Agenda

Title / Purpose:	MiHIN Technical Workgroup Meeting		
Meeting Date:	Jan 11, 2010	**Facilitator:**	Mike Gagnon
Place:	Conf Call and Web-ex	**Time:**	9:00 AM – 11:00 noon
		Conf Call #:	1-888-394-8197 Passcode: 869479
		Web Link	https://premconf.webex.com/premconf/j.php?ED=102412692&UID=-1 Password: mihin-tech4

Topic 1:	**Attendance, Review and Approve Minutes**	**10 Min**
Materials:	Meeting Minutes	
Presenter:	Ken Theis and Rick Warren	
Topic 2:	**Review and Comment on Technical Architecture**	**90Min**
Materials:	Technical Architecture Draft	
Presenter:	Group Discussion	
Topic 4:	**Review status of Vendor Collaboration Team and Vendor Presentations**	**10 Min**
Materials:	None	
Presenter:	Mike Gagnon	
Topic 5	**Public Comment Period**	**10 Min**

Agenda and Meeting Minutes

Title / Purpose:	MiHIN Technical Workgroup Meeting		
Meeting Date:	Jan 5, 2010	**Facilitator:**	Mike Gagnon
Place:	Conf Call and Web-ex	**Time:**	9:00 AM – 11:00 noon
		Conf Call #:	1-888-394-8197 Passcode: 869479
		Web Link	https://premconf.webex.com/premconf/j.php?ED=102397092&UID=0 Password: mihin-tech3

Topic 1:	**Attendance, Review and Approve Minutes**	**10 Min**
Materials:	Meeting Minutes	
Presenter:	Ken Theis and Rick Warren	
Topic 2:	**Review Specific HITSP Standards**	**20 Min**
Materials:	HIT Standards Presentation	
Presenter:	Mike Gagnon	
Topic 3:	**Review and Comment on Technical Architecture**	**60Min**
Materials:	Technical Architectrure Draft	
Presenter:	Group Discussion	
Topic 4:	**Review coordination with Vendor Collaboration Team and Vendor Presentations**	**15 Min**
Materials:	None	
Presenter:	Mike Gagnon	
Topic 5	**Public Comment Period**	**15 Min**

DISCUSSION	**Topic 1: Attendance, Review and Approve Minutes**	
Voting member Bill Riley was not present.		
Meeting minutes for the first and second Technical WG meetings were approved.		
ACTION ITEMS	**PERSON RESPONSIBLE**	**DEADLINE**
None.		
DISCUSSION	**Topic 2: Review Specific HITSP Standards**	
Mike Gagnon presented 'Proposed HIT Standards for the MiHIN'.		
The first slide presented a list of HITSP Interoperability Specifications and the current version of each of those specifications. Some specifications are more mature than others. Some specifications are not part of priorities or use cases being considered for the MiHIN. For example, IS07 Medication Management could be part of the MiHIN but IS08 Personalized Healthcare probably will not. The specifications likely to be part of the MiHIN were highlighted.		

The next slide presented a matrix of HITSP components and the IS specifications in each of those components. Again, the HITSP components that likely to be implemented as part of the MiHIN were highlighted down the left side of the page.

Rick Brady, co-facilitator of the Business Operations Workgroup gave a brief summary of the HIE Service Priorities and the work being done by the Business Operations Workgroup. The HIE Service Priorities are:

1. Electronic clinical laboratory ordering and results delivery
2. Electronic public health reporting
3. Quality Reporting
4. Clinical summary exchange for care coordination and patient engagement
5. Electronic eligibility and claims transactions
6. Electronic Prescribing and refill requests
7. Prescription fill status and/or medication fill history

The Business Operations Workgroup will develop use cases developed for HIE Service Priorities 1 and 2. Value propositions will then be defined for each use case.

The next slide presented HITSP Transactions (and IS specifications) with those likely to be implemented highlighted.

The Technical Workgroup will need to identify and address technical priorities as well. For example, Transactions T16 and T17 are related to security.

The following slide noted the HITSP transaction packages.

Ernie Yoder noted that while TP46 Medication Formulary and Benefits Information was not highlighted, there are exceptions in reconciliation that require formulary access so this transaction package might have to be considered.

Mike noted that we should build the MiHIN design around the ideal (i.e., standards) and can always then veer from standards where necessary. He also noted that many of these standards are currently implemented in other architectures around the country or around the world.

Mike noted a transaction that was not highlighted (T40 – Patient Health Plan Eligibility Verification) since MiHIN has a clinical focus and this transaction has an administrative focus.

Doug Fenbert noted that there is limited value anyways there because payers have different processes for eligibility.

Mike noted that for some components, clinical documents could be implemented as summary documents and still meet the requirements.

C78 Immunization Document could become a high priority.

Dan Stross noted that in the end, the MiHIN could support all the transactions listed but any initial implementation plan would force the workgroup to choose what to implement first.

Mark Tuthill noted that not all lab results are created equal. In other words, the workgroup would need to know what the most important uses cases are.

