

Health Information Exchange



Presenters

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Minnesota Health Information Exchange (MN HIE)

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Stratis Health



Stratis Health is a non-profit organization that leads collaboration and innovation in health care quality and safety, and serves as a trusted expert in facilitating improvement for people and communities

Under federal contract, Stratis Health serves as Minnesota's Medicare Quality Improvement Organization (QIO)

Stratis Health is also involved in other state and national projects funded through government contracts, foundation and corporate grants, and health systems

www.stratishealth.org



Topic Objectives

- Participants will:
 - Describe the purpose of HIE, types of HIE organizations, and the nature of the HIE services being provided
 - Learn about HIE activities in Minnesota in order to evaluate opportunities for participation
 - Learn how participation in HIE organizations may enhance your facility's ability to participate in various incentive programs for HIT adoption.
 - Discuss how local/regional HIE organizations relate to NHIN activities



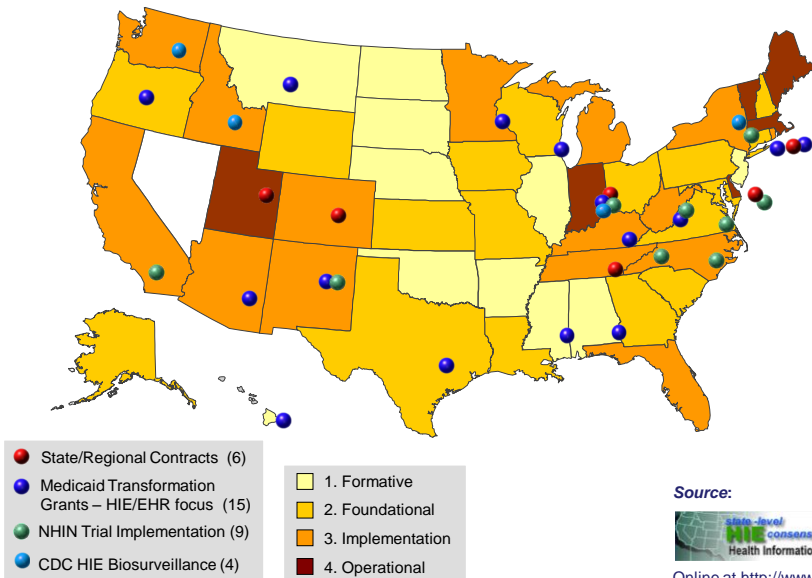
Introduction to HIE and HIO

- HIE is seamless exchange of health information in support of:
 - improved care delivery
 - preventative and population health
 - efficiencies for healthcare delivery
 - consumer empowerment
- HIO refers to the organization:
 - With specific agreements for secure exchange of health information
 - among parties who conform to a model, agreement, or ultimately a certification process for use of a network.
- Nationwide Health Information Network (NHIN) is a network of networks **concept** for HIE across the country

Health Information Exchange (HIE)	Health Information Organization (HIO)	Regional Health Information Organization (RHIO)
The electronic movement of health-related information among organizations according to nationally recognized standards.	An organization that oversees and governs the exchange of health-related information among organizations according to nationally recognized standards.	An HIO that brings together health care stakeholders within a defined geographic area and governs HIE among them for the purpose of improving health and care in that community.
NAHIT, 2008		



State HIE Progress: 2008



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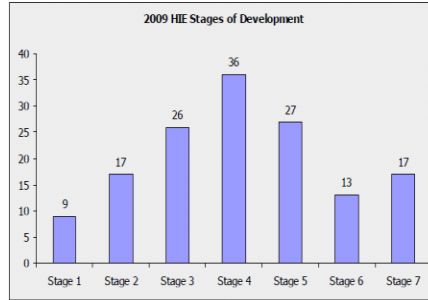


