



## MiHIN – Business Operations Meeting Agenda



<b>Meeting Date:</b>	December 15, 2009	<b>Teleconference #:</b>	866-274-9016 Code: 241174, web conference invite sent separately
<b>Place:</b>	Web Conference and MPHI, 2436 Woodlake Circle, STE 380, Okemos, MI 48864	<b>Facilitator:</b>	Shaun J. Grannis, MD MS FAAFP
<b>Time:</b>	1:30-4:30		

- Topic 0: Attendance, Approval of Meeting Minutes (5 minutes)
- Topic 1: Workgroup Goals (15 minutes)
- Topic 2: Meaningful Use, ONC HIE Services, and Priorities(60 minutes)  
BREAK – 15 minutes
- Topic 3: MiHIN Conceptual Architecture (30 minutes)
- Topic 4: Capacity for HIE in Michigan (30 minutes)
- Topic 5: Status of Other Workgroups (15 minutes)
- Topic 6: Public Comment

<b>DISCUSSION</b>	0. Attendance, Approval of Meeting Minutes (5 minutes)		
	<ul style="list-style-type: none"> <li>• Take attendance</li> <li>• Approval of previous meeting's minutes</li> <li>• For first session: Rules of Engagement (May run long this session)               <ul style="list-style-type: none"> <li>○ Open Meeting format</li> <li>○ Voting process</li> </ul> </li> </ul>		
<b>ACTION ITEMS</b>	<b>PERSON RESPONSIBLE</b>	<b>DEADLINE</b>	

<b>DISCUSSION</b>	1. Workgroup Goals (15 minutes)		
	<ul style="list-style-type: none"> <li>• Presentation by Co-Chairs</li> </ul>		
<b>ACTION ITEMS</b>	<b>PERSON RESPONSIBLE</b>	<b>DEADLINE</b>	

<b>DISCUSSION</b>	2. Meaningful Use, ONC HIE Services, and Priorities(60 minutes)		
	<ul style="list-style-type: none"> <li>• Presentation by Shaun Grannis</li> </ul>		

ACTION ITEMS / DECISIONS	PERSON RESPONSIBLE	DEADLINE
DISCUSSION	BREAK – 15 minutes	
	•	
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
DISCUSSION	3. MiHIN Conceptual Architecture, Constraints for Phase One (30 minutes)	
	• Presentation by Mike Gagnon, MiHIN Lead Technical Architect	
ACTION ITEMS / DECISION	PERSON RESPONSIBLE	DEADLINE
DISCUSSION	4. Capacity for HIE in Michigan (30 minutes)	
	• Presentation by Rick Brady	
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
DISCUSSION	5. Status of Other Workgroups (15 minutes)	
	<ul style="list-style-type: none"> <li>• Will cover logistics for future meetings at this first meeting</li> <li>• Estimated in person attendance for future meetings</li> <li>• Our near term agenda</li> <li>• Other workgroups</li> <li>• Coordinated plan reminder</li> </ul>	
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
DISCUSSION	6. Public Comment	
	• Open to public for any issue	
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE



# ***MiHIN Business Operations Workgroup: Business Operations Goals***

• December 15, 2009



# Create

- Prioritize ONC HIE Services (December 29)
- Select Use Cases for initial implementation (January 12)
- Create Value Propositions for Use Cases Selected (January 26)



## Inform and Approve

- Provide Input and Approve Statewide Business Architecture (February 23)
- Provide Input and Approve Statewide HIE Strategic Plan (March 9)
- Provide Input and Approve Statewide HIT Coordination Plan (March 9)
- Provide Input and Approve Statewide HIE Operational Plan (March 23)
- Provide Input and Approve ARRA Reporting Measures (April 6)



# MiHIN Business Operations Workgroup:

## HIE Services, Meaningful Use and Clinical Prioritization

December 15, 2009

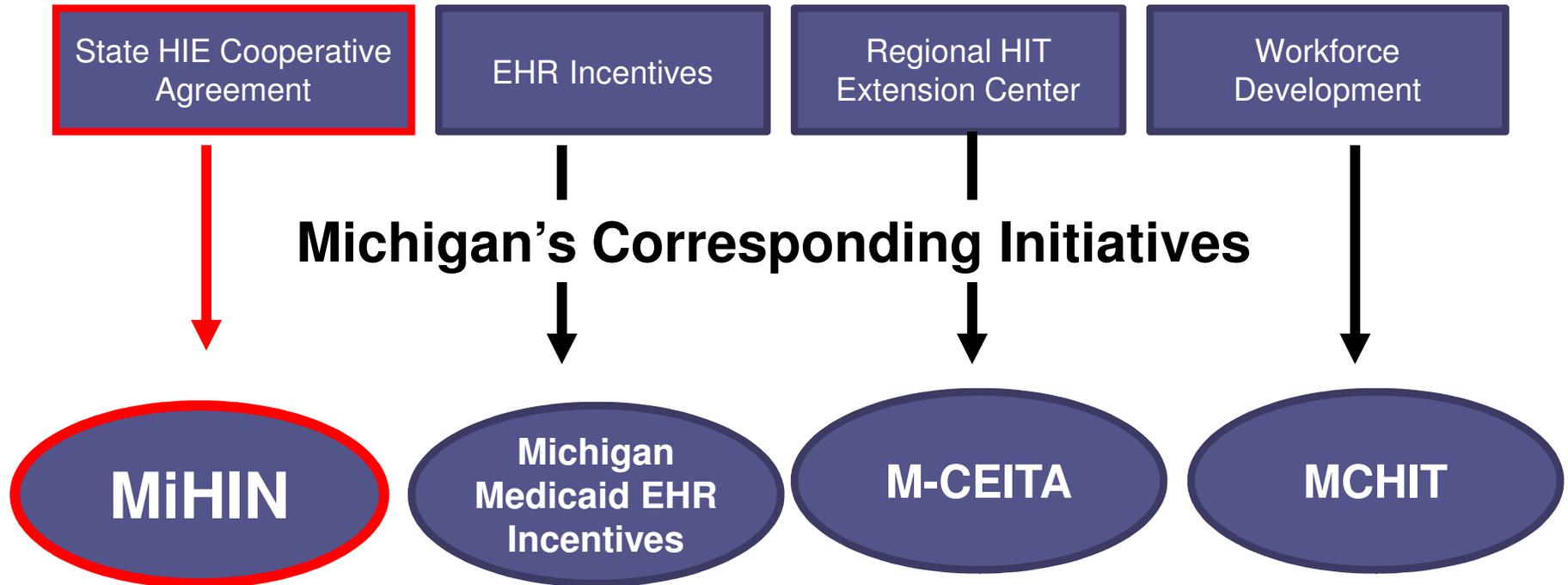


## Overview: What We'll Cover

- Brief ONC Organizational Overview
- HIE Services with Examples
- Meaningful Use with Examples
- Clinical Prioritization Process



## American Recovery & Reinvestment Act of 2009 HIT Opportunities



# State HIE Cooperative Agreement

<b>Total Amount of Funding Available:</b>	<b>\$564,000,000</b>
<b>Award Floor</b>	<b>\$4,000,000</b>
<b>Award Ceiling</b>	<b>\$40,000,000</b>
<b>Approximate Number of Awards:</b>	<b>56</b>
<b>Program Period Length</b>	<b>Four years</b>
<b>Letter of Intent Due:</b>	<b>11-Sep-09</b>
<b>Application Due:</b>	<b>16-Oct-09</b>
<b>Award Announcements:</b>	<b>15-Dec-09</b>
<b>Estimated Start Date:</b>	<b>15-Jan-10</b>



# State HIE Cooperative Agreement

- Purpose: continuously improve and expand HIE services to reach all health care providers in an effort to improve the quality and efficiency of health care.
- Cooperative agreement recipients will evolve and advance the necessary governance, policies, technical services, business operations, and financing mechanisms for HIE over a four-year performance period.
- Activities under this program must support interoperability that lets patient data follow the patient across political and geographic boundaries.
- Awardees will become partners in building the nationwide HIE infrastructure.