Rick Brady noted that there could be trade-offs as to what use cases are most important and what is technically or financially feasible.

Mike concluded with the concept that the architecture needs to be designed to be able to implement ALL the transactions and components, over time and in the long run.

ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
None.		

DISCUSSION	**Topic 3: Review and Comment on Technical Architecture**

HIE policies can make technical implementation easier or administrative activities easier. For example, instead of passing user-ids, the MiHIN could trust organizations to validate user ids and pass trusted ones using SAML.

Dan Stross asked if major vendors like Medicity, or Axlotyl are configured today to interface in this way. Mike noted that most vendors are not currently at this point in their implementations but it is the current direction. We are looking to the Vendor Technical Collaboration to assist us so that we design in this same direction. We anticipate an interoperable architecture and a backbone that will be sustainable in the future as standards and vendor abilities progress forward.

Private HIEs plug into the backbone directly or through a community HIE. Large organizations will set up a MiHIN connectivity layer but it is more straightforward for an organization to plug into an edge server and let Community HIEs set up that MiHIN connectivity layer.

Additionally, once an organization plugs into one community HIE, the information will be shared through the MiHIN connectivity layer. There will be no need to connect to any other HIE for sharing.			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
None,			
DISCUSSION	**Topic 4: Review coordination with Vendor Collaboration Team and Vendor Presentations**		
Mike would like a list of 30-40 EHR vendors. See action item below.			
Vendor presentations will start in mid-January and go through mid-February. The presentations will be scheduled over the lunch hour.			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
None.			
DISCUSSION	**Topic 5: Public Comment**		
Deb Mosher informed the Technical Workgroup that CAHA will go live in 3-4 months**.**			

Attendance list

- Nathan Bunker — General Public
- Don Carne — member
- Lee Castigilioni — Member
- Marcus Cheatman — Member
- Doug Dietzman — Voting Member
- Darrell Dontje — Member
- Chuck Dougherty — Member
- Scot Ellsworth — MiHIN PCO
- Doug Fenbert — Voting Member
- Paul Groll — Member
- Larry Hamilton — Member
- Pat Klima — Member
- Troy Lane — Member
- Thomas Lauzon — Voting Member
- Pat Maltby — MiHIN PCO
- Mark Miller — Member
- Paul G. Miller — Voting Member
- Deb Mosher — Member
- Amber Murphy — MiHIN PCO - Dewpoint
- Samer Naser — MiHIN PCO – Dewpoint
- Mark Notham — Member
- Laura Rappeleye — MiHIN PCO
- Kevin Sackett — Member
- Dan Stross — Voting Member
- Steve Summers — Member
- Ralph Tenney — Member
- Ken Theis — Co-Chair
- Mark Tuthil — Voting Member
- Rick Warren — Co-Chair
- Bruce Wiegand — Voting Member
- David West — Member
- Ernie Yoder — Voting Member

Conceptual Architecture Design Description

This document contains a background of the concepts that led to the development of the conceptual architecture plus a description of its core design concepts, data exchange components, infrastructure components and backbone services.

Background

1. Glossary of Terms
    a. Michigan Health Information Exchange (MiHIN) – The name of the state HIE organization
    b. HIE – A Health Information Exchange system
    c. MiHIN Backbone – The state-wide backbone for HIE interoperability
    d. Community HIE – A local HIE that is open to all providers and data sources typically in a region
    e. Private HIE – A vendor sponsored, hospital-based HIE or other privately run HIE
    f. Regional Health Information Organization (RHIO) – An organization formed to operate an HIE, usually a not-for-profit.
    g. National Health Information Network (NHIN) – The federal government sponsored architecture and standards which allow for basic interoperability among state backbones and other HIEs.

2. Environment Description
    a. Nine MTAs; 1 has an HIE system installed but is not exchanging any data (UP); 1 has a contract with Axolotl (Capital area); 5 in various stages of planning and 2 with no plan
    b. Seven state systems to be integrated; MICR, Vital records birth, death, disease surveillance MDSS, syndromic surveillance MSSS, data warehouse, StarLIMS (labs), Champs Medicaid. Also potential for Corrections System and Bridges.
    c. State architecture that could be used for HIE: Data warehouse (Teradata), ETL (IBM Datastage, Information Integrator), SSO (Tivoli but also contract with Novell), Data exchange gateway (FTP server, Messageway), Rhapsody, PHIN MS, Business Object reporting environment, SAP BO Data Quality platform
    d. No current SOA standards but there are some platforms i.e. IBM Websphere
    e. Regions have been sensitive about the state proposed centralized design
    f. No current state HIE workgroups but they will be forming soon
    g. Some large stakeholders may not participating in a region
    h. Payer mix: BCBS (60%), Medicaid (state Medicaid plus some managed care companies) (20%), Medicare, other private payers, Priority Health, PHP, MCare (20%). Delta Dental is also a player.
    i. BCBS and Medicaid using X.12 HIPAA transaction code sets. BCBS acts as a clearinghouse
    j. Department of Military and Veterans affairs (DMVA)
    k. Large healthcare systems: Trinity, Sparrow, Spectrum, Detroit Mercy, Henry Ford

l. State employers: Covisint, automakers, DOW Chemical

3. Business/Clinical Phase I Services (Meaningful Use)
    a. Lab orders and results
    b. Eligibility checking and claims processing
    c. Public health reporting
    d. Quality reporting
    e. ePrescribing
    f. Medication Management
    g. Coordination of Care

Conceptual Architecture Design

The MiHIN will be implemented using a service-oriented architectural paradigm (SOA), implemented through web services operating through an enterprise service bus (ESB), with a four-tier protocol stack.