Online at <http://www.shie.org/>



eHI Stages of HIE Development

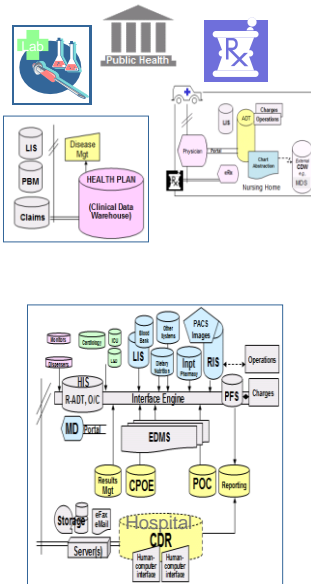
Stage 1	Recognition of the need for health information exchange among multiple stakeholders in your state, region or community. (Public declaration by a coalition or political leader)
Stage 2	Getting organized; defining shared vision, goals, and objectives; identifying funding sources, setting up legal and governance structures. (Multiple, inclusive meetings to address needs and frameworks)
Stage 3	Transferring vision, goals and objectives to tactics and business plan; defining your needs and requirements; securing funding. (Funded organizational efforts under sponsorship)
Stage 4	Well under way with implementation -technical, financial and legal. (Pilot project or implementation with multiyear budget identified and tagged for a specific need)
Stage 5	Fully operational health information organization; transmitting data that is being used by healthcare stakeholders.
Stage 6	Fully operational health information organization; transmitting data that is being used by healthcare stakeholders and have a sustainable business model.
Stage 7	Demonstration of expansion of organization to encompass a broader coalition of stakeholders than present in the initial operational model.



