Health Information Exchange Workgroup Meeting
September 16, 2016

Co-Chairs:
Jeff Benning
President and CEO, Lab Interoperability Collaborative

Peter Schuna
President and CEO, Pathway Health

Staff Contacts:
Melinda Hanson and Anne Schloegel
Agenda and Meeting Objectives

- Welcome and Introductions
- Review HIE Workgroup Charge
- Minnesota HIO presentations and discussion
- Minnesota Department of Health Updates
  - Minnesota HIE Study
  - Proposed HIE Strategy Roadmap
  - Draft 2017 Interoperability Standards Advisory
  - Minnesota Health Records Act-Consent RFI
Proposed 2016-2017 HIE Workgroup Charge

- Provide expert input in support of actions to advance HIE as recommended in the *Working Action Plan to Address HIE Barriers*

- Serve as a forum to discuss and respond to any HIE-related issues
Proposed 2016-2017 HIE Workgroup Charge

Approach and Tasks

- Valuable work during 2015-2016 provided many actionable items that will require periodic public input.

- 2016-2017 workgroup will include two to three in-person meetings (September, February, and April) and further input, as needed via email requests.

- Educational webinars and updates offered throughout the workgroup year as needed.
Proposed 2016-2017 HIE Workgroup Charge
Approach and Tasks (continued)

September 2016 – January 2017:
• Learn from HIOs and discuss current HIE landscape, value proposition, and priorities for exchange among HIOs

January – May 2017:
• Identify expectations for statewide HIE in Minnesota with specific attention to transactions and value propositions
• Review Privacy and Security Workgroup approved materials from the SIM-funded privacy, security and consent work.

September 2016 – May 2017
• Review and provide input, as needed, on HIE-related activities such as: Minnesota HIE Study, federal activities (e.g., SIM, CMS 90/10) and Minnesota HIE Oversight
Proposed 2016-2017 HIE Workgroup Charge

Deliverable

By May 2017:

• Summary report of recommended “Expectations for Statewide HIE Capabilities in Minnesota” that align with federal initiatives and include but are not limited to value proposition for implementation of specific transactions.
Today’s meeting addresses the following HIE Workgroup Actions Plans:
(see HIE Workgroup Summary Report Appendix A)

Objective #1: Increase the number of health and healthcare providers participating in a State-Certified HIO.

• 1c. Use vision of MN HIE approach to help potential HIOs and providers identify how they may connect to MN HIE.

Objective #6: Increase the number of providers with established agreements to: 1) share health information electronically with care partners and/or 2) establish an agreement with an HIO/HDI.

• 6a. Establish expectations around HIE (e.g., rules of the road) to improve process of building partner relationships for HIE.
Minnesota HIE Approach

**Goal:** Assuring the right information is available to the right provider, at the right time for individuals and communities.

**Approach:**
- Vendor certification required
- Open market choices
- Standards for interoperability
- Market transparency
- Limited government oversight
Definitions for State-Certification
Minnesota HIE Oversight Law
Minn. Stat. §62J.498

- Health Information Organization (HIO): an organization that oversees, governs, and facilitates HIE among health care providers that are not related health care entities to improve coordination of patient care and the efficiency of health care delivery.

- Health Data Intermediary (HDI): an entity that provides the technical capabilities or related products and services to enable HIE among health care providers that are not related health care entities. This includes but is not limited to: health information service providers (HISP), electronic health record vendors, and pharmaceutical electronic data intermediaries.
Current HIE Certification Status

- **Health Information Organizations (HIOs)**
  - Allina Health, Koble-MN, Southern Prairie Community Care

- **Health Data Intermediaries (HDIs)**
  - CenterX
  - MaxMD
  - Secure Exchange Solutions
  - Cerner
  - MedAllies
  - Simply Connect
  - CIOX Health
  - Medicity
  - South Dakota Health Link
  - Emdeon
  - RelayHealth
  - Surescripts
  - Inpriva
  - Wisconsin Statewide Health Information Network (WISHIN)

- **In Process:**
  - NextGen, Epic
Minnesota Health Information Network (MNHNIN)