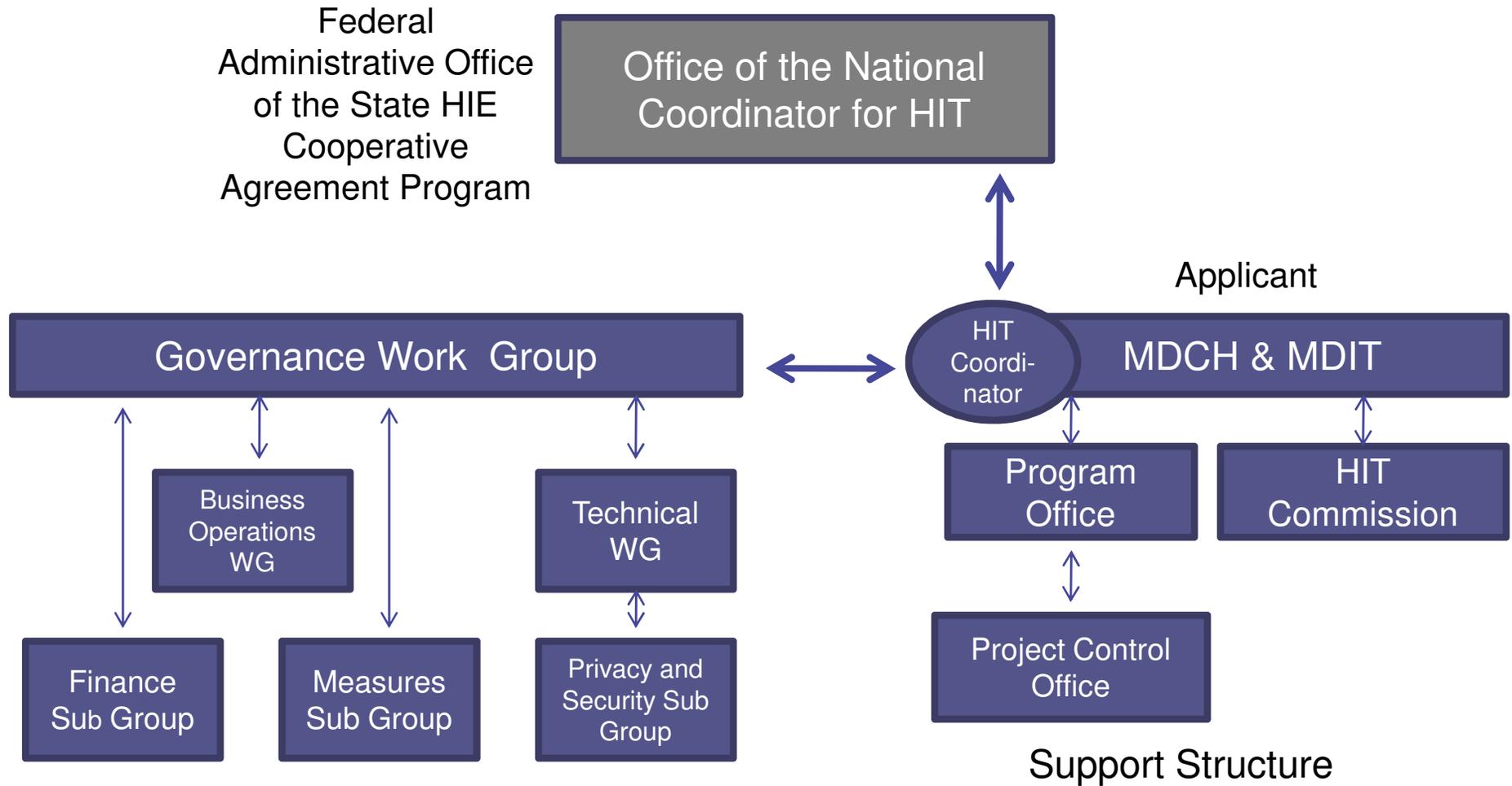


# MiHIN Project Goals

- Support the implementation of the ONC priorities for health information exchange including NHIN connection
- Establish Long-term Governance Structure
- Establish a Financial Sustainability Plan
- Develop a statewide infrastructure for the secure exchange of health information
- Create an incremental plan for implementing HIE over the next four years across Michigan
- Ensure interoperability of disparate systems by developing and implementing technical standards that address privacy and security
- Develop measures for success



# Project Structure



Stakeholder Input Structure

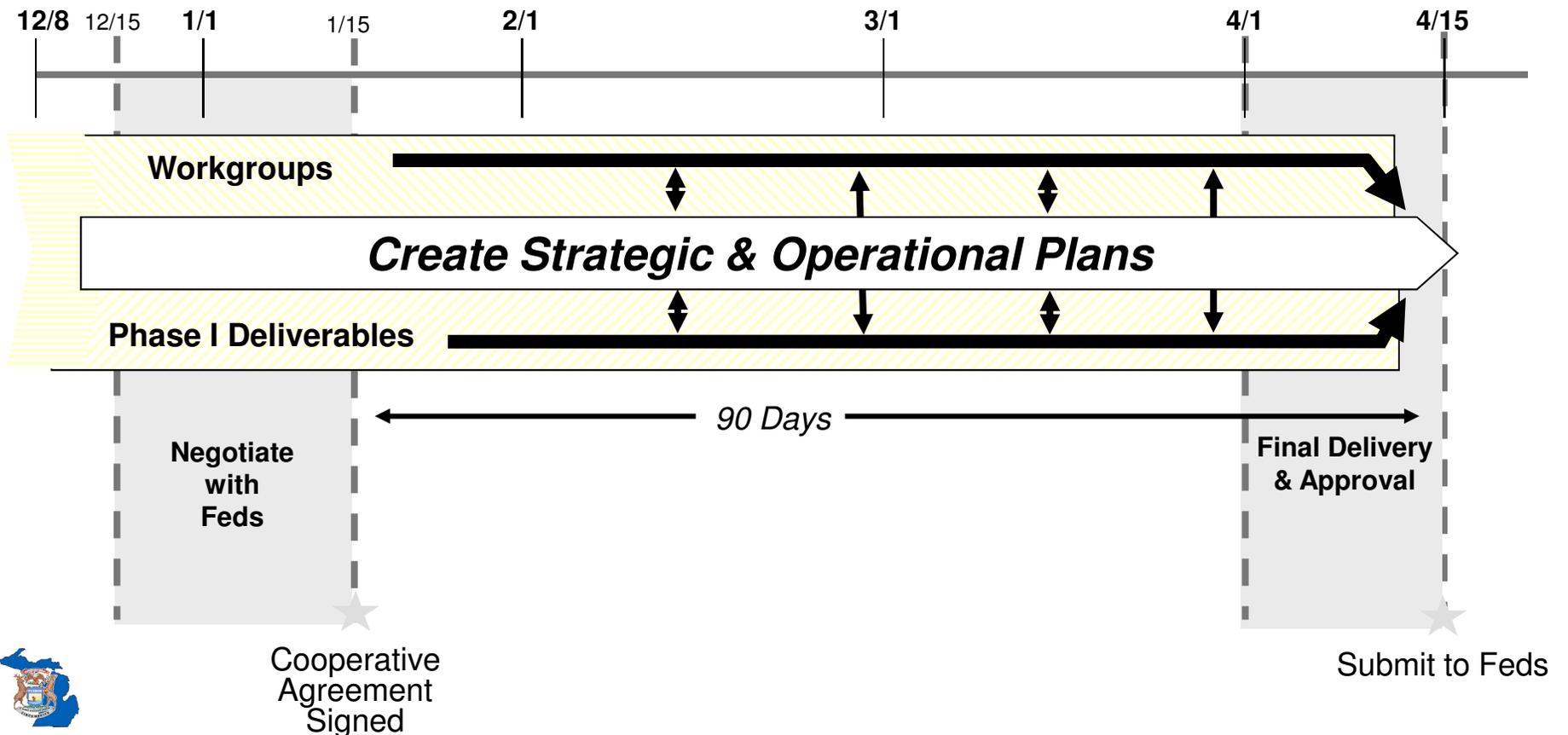


# Current MiHIN Strategy

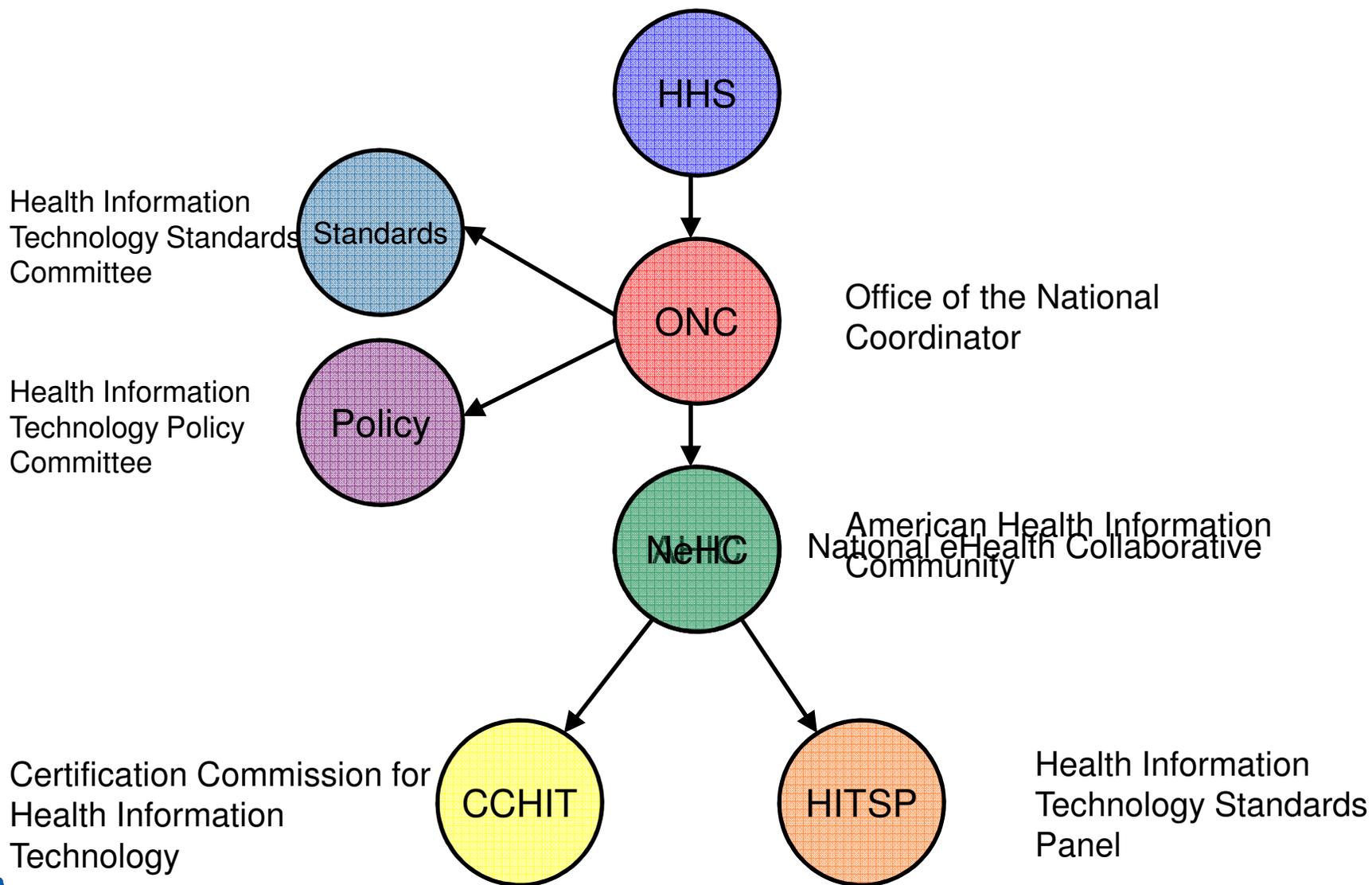
## Goal

4/15/10 - Submit Strategic & Operational Plans to Feds

## Current Approach & Schedule



# A Brief ONC Organizational Overview



# Seven HIE Services from ONC Guidance

Develop or facilitate the creation of a statewide technical infrastructure that supports statewide HIE. While states may prioritize these HIE services according to its needs, HIE services to be developed include:

- Electronic eligibility and claims transactions
- Electronic prescribing and refill requests
- Electronic clinical laboratory ordering and results delivery
- Electronic public health reporting (i.e., immunizations, notifiable laboratory results)
- Quality reporting
- Prescription fill status and/or medication fill history
- Clinical summary exchange for care coordination and patient engagement



# Electronic eligibility and claims transactions

- HIE's may supply health information to help determine Social Security disability benefits
- Claimants may receive access to Medicare and Medicaid benefits faster
- Healthcare providers benefit from
  - reduced administrative costs associated with data collection/aggregation
  - reduced uncompensated care by faster claims adjudication
- HITSP/T40, HITSP/C32



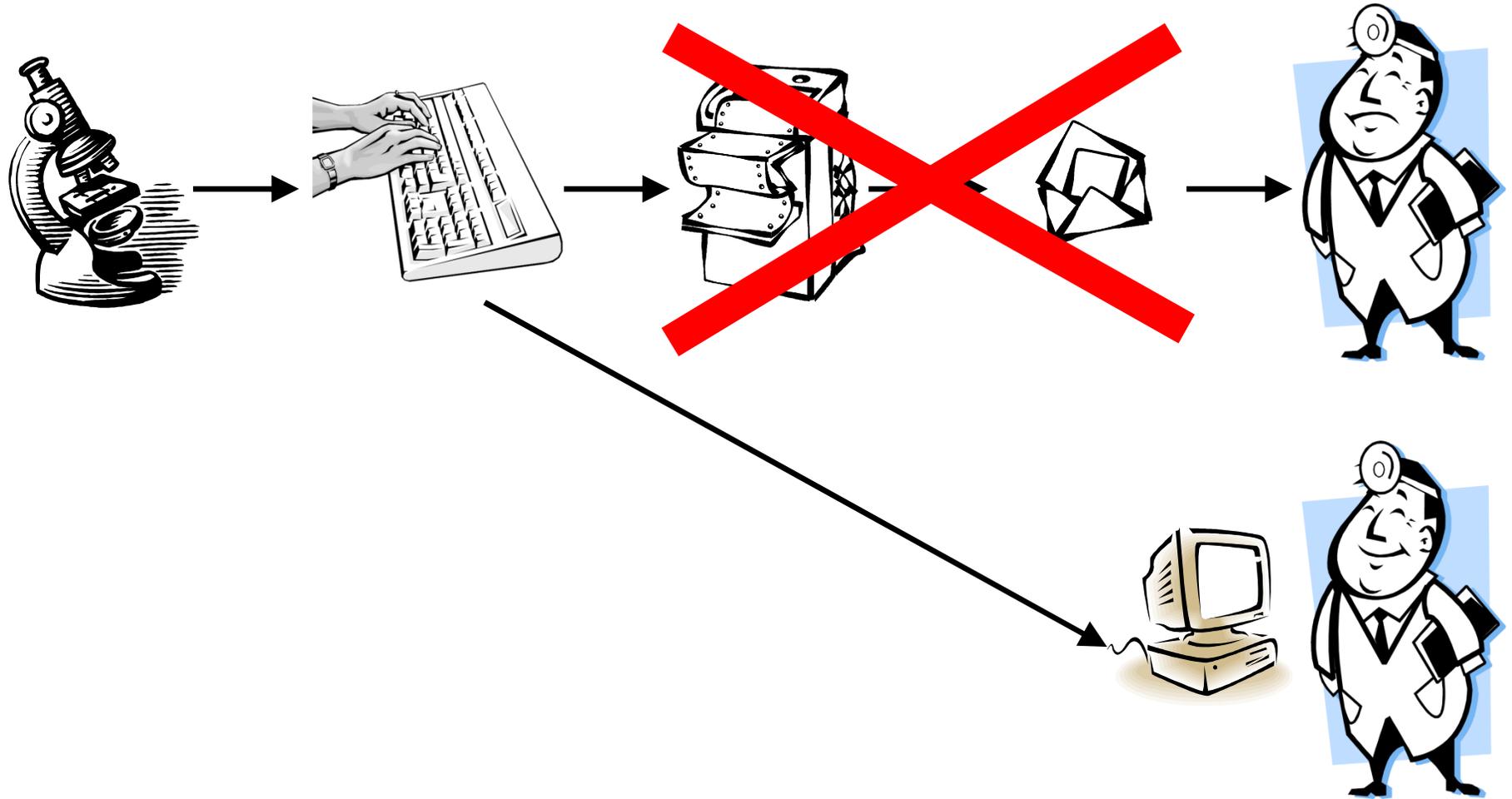
## Electronic prescribing and refill requests

Electronic generation and transmission of a prescription. Advantages include:

- Medication Cost Reduction - \$27 billion annually
- Improved patient safety - prevent 130,000 medication errors annually
- Improved coordination of care with more complete information
- Administrative Efficiencies – \$8.8 billion in savings
- HITSP/CAP117, HITSP/TP43



# Electronic clinical laboratory ordering and results delivery



## Electronic clinical laboratory ordering and results delivery (cont'd)

- Replace current manual processes, consolidate work in automated fashion within HIE
- Directly engages physician practices
- Incremental step towards moving providers into information-based practice
- The service providers and others who are responsible for delivering clinical results benefit by reducing results delivery costs
- Providers benefit by receiving results in a consolidated, more timely fashion
- By re-using HIE infrastructure, the HIE can facilitate this service at lower cost
- HITSP/T14, HITSP/TP43

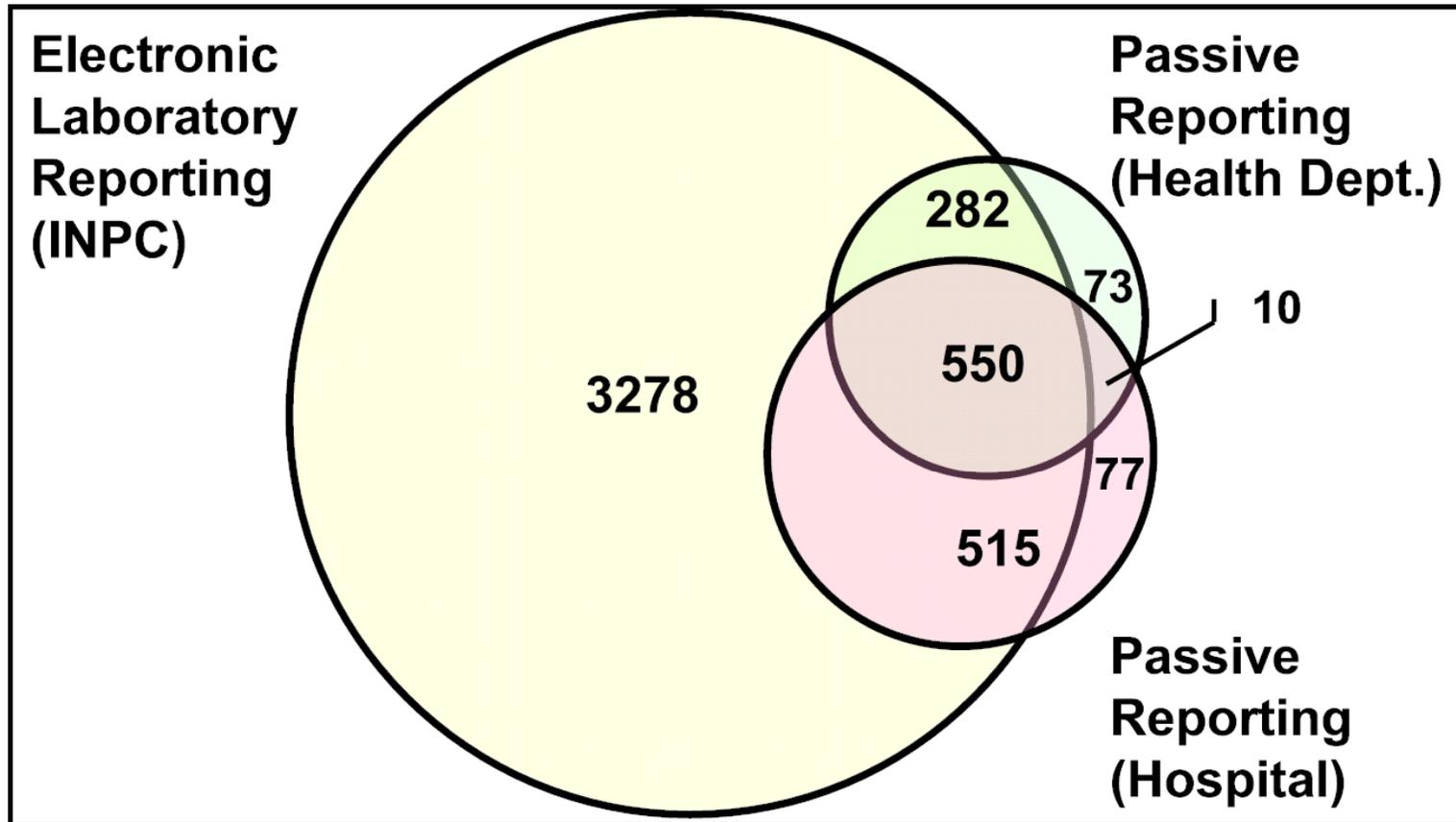


# Electronic public health reporting

- The disease burden of a community must be known to address the public health issues; disease burden is largely determined using information collected from clinical care processes.
- Clinical care processes under-report to public health
  - Reporters overburdened/under-resourced
  - Reporters lack knowledge, willingness
  - Clinical data is scattered across disparate settings in different (non-standard) formats
- Public health reporting opportunities includes:
  - Electronic laboratory reporting of notifiable conditions
  - Immunization data exchange
  - Disease surveillance
- HITSP/IS02, HITSP/IS10, HITSP/IS11



# Electronic public health reporting: ELR Completeness



4,785 total reportable cases  
INPC – 4,625 (97%)  
Health Dept – 905 (19%)  
Hospitals – 1,142 (24%)

†Overhage, Grannis, McDonald. A Comparison of the Completeness and Timeliness of Automated ELR and Spontaneous Reporting of Notifiable Conditions. Am J Pub Health 2008 98:344-350.



