



HIE Use Case Design Group

A Design Group of the Connecticut Health IT Advisory Council

October 11, 2017 | 2:30 – 4:00 pm

Session #11

Facilitated by CedarBridge Group



CEDARBRIDGE
GROUP

Agenda

Welcome / Roll Call	Michael Matthews	2:30 PM
Comments on 10/4/17 Minutes	Design Group Members	2:32 PM
Review Meeting Schedule	Michael Matthews	2:34 PM
Review Accepted Rollout of Use Cases	Michael Matthews	2:35 PM
Business Model Discussion	Michael Matthews	3:00 PM
Driving to Sustainability	Michael Matthews	3:40 PM
Meeting Wrap-up and Next Steps	Michael Matthews	3:55 PM

Comments on 10/04/17 Minutes

Meeting Schedule

Milestones/Deliverables	Dates
Session 1: Kick-Off Meeting	6/27/17
Session 2: Review Use Cases (Part 1)	7/12/17
Session 3: Review Use Cases (Part 2)	7/19/17
Present update to Health IT Advisory Council	7/20/17
Session 4: Review Use Cases (Part 3)	7/27/17
Session 5: Review Use Cases (Part 4)	8/2/17
Session 6: Review Use Cases (Part 5) and Prioritization Criteria for Use Cases	8/9/17
Session 7: Review Final Use Cases (Part 6); Apply Prioritization Criteria	8/16/17
Present Update to Health IT Advisory Council	8/17/17
Session 8: Select “Top 10” Use Cases; Discuss Final Prioritization Criteria	8/23/17
CedarBridge to Conduct Analysis of “Top 10” Use Cases; Research Financial, Business, Legal, and Policy Considerations	8/23/17 - 8/30/17
Session 9: Validate Value Propositions, Implementation Priorities, and HIE Services Needed to Enable Priority Use Cases	8/30/17
Session 10: Review of Additional Information and Preliminary Recommendations	10/4/17
Session 11: Final Recommendations	10/11/17
Final Report and Recommendations to Health IT Advisory Council	10/19/17

Accepted Wave 1: Summary

eCQM Reporting System

- Procurement
- Implementation

Immunization Information System

- Implementation
- Integration with Public Health Reporting

Longitudinal Health Record

- Leverage eHEX, CeQ, CW
- Implement provider portal

Public Health Reporting

- Potential to leverage/expand AIMS
- Implement expanded data elements; onboarding and TA

Clinical Encounter Alerts

- Finalize business requirements
- Procurement/contracting (including leverage of existing assets)

Image Exchange

- Finalize business and functional requirements
- Further discussions with NYeC

Accepted Wave 2: Summary

Medication Reconciliation

- Implement pilot for process re-design
- Implement technology to support re-designed process

MOLST / Advance Directives

- Partner with existing MOLST Task Force and Advisory Committee to assess technology value-add
- Further assess value of complementary AD Registry

