care Coordination: Electronic Results Delivery

Outcome: Improve Medicaid providers' ability to effectively treat and coordinate care for Medicaid beneficiaries by delivering laboratory, radiological, and transcribed reports through the VHIE.

- Electronic Results Delivery is the transmission of laboratory (LAB), radiological (RAD), and transcribed reports (TRANS) collected through the VHIE directly into the electronic health record systems of care providers, to public health registries, and/or made available through the VHIE provider portal.

- Results delivery enhances the longitudinal health record accessible to providers aiding in care delivery and reducing instances of duplicative testing.

Supporting the Medicaid Population
Direct Care & Care Coordination: Electronic Results Delivery

Outcome: Improve Medicaid providers' ability to effectively treat and coordinate care for Medicaid beneficiaries by delivering laboratory, radiological, and transcribed reports through the VHIE.

- Metric: Laboratory (LAB), radiological (RAD), and transcribed reports (TRANS) messages captured by the VHIE and made available to health care organizations through VHIE
  - *Number of laboratory messages captured in the VHIE*
  - *Number of radiological messages captured in the VHIE*
  - *Number of transcribed reports messages captured in the VHIE*

- *IT Systems Enabling Outcomes: Rhapsody (integration engine), Master Patient Index, Clinical Data Repository, Data Warehouse, Terminology Services*

Direct Care/Care Coordination: Outcomes Data

Metric	July 2024	August 2024	September 2024	October 2024	November 2024	December 2024
Direct Care/Care Coordination						
Number of VITLAccess User Accounts	2,565	2,590	2,610	2,681	2,704	2,710
Number of Locations using VITLAccess	293	297	310	313	316	318
Number of Potential Locations that could use VITLAccess	1,588	1,593	1,585	1,541	1,544	1,546
Number of Patient Queries through VITLAccess	20,759	20,053	20,181	22,615	18,658	22,108
Number of Medicaid patient records transmitted from the VHIE to the Medicaid care coordination tool	430,998	433,910	415,555	481,214	416,761	413,312
Direct Care/Care Coordination: Event Notification						
Number of event notifications (ADT) messages sent to PatientPing through VHIE connection	1,403,058	1,422,000	1,341,983	1,496,465	1,323,699	1,318,147
Main Patient Index: Percent Medicaid Match Rate	99.57%	99.65%	99.60%	99.65%	99.65%	99.65%
Medicaid IDs provided by Vermont Chronic Care Initiative (VCCI) and matched to Clinical data – Numerator	283,694	284,804	285,648	285,806	285,817	285,815
Medicaid IDs provided by Vermont Chronic Care Initiative (VCCI) – Denominator	284,929	285,816	286,802	286,802	286,808	286,805
Direct Care/Care Coordination: Electronic Results						
Number of laboratory messages captured in the VHIE	582,702	581,652	562,515	570,984	520,067	521,145
Number of radiological messages captured in the VHIE	89,219	89,294	84,422	90,801	80,933	81,113
Number of transcribed report messages captured in the VHIE	421,318	419,255	412,919	448,726	403,055	401,357

Supporting the Medicaid Population

Public Health

Outcome: Enhance public health management of the Medicaid population (and general population) by automating capture and exchange of public health data through the VHIE system.

Outcome: Support response to epidemic monitoring and emergency response by capturing and making available related data for the state's Public Health Authority (Vermont Department of Health).

- In service of investment maximization/reuse and in support of realizing the vision of a Unified Health Data Space, the VHIE systems and data are used to support public health activities in Vermont.

- Immunization data is captured by the VHIE from connected electronic health record systems and pharmacies and transmitted to the state's Immunization Registry. Providers are required by state law to report immunization data to the Immunization Registry; using the VHIE to do so reduces provider reporting burden and gains efficiencies in reporting time and accuracy.

- The VHIE captures laboratory data, including COVID-19 test results, and makes that data available to the Public Health Authority for specific diseases.

- Vermont death data is collected in the Vermont Department of Health's Death Registry and transmitted to the VHIE to ensure that treating providers have up-to-date death information on their patients.

Supporting the Medicaid Population

Public Health

Outcome: Enhance public health management of the Medicaid population (and general population) by automating capture and exchange of public health data through the VHIE system.

Outcome: Support response to epidemic monitoring and emergency response by capturing and making available related data for the state's Public Health Authority (Vermont Department of Health).

- Metric: Percent of total immunization data captured by the VHIE and transmitted to the Immunization Registry
  - *The percent of total immunization messages (VXU) provided by the VHIE to the Vermont Immunization Registry by Health Level Seven (HL-7), a set of standards for exchanging health information.*

- Metric: Percent of total death records captured in the VHIE system from the state's Death Registry
  - *Percent of total death records transmitted from Vermont Death Registry to VHIE*

- Metric: Capability to submit electronic data on reportable lab results and other health records to the Vermont Department of Health to aid in epidemic monitoring and response.
  - *Laboratory messages captured in the VHIE and transmitted to the Vermont Department of Health*

- *IT Systems Enabling Outcomes: Rhapsody (integration engine), Master Patient Index, Data Repository, Data Warehouse, Terminology Services*

Public Health: Outcomes Data

Metric	July 2024	August 2024	September 2024	October 2024	November 2024	December 2024
Public Health						
The percent of total immunization messages (VXU) received by the Immunization Registry from the VHIE	88%	88%	93%	93%	93%	92%
The percent of total death records transmitted from Death Registry to VHIE	100%	100%	100%	100%	100%	100%
Death Registry Records Processed into the VHIE - Numerator	2,785	3,274	3,827	4,328	4,828	5,357
Death Registry Records Received from the Vermont Department of Health - Denominator	2,785	3,274	3,827	4,328	4,828	5,357
Laboratory messages captured in the VHIE and transmitted to the Vermont Department of Health	662	2,622	1,943	1,670	583	897

Supporting the Medicaid Population
Value Based Care (Program Management)

Outcome: Availability of the HIE system to positively impact health policy priorities.

- A platform that offers a common view of people across care settings and over time is essential to ongoing health care reform efforts.

- The Department of Vermont Health Access operates as a managed care plan for the Medicaid program. To manage risk and the overall performance of the health plan, Medicaid needs patient-level, linked clinical and claims data.

- The VHIE is a crucial component in the success of delivery system reforms as these initiatives are hinged on engaging providers with tools, supports, and data to focus care on improved health outcomes, and data is essential to evaluating and understanding the impacts of value-based care models.

- The VHIE provides health data on people attributed to delivery system reform programs directly to program operators.

- The Blueprint for Health Patient Centered Medical Home Program is one example of a delivery system reform initiative housed at Vermont Medicaid.

Supporting the Medicaid Population
Value Based Care (Program Management)

Outcome: Availability of the HIE system to positively impact health policy priorities.

- Metric: Blueprint for Health Clinical Extract Report from the VHIE

- IT Systems Enabling Outcomes: Terminology Systems, Master Patient Index, VHIE to OneCare Gateway, Data Warehouse

Value Based Care: Outcomes Data

Metric	July 2024	August 2024	September 2024	October 2024	November 2024	December 2024
Value Based Care						
Blueprint for Health Clinical Extract Report from the VHIE	Provided the report to Blueprint on 4/1/2024	Provided the report to Blueprint on 4/1/2024	Provided second report to Blueprint on 9/5/24	Provided second report to Blueprint on 9/5/24	Provided second report to Blueprint on 9/5/24	Provided second report to Blueprint on 9/5/24