• a private – public collaborative
• Support implementation of HIE services
• Includes State-Certified HIE Service Providers in collaboration with HIE stakeholders
• To improve infrastructure design and interoperability in Minnesota
Minnesota’s HIE Approach and the Interoperable EHR Mandate

Exchange partners

- Adult day services
- Behavioral health
- Birth centers
- Chiropractic offices
- Clinics: primary care and specialty care
- Complementary/integrative care
- Dental practices
- Government agencies
- Habilitation therapy
- Home care
- Hospice
- Hospitals
- Laboratories
- Local Public Health
- Long-term care
- Pharmacies
- Social services
- Surgical centers

Provider choices
1.) Identify a State-Certified HIO to connect to directly,
2.) Identify a State-Certified HIO to connect to through a State-Certified HDI, or
3.) Engage your HIE partners to become a State-Certified HIO
Key Elements of Minnesota HIE Infrastructure
(covered by certification)
Minnesota Health Information Network (MNHIN)

[Diagram showing the relationships between various providers and information networks.]
Minnesota HIO Presentations

Panelists

- Mary Thompson (Allina Health)
- Will Muenchow (Southern Prairie Community Care)
- Chad Peterson (Koble-MN)

Key Questions Panelists were asked to address:

- How can your HIO support providers across the continuum of care improve care coordination and improve population health for the communities you serve?
- What are your current or future plans to include settings beyond clinics and hospitals in your HIO (e.g., behavioral health, long-term and post-acute care)?
Allina Health

• Largest Non-for-Profit Healthcare System in the Twin Cities and Region
  – 13 hospitals – 1,789 beds
  – 61 Allina Clinics, 23 hospital-based clinics
  – 15 community pharmacies
  – 2 ambulatory care centers
  – 11 Clinical Service Lines
  – Specialty Operations: Transportation, Pharmacy, Lab, Homecare/Hospice
  – Over 27,000 employees
  – Allina Integrated Medical Network representing over 3,000 employed & independent physicians

• Key statistics (2015)
  – $3.8 billion in revenue
  – 109,265 inpatient admissions
  – 1.4 million outpatient admissions
  – 4.3 million total clinic visits
Allina Health Mission

We serve our communities by providing exceptional care, as we prevent illness, restore health and provide comfort to all those who entrust us with their care
Strategic Focus

Allina Health pursuing a strategy of ‘Connected Care’

– Better connect and coordinate care *(and support the caregiver’s ability to do just that)*
– Advance new payment systems that rewards outcomes
– Integrate data and knowledge to improve care and health
Allina Integrated Medical Network Overview

- AIM Network is a Clinically Integrated Network formed **December 2010**
- A **platform to link** multiple disparate parts of the care system together to integrate care, improve quality, experience and decrease costs (Triple Aim)
- Supports Allina’s strategy to ‘**partner with**’ rather than employ independent providers
- Organizational structure that engages **independent providers** in shared leadership & decision-making
  - Physician Led – > **50 physicians** involved in governance activities to date
  - Wholly owned subsidiary of Allina Health
## AIM Network Profile

### Current Membership:

<table>
<thead>
<tr>
<th>Memberships</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>~3,000</td>
</tr>
<tr>
<td>(1,300 Allina; 1,700 Independent)</td>
<td></td>
</tr>
<tr>
<td>Physician Groups</td>
<td>&gt;60</td>
</tr>
<tr>
<td>Hospitals</td>
<td>26</td>
</tr>
<tr>
<td>Allina Health</td>
<td>13</td>
</tr>
<tr>
<td>Independent</td>
<td>13</td>
</tr>
</tbody>
</table>

### Vision:
The AIM Network aligns independent physicians and Allina to deliver market-leading quality and efficiency in patient care

### AIM NETWORK GOALS:

- Achieve clinical integration that enables AIMN participants to partner with each other to improve quality and reduce cost
- Build an infrastructure that supports effective care coordination
- Deliver consistent, evidence-based, best practice health care to the patients and communities we serve
- Position AIMN to jointly contract with payers for value based payment
AIMN Clinical Integration Strategic Plan
(2016-2018)

Our Vision:
AIMN Network aligns independent physicians and Allina to deliver market-leading quality and efficiency in patient care