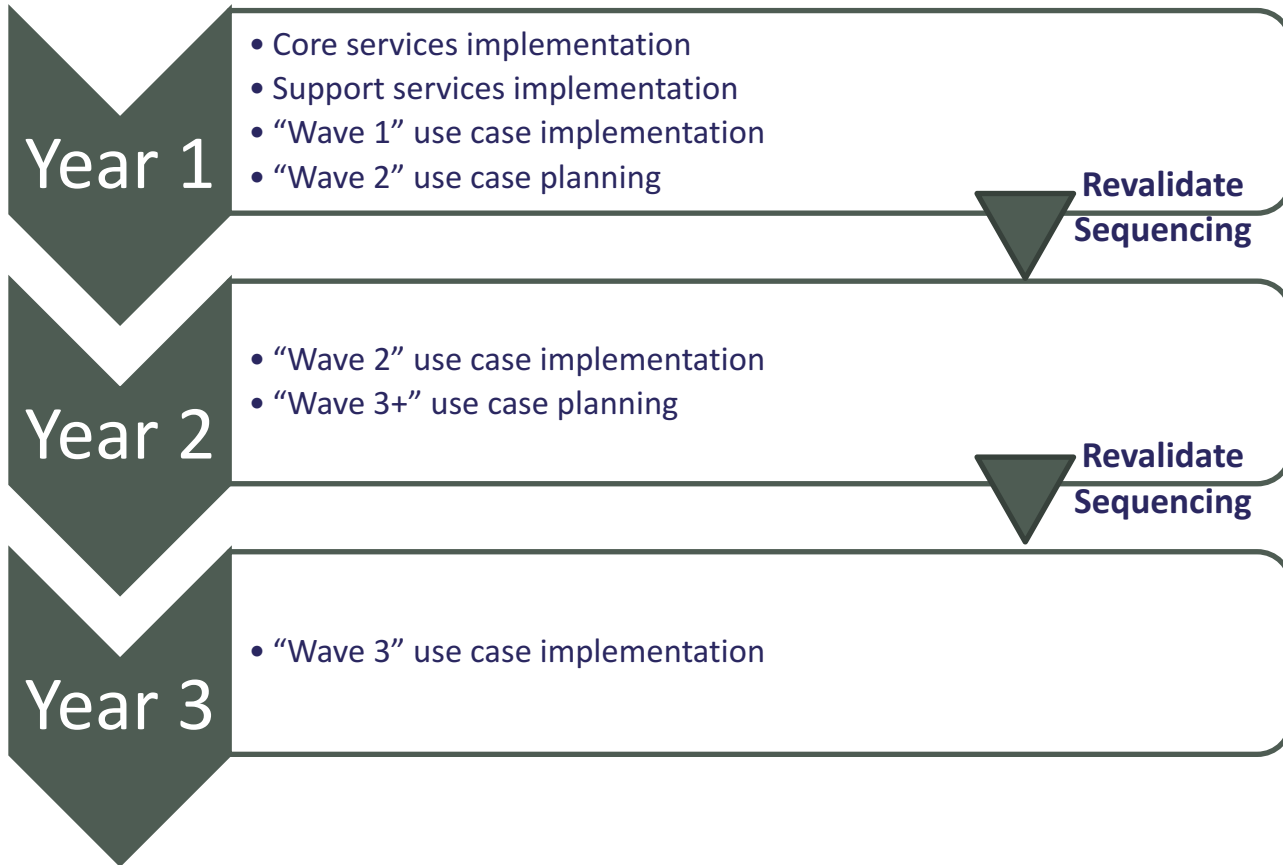
Patient Portal

- Plan for rollout after implementation of longitudinal health record

Population Health Analytics

- Plan for rollout after eCQM RS and required technical architecture

Rollout




Business Model Discussion

- Sustainability considerations
- HIE expenses
- Benefits of HIE
- Evidence of impact
- Business models
- Role of the state
- Driving to sustainability