Operational



HIE Organization Services



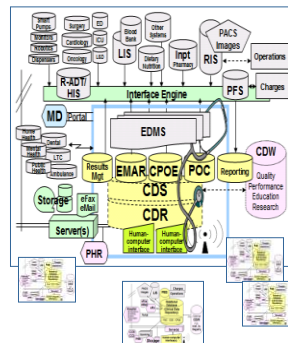
HIO Services

Directory
PID
RLS

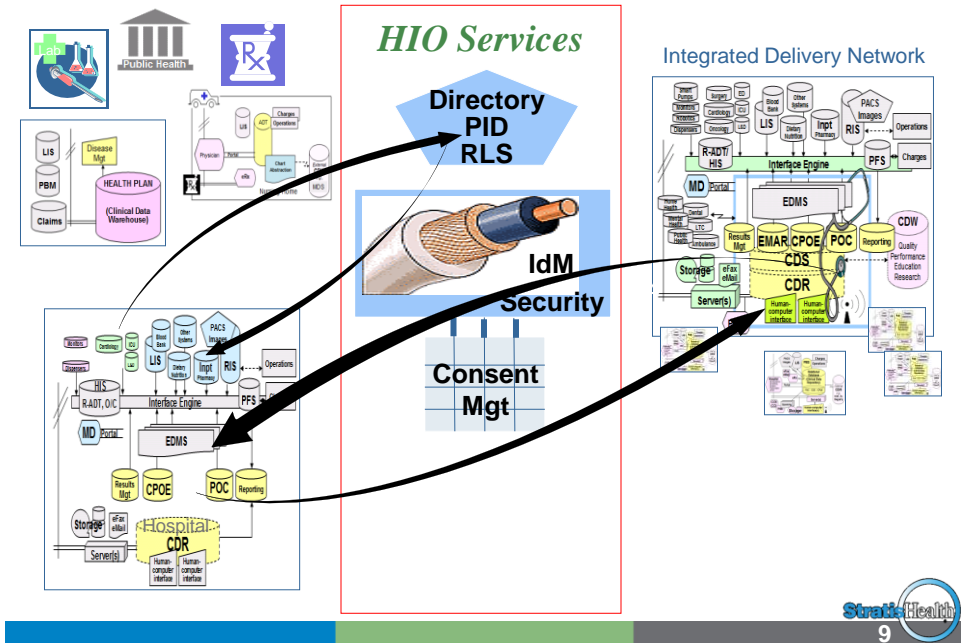
IdM
Security

Consent
Mgt

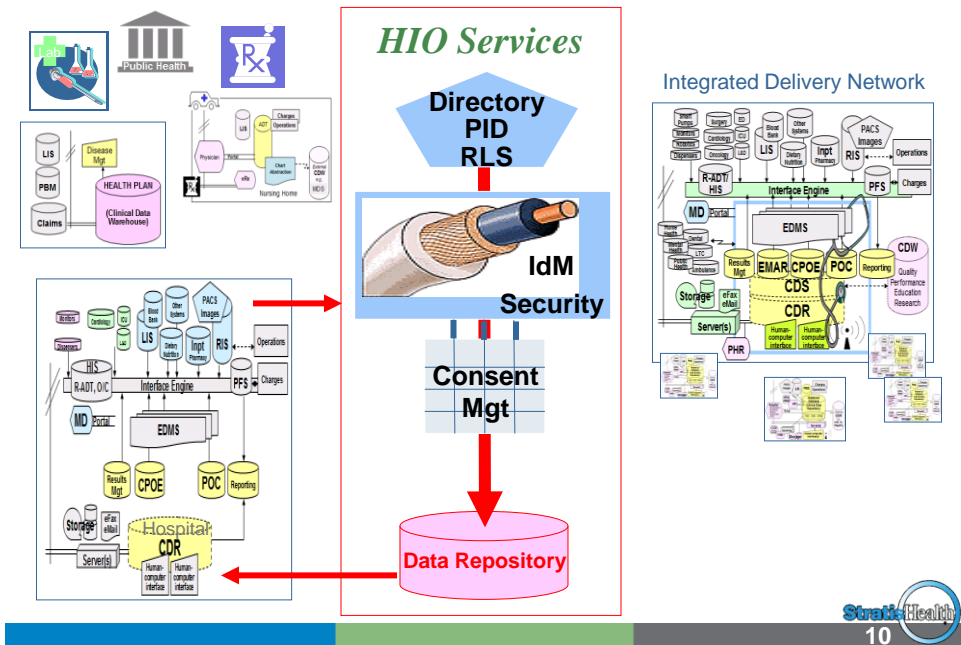
Integrated Delivery Network



HIE Architectures: Federated

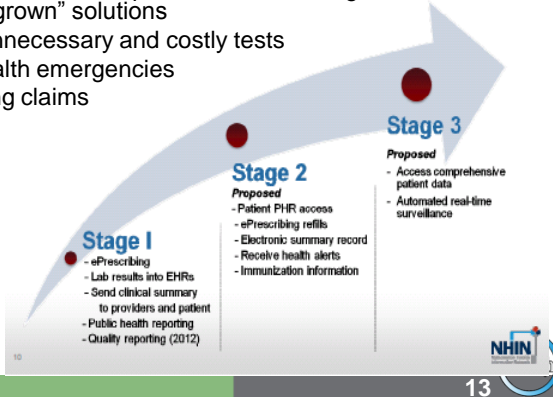


HIE Architectures: Consolidated

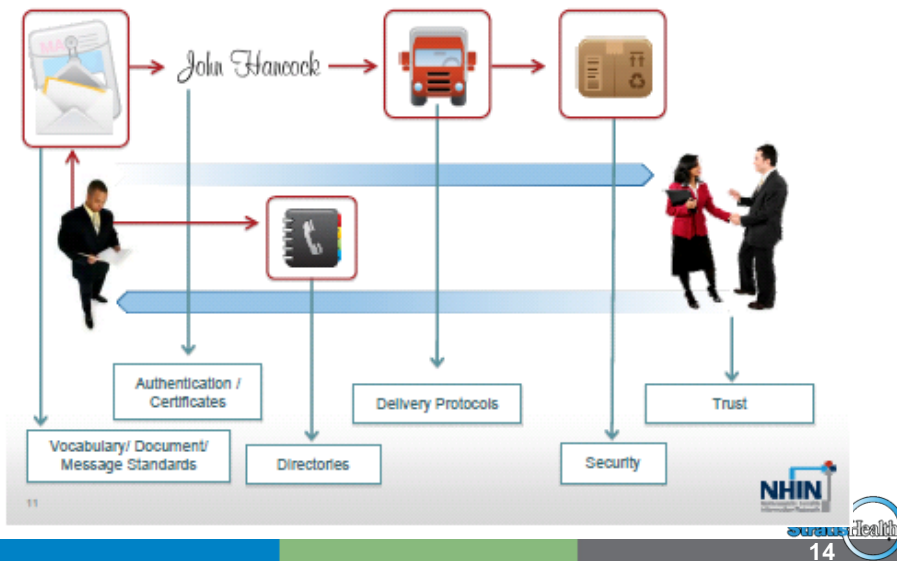


Goals for NHIN

- Provide robust gateway and single data use agreement to securely exchange health information
- Support meaningful use for incentives under federal economic stimulus law
- Aid in care coordination between private and governmental providers
- Ensure reliable and secure health information exchange
- Deliver fast and accurate communication of health information
- Provide common set of standards and protocols, eliminating need to create duplicative “home-grown” solutions
- Reduce medical errors, unnecessary and costly tests
- Aid response to public health emergencies
- Reduce time for processing claims
- Reduce costs
- Speed diagnosis
- Faster benefits decisions
- Empower citizens



NHIN Functionality





MN HIE Overview 7/14/2010

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MN Health Information Exchange (MN HIE)

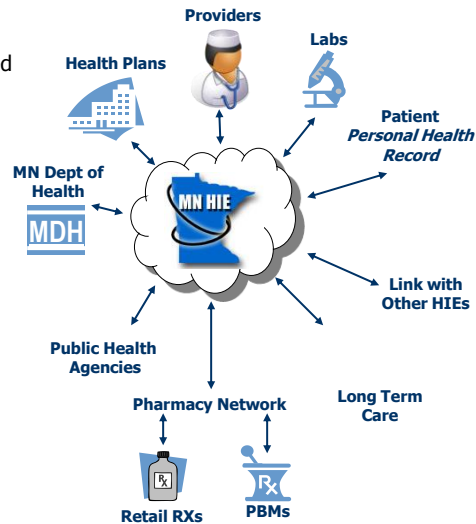
What is MN HIE?

- **State-wide** secure network and record locator service
- Designed to share clinical and administrative information among healthcare providers in **Minnesota and bordering states**
- Not for profit public/private partnership
- **Purpose**
Improve the health of all Minnesotans through more informed decision-making by the provider and patient at the point of care