Our long term plan for the MiHIN state-wide network includes four core capabilities:

a. Aggregating data and interconnecting providers via Community HIEs
b. A MiHIN state-wide backbone for connecting Community HIEs and providing a vehicle for the delivery of shared services
c. Shared clinical and administrative services and applications
d. NHIN connectivity for sharing data with other states and the federal government

1. Core Design Concepts

The design of the MiHIN Backbone is predicated on there being relatively few direct connections (<25). The idea is based on the common network design principle of segmentation for performance, security and reliability. We expect that a significant amount of the patient data that needs to be exchanged will be within Community or Private HIEs where the patient receives care. Just as networks use bridges, switches or routers to segment traffic we will expect that HIEs will segment traffic that can stay within the HIE and only route transactions to the MiHIN backbone that must cross HIEs.

2. Protocol Stack
    a. Tier 1 – Connectivity, Transport & Security
    b. Tier 2 – Message Standards (HL7, IHE, CCD, etc)
    c. Tier 3 – Terminology Standards (LOINC, RxNorm, SNOMED, etc)
    d. Tier 4 – Healthcare Service Orchestration (decision support, eRx, etc)

3. Data Exchange Components

NHIN Connectivity

For communicating to the Federal Government and other state backbones. Effectively for communicating anything outside the MHIN.

MiHIN Backbone

Provides the backbone connectivity and state-wide services for Community HIEs, Private HIEs, ancillary data sources (labs, RxHub) and connection to the NHIN.

Community HIE

1. Locally supported HIE
2. Community HIE can select their own vendor and run the HIE
3. Open to all providers
4. State would require compliance with standards for MiHIN Backbone interoperability

Private HIE

1. HIE supported by a private organization such as a vendor or hospital system often for profit or to promote the needs of a particular organization (hospital system) or affinity group (physician offices)
2. Would not be an option for a Community HIE unless the Private HIE opened the HIE to all providers including competitors and is accepted by a majority of provider organizations
3. Allows private organizations to connect their affinity groups or affiliates
4. Private HIEs will be encouraged to connect to the Community HIE for data interchange with other MTA providers
5. Private HIEs can connect directly to the MiHIN Backbone. In this case state would require compliance with standards for MiHIN Backbone interoperability.

3. Technical Infrastructure Components

MiHIN Backbone

The MiHIN Backbone will be designed as an Enterprise Service Bus architecture. The ESB will be capable of supporting ESB nodes which can provide transaction services. The exact topology of the MiHIN ESB has not yet been designed (single instance or federated for example). The ESB will support one or more service registries for web services provided by secure nodes. Community HIEs will be required to be secure nodes and a four level protocol stack for communication to the ESB will be developed.

EMPI/RLS

Enterprise Master Patient Index/Record Locator Service will be used for subject discovery (patient lookup) and Query for Documents services.

Provider Index

This is an index of all care providers in the state. This could be part of the EMPI listed above or could be part of the User Directory.

Messaging Gateway

Used for all transaction-based services such as Lab Ordering, Results Reporting and Eligibility Checking. Primary function with be interface transactions and message translation. Nomenclature normalization will be expected to happen at the HIE level.

Data Warehouse/Repository

Data repository would be used for local storage of data for Public Health Reporting, Quality Reporting, Medical Research and Chronic Disease Registries.

Identity and Access Management (IAM) Platform

Security services will provide user authentication, access, authorization and auditing services. The User Directory will be a federated design and the MiHIN User Directory will be built by aggregating users from all connected HIEs or State entities.

4. MiHIN Backbone Services

Core

- EMPI/RLS
- Master Provider Index
- Query for Documents (XDS)
- Security
- Service Registry

Business/Clinical Phase I Services

- Lab orders and results
- Public health reporting
- Eligibility checking
- Quality reporting
- ePrescribing
- Medication Management
- Coordination of Care

Connection to State of Michigan Systems

- Vital Records (Birth and Death Systems)
- Michigan Disease Surveillance System
- Michigan Syndromic Surveillance System
- Michigan Care Improvement Registry
- CHAMPS Medicaid System
- State Lab Systems

Business/Clinical Later Phase Services

- Medical research database
- Chronic disease registries
- Patient transfer to post acute care
- And many more……