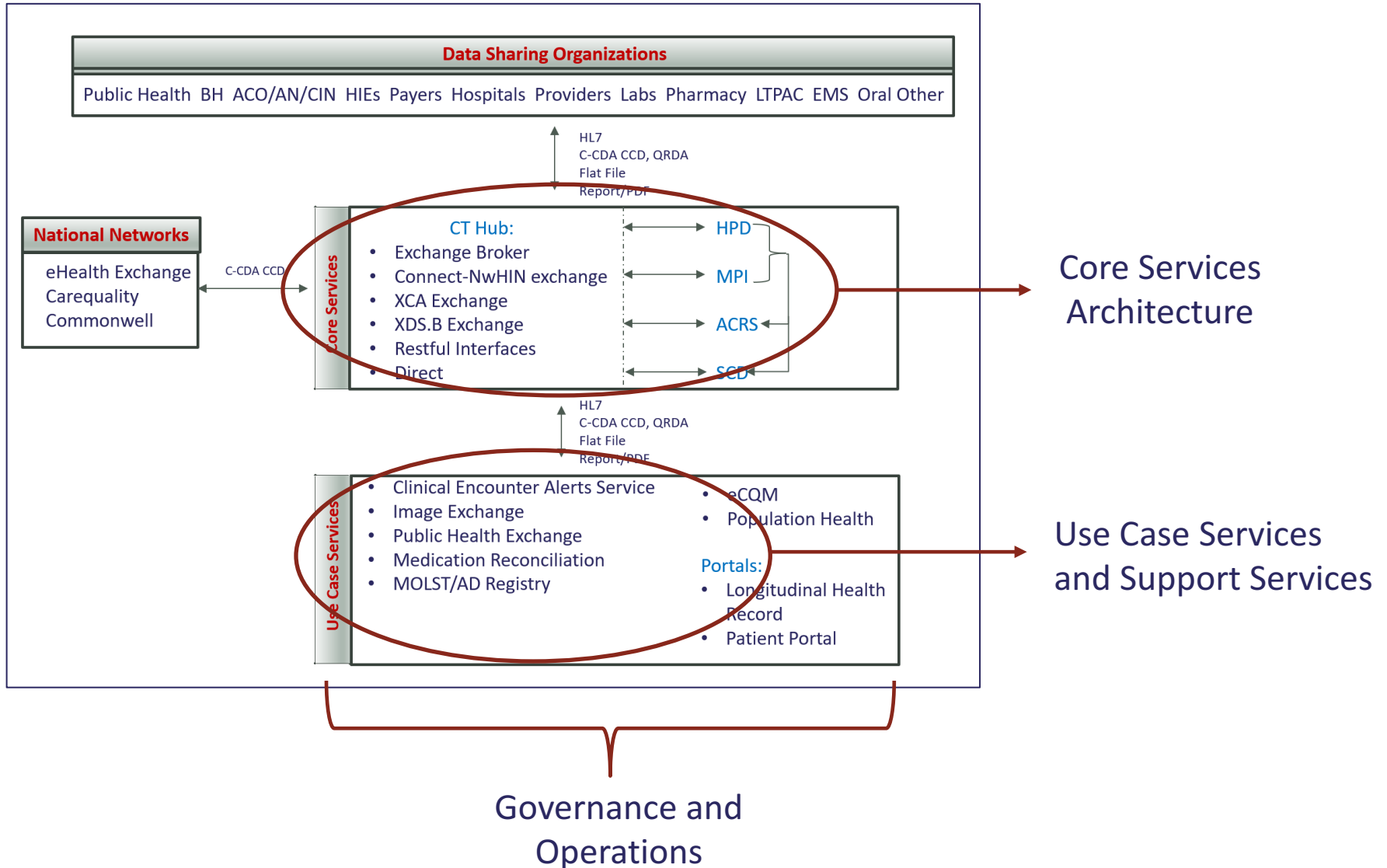


Sustainability Considerations



<p>Primary focus of the Design Group to date has been on value creation and technical requirements.</p>
<p>The recommendations for initial use cases have been driven by experience, common agreements around value among Design Group members, and best practices from successful HIEs in other states.</p>
<p>The HITO should include adequate resources to develop a sound long-term financial sustainability plan in the next IAPD funding request.</p>
<p>In operations of the future HIE entity, rigorous measures of usage and value creation should be implemented to ensure all services provide correlating value to investments, with processes for implementing adjustments, as needed.</p>

HIE Expenses



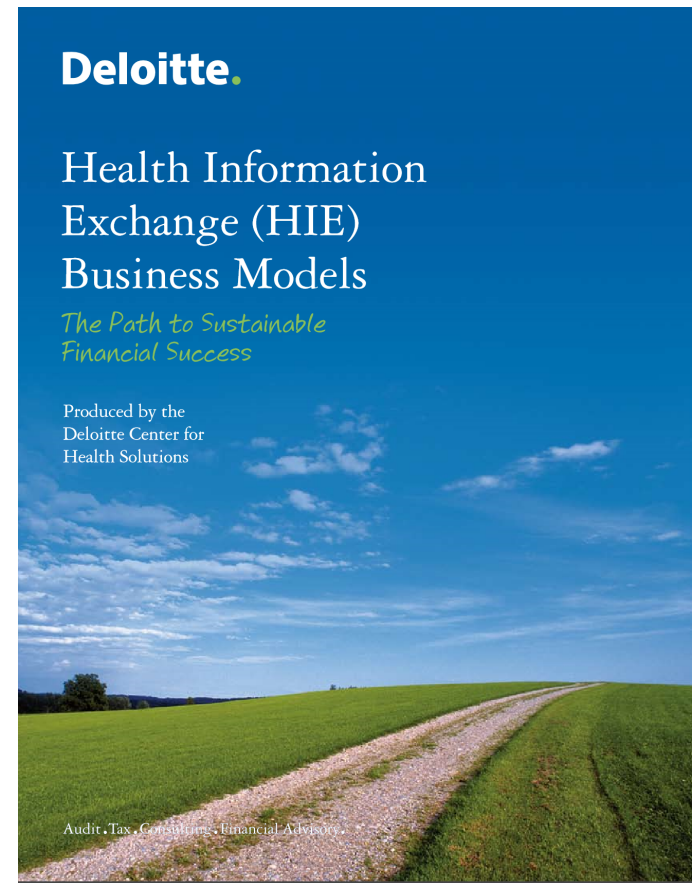
Sustainability: Not a New Issue

The spread of sustainable HIEs and other interoperable health information systems will enable the health care industry to take a major step forward in improving the quality, safety and efficiency of care. First, however, HIE stakeholders must embrace fiscal responsibility and viability to make sure that the promise of HIEs remains in lockstep with the economics.