Grow
Expand Risk-Based Membership in ACO Populations

Perform
Build Population Health Management Capabilities and Optimize Network

Demonstrate Value
Activate and Engage Consumers through Differentiated Experience

- Data Analytics & Reporting
- Operational Efficiency
- Network Alignment
- Care Transformation

The Triple Aim
Health of a Population
Experience of Care
Per Capita Cost

Allina Health
Value Propositions of HIE

1. Reduce duplication of imaging and lab testing
2. Improve diagnosis and treatment plans
3. Gain in efficiency and productivity for providers
4. Enhance the patient experience
5. Reduce information gaps in care delivery
6. Replace manual workflows with automated information exchange
Connect HIE Implementation Approach

1. Establish secure network connections & create patient demographics and clinical notes interfaces into HIE from each practice in AIMN

2. Provide AIMN clinic users access to the Point of Care Portal

3. Establish Query/Response connection with Excellian Care Everywhere to seek outside records summary (CCD) from Connect HIE
thank you!

Mary.Thompson@allina.com
Southern Prairie Community Care

- SPCC is a **virtual** network focused on the Triple Aim
- Identified as an **Accountable Community for Health**
- 27 Provider Members - **Clincs, Hospitals, Public Health, Mental Health, Human Services**
- Focused on **improving health** of people in our communities
- Strength of SPCC is **efficiently mobilizing “the community”** around those with highest need
- Ability to leverage connections in governance of SPCC and area HHS agencies, MHCs, hospitals
- Business Line for HIE Services Offered as **SPCLink**
Collaboration of 12 Counties

CHIPPEWA
COTTONWOOD
JACKSON
KANDIYOHI
LINCOLN
LYON
MURRAY
NOBLES
REDWOOD
ROCK
SWIFT
YELLOW MEDICINE
The Four Pillars of SPCC

INTEGRATED COMMUNITY CARE
HEALTH INFORMATION SERVICES
POPULATION HEALTH IMPROVEMENT
HEALTH EQUITY AND ACCESS
PILLAR 4: Health Information Services

- Focused on supporting Integrated Community Care
- Facilitating movement of clinical data among providers
- Providing access to more timely data and alerts
- Enabling clinical data to be gathered for analytics
- Delivering timely, actionable data and reports
- Expanding analytics to include social determinant data
- Leading Data Driven Intervention Strategies
SPCLink Update - 2016

- HIE Vendor Procurement
  - Change in Vendor, Not in Mission
  - Open, Transparent, Engaged Network
  - Learning From Past Challenges and Leveraging Critical Insight
  - RelayHealth Chosen as HIE Vendor
  - Salient ACO Chosen as Analytics Vendor

- Current Progress and Goals
  - DSM Implementation 80% Complete
  - Query Based Exchange Implementation In Progress
  - Event Notification Launch Fall 2016
  - Analytics Launch Fall of 2016
  - Patient Portal Winter of 2016/17
HIE Services

- SPCC is a State Certified Health Information Organization (HIO)
- Business Line for HIE Services Offered as SPCLink
- Growing Together – Statewide Footprint
- Direct Secure Messaging
- Query Based Exchange
  - Connects health care offices, hospitals, clinics, labs and other data sources
  - Creates a two-way, push/pull interaction between care givers – portal and EHR integration
  - Result is a virtual medical record that follows the patient across the network
  - Aggregates and normalizes clinical data for use in analytics
- Event Notifications/Alerts
  - Real time emergency admission/discharge/transfer alerts for care coordination, quality improvement
- Patient Portal
- Data Analytics
Perspective on Statewide Strategy

- MN statewide strategy needs to expand beyond historical approach focused on:
  - Movement of clinical data among providers, information available at the point of care

- New landscape requires focus on role of HIE in data aggregation to achieve transformation:
  - Data at the ACO level for use in analytics, information to care managers to drive interventions

- Statewide Interoperability Requires State Level Infrastructure and Policy Changes
  - MN should leverage CMS Meaningful Use 90/10 opportunity to build out infrastructure
  - Requires heightened role of DHS in the statewide strategy – Policy, Purchasing, Technical Infrastructure
  - Support build of state-level architecture “MN HIN Shared Service Bus”
  - Support for HIOs in connecting to architecture
  - Support for connecting essential partners for Meaningful Use, Integrated Care, IHP

