THE DOWNLOAD

A monthly webinar diving into the intersection of healthcare and technology
Michigan Health Information Network Shared Services (MiHIN) is a non-profit organization that provides technology and services to connect disparate sectors, our stakeholders, to securely, legally and technically share health information.

An unbiased data trustee, MiHIN does not provide health care services, produce health care data or compete in the marketplace.

Instead, we help convene to share vital health information to advance care, better outcomes and lower costs.

Technology is a tool. Humans are the energy! Technology is meant to support the human ability to connect, communicate, and collaborate.
Today’s Agenda

01 Welcome
Joanne Jarvi

02 MiHIN 101
Joanne Jarvi

03 Adjourn
Joanne Jarvi
Communication, the successful conveying or sharing of ideas, is more critical than ever.

Every communication involves (at least) one sender, a message and a recipient.

Data is not always communicative.

Technological Infrastructure + Human Infrastructure

- Joanne Jarvi (Facilitator)
- Katelyn Lewis (Webex Chat Moderator)
The Group Development Model
(with special thanks to MHEF and MPHI)

1. **WHY?**

2. **WHO**

3. **HOW**

4. **WHAT**

Feedback

Feedback

Feedback

Feedback
WHY?
Data for Good
Every year in the US, an estimated $760 to $935 billion is wasted through overtreatment, poor coordination and other failures, amounting to about a quarter of total U.S. health care spending.

Nationally, an estimated 251,454 people die annually from medical errors, adjusted for MI (3.09% of US population) that is 7,768 people a year or over 8 times more people than those who die from car crashes annually in Michigan.
The GOALS of Health Information Exchange

- Reduced inefficiencies
- Improved healthcare access
- Lower healthcare costs
- Better quality of care & health outcomes
- Personalized medicine for patients
For WHOM
With WHOM
By WHOM?
<table>
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<tr>
<th>LEVEL</th>
<th>KEY STAKEHOLDER</th>
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<tr>
<td>Micro</td>
<td>Patient</td>
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<td>Patient's family &amp; support structure</td>
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<td>Individual care givers &amp; small practices</td>
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<td>School-based clinics site</td>
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<td>Local health department</td>
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<td>Emergency Medical Support &amp; First Responders</td>
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<td>Emergency department</td>
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<td>Critical Access Hospitals</td>
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<td>Physician Organizations</td>
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<td>Direct Contracting, Risk or Accountable Care Orgs</td>
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<td>Health System</td>
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<td>Health Plans</td>
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<td>HIEs, CBOs, HINs</td>
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<td>Municipal Government (Cities &amp; Counties)</td>
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<td>State Medicaid</td>
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<td>State Human Service</td>
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<td>State Public Health</td>
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<td>Macro</td>
<td>Academic Medical Centers</td>
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<td>Technology Incubators</td>
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<td>Strategic Health Information Exchange Collaborative (SHIEC)</td>
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<td>National Provider Organizations &amp; Health Systems</td>
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<td>National Health Plans</td>
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<td>Centers for Medicare and Medicaid</td>
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<td>Office of the National Coordinator</td>
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<td>Veterans Affairs</td>
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<td>Centers Disease Control</td>
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<td>Standard Development Organizations (HL7, IHE, OMG, X12, etc.)</td>
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Brief History: Michigan Health Information Network Shared Services

Federal Office of National Coordinator establishes State Health Information Exchange Cooperative Agreement Program

Michigan forms Health Information Technology Commission, which establishes MiHIN.

Active Care Relationship Service (ACRS) and Admission Discharge, Transfer (ADT) Notifications go live

97% of Admissions Discharge Transfer Notifications statewide sent through MiHIN

Common Key Service introduced for patient matching

131,133,812 cumulative Immunization Queries

Velatura Public Benefit Corporation and Interoperability Institute established

2010

2012

2013

2014

2016

2017

2019

2020

2022

More than 100 M messages routed through statewide network

MiHIN completes its corporate affiliation of Great Lakes Health Connect (GLHC)

More than 1 BILLION messages routed through statewide network

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MiHIN Governance Model
BEFORE: Duplication of effort, waste and expense
BEFORE: Duplication of effort, waste and expense