- **Goals**
 - **Support interoperability across Minnesota**
 - Enhance safety, quality and reduce healthcare costs
- **Patient Controlled**
 - Consent at each visit
 - Ability to opt-out of clinical information exchange



MN HIE Approach

- Patient Controlled and Patient Centered
- Provides Connectivity for all Health Care Organizations
- Meets Providers 'where they are'
- Provides aggregated patient specific data
- Allows Single Sign On (SSO) and Patient Context to many applications or connections
- Federated Environment
- Centralized Secure Patient Directory (SPD)
- Centralized Record Locator Service
- Role Based Security



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We meet Providers 'where they are'

Getting to Meaningful Use is a Journey

View data from other providers

Exchange data with other providers

Integrate data from other providers into system

Three ways to access Administrative and Clinical data via MN HIE:

1. Stand-alone Web Browser
2. Embedded into an Electronic Medical Record
3. Interoperable Transactions

Providers may use more than one method to access MN HIE

One Pricing model regardless of access method

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Clinical Workflows

- Clinical View
 - Aggregated data from multiple sources
 - Gives 'snapshot' of patient's clinical status
- Interoperable Exchange of Data
 - Clinical Care Documents
 - Provides in-depth information from one provider
 - Episode of Care
 - Data from defined time period, one EHR
 - Useful in transition of care, referral situations