# Quality Reporting

- Quality reporting initiatives are receiving increasing attention (and may be crucial to meaningful use)
- While much clinical data necessary for quality reporting will be captured in local EHR's, patients receive care in a variety of settings
- HIE can help aggregate comprehensive data to support quality reporting initiatives
- HITSP/IS06



## Prescription fill status and/or medication fill history

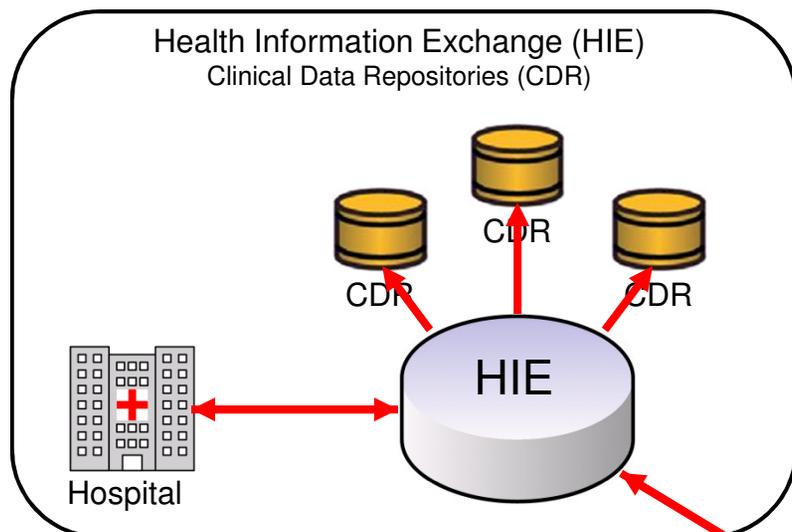
- An estimated 770,000 people are injured or die each year from adverse drug events (ADE's)
- Over half of all hospital medication errors occur at transitions of care (e.g., outpatient to inpatient)
- ADE's may cost up to \$5.6 million each year per hospital depending on hospital size.



# Prescription fill status and/or medication fill history

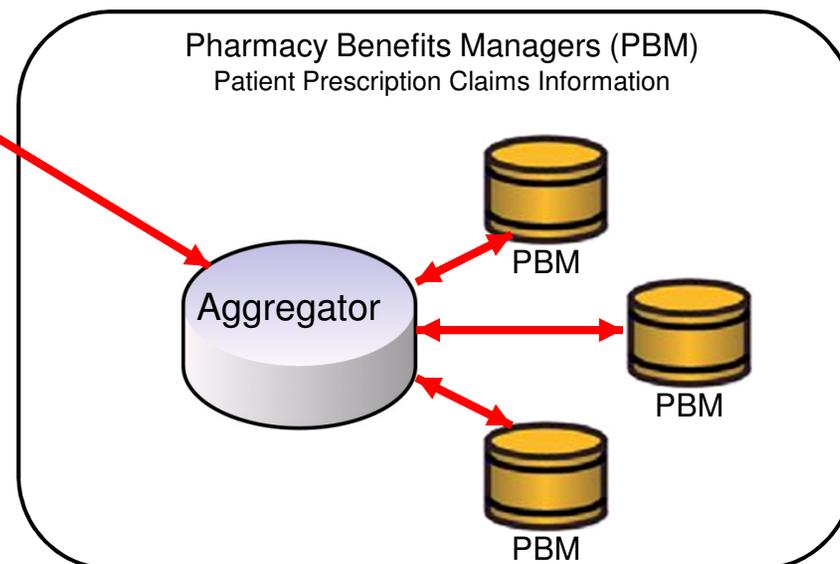
## Health Information Exchange Medication Reconciliation Process

1. Patient is admitted and appropriate consent is obtained
2. Hospital requests medication history through local health information exchange
3. Health information exchange queries multiple clinical data repositories (CDR's), including medication data thru pharmacy benefits manager (PBM) aggregator.
4. Patient medication history received from aggregator.
5. Medication data is reviewed with patient; care is informed by medication history



## Pharmacy Medication Aggregation

1. Patient medication history request received from health information exchange
2. Aggregator compiles medication history from multiple PBM's and responds back to the health information exchange



## Prescription fill status and/or medication fill history

- HIE can support query of medication history data sources and proactively assist with medication reconciliation
- Process can be integrated with existing patient registration workflow
- Can be implemented across an entire community/region/state
- HITSP/T42



# Clinical summary exchange for care coordination and patient engagement

- HIE's can support the creation of an integrated patient view derived from multiple sources of data
- The Continuity of Care Document (CCD) may include allergies, diagnoses, immunizations, lab results, and medications
- The CCD can be used in variety of ways:
  - imported into standards-based EHR's
  - as a conduit for personal health records (PHR)
  - Referral or transition of care summary
- HITSP/C32



# Meaningful Use



## Meaningful Use – ONC HIE Guidance

- The HITECH act requires hospitals and physicians to demonstrate meaningful use of EHR's to qualify for Medicare and Medicaid incentive payments.
- The Strategic Plan must include a strategy that specifies how HIE will intends to support meaningful use



## Meaningful Use – Overview

- Starting in 2011, providers deemed to be “meaningful users” of EHR systems will be eligible to receive \$40K-\$60K in incentive payments paid out over five years in increased Medicare and Medicaid premiums.
- Starting in 2015, physicians who fail to qualify as meaningful users will be penalized by decreased Medicare and Medicaid payments of 1% in 2015, 2% in 2016, and 3% in 2017, with a maximum reduction of 5% by 2020.



## Meaningful Use – Overview (cont'd)

- To qualify as a meaningful user, providers must demonstrate use of a qualified EHR in a meaningful manner.
- The bill defers to the secretary of Health and Human Services (HHS) to set specific guidelines for determining what constitutes a qualified EHR.
- Many expect CCHIT certification to play a role in setting standards of interoperability.
- A proposed rule defining meaningful use for 2011, with a 60-day period for public comment, is targeted for publication 12/31/2009.



# Meaningful Use – Proposed Incentive Plan

<--- Amount Paid Each Year --->

## HITECH ACT - Subsidy Plan

<--- Year of Eligibility --->

	2011	2012	2013	2014	2015	Total Paid
2011	\$18,000	\$12,000	\$8,000	\$4,000	\$2,000	\$44,000
2012	-	\$18,000	\$12,000	\$8,000	\$4,000	\$42,000
2013	-	-	\$15,000	\$12,000	\$8,000	\$35,000
2014	-	-	-	\$15,000	\$12,000	\$27,000
2015	-	-	-	-	-	-



# Meaningful Use: Health Outcomes Policy Priority Areas

- Improve quality, safety, efficiency, and reduce health disparities
- Engage patients and families
- Improve care coordination
- Improve population and public health
- Ensure adequate privacy and security protections for personal health information



# Meaningful Use Matrix

Health Outcomes Policy Priorities	Care Goals	2011 Objectives <i>Goal is to electronically capture in coded format and to report health information and to use that information to track key clinical conditions</i>	2011 Measures	2013 Objectives <i>Goal is to guide and support care processes and care coordination</i>	2013 Measures	2015 Objectives <i>Goal is to achieve and improve performance and support care processes and on key health system outcomes</i>	2015 Measures
<b>Improve quality, safety, efficiency, and reduce health disparities</b>	<p>Provide access to comprehensive patient health data for patient's health care team</p> <p>Use evidence-based order sets and CPOE</p> <p>Apply clinical decision support at the point of care</p> <p>Generate lists of patients who need care and use them to reach out to patients (e.g., reminders, care instructions, etc)</p> <p>Report to patient registries for quality improvement, public reporting, etc</p>	<p>Use CPOE for all order types including medications [OP, IP]</p> <p>Implement drug-drug, drug-allergy, drug-formulary checks [OP, IP]</p> <p>Maintain an up-to-date problem list [OP, IP]</p> <p>Generate and transmit permissible prescriptions electronically (eRx) [OP]</p> <p>Maintain active medication list [OP, IP]</p> <p>Maintain active medication allergy list [OP, IP]</p> <p>Record primary language, insurance type, gender, race, ethnicity [OP, IP]</p> <p>Record vital signs including height, weight, blood pressure [OP, IP]</p> <p>Incorporate lab-test results into EHR [OP, IP]</p> <p>Generate lists of patients by specific condition to use for quality improvement, reduction of disparities, and outreach [OP]</p> <p>Send reminders to patients per patient preference for preventive /follow up care [OP, IP]</p>	<p>Report quality measures, including:</p> <ul style="list-style-type: none"> <li>- % diabetics with A1c under control [OP]</li> <li>- % hypertensive patients with BP under control [OP]</li> <li>- % of patients with LDL under control [OP]</li> <li>- % of smokers offered smoking cessation counseling [OP, IP]</li> </ul> <p>% of patients with recorded BMI [OP]</p> <p>% eligible surgical patients who received VTE prophylaxis [IP]</p> <p>% of orders entered directly by physicians through CPOE</p> <p>Use of high-risk medications in the elderly [OP, IP]</p> <p>% of patients over 50 with annual colorectal cancer screenings [OP]</p>	<p>Use evidence-based order sets [OP, IP]</p> <p>Record clinical documentation in EHR [IP]</p> <p>Generate and transmit permissible prescriptions electronically [IP]</p> <p>Manage chronic conditions using patient lists and decision support [OP, IP]</p> <p>Provide clinical decision support at the point of care (e.g., reminders, alerts) [OP, IP]</p> <p>Report to external disease (e.g., cancer) or device registries [OP (esp. specialists)] [IP]</p> <p>Conduct medication administration using bar coding [IP]</p>	<p>Additional quality reports using HIT-enabled NQF-endorsed quality measures [OP, IP]</p> <p>% of all orders entered by physicians through CPOE [OP, IP]</p> <p>Potentially preventable Emergency Department Visits and Hospitalizations [IP]</p> <p>Inappropriate use of imaging (e.g. MRI for acute low back pain) [OP, IP]</p> <p>Other efficiency measure (TBD) [OP, IP]</p>	<p>Achieve minimal levels of performance on quality, safety, and efficiency measures</p> <p>Implement clinical decision support for national high priority conditions [OP, IP]</p> <p>Medical device interoperability [OP, IP]</p> <p>Multimedia support (e.g. x-rays) [OP, IP]</p>	<p>Clinical outcome measures (TBD) [OP, IP]</p> <p>Efficiency measures (TBD) [OP, IP]</p> <p>Safety measures (TBD) [OP, IP]</p>



# Improve quality, safety, efficiency, and reduce health disparities

## **2011 Meaningful Use Care Goals:**

- Provide access to comprehensive patient health data for patient's health care team
- Use evidence-based order sets and CPOE
- Apply clinical decision support at the point of care
- Generate lists of patients who need care and use them to reach out to patients (e.g., reminders, care instructions, etc)
- Report to patient registries for quality improvement, public reporting, etc.