- Statewide Interoperability, Sustainability Requires Collaboration Among Communities
Minnesota eHealth Initiative
HIE Workgroup

CHAD PETERSON
About Us

Koble-MN is solely focused on healthcare IT. We offer professional services in Health Information Exchange Management, Integration Engineering and Compliance. We were certified as a MN HIO in November of 2015.
Mission

Advance the adoption, use of technology and exchange of health information to improve healthcare quality, patient safety and overall efficiency of healthcare and public health services of Minnesota.

Vision

To promote high quality and transform the health care experience of all Minnesotans.
Kevin Schumacher
CIO
LifeCare Medical Center (Roseau)

Lori O’Hara
OneCare Director
Catholic Health Initiatives (Fargo)

Shauna Reitmeier
CEO
NW Mental Health Center (Crookston)

Nicole Sowers
COO
CHAMP Software (Mankato)

Greta Siegel
Budget & Finance Supervisor
Horizon Public Health (Alexandria)

Alex Todorovic
Director of Applications
Altru Health Systems (Grand Forks)

Mark Sonneborn
VP Health Information & Analytics
Minnesota Hospital Association (St. Paul)

Advisory Committee
Core Services

Pull / Query
Additional Services

- ACO Payer Support
- HIE Consulting
- Care Coordination
- Data Analytics
- Population Health
Contact Us

Koble-MN

www.koblemn.org

support@koblemn.com

(844) 33-KOBLE
Panel and Workgroup Discussion

Key Questions:

- What use cases are you trying to support through HIE transactions?
- What suggestions would you give organizations considering becoming an HIO?
- Are there advantages/disadvantages to connecting to an HIO rather than becoming one?
- What are your current plans to connect to any state-certified HDIs?
- How does your participation in any value-based payment options (e.g., IHPs, ACOs) affect decisions?
- What will it take to exchange among HIOs? And what transactions should be priorities? What HIE value proposition(s) does each transaction offer?
- Other questions?
Legislative HIE Study Update
Legislative Directive

- To assess MN's legal, financial, and regulatory framework for HIE, including the requirements the MN Health Records Act;
- Make recommendations for modifications that would strengthen the ability of MN health care providers to:
  - securely exchange data
  - in compliance with patient preferences, and
  - in a way that is efficient and financially sustainable.
- Due February 2018
Proposed Study Objectives

- Review MN policies for HIE and patient consent compared to other states.
- Describe the current status of HIE activity in MN
- Understand how MN’s policies and the market are supporting HIE activity within communities and statewide.
- Develop recommendations for the legislature
Example Topics

- **Policy**
  - Laws relating to HIE and health information technology
  - Role of government in supporting HIE
  - Funding
  - Governance regarding HIE
  - MN’s HIE model

- **HIE implementation**
  - HIE service provider expectations; “rules of the road”
  - Vendor capabilities (current and evolving)
  - Standards for interoperability

- **Providers**
  - Setting/type of care provided
  - Transactions needed to support care (use cases)
  - Readiness to participate in HIE
  - Commitment to participate in HIE
  - Geography
The Minnesota Accountable Health Model
HIE Strategy Roadmap
Minnesota E-Health Advisory Committee

JENNIFER FRITZ, MDH
Minnesota Hospitals and Clinics
Connected to an HIO

Minnesota Hospitals (n=145)
- Not connected to HIO (82%)
- Connected to HIO (18%)

Minnesota Clinics (n=1,473)
- Not connected to HIO (91%)
- Connected to HIO (9%)

Source: MDH–OHIT Survey data 2015, connection includes HIO participatory agreement with direct and/or query capability
Gaps and Challenges

Gaps

• Across the care continuum, many settings just beginning to engage in e-health
• Disparity in use of EHRs and HIE despite equal rates of adoption.