Many networks connecting regional health providers
Michigan’s network of networks

SINCE 2010:
Connect once to access shared services

Regional health information exchange

Federal
CMS

Simple Data Sharing Organizations

Michigan Health & Hospital/Association

NoMoreClipboard.com
GIFT of LIFE

MDHHS Data Hub

State Labs
Disease Surveillance
Syndromic
Other State Sources

Health Plan QOs

Immuno-Custodian Registry

Pharmacies

Single point of entry/exit

Virtual QOs

Walgreens
CVS
Costco
meijer
SureScripts

Sponsored Organizations

Beaumont Health

MCHIP SQS (Sustained Quality Services)

Medicaid

Enterprise Data Warehouse

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mihin.org

help@mihin.org
Michigan’s network of networks

TOMORROW: Connect once to access interstate data exchange, leveraged under the ONC Trusted Exchange Framework and Common Agreement
"Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap." The Office of the National Coordinator for Health Information Technology,” Final Version 1.0.
Connect Department of Health and Human Services and healthcare organizations in Michigan including:
- Health systems, physician organizations, health plans, pharmacies, etc.

Maintain statewide master data sharing infrastructure

Convene stakeholder groups to identify data sharing barriers, reduce provider burdens, engage consumers, and enable population health

Manage statewide legal trust framework

Align incentives and/or regulations to fairly share data and promote data standardization via use cases
Use Case
One or more scenarios to share specific information

Each use case has its own:
• Purpose
• Type of information exchanged
• Description of interactions between people/systems

Examples of use cases:
• Immunizations
• Admission Discharge Transfer (ADT) Notifications

Each use case may have different:
• Participants/interested parties
• Scenarios for information-sharing
• Rules for using the information
• Technical requirements
• Access restrictions
• Cost recovery fees or charges

Anyone can suggest a use case at https://mihin.org/submit-use-case-idea/
Use Case Factory

How does it work?

Adoption
• Critical Mass

Continuous Improvement. ...Bringing us back to...

Conceptual
• Define purpose
• Evaluation

Idea with Sponsor

Implement
• Production Status
• Metrics

Mass Marketing & Outreach
Successful Adoption

Plan and Develop
• Technical Planning
• Pilot and Refine

Functional Data-Sharing Widget
...onto MOAC and the MiHIN Board
Family of Companies
Velatura Public Benefit Corporation & Interoperability Institute

creatively connects and aligns people, organizations, technology, ideas, and information to improve the way healthcare information is exchanged today through professional services and best in class technology solutions

an alternative nationwide health information network, focused on rationalizing interstate data exchange at national scale

a consolidation of health information exchanges, community-based organizations, and health information networks that have formally affiliated to achieve national economies of scale yet maintain localized stakeholder alignment

a non-profit software technology research and development institute. Uniquely positioned as a health information technology innovation incubator, IOI’s capabilities include applied research, software development, informatics, data science, artificial intelligence, machine learning, natural language processing, and solution enablement.
The WHAT:
The Use Case determinations the Service which is operationalized by the Tool
MiHIN Use Cases