## **HIE Services:**

- Clinical Summary Exchange
- e-Prescribing, Lab ordering
- e-Prescribing, Lab ordering
- Quality Reporting
- Electronic Public Health Reporting, Quality Reporting, Clinical Summary Exchange



# Improve quality, safety, efficiency, and reduce health disparities

## 2011 proposed measures:

- % diabetics with A1c under control [OP]
- % hypertensive patients with BP under control [OP]
- % of patients with LDL under control [OP]
- % of smokers offered smoking cessation counseling [OP, IP]
- % of patients with recorded BMI [OP]
- % eligible surgical patients who received VTE prophylaxis [IP]
- % of orders entered directly by physicians through CPOE Use of high-risk medications in the elderly [OP, IP]
- % of patients over 50 with annual colorectal cancer screenings [OP]
- % of females over 50 receiving annual mammogram [OP]
- % patients at high-risk for cardiac events on aspirin prophylaxis [OP]
- % of patients with current pneumovax [OP]
- % eligible patients who received flu vaccine [OP]
- % lab results incorporated into EHR in coded format [OP,IP]
- Stratify reports by gender, insurance type, primary language, race, ethnicity [OP, IP]



# Engage patients and families

## **2011 Meaningful Use Care Objectives:**

- Provide patients with electronic copy of- or electronic access to- clinical information (including lab results, problem list, medication lists, allergies) per patient preference (e.g., through PHR) [OP, IP]
- Provide access to patient-specific educational resources [OP, IP]
- Provide clinical summaries for patients for each encounter [OP, IP]

## **HIE Services:**

- Clinical Summary Exchange, Prescription Fill Status/Med Fill Hx
- Clinical Care Summary Exchange
- Clinical Care Summary Exchange



# Engage patients and families

## **2011 Proposed Measures:**

- % of all patients with access to personal health information electronically [OP, IP]
- % of all patients with access to patient-specific educational resources [OP, IP]
- % of encounters for which clinical summaries were provided [OP, IP]



# Improve care coordination

## **2011 Meaningful Use Care Objectives:**

- Exchange key clinical information among providers of care (e.g., problems, medications, allergies, test results) [OP, IP]
- Perform medication reconciliation at relevant encounters [OP, IP]
- Report 30-day readmission rate [IP]

## **HIE Services:**

- Clinical summary exchange, Prescription fill status and/or medication fill history, Electronic clinical laboratory ordering and results delivery
- Prescription fill status and/or medication fill history
- Clinical summary exchange, Electronic eligibility and claims transactions



# Improve care coordination

## **2011 proposed measures:**

- Report 30-day readmission rate [IP]
- % of encounters where med reconciliation was performed [OP, IP]
- Implemented ability to exchange health information with external clinical entity (specifically labs, care summary and medication lists) [OP, IP]
- % of transitions in care for which summary care record is shared (e.g., electronic, paper, eFax) [OP, IP]



# Improve population and public health

## **2011 Meaningful Use Care Objectives:**

- Submit electronic data to immunization registries where required and accepted [OP, IP]
- Provide electronic submissions of reportable lab results to public health agencies [IP]
- Provide electronic syndrome surveillance data to public health agencies according to applicable law and practice [IP]

## **HIE Services:**

- Electronic Public Health Reporting, Clinical summary exchange
- Electronic Public Health Reporting, Electronic clinical laboratory ordering and results delivery, Quality Reporting
- Electronic Public Health Reporting, Clinical summary exchange



# Improve population and public health

2011 proposed measures:

- Report up-to-date status for childhood immunizations [OP]
- % reportable lab results submitted electronically [IP]



# Ensure adequate privacy and security protections for personal health information

## **2011 Meaningful use care objectives:**

- Compliance with HIPAA Privacy and Security Rules and state laws
- Compliance with fair data sharing practices set forth in the Nationwide Privacy and Security Framework

## **HIE Services:**



# Ensure adequate privacy and security protections for personal health information

## **2011 proposed measures:**

- Full compliance with HIPAA Privacy and Security Rules (An entity under investigation for a HIPAA privacy or security violation cannot achieve meaningful use until the entity is cleared by the investigating authority)
- Conduct or update a security risk assessment and implement security updates as necessary



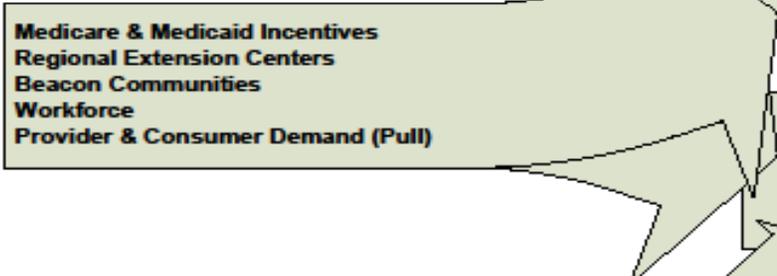
# Meaningful Use: Summary

- MU proposed rule is due 12/31/2009 (may arrive sooner)
- The strategic and operational plans for the ONC HIE cooperative agreement must describe how HIE will support meaningful use
- MU priority areas and care objectives may help to inform specific HIE services and clinical use case priorities



**ARRA Enabling Structures**

State HIE Grants  
Public Health Infrastructure  
Standards & Certification, NHIN  
Privacy & Security  
Federal Coordination & Planning  
R&D and Innovation



**Exchange & Enhanced Uses**

**Adoption**

**Meaningful Use**

- 1) Improved Clinical Health Outcomes
- 2) Improved Population Health Outcomes
- 3) Increased Efficiency in the Health Care System

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- 4) Empowered Individuals
- 5) Learning Health Care System

# Prioritizing HIE priorities and Use cases



# Prioritization Objectives

- Two chief objectives of the business operations workgroup is to prioritize both:
  - ONC HIE services
  - Specific health care processes to be supported within priority HIE services
- Outcomes:
  - List of priority statewide HIE services
  - List of priority health care processes
  - List of other clinical priorities for future consideration (parking lot)



# Factors Informing Prioritization

As we evaluate potential clinical priorities in Michigan, potential factors that *may* inform prioritization include:

- Potential to improve health outcomes
- Potential to improve workflow (does it address current “pain points”?)
- Existing evidence?
  - Cost Reduction?
  - Improved Outcomes?
- Magnitude of impact (many or few affected?)
- Does current capacity exist to support process?
- Support Incremental Growth of HIE in Michigan?
- Support Meaningful Use?
- Sustainable?



# Example HIE Services Prioritization Worksheet

HIE Service	Improve Health?	Workflow?	Evidence?	Magnitude?	Capacity?	Incremental?	MU?	Sustainable?
Electronic eligibility and claims transactions			X	0		X	X	
Electronic prescribing and refill requests	X	X	X	2	X		X	X
Electronic clinical laboratory ordering and results delivery	X	X	X	3		X	X	
Electronic public health reporting (i.e., immunizations, notifiable laboratory results)	X		X	4	X	X	X	X
Quality reporting				2			X	X
Prescription fill status and/or medication fill history		X		3	X	X	X	
Clinical summary exchange for care coordination and patient engagement	X	X	X	5			X	



## Candidate clinical processes (examples only)

- Generate and transmit permissible prescriptions electronically (eRx)
- Incorporate lab test results into EHR
- Report to external disease (e.g., cancer) or device registries
- Provide patients with access to electronic clinical information (including lab results, problem list, medications list, allergies) per patient preference
- Exchange key clinical information among providers of care (e.g., problems, medications, allergies, test results)
- Produce and share electronic summary care record for every transition in care (place of service, consults, discharge)
- Perform medication reconciliation at relevant encounters
- Receive histories and recommendations from immunization registries
- Submit electronic reportable lab results to public health agencies
- Provide electronic syndromic surveillance data to PH agencies according to applicable laws
- ...