Challenges

• Exchanging across different vendor platforms
• Integrating data from other providers into the EHR
• Managing patient consent to share information
• Leveraging EHR data to support population health
SIM Sustainability & HIE Strategy Implementation Roadmap
SIM HIE Strategy / Roadmap Plan - Goal

• Improve health outcomes and cost of care among all Minnesotan’s by using e-Health and health information exchange to:
  – Engage and activate individuals and caregivers
  – Engage and activate all health providers
  – Extend care coordination into the community
  – Monitor cohorts and attributed populations
  – Manage population health
### Provisional Minnesota HIE Framework to Support Accountable Health

<table>
<thead>
<tr>
<th>Key Element</th>
<th>A. Engage and Activate Individuals and Caregivers</th>
<th>B. Engage and Activate all Health Providers</th>
<th>C. Extend Care Coordination into the Community</th>
<th>D. Monitor Cohorts and Attributed Populations (including risk stratification)</th>
<th>E. Manage Population Health (well-being of the population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Premise ( Desired Outcome)</td>
<td>Individuals who are engaged, with access to their health information, are more responsible for their health and have better health outcomes.</td>
<td>Providers who are engaged, with access to all necessary information at the point of care, help contribute to better health outcomes for patients.</td>
<td>Individuals are healthier when health care and related services are coordinated among providers.</td>
<td>Cohorts and attributed populations have better health and financial outcomes when program decisions are made using information generated with enhanced data analytics.</td>
<td>Health policy, emergency preparedness, and public program decisions are improved when based on accurate &amp; timely population health information.</td>
</tr>
<tr>
<td>Key HIE Functions and Capabilities to Achieve Desired Outcomes</td>
<td>a) Patients have access to bi-directional communication with providers. b) Individuals have access to their personal health information that is understandable, in a useful form and actionable. c) Individuals and patients have access to information about their providers and health care services. d) Individuals have access to tools to actively monitor and care for themselves and are able to share health activity monitoring information with providers. e) Individuals have easy access to chronic disease management tools. f) Individuals have easy access to disease specific and preventative education materials.</td>
<td>a) Providers have access to bi-directional communication with patients. a) Providers have ability to communicate/share information within their own organization. b) Providers have the ability to communicate/share information outside their organization. c) Providers have access to user friendly, timely clinical decision support (CDS). d) Providers have access to public health alerts. e) Providers have access to comprehensive patient medication histories.</td>
<td>a) Providers have closed loop referral capability (Referral Management). b) Individuals and providers have access to identified social &amp; community supports (for referral) that address social as well as medical needs. c) Providers have the information needed for care coordination in standard and/or shared terminologies where possible. d) Providers participate in care teams. e) Providers have access to bi-directional care coordination support services to/from MDH. f) Providers have access to information on targeted patients (e.g., cohorts) for follow-up/support. g) Individuals and patients have access to financial information needed for care management. h) Care coordinators have access to shared care management plans.</td>
<td>a) Access to information to identify and monitor cohorts; share trends with care coordinators. b) Access to financial risk sharing models use predictive analytics. c) Access to shared care management plan and transparency of data analyzed. d) Ability to normalize and integrate data, including social determinants of health. e) Ability to provide care coordinators and providers performance reports. f) Access to information that allows for participation in reimbursement systems for other than fee for service (ACO, value-based payment). g) Access to and ability to use repository and data warehouse.</td>
<td>a) Access to information for health assessment of entire population. b) Ability to evaluate effectiveness of public health programs. c) Ability to report measures to external designated entities. d) Ability to report adverse events to Patient Safety Organization. e) Access to emergency preparedness monitoring and assessment information. f) Access to information needed to react to emergency disasters and outbreaks more quickly. g) Access to and ability to share research protocol information. h) Access to and ability to share comparative effectiveness research. i) Access to and ability to share population health analysis.</td>
</tr>
<tr>
<td>F. Transactions and Standards</td>
<td>Recommended transactions and national standards are supported.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Patient Safety Practices</td>
<td>HIE and e-health protocols and procedures are supportive and enhance patient safety.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Privacy and Security</td>
<td>Protect all health information; any data sharing includes patient permissions (shared with whom and for what purpose).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Total Cost of Care (TCOC)</td>
<td>HIE and e-health protocols and procedures support TCOC model (clinical decision support, program evaluation etc.).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Learning Health System</td>
<td>Moving toward an &quot;ecosystem where all stakeholders can securely, effectively and efficiently contribute, share and analyze data and create new knowledge that can be consumed by a wide variety of electronic health information systems to support effective decision-making leading to improved health outcomes&quot; (Collect, share, use).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. Administrative Simplification</td>
<td>Providers, patients and individuals can easily access information for appointment, insurance eligibility and benefits among other needs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SIM HIE Strategy / Roadmap Plan**