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Information Exchange

Capabilities

Current

- Secure Patient Directory (SPD) with Record Locator Service (RLS)
 - 4.2 million patients
- Consent Management
- Opt-Out Capabilities
- Medication History
- Eligibility
- Immunizations
- Lab History
- Clinical Care Documents

Future

- e-Prescribing (Fall 2010)
- Roadmap to Meaningful Use

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Roadmap to Meaningful Use

Meaningful Use	
<p>Stage 1 2011</p>	<ul style="list-style-type: none"> Medication History Lab History Continuity of Care Document Exchange Eligibility Immunization History and Submission Capability ePrescribing* Radiology History Allergies and Alerts Exchange Problem List Exchange Procedure List Exchange Public Health Reporting Discharge Summaries Exchange Quality of Care Reporting
<p>Stage 2 2013</p>	<ul style="list-style-type: none"> Document Push Capability Lab Ordering and Results Delivery* Radiology Ordering and Results Delivery* Establish State-wide Provider Directory Clinical Messaging* Secure Email Exchange other Text Documents Additional Diagnostic Test History Manage Consumer Preferences Specialty Reporting to Device and Disease Registries
<p>Stage 3 2015</p>	<ul style="list-style-type: none"> Connectivity to the National Health Information Network Multi-media support (Exchange of Images) Medical Device Interoperability Additional Quality of Care Reporting Connection to Trauma, Traumatic Brain Injury and Spinal Cord Registries Support for Advanced Directives Home Monitoring Interoperability

Meaningful Use Requirements will change as regulations are further defined. * Additional charges may apply.

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Minnesota Health Information Exchange Mock data for demo purposes only Welcome to MN HIE's Portal

Welcome Laurie Southerton!

Home Administrative View Clinical View Test Results Patient Output

Bill Granger

Sex: Male Age: 43 Date of Birth: 05/02/1967

PATIENT SUMMARY CLINICAL DOCUMENTS LAB RESULTS MEDICATION HISTORY IMMUNIZATIONS

LAB RESULTS

Test Name	Result Status	Collection Date	Ordering Provider	Source
BLOOD ALCOHOL	Final results	10/23/2009	Catalan, Grace	Good Lab
CBC	Final results	05/23/2009	Jones, Alan	Good MN Laboratories
LIPID PROFILE	Final results	05/23/2009	Jones, Alan	Good MN Laboratories
ELECTROLYTES	Final results	05/23/2009	Jones, Alan	Good MN Laboratories

IMMUNIZATIONS

Vaccine	Date Administered	Refusal Reason
Td (adult)	12/11/2006	Patient decision
Td (adult)	03/15/1995	
MM,MM,MM	01/16/1989	
MM,MM	05/29/1988	

MEDICATION HISTORY

Last Fill Date	Medication Name	Strength	Drug Form	Quantity	Days Supply	Refills	Prescriber Name	Pharmacy	Source
02/05/2009	ENVOXOCTIN 150 MG	150 MG	Tablet	30	14		BROWN, CYNTHIA	MADINE'S PHARMACY 0	Good Metropolitan Insurance
02/05/2009	HYDROCODONE-APAP 7.5-750MG	7.5-750MG	Tablet	150	18		MILLER, SHARON	CVS PHARMACY 0120	Good Metropolitan Insurance
02/03/2009	POTASSIUM CL 20 MED T. 20MEQ	20MEQ	Sustained Release Tablet	30	30		JONES, ALAN	TARGET CORPORATION 0	Good Metropolitan Insurance
01/29/2009	LUMESTA 2 MG	2 MG	Tablet	30	30		JONES, ALAN	TARGET CORPORATION 0	Good Metropolitan Insurance
01/29/2009	ALPRAZOLAM 0.5 MG	0.5 MG	Tablet	150	30		JONES, ALAN	TARGET CORPORATION 0	Good Metropolitan Insurance
01/29/2009	ACTOVARASIN CALCIUM 400MG	400MG	Tablet	30	30		JONES, ALAN	TARGET CORPORATION 0	Good Metropolitan Insurance
01/29/2009	NAPROXEN 500 MG	500MG	Tablet	60	30		JONES, ALAN	TARGET CORPORATION 0	Good Metropolitan Insurance
01/29/2009	OMEPRazole 20 MG CA. 20MG	20MG	Capsule, extended release	180	90		JONES, ALAN	TARGET CORPORATION 0	Good Metropolitan Insurance
01/29/2009	AMLODIPINE BESYLATE 10MG	10MG	Tablet	90	90		JONES, ALAN	TARGET CORPORATION 0	Good Metropolitan Insurance

