

# Minnesota e-Health Update Monthly Call

**March 17, 2011**  
Conference Call

**Sponsored by:**

- **Minnesota e-Health Initiative**
- **Minnesota Department of Health**
- **Minnesota Department of Human Services**



# Monthly Update Calls

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- Purpose of the Calls:
  - Brief update on issues important to Minnesota Stakeholders
  - Provide a Q & A opportunity
  - Compliment other communications activities
- Monthly Timing of the Calls
  - Usually Third Thursday of the Month from 4:00 - 4:45 p.m.
  - Next Call Scheduled for April 21, 2011
- E-mail feedback & suggestions for improvement to [bob.b.johnson@state.mn.us](mailto:bob.b.johnson@state.mn.us)

# Plan for Receiving Questions From Conference Call Participants

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- All lines will be muted during the call
- E-mail questions to [bob.b.johnson@state.mn.us](mailto:bob.b.johnson@state.mn.us) at any time during the presentation
- Questions will be addressed following the presentation

*Following the call:  
Questions will be reviewed and staff will identify future  
resource materials to be posted.*

# Reminder

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- We don't have all the answers but we are very interested in hearing your questions and your perspectives.

# Meeting Agenda

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## Topic: Direct Immunization Data Exchange in Minnesota

- Minnesota Immunization Information Connection (MIIC)
- Hennepin County Medical Center (HCMC)
- Comments and Questions

# Our Speakers & Panel Members

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- **Emily J. Emerson**

*Manager/IT Unit Supervisor*

*Minnesota Immunization Information Connection (MIIC)*

*Minnesota Department of Health*

- **Kevin Larsen, MD**

*Chief Medical Informatics Officer*

*Associate Medical Director*

*Hennepin County Medical Center*



# Minnesota Immunization Information Connection (MIIC): An Update on Current Initiatives

Emily J. Emerson

MIIC Manager/IT Unit Supervisor

March 17, 2011

# Topics

- MIIC Overview
- Direct Project Participation Update
- Public Health Reporting on Immunizations for Meaningful Use
- EHR-IIS Interoperability Grant
- Future Directions

# MIIC Quick Stats

- MIIC is the statewide immunization information system; live since May 2002
- MIIC contains 5.7 million clients
- Over 45 million immunizations
- Met Healthy People 2010 goals of 95% of kids 0-6 enrolled
- 8,324 active users
- Over 2,300 log-ins occur every day

# Providers in MIIC

| Provider Type                   | # enrolled |
|---------------------------------|------------|
| Primary Care Clinic             | 803        |
| School                          | 780        |
| Child Care/Headstart/Pre-school | 475        |
| Pharmacy                        | 344        |
| Nursing Home/ Long Term Care    | 271        |
| Hospital                        | 146        |
| Specialty, other                | 126        |
| Public Health                   | 112        |
| Other                           | 103        |
| OB/Gyn                          | 49         |
| College/University              | 37         |
| Occupational Health             | 36         |
| Tribal or IHS Clinic            | 30         |
| Family Services                 | 26         |
| Correctional facility           | 23         |
| Home Care/Hospice               | 22         |
| Health Plan                     | 21         |
| Community Vaccinators           | 10         |