**A Path Forward**

### Today
- High EHR adoption and use among many settings
- HIE limited to some communities, EHR-vendor facilitated by large health systems
- Many lessons learned through previous HIE implementation

### Tomorrow
- Information is available when needed
- HIE adoption high statewide
- HIE capacity expands to support population health and learning health system
- HIE sustainability plan driven by value-based care and value-based HIE services

**Key principle:** E-health is distributed equitably statewide

---

Information: www.mn.gov/sim

Contact: sim@state.mn.us
SIM HIE Strategy / Roadmap Plan
Many Elements to Connect

Minnesota HIE Strategy Implementation Roadmap in Support of Accountable Health and Payment Reform Goals

- Phased approach
- Built on lessons learned
- Based on collaborative input
- Scalable statewide

Information: www.mn.gov/sim
Contact: sim@state.mn.us
Minnesota HIE Strategy Implementation Roadmap in Support of Accountable Health and Minnesota’s Payment Reform Goals – DRAFT 7/28/16

2013-2016
Phase 1 (initial SIM implementation)

2017- Phase 2
(final SIM implementation)

2018 Forward
Phase 3 (post-SIM)

MDH & DHS Leadership, Oversight, Policy Levers, and Measurement towards Goals

Governance, Operations and Policy

Minnesota e-Health Advisory Committee
- Policy recommendations; collaborative action on priorities

HIE Review Panel
- Advice to MDH on certifications of HIOs and HDIs

MN Health Information Network (MNHIN)
- Collaboration on HIE implementation

Technoogy and Services

MNHIN
- Limited use of HIE Service Providers
- Services mostly local/ regional.
Common capabilities include:
- Direct secure messaging
- Other directed exchange (e.g., alerts)
- Query-based services
- Consent management
- Begin developing requirements for shared services and common services/data exchange needs

MNHIN
- Widespread HIE adoption among Medicaid IHPs and ability to connect IHPs
- MDH reporting through state-certified HIE Service Providers (ELR and Immunizations)

Shared Services (TBD based on Phase 1 requirements)
- Initial implementation with focus on Medicaid but eventually scalable to statewide. May include: provider directory services.

Investments
- SIM grant – grants for HIE, e-health roadmap, privacy and security resources, MDH Direct services.
- State appropriations for MN e-Health Initiative, grants, HIE study
- Private market investments (HIOs, HDIs)

Investments
- SIM grant (same as phase 1, plus new HIE grants and investments in shared services)
- State appropriations for MN e-Health Initiative, grants, HIE study
- Private market investments (HIOs, HDIs)
- HIE study to recommend long-term finance strategy
- Seek CMS funding for Medicaid share for implementation

Investments
- Implement HIE study recommendations (requires legislative action)
- Broad-based financing (includes non-Medicaid) model towards a public/private partnership provides financial stability
- State/CMS contribute ongoing funding for services that support state Medicaid operations

Finance

Investments
- SIM grant – grants for HIE, e-health roadmap, privacy and security resources, MDH Direct services.
- State appropriations for MN e-Health Initiative, grants, HIE study
- Private market investments (HIOs, HDIs)
To provide the industry with a single, public list of the standards and implementation specifications that can best be used to fulfill specific clinical health information interoperability needs.

To reflect the results of ongoing dialogue, debate, and consensus among industry stakeholders when more than one standard or implementation specification could be used to fulfill specific clinical health information interoperability need.

To document known limitations, preconditions, and dependencies as well as known security patterns among referenced standards and implementation specifications when they are used to fulfill a specific clinical health IT interoperability need.