1. Advance Care Documents
2. Active Care Relationship Service
3. Admission, Discharge, Transfer Notifications
4. Behavioral Health Specially Protected Information
5. Common Key Service
6. Death Notifications
7. Drug Poisoning Surveillance System
8. Electronic Case Reporting
9. Electronic Consent Management Service
10. Exchange Consolidated Clinical Document Architecture (C-CDA)
11. Exchange Continuity of Care (CCD)
12. Health Information for State, including Immunizations, Syndromic Surveillance, Newborn Screening – Hearing Test Results
13. Health Provider Directory
14. Imaging
15. Immunization History-Forecast
16. Lab Orders - Results, including Cancer Notifications, Cancer Pathology, Disease Surveillance, State Bureau Lab Order-Results, Newborn Critical Congenital Heart Disease
17. Longitudinal Record
18. Medication Reconciliation, including Discharge Medication Reconciliation
19. Medicaid Patient Query, Michigan, including Find Patient Records
20. Orders and Results Delivery
21. Quality Measure Information
22. Radiology Studies
23. Referrals, including: Tobacco Free
24. Social Determinants of Health (SDOH)
25. Statewide Telehealth
26. Streamline Medical Examiner Reporting of Death Certificates
27. Transcribed Document Delivery
28. University of Michigan Proprietary System for Opioid Overdose Surveillance
## MiHIN Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
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<tbody>
<tr>
<td>1. ADT Normalization &amp; Conformance</td>
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<td>2. C-CDA Normalization &amp; Conformance</td>
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<tr>
<td>3. Common Key Service</td>
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<tr>
<td>4. Connect to Cancer Registry</td>
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<td>5. Coordinating the Care Coordinators</td>
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<td>6. Covid-19 ACRS Batch Reporting</td>
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<td>7. Death Notifications outbound</td>
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<td>8. Direct Secure Messaging</td>
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<td>9. eConsent</td>
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<td>10. Electronic Case Reporting</td>
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<td>11. Health Directory</td>
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<td>12. Immunization for Schools (also known as Consumer Access)</td>
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<td>13. Immunization Query</td>
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<td>14. Immunization Submission</td>
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<tr>
<td>15. Lab Conformance and Normalization</td>
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<td>16. Longitudinal Patient Record</td>
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<td>17. Making Choices Michigan: Advanced Directives</td>
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<td>18. Newborn Screening Login Portal</td>
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<tr>
<td>19. Population Health (MDSS, MSSS, ADT/syndromic, CCHD, ORU)</td>
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<td>20. PPQC (APS Files)</td>
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<tr>
<td>21. Public Health Reporting (MCIR: QBP, VXU)</td>
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<tr>
<td>22. Radiology Conformance and Normalization</td>
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<tr>
<td>23. Receive ADTs from External Facility</td>
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<tr>
<td>24. Receive C-CDA from external facility</td>
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<tr>
<td>25. Receive Death Notification</td>
<td></td>
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<tr>
<td>26. Receive External Lab Results</td>
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<tr>
<td>27. Receive External Radiology Results</td>
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<tr>
<td>28. Receive Transcribed Documents</td>
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<tr>
<td>29. Reportable Labs to State of Michigan</td>
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<tr>
<td>30. Send Claims Data for Disease Registries</td>
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<tr>
<td>31. Separate Ambulatory C-CDA</td>
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<tr>
<td>32. Sharing Integrated Care Bridge Record (ICBR)</td>
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<tr>
<td>33. Submission of SDOH Screening Forms to Route</td>
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<tr>
<td>34. Super C-CDA</td>
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<td>35. Syndromic Surveillance</td>
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MiHIN Tools

**MI Gateway**
- Single platform to: Upload ACRS files; Manage Active Care Relationships; View Care Team & other patient information; View Super C-CDA; View/Download ADTs/CCDs; Access report to support MU attestations; Access Diretto
- Customer Types: Health Plans, Providers, Practices, POs, ACOs, Health, Departments, Health Systems, MDHHS

**Diretto**
- Web interface supporting sending & receiving Direct Secure Messaging through a web browser
- Customer Types: Everyone exchanging data in healthcare: payers, providers, HIEs, POs, PHOs, home health, state governments, even consumers eventually

**AD Vault**
- Allows submission of Advance Care Documents, Care Plans, Action Plans & other clinical PDF documents into Longitudinal Record
- Customer Types: Any organization that has Advance Care Documents, Care Plans, Action Plans & other clinical PDF documents (e.g. Attorneys, Cancer Centers, Community & Faith Based Orgs, HIEs, Home Health, Hospice, Hospitals, Online Healthcare, Outpatient Clinics, PHOs, POs, Senior Living Centers, LTC, SNF, Health Plans

**Interoperability Institute and MELD**
- Meld is an open-source, cloud-based healthcare IT sandbox preloaded with fully synthetic HL7® FHIR® data available in FHIR DSTU2, STU3, and R4. An immersive, vendor-neutral environment that’s collaborative across different organizations who can work together to achieve a unified goal of healthcare interoperability.