# Data Receipt by MIIC

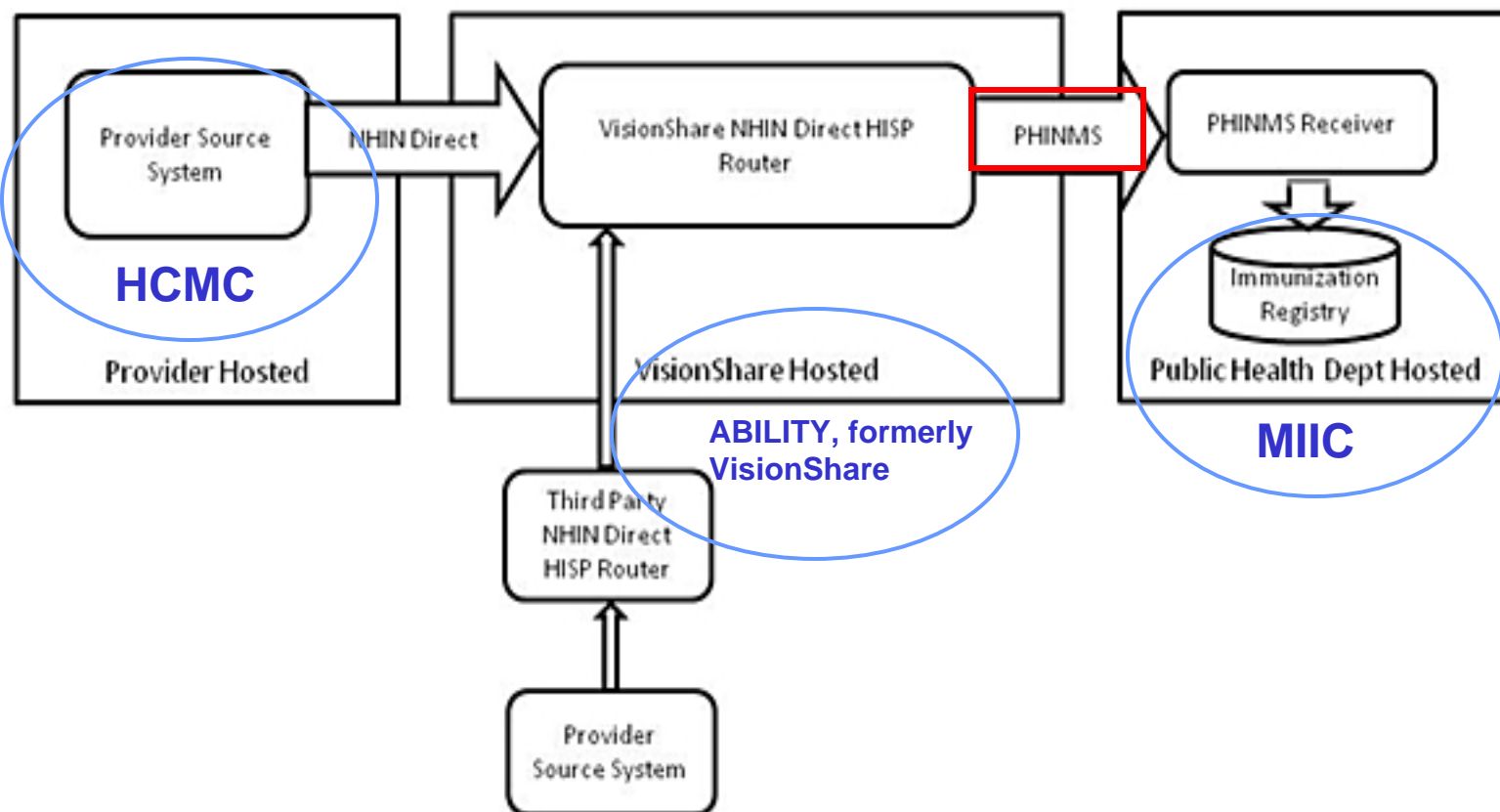
- Direct data entry – 14%
- Batch file process – 83%
- Real-time HL7 – 3%
  - Time period 1/1/11-3/14/11
- Batch includes flat file format and HL7 2.3.1 and 2.4.1
- New standard is 2.5.1

# Direct Project Evolution

- Initial meeting of interested stakeholders at MDH (MIIC, OHIT and ISTM) with HISP Vendor (former Visionshare, now ABILITY) in Sep 2010
- To meet current message transport environment that MDH supports, decision to use secure PHINMS communication standard as destination edge protocol
- Provider recruitment done by HISP vendor and Hennepin County Medical Center (HCMC) participated in Direct pilot project
- Technical details of transport protocols worked between HISP vendor and technical teams of sender and receiver
- Project went live on January 12, 2011
- Currently, HCMC is sending production immunization data to the MIIC immunization registry using direct project specifications and using PHINMS as destination protocol, a one direction push of data

# Direct Project

## NHIN Direct Public Health Immunization Pilot Architecture



Source: Adapted from Direct Project site

<http://wiki.directproject.org/Pilot+Project+Brief+--+VisionShare+and+Public+Health>

# Meaningful Use and Public Health Reporting for Immunizations

- State Immunization Registry (MIIC)

<http://www.health.state.mn.us/divs/idepc/immunize/registry/index.html>

- MIIC Meaningful Use Fact Sheet

<http://www.health.state.mn.us/divs/idepc/immunize/registry/hp/mu.pdf>

- National standards and MIIC-specific requirements available at

<http://www.health.state.mn.us/divs/idepc/immunize/registry/hp/mu.html#6>

## HL7 Specifications for MIIC

<http://www.health.state.mn.us/divs/idepc/immunize/registry/hp/hl7specs.pdf>

# Meaningful Use and Public Health Reporting for Immunizations

Successful data submissions to MIIC include those with all of the following characteristics:

- Submitted from a certified EHR technology
- Follows MIIC HL7 Version 2.3.1 specifications  
*Capabilities to accept HL7 2.5.1 under development and will be ready in Summer 2011*
- Includes MIIC-accepted CVX codes
- Sent to MIIC via a secure transport mechanism  
*Currently it is PHINMS, secure ftp, or direct upload into MIIC, but other options are being explored as part of EHR-IIS interoperability grant*

Submissions using direct data entry, electronic transfer from billing systems, and electronic transfer in flat file format do not qualify under the meaningful use objective

# MIIC and MN State Certified HIOs

- Agreements in place between MDH/MN-HIE and MDH-CHIC
- HIO's web portal will display IZ of patients based upon MIIC data
- Plans to utilize HL7 real-time messaging

For additional info on state certified HIOs, refer to

<http://www.health.state.mn.us/e-health/index.html>

# EHR-IIS Interoperability Grant Minnesota Project Objectives

Project Period: September 2010 – August 2012

- The MDH received \$1.38 million in September 2010
- Implement HL7 version 2.5.1 messaging for receiving immunizations records into MIIC
- Establish a secure, more automated standard method of exchanging HL7 messages
- Upgrade MIIC's vaccine forecasting algorithm
- Increase the number of electronic interfaces between EHRs and MIIC
- Increase provider participation and timeliness of reporting
- Enhance the capability of MIIC to meet the public health requirements of meaningful use related to immunizations

# Three Paths of EHR-MIIC Integration:

- Data from EHR to MIIC “real time”
- Ability to query MIIC from within EHR to receive immunization history and forecast (Alternate Access)
- True bi-directional exchange

# Future Directions

- Increasing provider participation and moving to better electronic exchange with nationally recommended standards
- Increasing timeliness and completeness of immunization reporting
- Advanced reports such as assessment and patient follow up available to end users
- True bi-directional exchange!

# Acknowledgements

True Team Effort!

## MDH Leadership

Marty LaVenture, Director, e-Health and Office of Health IT

Jim Golden, State Government HIT Coordinator

John Paulson, MDH Chief Information Officer

Kris Ehresmann, Director, IDEPC

Margo Roddy, IDEPC/Immunization Program Mgr

## MIIC Team

Aaron Bieringer, Steve Felton, Diana Jaeger, Linda Luebchow, Priya

Rajamani, Erin Roche, Linda Stevens, Karen White, Jeff Williams

## ISTM Team

Mark Hollock, Gerry Skerbitz, Keith Hammel, Spencar McCaa

## HP

David Kaiser, Mike Loula

# Questions

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# *Direct Project Update*

*Dr. Kevin Larsen, MD*

Chief Medical Informatics Officer  
Associate Medical Director

*March 17, 2011*



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# *HCMC & MIIC*

- HCMC has been sending immunization data to MIIC for 10+ years
- Multiple formats, most recently via encrypted secure messaging of daily reports from our EHR (Epic)



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## *Recently Epic/ MIIC Integration*

- HCMC and MIIC do “context linking” so that a provider can launch a patients MIIC record directly from HCMC’s EMR
- Vision for future is a live 2 way, HL7 interface



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## Viewing MIIC data in Epic

When the MIIC Activity is launched, Epic will send username, password, patient first name, last name, middle initial and date of birth. There is an option to also submit the Epic MRN. MIIC uses “wildcard” searching, so if MRN is in the search criteria, it would be the first item checked. If MRN is not found (which would be the case in the majority of patients if your facility recently began sending), then a message would return that says “No matches are found” even if there is other information that will match. It is suggested to not add MRN to your search criteria until you are sure that all Epic MRN’s are loaded into MIIC.

“Records not found, too many matches. Go to MIIC website to refine your search.

<https://miic.health.state.mn.us/miic>”

Example of Activity:

The screenshot shows the Epic EMR interface with a patient record for 'son, Test', a 10-year-old male born 12/18/1998. The MIIC window is open, displaying the following information:

**MIIC - Minnesota Immunization Information Connection**

Client Information: VFC Eligible: UNK

| Client Name (First - MI - Last) | DOB        | Gender | Mother's Maiden | Tracking Schedule | Chart # |
|---------------------------------|------------|--------|-----------------|-------------------|---------|
| TEST PERSON_ONE                 | 12/18/1998 | U      | PERSON_ONE_LAST | ACP               |         |

Address: . . .

Comments: . . .