## For Next Meeting

- Establish factors that inform prioritization of health care processes
- Solicit missing clinical outcomes
- Engage in vigorous electronic debate
- Prepare short list to vote upon



# *MiHIN Business Operations Workgroup: HIE Services and Meaningful Use*

## Discussion / Questions





# Goals and Objectives

Develop a comprehensive statewide technical architecture that:

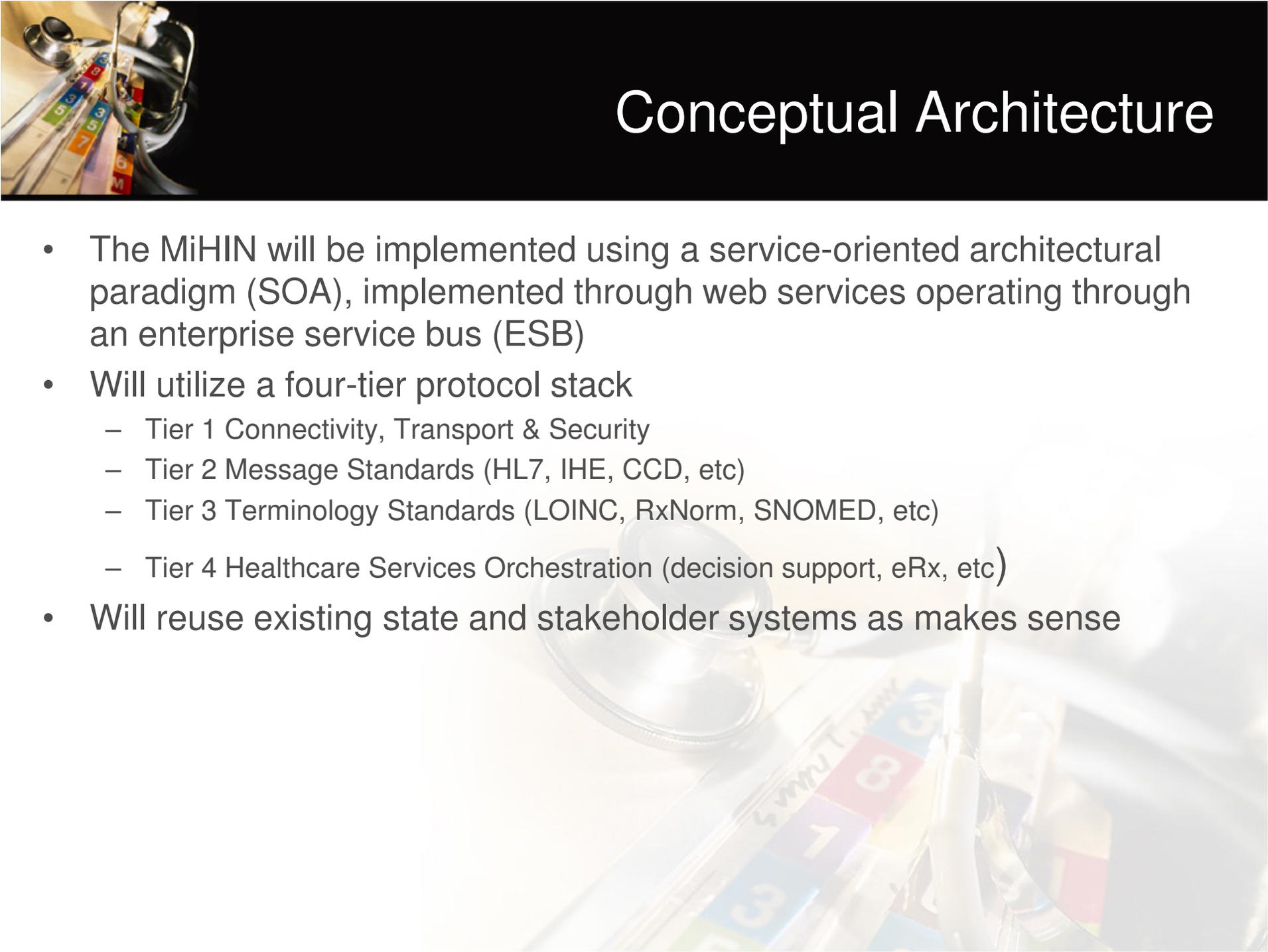
- Performs 4 main functions
  - Aggregating data and interconnecting providers via Community HIEs
  - Connecting Community HIEs through a MiHIN state-wide backbone
  - Provide shared clinical and administrative services and applications
  - NHIN connectivity for sharing data with other states and the federal government
- Meets prioritized clinical requirements for meaningful use (as defined by the ONC)
- Allows community HIEs and State systems to interoperate with the statewide architecture
- Supports auditing
- Supports data analytics
- Is cost-effective to maintain
- Implements privacy and security policies





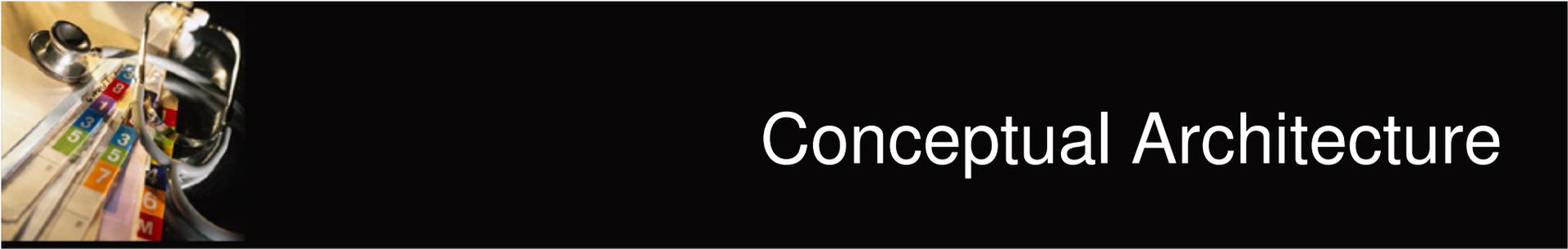
# Strategies

- Vendor agnostic
- Support multiple communication protocols within reason (FTP, SOAP, Sockets, etc).
- This will be a hybrid architecture that will not be entirely federated or centralized
- Comply with the latest interoperability standards but be practical enough to get something working
- Undertake an incremental approach to implementing a statewide architecture
- We will be consistent with Industry Standards (web services, etc) when not in conflict with our design
- Our primary focus will be on designing Information Exchange, not end-user applications
- Interoperate with existing state and regional healthcare delivery systems
- Our objective for real-time communications is to use web services where feasible
- The infrastructure and all external communication paths must be highly secure and HIPAA compliant
- The architecture must be extensible (capable of adding new functions or services easily)
- The architecture must be scalable (capable of adding more users, transactions or other volumes of work easily)
- Will support delegated user authorization, authentication & administration



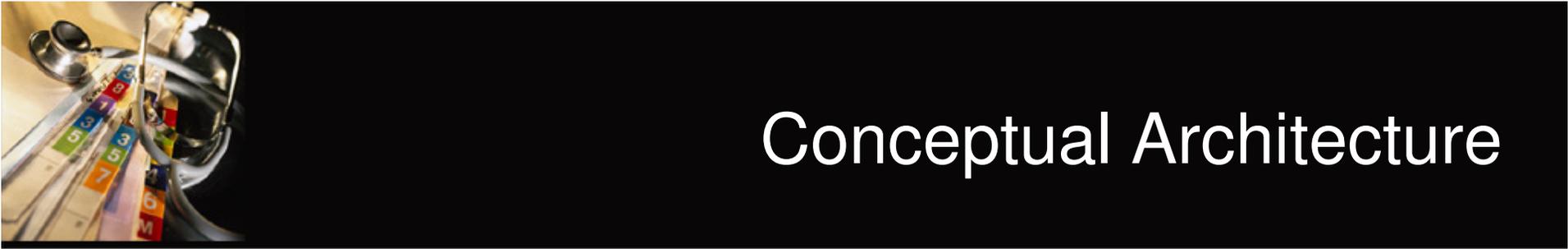
# Conceptual Architecture

- The MiHIN will be implemented using a service-oriented architectural paradigm (SOA), implemented through web services operating through an enterprise service bus (ESB)
- Will utilize a four-tier protocol stack
  - Tier 1 Connectivity, Transport & Security
  - Tier 2 Message Standards (HL7, IHE, CCD, etc)
  - Tier 3 Terminology Standards (LOINC, RxNorm, SNOMED, etc)
  - Tier 4 Healthcare Services Orchestration (decision support, eRx, etc)
- Will reuse existing state and stakeholder systems as makes sense



# Conceptual Architecture

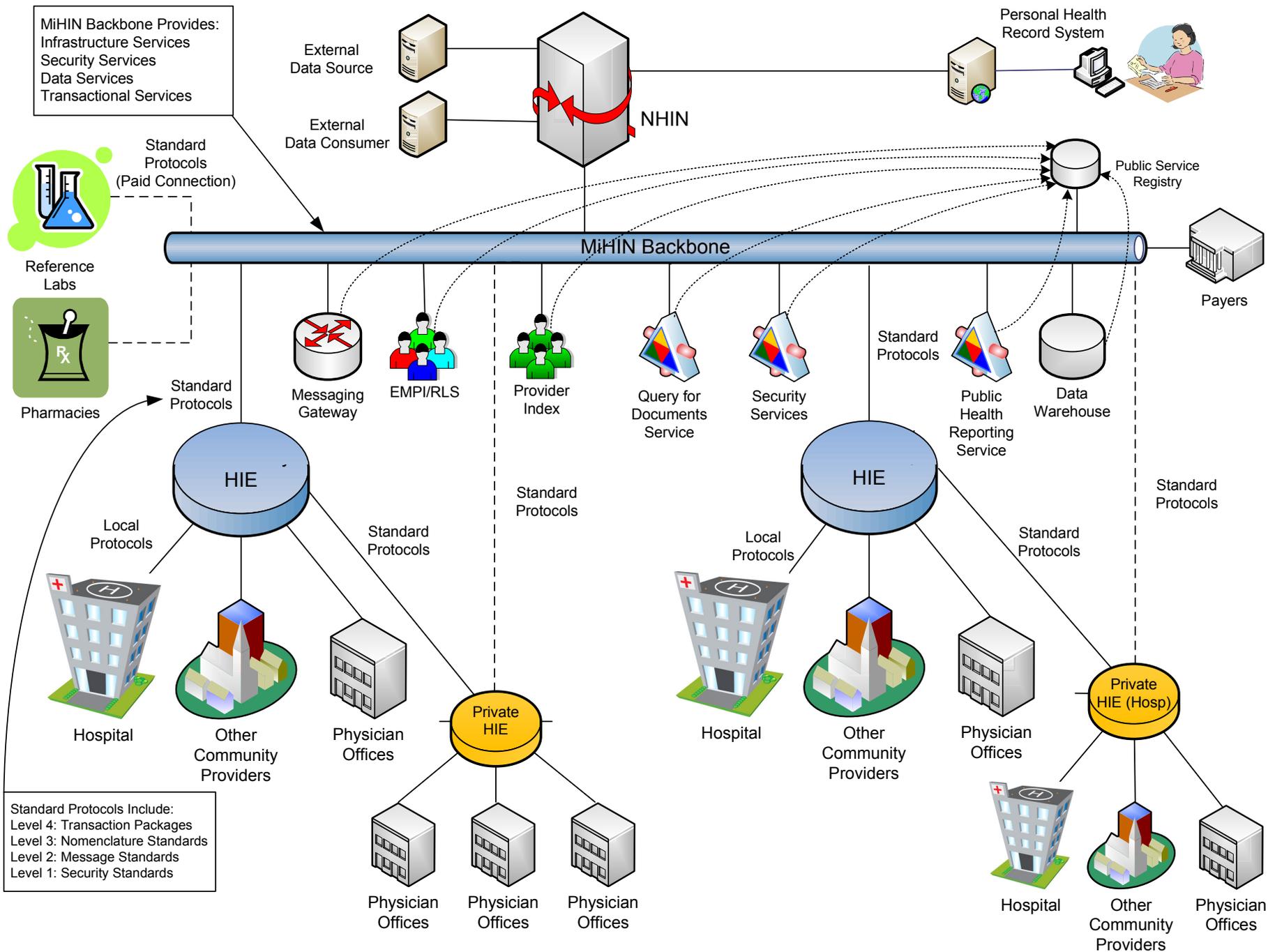
- Will provide the following core services:
  - EMPI/RLS
  - Master Provider Index
  - Query for Documents (XDS)
  - Security
  - Service Registry
- Will initially focus on the ONC HIE priorities of
  - Lab orders and results
  - Public health reporting
  - Eligibility checking
  - Quality reporting
  - ePrescribing
  - Medication Management
  - Coordination of Care