CLINICAL CARE DOCUMENTS (CCD)

Source	Author's Org	Effective Dates	Document
Good Healthcare	Good Healthcare Hospital	12/13/2006 - 12/13/2006	Summarization of episode note (CCDCONF.S)
Good Clinics	Good Clinics	06/01/2002 - 11/13/2009	Summarization of episode note (CCDCONF.S)



Minnesota Health
Information Exchange

MN HIE Experience

- Value Proposition
 - 'One Stop Shop' for Clinical and Administrative Information
 - Subscription model (No transaction fees)
 - Reduced risk of clinical errors
 - Quicker access to relevant clinical information
 - Increased Patient Satisfaction
 - Eventual reduction in staff time and effort (i.e. Public Health Reporting)
- Feedback from MN HIE Users
 - Intuitive to Use
 - Valuable Data – would miss it if taken away

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Information Exchange

Why Now?

- 2011 is next year
- Meaningful Use Stage 1 is close to finalization – MN HIE services will meet exchange requirements
- Ability to view patient specific data from different clinical sources
- MN HIE provides neutral access to data – regardless of what EHR you have (or don't have)
- You can start now – do not need to wait until you have an EHR
- You can use MN HIE to exchange information with referrals or when your patients are outside your care system

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What You Need to Do

- Educate yourself on Meaningful Use requirements
 - Final criteria is expected from the Office of the National Coordinator (ONC) by end of June
 - Current version in draft form will likely not change significantly
- Perform an internal assessment of business / technology needs
 - Key Health Alliance is excellent resource for assistance (Regional Extension Center for Minnesota Community)
 - Create a high-level plan to satisfy meaningful use requirements
- Contact a Health Information Organization (HIO)
 - Understand current exchange services available
 - Explore options and timing for connecting to HIO network
 - Review meaningful use 'exchange' requirements and HIO delivery roadmap
 - Determine cost of services (include in your 2011 budget process)

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Questions?

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Presented by
Cheryl M. Stephens, PhD
President and CEO
Community Health Information Collaborative
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Community Health Information Collaborative
Our mission is to provide regional access and utilization of health care information through collaboration.



CHIC is a nonprofit collaborative of hospitals, clinics, long-term care facilities, tribal health organizations, higher education institutions and public health departments in Northeastern Minnesota. CHIC leverages information technology and collaborative relationships to help members improve care and save precious healthcare dollars through the following programs.

CHIC: Building bridges to quality healthcare.