**History**

| Vaccine Group | Date Administered | Series    | Trade Name             | Dose | Owned? | Reaction | Hist |
|---------------|-------------------|-----------|------------------------|------|--------|----------|------|
| DTP/aP        | 12/18/2008        |           | Pentacel               | Full |        |          | No   |
| HepB          | 12/18/2008        | 1 of 3    | HepB-Adult             | Full |        |          | No   |
| Hib           | 12/18/2008        |           | Pentacel               | Full |        |          | No   |
| MMR           | 12/18/2008        | NOT VALID | Measles-Rubella (MERU) | Full |        |          | No   |
| Polio         | 12/18/2008        | 1 of 4    | Pentacel               | Full |        |          | No   |
| Td/Tdap       | 12/18/2008        | 1 of 3    | Tdap                   | Full |        |          | No   |

**Current Age: 10 years, 11 months**

Vaccines Recommended by Selected Tracking Schedule

| Vaccine Group | Earliest Date | Recommended Date     | Overdue Date | Latest Date |
|---------------|---------------|----------------------|--------------|-------------|
| DTP/aP        |               | Maximum Age Exceeded |              |             |
| HepB          | 01/15/2009    | 01/15/2009           | 03/18/2009   |             |
| Hib           |               | Maximum Age Exceeded |              |             |
| MMR           | 01/15/2009    | 01/15/2009           | 01/15/2009   | 12/17/2047  |
| Polio         | 01/15/2009    | 01/15/2009           | 04/18/2009   | 12/17/2016  |
| Td/Tdap       | 01/15/2009    | 01/15/2009           | 03/18/2009   |             |
| Varicella     | 01/15/2009    | 01/15/2009           | 01/15/2009   |             |

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## *Proposed NHIN/Direct Pilot Implementation*

- HCMC and Ability! (then VisionShare) piloted the NHIN Direct Project protocols
- Started in Jan 11
- NHIN Direct HISP routing and secure messaging services to send the immunization message to the Minnesota Department of Health public health department



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# *Description*

- Phase 1
  - the flat file being submitted to the Public Health Department.
- Phase 2
  - HL7 VXU messages embedded in the standard NHIN Direct RFC5322 container. In both cases it will be S/MIME signed and encrypted and S/MIME decrypted and verified as specified by NHIN Direct.



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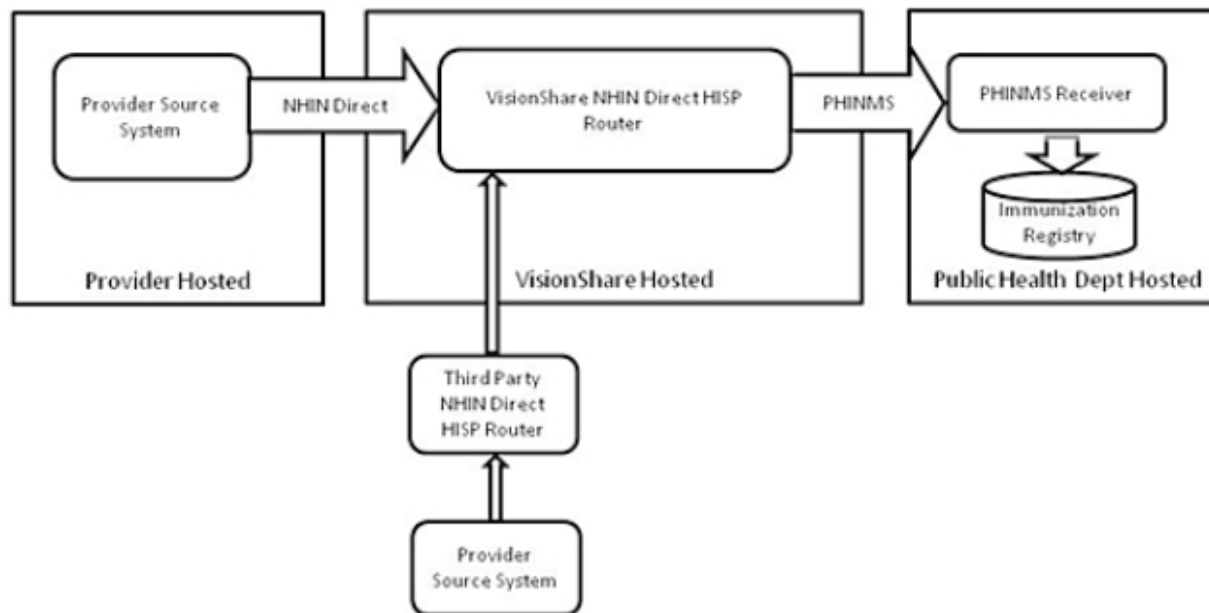
## *Description*

- In order to help the Public Health Department at the State of Minnesota participate with the NHIN Direct initiative, the secure PHINMS communication standard will be used as the NHIN Direct destination edge protocol. HCMC will be able to send immunization messages through VisionShare's HISP using a mutually agreed source edge protocol. This approach allows the public health departments to leverage existing investments in PHINMS while enabling HCMC to communicate immunization information using a communication protocol with which they are comfortable. In short, the two parties may securely communicate while remaining technologically decoupled from one another. This is made by NHIN Direct security, addressing, content packaging, and routing standards coupled with the enabling concept of a HISP.