**ReferralsPlus™**
- A secure closed loop application that enables healthcare & community organizations to send and receive referrals
- Customer Types: Medical Practices & Clinics, Hospitals, Home Health Agencies, Behavioral Health, Educational & Human Services, Pharmacist, Community Mental Health & Health Departments, Community Resources, (e.g. Shelters, Food Banks, Physical, Speech & Occupational Therapy, Dental, Health Plans)

**CareConvene**
- Virtual health platform allowing for greater patient access to quality care via a secure platform; HIE enabled, easily integrated into a providers practice flow, and can provide longitudinal and episodic care information; supports bi-directional communication between patient and provider via text or chat functionality
- Customer Types: Providers, Payers, HIEs as a reseller, POs
Cumulative Quarterly Message Totals by Use Case

<table>
<thead>
<tr>
<th>Use Case</th>
<th>2021 Q1</th>
<th>2021 Q2</th>
<th>2021 Q3</th>
<th>2021 Q4</th>
<th>2022 Q1</th>
<th>2022 Q2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADT ACRS Inbound</td>
<td>2,017,244,468</td>
<td>2,108,551,698</td>
<td>2,189,499,154</td>
<td>2,270,317,001</td>
<td>2,363,938,878</td>
<td>2,438,577,629</td>
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<tr>
<td>ADT ACRS Outbound</td>
<td>1,569,873,594</td>
<td>1,776,779,958</td>
<td>1,916,894,305</td>
<td>2,062,345,190</td>
<td>2,210,791,818</td>
<td>2,366,272,793</td>
</tr>
<tr>
<td>Ambulatory C-CDA Inbound</td>
<td>4,789</td>
<td>4,789</td>
<td>4,789</td>
<td>4,789</td>
<td>4,789</td>
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<tr>
<td>Blood Lead</td>
<td>14,202</td>
<td>14,635</td>
<td>14,704</td>
<td>14,704</td>
<td>14,704</td>
<td>14,704</td>
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<tr>
<td>Cancer Notifications</td>
<td>166,043</td>
<td>167,018</td>
<td>167,128</td>
<td>167,253</td>
<td>167,311</td>
<td>167,433</td>
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<tr>
<td>Cancer Pathology</td>
<td>6,926</td>
<td>7,425</td>
<td>10,738</td>
<td>11,667</td>
<td>12,461</td>
<td>12,240</td>
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<tr>
<td>Death Notifications SCDI Inbound</td>
<td>1,524</td>
<td>3,168</td>
<td>5,391</td>
<td>7,923</td>
<td>10,620</td>
<td>12,514</td>
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<tr>
<td>Death Notifications SCDI Outbound</td>
<td>7,119</td>
<td>5,132</td>
<td>7,866</td>
<td>10,348</td>
<td>13,835</td>
<td>18,331</td>
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<tr>
<td>Electronic Case Reporting</td>
<td>78,452</td>
<td>102,308</td>
<td>118,648</td>
<td>127,090</td>
<td>211,426</td>
<td>259,594</td>
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<tr>
<td>ICBR</td>
<td>121,618</td>
<td>124,260</td>
<td>126,916</td>
<td>130,827</td>
<td>134,244</td>
<td>136,256</td>
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<tr>
<td>Immunization History-Forecast</td>
<td>115,506,952</td>
<td>126,430,533</td>
<td>137,725,335</td>
<td>151,346,154</td>
<td>163,375,369</td>
<td>178,093,464</td>
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<td>MDPSS</td>
<td>1,253,832</td>
<td>1,507,509</td>
<td>1,778,112</td>
<td>2,021,791</td>
<td>2,287,941</td>
<td>2,505,979</td>
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<td>MedRec Inbound</td>
<td>31,683,679</td>
<td>32,674,923</td>
<td>33,575,553</td>
<td>34,622,432</td>
<td>35,635,221</td>
<td>36,467,330</td>
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<tr>
<td>Query Patient Record History</td>
<td>273,387</td>
<td>329,748</td>
<td>387,731</td>
<td>454,899</td>
<td>516,735</td>
<td>599,280</td>
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<td>Total Messages Received</td>
<td>5,034,820,714</td>
<td>5,396,540,788</td>
<td>5,747,627,395</td>
<td>6,125,505,595</td>
<td>6,501,503,082</td>
<td>6,796,167,430</td>
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<tr>
<td>Statewide Labs</td>
<td>351,599,934</td>
<td>379,005,655</td>
<td>405,994,344</td>
<td>435,500,297</td>
<td>463,919,471</td>
<td>485,469,507</td>
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<tr>
<td>Statewide Labs Enhanced ORU/Outbound</td>
<td>5,616</td>
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<tr>
<td>Statewide Labs-Outbound</td>
<td>244,236,679</td>
<td>303,311,197</td>
<td>357,373,472</td>
<td>425,626,336</td>
<td>494,816,041</td>
<td>549,759,524</td>
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<tr>
<td>Submit Immunizations</td>
<td>95,933,784</td>
<td>101,503,136</td>
<td>107,592,874</td>
<td>115,345,069</td>
<td>119,773,128</td>
<td>121,664,076</td>
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<tr>
<td>Submit MBCIS</td>
<td>377,714</td>
<td>68,944</td>
<td>62,566</td>
<td>64,893</td>
<td>87,944</td>
<td>80,772</td>
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<tr>
<td>Submit Newborn Screening</td>
<td>9,692,722</td>
<td>11,552,433</td>
<td>12,850,754</td>
<td>14,890,111</td>
<td>18,080,793</td>
<td>19,076,421</td>
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<tr>
<td>Submit Syndromic Surveillance</td>
<td>359,316,197</td>
<td>371,924,889</td>
<td>386,835,947</td>
<td>406,134,951</td>
<td>434,999,266</td>
<td>458,254,248</td>
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<td>Grand Total</td>
<td>5,033,480,683</td>
<td>5,396,540,788</td>
<td>5,747,627,395</td>
<td>6,125,505,595</td>
<td>6,501,503,082</td>
<td>6,796,167,430</td>
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Areas of opportunity