# Conceptual Architecture

- Will connect to the following 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
- 

# MiHIN Conceptual Architecture



## Business Operations Goals by April 15

1. Prioritize ONC HIE Services (December 29)
2. Select Use Cases for initial implementation (January 12)
3. Create Value Propositions for Use Cases Selected (January 26)
4. Provide Input and Approve Statewide Business Architecture (February 23)
5. Provide Input and Approve Statewide HIE Strategic Plan (March 9)
6. Provide Input and Approve Statewide HIT Coordination Plan (March 9)
7. Provide Input and Approve Statewide HIE Operational Plan (March 23)
8. Provide Input and Approve ARRA Reporting Measures (April 6)

# ***MiHIN Business Operations Workgroup: HIE Capacity***

• December 15, 2009



# MTA Region HIE

- Sound planning basis in all regions
- One region implementing Vendor HIE solution
- One region implementing custom HIE solution



# Private HIE

- Strong eRx
- Some organic growth centered around high population areas
- Highly utilized Statewide portal solutions available – limited in information types available
- Biggest demand: eRx, Registries for incentive \$\$\$
- Reports of CCD use



# State of MI

- MCIR
- Disease Surveillance (MDSS, MSSS)
- Bureau of Labs
- Data Warehouse
- CHAMPS
- Vital Records



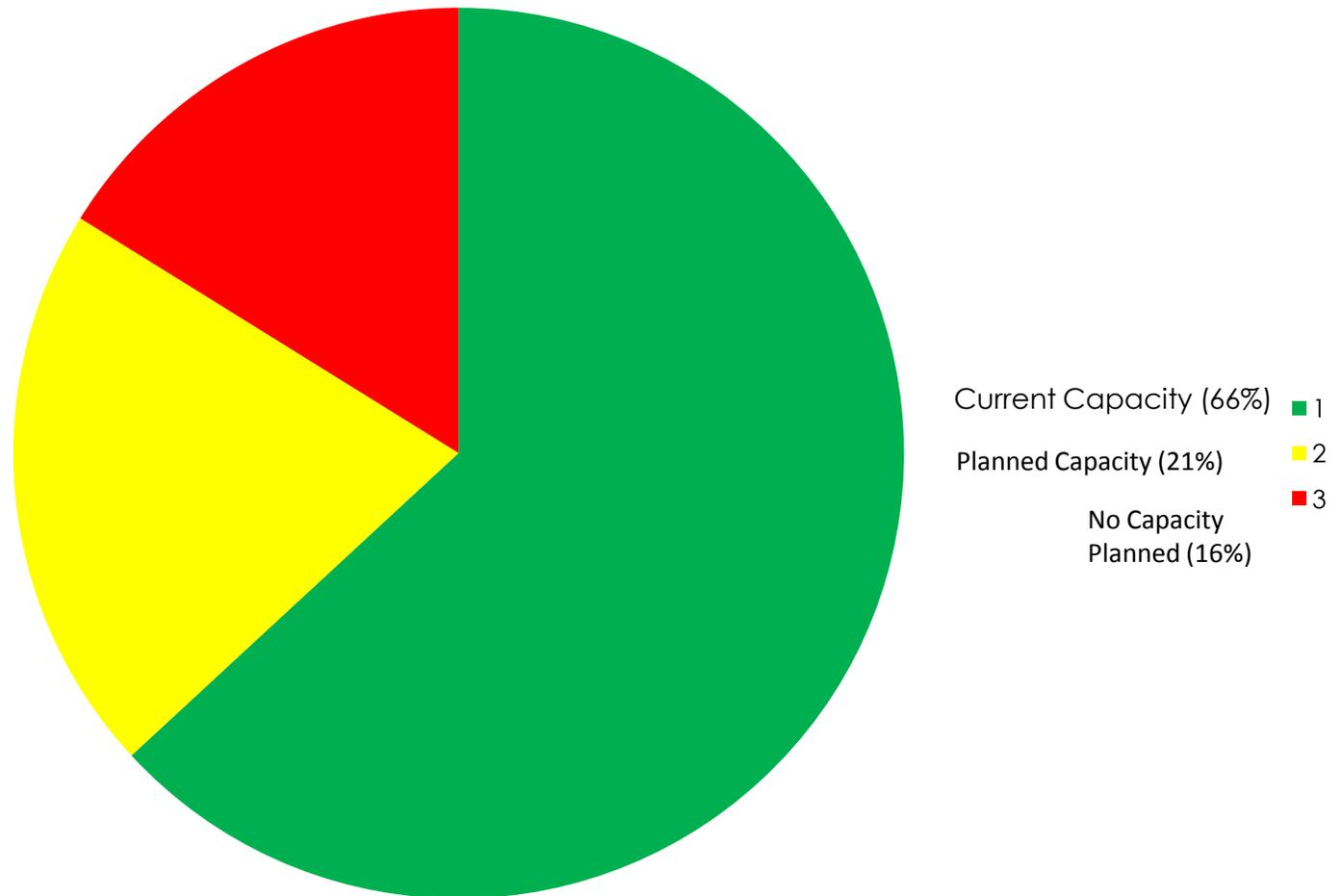
# Health Systems

- Majority of documented capacity in health systems
- Skilled staff exists
- Technical Infrastructure capacity
- Standards lagging, but in progress
- Interoperability in health system domain (inpatient, ambulatory, labs, imaging)



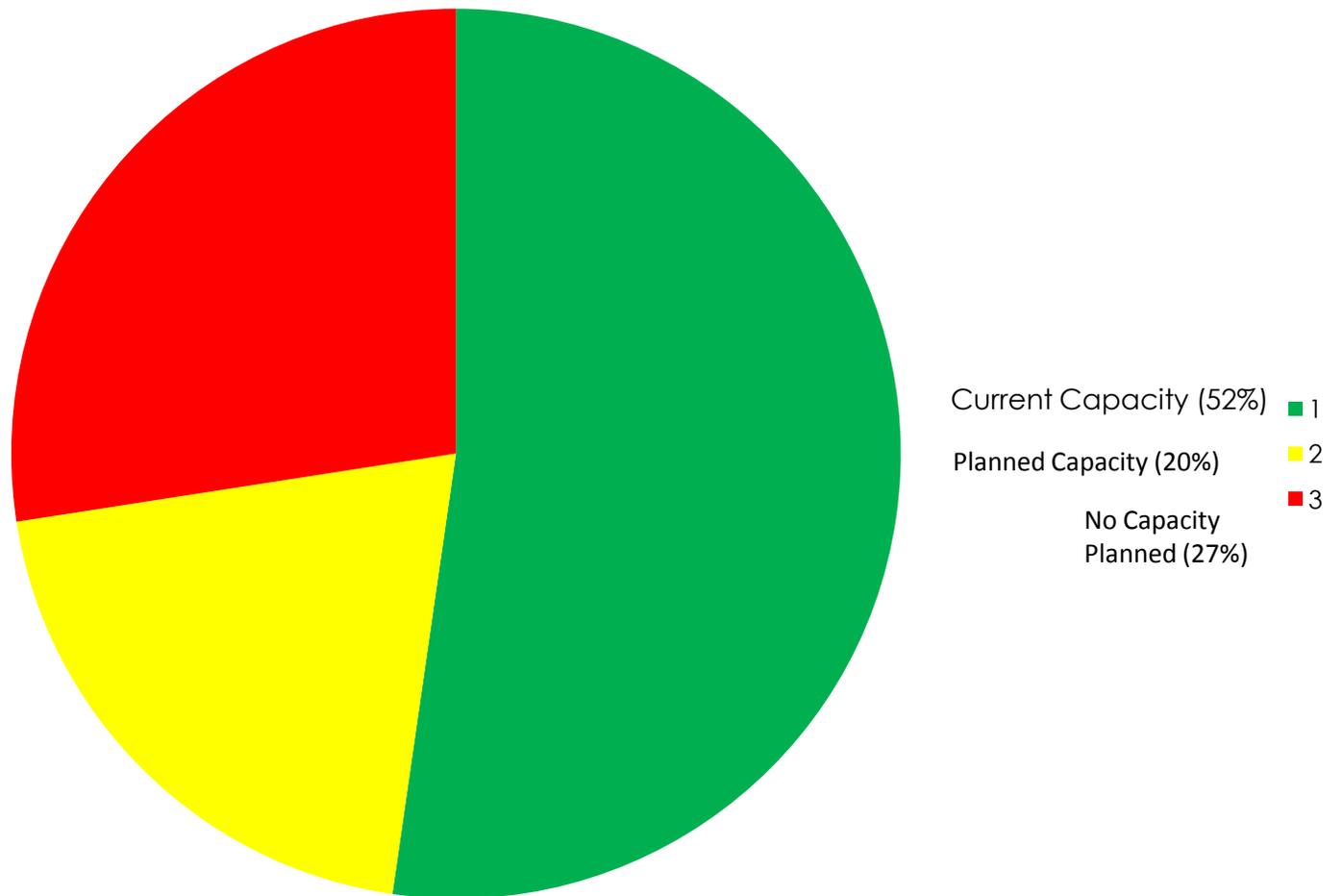
# Health Systems

## Electronic Health Information Capacity



# Health Systems

## Standards Capacity



## **MiHIN Voting Workgroup Member Results**

November 19 through November 23 more than 130 MiHIN stakeholders completed the online ballot for selecting the MiHIN Voting Workgroup Members.