The following diagram shows a high level view of providers utilizing multiple HISPs to send immunization data to a department of health.

### NHIN Direct Public Health Immunization Pilot Architecture





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# *Implementation*

Very Easy!

HCMC – about 4 hours of work from  
our interface team largely for testing

Smooth go-live

Excited about future opportunities



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## *Frequently Asked Questions*

- **Q** - How are vaccines handled when patient lives in Minnesota but vaccine was administered at a Wisconsin facility, or the other way around?
- **A** – There is a weekly exchange between MIIC and WIR. This is dependant upon the address that is in the MIIC or WIR systems.
- **Q** – Many times, the address in MIIC doesn't match the address in Epic. How does this get updated?
- **A** – if your facility is sending an extract or reporting vaccine data to MIIC and the patient's address is on that report, then MIIC will be updated with the correct address at the time the report is received.
- **Q** – How do patients Opt-Out of having their vaccine information reported to MIIC?
- **A** – Patient families are notified on the Parent Notice on checking the accuracy of the birth record, that vaccines are reported to MIIC. If the patient/patient family decides to Opt-Out, there is a number to contact MIIC. If they have opted out, vaccine data will not be uploaded to MIIC from the clinic reports. More information regarding opting out and patient notification can be found here:  
<http://health.minnesota.gov/divs/idepc/immunize/registry/notification.html>

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# *Questions?*

e-mail questions to  
**[bob.b.johnson@state.mn.us](mailto:bob.b.johnson@state.mn.us)**

# For More Information

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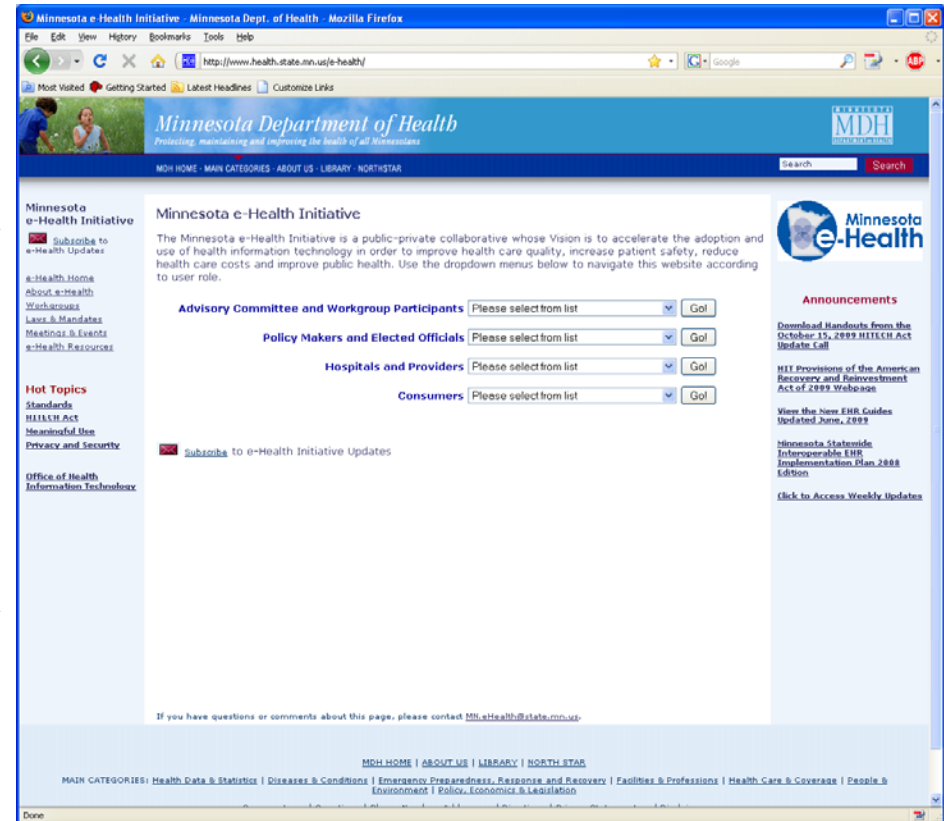
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