- Reduce health disparities and underlying drivers of inequities, with solutions to bridge the digital divide, and give residents more control over their own health.
- Maximize the impact of public-private partnerships by creating a statewide plan that can drive joint investments in interoperable HIT.
- Support systems that address social determinants of health with screening and referral systems, and integrated health and human services data.
- Expand real-time notifications and data exchange to improve coordinated care delivery, follow up, and public health response.
- Enhance the use of data to measure performance and drive decision-making in the public and private sectors, including improving standardization and completeness.
- Streamline activities across the system, creating tools that reducing duplication of effort for providers and patients, and adopting a “build once” mindset.
High Level Priorities

**GOAL 1: Promote Health and Wellness**
- **Objective 1a:** Improve individual access to usable health information
- **Objective 1b:** Advance healthy and safe practices through health IT
- **Objective 1c:** Integrate health and human services information

**GOAL 2: Enhance the Delivery and Experience of Care**
- **Objective 2a:** Leverage health IT to improve clinical practice and promote safe, high-quality care
- **Objective 2b:** Use health IT to expand access and connect patients to care
- **Objective 2c:** Foster competition, transparency, and affordability in healthcare
- **Objective 2d:** Reduce regulatory and administrative burden on providers
- **Objective 2e:** Enable efficient management of health IT resources and a nationwide workforce confidently using health IT

**GOAL 3: Build a Secure, Data-Driven Ecosystem to Accelerate Research and Innovation**
- **Objective 3a:** Advance individual- and population-level transfer of health data
- **Objective 3b:** Support research and analysis using health IT and data at the individual and population levels

**GOAL 4: Connect Healthcare with Health Data**
- **Objective 4a:** Advance the development and use of health IT capabilities
- **Objective 4b:** Establish expectations for data sharing
- **Objective 4c:** Enhance technology and communications infrastructure
- **Objective 4d:** Promote secure health information practices that protect individual privacy

For more information, visit: https://www.healthit.gov/topic/2020-2025-federal-health-it-strategic-plan
Interested in working with MiHIN?

The first step is to **identify a use case** with a manageable scope that can grow incrementally.

Does my organization have health data that other members of the care team would find valuable or vice versa?

**Why do I want to share the data?**

What is the data going to be used for?

From there, let’s work together to identify policy or governance challenges and figure out how to create a technology solution to enable that data sharing.