Emergency Preparedness	Health Info Exchange	Immunization Registry	USAC Administration
<p>CHIC serves as the Administrative Regional Healthcare Preparedness Coordinator for 16 hospitals in seven counties in northeastern Minnesota. Coordination includes medical services, mental health services and volunteer recruitment that would be required in an emergency.</p> <p>CHIC's efforts were recognized in July 2008 by a National Congress on Health Systems Readiness, hosted jointly by the American Medical Association and the Centers for Disease Control and Prevention.</p> <p>In addition, CHIC coordinated the volunteer efforts associated with the serious wildfires experienced in the early summer of 2007 near the Gunflint Trail in far northeastern Minnesota.</p> <p>Our partners include hospitals, state and local public health and tribal health agencies, homeland security, emergency medical services, long-term care facilities, clinics and public safety agencies.</p>	<p>HIE-Bridge™ is a web-based network that speeds up access to patient medical information by connecting doctors, nurses, and emergency staff to the facilities holding remote medical records.</p> <p>Benefits of HIE-Bridge™:</p> <ul style="list-style-type: none"> •Links hospitals, clinics, and long-term care facilities across upper Midwest to quickly find location of medical records •Improved quality of care as a result of transfer of electronic medical record/CCD documents •State-of-the-art security to protect patient privacy •Access to the location of remote medical information can help reduce unnecessary medical re-testing •Access can reduce prescription errors and alert providers to patient allergies •Designed in conjunction with the Nationwide Health Information Network (NHIN) as a participant in the 2008-2009 trial implementations and demonstrations 	<p>The Minnesota Immunization Information Connection (MIIC) is a confidential, computerized network of shared immunization records. It provides clinics, schools, and parents with accurate, complete, and up-to-date immunization records.</p> <p>MIIC offers:</p> <ul style="list-style-type: none"> •Clinical decision support on what antigens and vaccine products are optimally due for given patient. •Reduced medical errors related to over- and under-immunization •Improved immunization rates through reminder and recall notices •Assurance that you will know about shots given to your patients in other settings •Aids schools by providing complete accurate immunization records for children enrolling in Early Childhood Family Education (ECFE) and other preschool programs. 	<p>The Rural Health Care Program of the Universal Service Fund (USF), which is administered by the Universal Service Administrative Company (USAC), is a support program authorized by Congress and designed by the Federal Communications Commission (FCC) to provide reduced rates to rural health care providers (HCPs) for telecommunications services and Internet access charges related to the use of telemedicine & tele-health.</p> <p>For health care providers this means that support is available for telecommunications services and monthly Internet access charges used for the provision of health care.</p> <p>CHIC provides administrative assistance in document preparation between USAC and the healthcare providers for this program.</p>



Agenda

- **Progression of CHIC Health Information Exchange projects**
 - Secure E-mail
 - Web Portal
 - HIMSS / GSA Single Sign-on
 - RLS

- **Nationwide Health Information Network and Social Security Administration**

- **Health Information Exchange:**

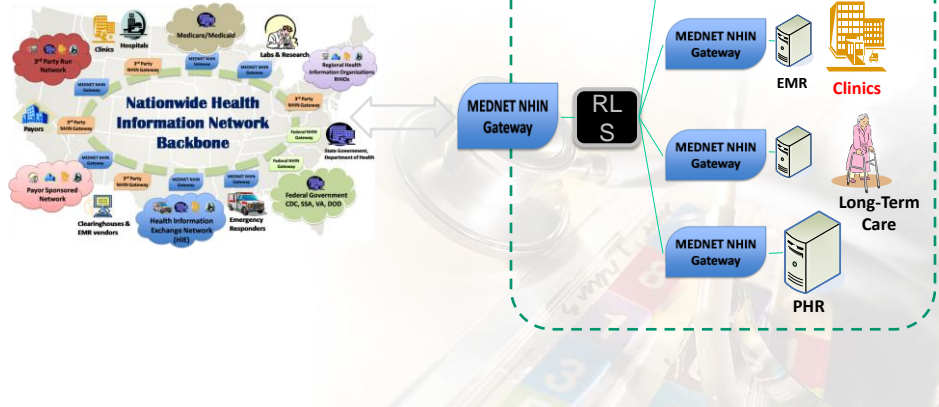


**Nationwide Health Information Network
and
Social Security Administration
Electronic Submission of Disability Claims**

Extending HIE-Bridge™

Interoperability for SSA

- **Patient Lookup**
- **Clinical Document Exchange**
- **Privacy and Security**



Core Services

- **Look-up and retrieve data**
 - ✓ Summary record and other available data from locations in EHRs and PHRs
- **Deliver data**
 - ✓ Summary record to meet emergent care needs
- **Exchange consumer preferences**
 - ✓ Decisions about participation in electronic exchange of their data
 - ✓ Workable permissions for who can access what
- **Support delivery of data for population uses**