The ISA is designed to provide clarity, consistency, and predictability for the public regarding the standards and implementation specifications that could be used for a given clinical health IT interoperability purpose.
ISA Structure

- The ISA is organized and structured into four sections and three appendices
  - Section I – Vocabulary/Code Sets/Terminology Standards and Implementation Specifications (i.e., “semantics”).
  - Section II – Content/Structure Standards and Implementation Specifications (i.e., “syntax”).
  - Section III – Standards and Implementation Specifications for Services (i.e., the infrastructure components deployed and used to fulfill specific interoperability needs)
  - Section IV – Questions and Requests for Stakeholder Feedback
  - Appendix I – Sources of Security Standards and Security Patterns
  - Appendix II - Revision History
  - Appendix III – Responses to Comments Requiring Additional Consideration
### II-L: Medical Device Communication to Other Information Systems/Technologies

**Interoperability Need:** Transmitting Patient Vital Signs from Medical Devices to Other Information Systems/Technologies

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard/Implementation Specification</th>
<th>Standards Process Maturity</th>
<th>Implementation Maturity</th>
<th>Adoption Level</th>
<th>Federally Required</th>
<th>Cost</th>
<th>Test Tool Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation Specification</td>
<td>IHE-PCCD (Patient Care Device Profiles)</td>
<td>Final</td>
<td>Production</td>
<td>● ● ● ○ ○</td>
<td>No</td>
<td>Free</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Limitations, Dependencies, and Preconditions for Consideration:**
- Feedback requested
- Recommend adding the link to the guidance developed by FDA CDRH and CBER:
  - Design Considerations and Pre-Market Submission Recommendations for Interoperable Medical Devices to the footnote on page 68
- See IHE projects in the Interoperability Proving Ground.

**Applicable Security Patterns for Consideration:**
- Feedback requested

### II-M: Patient Education Materials

**Interoperability Need:** A Standard Mechanism for Clinical Information Systems to Request Context-Specific Clinical Knowledge Form Online Resources

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard/Implementation Specification</th>
<th>Standards Process Maturity</th>
<th>Implementation Maturity</th>
<th>Adoption Level</th>
<th>Federally Required</th>
<th>Cost</th>
<th>Test Tool Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>HL7 Version 3 Standard: Context Aware Knowledge Retrieval Application (Infobutton), Knowledge Request Release 2</td>
<td>Final</td>
<td>Production</td>
<td>● ● ● ● ○</td>
<td>Yes</td>
<td>Free</td>
<td>No</td>
</tr>
<tr>
<td>Implementation Specification</td>
<td>HL7 Implementation Guide: Service-Oriented Architecture Implementations of the Context-Aware Knowledge Retrieval (Infobutton) Domain, Release 1</td>
<td>Final</td>
<td>Production</td>
<td>● ● ● ● ○</td>
<td>Yes</td>
<td>Free</td>
<td>No</td>
</tr>
<tr>
<td>Implementation Specification</td>
<td>HL7 Version 3 Implementation Guide: Context-Aware Knowledge Retrieval (Infobutton), Release 4</td>
<td>Final</td>
<td>Production</td>
<td>● ● ● ● ○</td>
<td>Yes</td>
<td>Free</td>
<td>No</td>
</tr>
</tbody>
</table>

**Limitations, Dependencies, and Preconditions for Consideration:**
- Feedback requested

**Applicable Security Patterns for Consideration:**
- Feedback requested
Draft 2017 ISA Highlights

• Nursing subsection was added with 5 interoperability needs
• Social determinants of health subsection was added with 8 interoperability needs
• Enhanced previously included social determinants of health
• Additional subsections added
  • Research
  • Clinical quality measures
  • Data provenance
  • Medical device communication to other IT
  • Public health exchange
Call for Public Comment

• Comments due October 24, 2016
  • 15 questions, general (5) and specific (10)
• Send comments to mn.ehealth@state.mn.us
Minnesota Health Records Act
(Consent)
Request for Information (RFI)
Next Steps

• Minnesota e-Health Advisory Committee
  December 8, 2016, Wilder Center

• Next HIE Workgroup meeting
  February 2017

*Save the Date:* Minnesota e-Health Summit
  Thursday, June 15, 2017