2006



By John Glaser, Ph.D.,
Senior Advisor, Deloitte Center for Health Solutions



HIE Benefits: *“The Usual Suspects”*

- Improve **patient safety** by reducing medication and medical errors;
- Increase **efficiency** by eliminating unnecessary paperwork and handling;
- Provide caregivers with clinical decision support tools for **more effective care and treatment**;
- **Eliminate redundant or unnecessary testing**;
- Improve **public health reporting and monitoring**;
- **Engage healthcare consumers** regarding their own personal health information;
- Improve **healthcare quality and outcomes**; and
- **Reduce health related costs.**



Impact Analysis Lacking Hard Data

By Saurabh Rahurkar, Joshua R. Vest, and Nir Menachemi

Despite The Spread Of Health Information Exchange, There Is Little Evidence Of Its Impact On Cost, Use, And Quality Of Care

ABSTRACT Health information exchange (HIE), which is the transfer of electronic information such as laboratory results, clinical summaries, and medication lists, is believed to boost efficiency, reduce health care costs, and improve outcomes for patients. Stimulated by federal financial incentives, about two-thirds of hospitals and almost half of physician practices are now engaged in some type of HIE with outside organizations. To determine how HIE has affected such health care measures as cost, service use, and quality, we identified twenty-seven scientific studies, extracted selected characteristics from each, and meta-analyzed these characteristics for trends. Overall, 57 percent of published analyses reported some benefit from HIE. However, articles employing study designs having strong internal validity, such as randomized controlled trials or quasi-experiments, were significantly less likely than others to associate HIE with benefits. Among six articles with strong internal validity, one study reported paradoxical negative effects, three studies found no effect, and two studies reported that HIE led to benefits. Furthermore, these two studies had narrower focuses than the others. Overall, little generalizable evidence currently exists regarding benefits attributable to HIE.

Health Information Exchange as a Driver of Improved Population Health

Julia Adler-Milstein, PhD
January 19, 2017

- ▶ Evidence is weak, and mixed
 - ▶ Suggests low levels of use, often due to poor workflow integration
 - ▶ Most consistent evidence comes from emergency department settings and avoiding redundant utilization
 - ▶ Little insight into mechanisms

Annals of Internal Medicine

REVIEW

Usage and Effect of Health Information Exchange

A Systematic Review

Robert S. Rudin, PhD; Aneesa Motala, BA; Caroline L. Goldzweig, MD, MSHS; and Paul G. Shekelle, MD, PhD

Background: Health information exchange (HIE) is increasing in the United States, and it is incentivized by government policies.

Purpose: To systematically review and evaluate evidence of the use and effect of HIE on clinical care.

Data Sources: Selected databases from 1 January 2003 to 31 May 2014.

Study Selection: English-language hypothesis-testing or quantitative studies of several types of data exchange among unaffiliated organizations for use in clinical care that addressed health outcomes, efficiency, utilization, costs, satisfaction, HIE usage, sustainability, and attitudes or barriers.

Data Extraction: Data extraction was done in duplicate.

Data Synthesis: Low-quality evidence from 12 hypothesis-testing studies supports an effect of HIE use on reduced use or costs in the emergency department. Direct evidence that HIEs were used by providers was reported in 21 studies involving 13 distinct HIE organizations, 6 of which were located in New York, and generally showed usage in less than 10% of patient encounters. Findings

from 17 studies of sustainability suggest that approximately one quarter of existing HIE organizations consider themselves financially stable. Findings from 38 studies about attitudes and barriers showed that providers, patients, and other stakeholders consider HIE to be valuable, but barriers include technical and workflow issues, costs, and privacy concerns.

Limitation: Publication bias, possible selective reporting of outcomes, and a dearth of reporting on context and implementation processes.

Conclusion: Health information exchange use probably reduces emergency department usage and costs in some cases. Effects on other outcomes are unknown. All stakeholders claim to value HIE, but many barriers to acceptance and sustainability exist. A small portion of operational HIEs have been evaluated, and more research is needed to identify and understand success factors.