Key Features

- Quick access to demographic information on patients
- Secure – requires PKI digital certificate authentication with 2-factor security
- Includes sophisticated Patient Privacy and Consent Management
 - ✓ Conforms to recent Minnesota legislation
- Fast – under 5 second response times
- Scalable – no limit to number of participants
- Distributed searches - No central database




DEMO

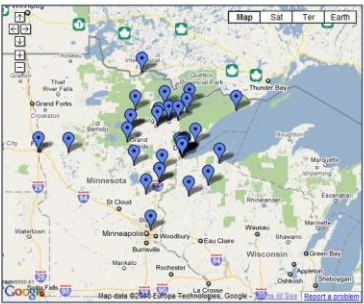

Welcome Page

Participating facilities - List view

- ☑ HIE Bridge
 - Central Hospital
 - Metro Hospital
 - NorthEast Hospital
 - NorthWest Hospital
 - SouthEast Hospital
 - SouthWest Hospital

No Facility Selected

Participating facilities - Map view



Larger Map
Report Map problems (missing location, misspellings, etc)

Learn about HIE Bridge

- Frequently Asked Questions

Sign Up

Click the button to register for the services


Register
More Information

User Services

- Access Electronic Referral Service
- Access Patient Lookup Service

Admin Services

- Manage Patient Privacy
- Manage Security
- Manage Reporting



Leaders in Connecting Health Care
Powered by MEDNET



➤ **Participation Overview**

1. **Data Exchange and Support Agreement**
2. **Consent Management**
 - ✓ Consent Language
 - ✓ Opt-Out Procedures
 - ✓ Opt-Out Revocation
 - ✓ Training for Registration Staff
3. **Auditing**
 - ✓ Privacy and Security Officers
 - ✓ Breach Notification procedures



➤ **Communication and Training**

- ✓ Registration Brochure
- ✓ Newsletter Copy
- ✓ Press Release
- ✓ Training Tutorials
- ✓ Frequently Asked Questions



HIE-Bridge™

In an emergency, locating your medical information is critical.



During high stress times, you should not have to worry about where to find your medical information.

HIE-Bridge™ can help



A Minnesota Health Information Exchange
www.hiebridge.org

HIE-Bridge™ FAQ's

What is HIE-Bridge™?
A system that speeds up locating your medical information for doctors, nurses and emergency staff from regional facilities.

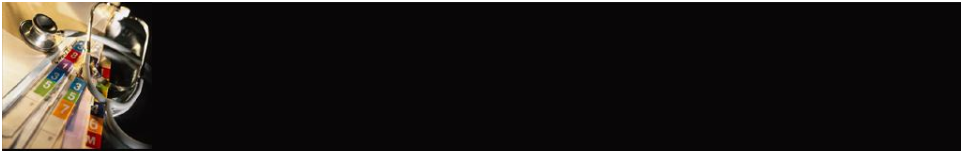
How will HIE-Bridge™ benefit me?
It will let doctors and nurses find where your tests and other health information is stored across the region. With this, they can make better and faster decisions for your care.

Is the system secure?
Yes! State of the art security protects your privacy and prevents unauthorized access to your medical records.

For more information, visit www.hiebridge.org

Additional Information:

Opt-Out
You may opt-out from the HIE-Bridge™ network. If you choose to remove your information from HIE-Bridge it will not be available in the event of an emergency or disaster. Please speak to your provider if you have questions about HIE-Bridge or opt-out. If you opt-out and then change your mind, you may opt back in at any time. Just talk to your healthcare provider.



Thank you!

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Thank You!

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