The goal of this voting process was to establish a decision-making structure that will allow Michigan to achieve success with the rigorous timelines that have been outlined by the federal State HIE Cooperative Agreement Program.

The overall goal of the workgroups is to engage and gain the perspectives of a broad and diverse set of stakeholders. As such, the workgroup meetings are open to all interested stakeholders and all will be invited to review and discuss the deliverables in the workgroups.

All workgroup meeting schedules and agendas will be posted to [www.michigan.gov/mihin](http://www.michigan.gov/mihin) and will be sent via email to the voting workgroup members and those that have expressed interest in the workgroups.

The following results are listed on a separate page for each workgroup.

<b>Governance</b> .....	<b>2</b>
<b>Technical</b> .....	<b>3</b>
<b>Business Operations</b> .....	<b>4</b>
<b>Finance</b> .....	<b>6</b>
<b>Performance Measurement</b> .....	<b>7</b>
<b>Privacy &amp; Security</b> .....	<b>8</b>

# Governance

## **Existing HIE Initiatives**

Paula Johnson - Upper Peninsula Health Care Network

Helen Hill - Southeast Michigan Health Information Exchange

## **Health System Executives**

Patrick O'Hare - Spectrum Health

Jocelyn Dewitt - University of Michigan Health System

## **Michigan Employer**

Denise Holmes - Michigan State University (Uncontested)

## **Provider Trade Associations**

Jim Lee - Michigan Health & Hospital Association

Kim Sibilsky - Michigan Primary Care Association

## **Rural healthcare provider/clinic/hospital.**

John Barnas - MI Center for Rural Health

## **Insurer/Health Plan.**

Richard Murdock - Michigan Association of Health Plans (Uncontested)

**NOTE:** The Governance Workgroup may choose to appoint two more representatives:

Health Care Consumer

Physician (with a business or employer)

**NOTE:** In addition to these members of the Governance Workgroup, all co-chairs will be a voting member of the Governance Workgroup, which include:

Janet Olszewski: Co-Chair of Governance

Larry Wagenknecht: Co-Chair of Governance

Ken Theis: Co-Chair of Technical

Rick Warren: Co-Chair of Technical

Sue Moran: Co-Chair of Business Operations

Bob Brown: Co-Chair of Business Operations

# Technical

## **Hospitals & Health Systems**

Doug Fenbert - Trinity Health

Dan Stross - Genesys Health System

## **Local public health**

Marcus Cheatham - Ingham Co. Health Department (Uncontested)

## **Behavioral/ mental health**

Bill Riley - Oakland County Community Mental Health

## **FQHCs**

Bruce Wiegand - Michigan Primary Care Association (Uncontested)

## **Health plan/Insurer/Payer**

Thomas Lauzon - Health Plan of Michigan (Uncontested)

## **Health research**

Ernie Yoder, MD, PhD - St. John Health System (Uncontested)

## **Laboratory systems**

Doug Dietzman - Spectrum Health (Uncontested)

## **Multispecialty group practice.**

J. Mark Tuthill, MD - Henry Ford Health System (Uncontested)

## **Pharmacy systems.**

Paul G Miller, Jr., M.Sc., Pharm.D., R.Ph. (Uncontested)

# **Business Operations**

## **Primary Care Physician.**

Peter Ziemkowski, M.D. - Kalamazoo, MI (tie)  
Christopher Beal, DO - St. Johns, MI

## **Chief Medical Information Officer**

Leland Babitch, M.D., MBA - Detroit Medical Center

## **Hospital/Health System Representative**

Bryan Dort - Alpena Regional Medical Center

## **Nursing**

Deana Simpson, RN - Detroit Medical Center (Uncontested)

## **Rural Health Centers**

Sherri Stirn, BS, CPC, - Mecosta Health Services (Uncontested)

## **University health researcher**

Bernard Han - Center of WMU Health Information Technology Research and Services (Uncontested)

## **Laboratory representative**

Gary S. Assarian, D.O. – Henry Ford Health System (Uncontested)

## **Pharmacy representative**

Michael Bouthillier - Ferris State University (Uncontested)

## **Public health representative**

Betsy Pash - Michigan Department of Community Health (Uncontested)

## **RHITEC representative**

Tim Pletcher - Central Michigan Univeristy Research Corporation

## **Workforce development initiatives**

Paul Edwards - Greater Flint Health Coalition's

## **Specialty physician representative with EHR experience**

Scott Monteith, M.D. - Northern Lakes CMH/GTBM, PC

## **Home health representative**

Linda Young - Borgess Visiting Nurse and Hospice Services (Uncontested)

## **Provider Trade Association**

Rebecca Blake - Michigan State Medical Society (Uncontested)

**Existing HIE Initiative**

Mary Anne Ford - Capital Area RHIO

## **Finance**

### **Payer/Insurer/Health Plan CFO**

Janice Torosian - Health Plan of Michigan (Uncontested)

### **Health system CEO**

Dennis Smith - Upper Peninsula Health Care Network (tie)

Donald Kooy - McLaren Regional Medical Center

### **Community hospital CFO**

Timothy M. Jodway - Northern Michigan Regional Health System (Uncontested)

### **Banker/financier**

Stephan Ranzini - University Bank

**Note** – This group may choose to recruit and appoint in the following categories:

Large multi-specialty group practice administrator

Small practice administrator

Michigan Employer

# Performance Measurement

## **Health Informaticist**

Nancy Walker - Michigan Health Information Management Association

## **University Health Research**

Sharie Falan - Center of WMU Health Information Technology Research and Services (Uncontested)

## **Hospital representative with QI or P4P reporting and EHR experience**

Sam Watson - Michigan Health & Hospital Association (MHA)

## **Quality Improvement Organization**

Jackie Rosenblatt – MPRO

## **Payer with QI reporting experience**

Rick Murdock - Michigan Association of Health Plans

## **Pharmacy representative with QI and HIE experience**

Roseanne Paglia, Pharm.D. - St. Johns Health System

## **FQHC representative**

Bruce Wiegand - Michigan Primary Care Association

**Note:** This group is on a delayed start, since it's work and focus are dependent on some deliverables in the other workgroups.

**Note:** This workgroup may choose to recruit and appoint in the following categories:

Primary care physician (or office manager)

Public Health Representative

Laboratory representative

## Privacy & Security

**Note:** This workgroup did not go through the same nomination and voting process as the others. In working with MPHI, we are formulating exactly what will be needed to make the format/voting process of this group consistent with the others. This may include another vote at a later date.

**Note:** As part of this round of voting, approximately 35 new members were nominated or expressed interest in this topic.

The following individuals have expressed interest in the Privacy & Security workgroup:

- Jeff Bontsas - St. John Health System
- Theresa Mulford – Michigan Department of Community Health
- Moira Davenport-Ash - Michigan Health Information Management Association
- John Hazewinkel - Michigan State University
- Margaret Marchak - Hall Render PLLC
- Robert Moerland - Kalamazoo Community Mental Health and Substance Abuse Services
- Mike Stines - Health Plan of Michigan
- Michael Tarn - Western Michigan University
- Mick Talley - Southeast Michigan HIE (SEMHIE)
- Chuck Dougherty - Clinton Eaton Ingham Community Mental Health

# ***MiHIN Business Operations Workgroup: Rules of Engagement***

• December 15, 2009



# Open Meetings

- Open to all interested stakeholders
- Public Comment Period at end of every meeting



# Voting

- Only Voting Work Group Members are allowed to vote
- A quorum of Voting Work Group Members must be present in order to vote - A majority vote rules – Voting members roll will be called and votes recorded
- Public Comment after every vote
- In General, items for vote will be introduced in one meeting, discussion continued between meetings, and voted on at the start of the next meeting



# Meeting Materials

- Agendas and documentation to be reviewed at each meeting will be posted to the MiHIN website and emailed to all workgroup members at least 2 days before each meeting
- Approved meeting minutes will be posted within 1 week after each meeting.



## **Work Group Meetings Rules of Engagement**

It is the intent of the State of Michigan to use an open and transparent process and to facilitate collaborative decision-making among broad stakeholders for key components of the MiHIN project. Toward this end, meetings will be conducted as follows:

### ***Open Meetings***

- All meetings conducted by the Work Groups will be open to all interested stakeholders
  - Voting Work Group Members as well as interested stakeholders will review and discuss items to be refined prior to vote
  - A public comment period will be included at the end of each agenda and will be offered after each vote.
  - When possible, discussion of a decision and the vote on a decision will take place one meeting apart.
  - Agendas and documentation to be reviewed at each meeting will be posted to the MiHIN website and emailed to all workgroup members at least 2 days before each meeting
  - Approved meeting minutes will be posted within 1 week after each meeting.
  - All workgroups will begin meeting face-to-face and will decide on alternative options like web-conference and teleconference for subsequent meetings.

### ***Meeting Approach***

- Agenda items fall into three categories:
  - Review only – enable Work Group members to become familiar with information, to ask and/or respond to questions to guide the development of future deliverables
  - Review and refine – provides the opportunity for the Work Group members to review a draft, comment, question, and direct iterations by other Work Groups, as necessary, before approving the final deliverable at a subsequent meeting
  - Review and approve – aims for a decision (consensus or vote) on deliverables that either likely require minimal discussion or have already been reviewed and refined by the Work Group

### ***Decision Making***

When a vote is called, the following process will be followed:

- Only Voting Work Group Members are allowed to vote
- A quorum of Voting Work Group Members must be present in order to vote
- A majority vote rules

When possible, items that require a vote will be clearly noted on the agenda.