Primary Funding Source: U.S. Department of Veterans Affairs. (PROSPERO registration number: CRD42014007469)

Ann Intern Med. 2014;161:803-811. doi:10.7326/M14-0877 www.annals.org
For author affiliations, see end of text.

Health Information Exchange Readiness for Demonstrating Return on Investment and Quality of Care

This study demonstrates the challenge faced by policy makers and healthcare organizations that are investing millions of dollars in HIEs that are believed to improve health outcomes and increase efficiency, but still need more time to develop the evidence to confirm that belief. Our study shows that calculating ROI for HIEs or their impact on quality of care remains a secondary priority for most HIEs. This finding raises serious questions for the sustained support of HIEs, both financially and as a policy lever, given the end of Health Information Technology for Economic and Clinical Health (HITECH) Act funding.

Case Study in Value Creation: Disability Determination

- For patients and families
 - Disability determination turnaround reduced by 35%
- For SSA
 - Efficiencies vs. paper-based process
- For health system
 - \$2.2M revenue enhancement for 4-hospital system

Social Security Administration (SSA)
Specialized Advisory and Assistance Services (SAAS)

Using the Nationwide Health Information Network to Deliver Value to Disability Claimants:

A Case Study of Social Security Administration and
MedVirginia Use of MEGAHIT for Disability Determination



Sue S. Feldman, RN, MEd
Thomas A. Horan, PhD

Kay Center for E-Health Research
Claremont Graduate University

Emerging Evidence

Reducing Medicare Spending through Electronic Information Exchange: The

Role of Incentives and Exchange Maturity

Idris Adjerid*, Julia Adler-Milstein**, Corey Angst*

*University of Notre Dame

**University of Michigan

We find significant cost reductions in healthcare markets that have established operational HIEs, with an average reduction in spending of \$139 (1.4% decrease) per Medicare beneficiary per year. We also find that these reductions occur disproportionately in healthcare markets where providers have financial incentives to use an HIE to reduce spending and when HIEs are more mature.

Effective HIE Use, Federal Incentives May Save Medicare Billions

Evidence shows mature HIE use and well-aligned federal incentives could save Medicare \$3.12 billion on average each year.



Clinical Research and HIEs

Research on medication adherence and health outcomes fundamentally relies on complete patient data including medication history and laboratory test results. Patients, especially with chronic conditions, often receive care from different health care facilities, and patient data are usually scattered across different “islands”. It is impossible to generate complete patient-level data from multiple sources without support of an HIE.

Facilitating Clinical Research through the Health Information Exchange: Lipid Control as an Example

Vivienne J. Zhu, MD, MS,^{1,2} Wanzhu Tu, Ph.D,^{1,2} Marc B. Rosenman, MD,^{1,2}
J. Marc Overhage, MD, Ph.D^{1,2}
¹Regenstrief Institute and ²Indiana University School of Medicine, IN

ABSTRACT

Using data from the Indiana Network of Patient Care (INPC), we analyzed long-term statin adherence patterns and their effects on low-density lipoprotein cholesterol (LDL-C) control among patients with type 2 diabetes. Statin adherence was measured by proportion of days covered (PDC) for a 6-month interval prior to each LDL-C test date. Patient demographic and clinical characteristics were used as covariates for LDL-C control and predictors for statin adherence. From 4,350 eligible subjects, 25,596 6-month PDC and LDL-C level pairs were formed between 2001 and 2009. Rates of suboptimal adherence and suboptimal LDL-C control were 68.5% and 46.6%, respectively. Positive predictors for LDL-C control included adherence to statin (OR: 1.87, $p < 0.0001$) and older age (OR: 1.11, $p = 0.01$). Significant risk factors for non-adherence were young age, female gender, African American race and newly-treated status. This study demonstrated the utility of a health information exchange in health outcome and clinical effectiveness research.

INTRODUCTION

One of the challenges for performing health outcome and clinical effectiveness research is assembling the appropriate data particularly when studying a question that involves care in multiple disparate settings. A well-established health information exchange (HIE) supports key components of health outcome research and chronic care management including diabetes.¹ The main features of our HIE infrastructure are as follows: a centrally managed federated data repository; standard medical terminology usage for patient data acquisition; interconnected linkages among different hospitals, laboratories, pharmacies and clinics while maintaining data integrity, quality and security; robust patient matching and patient-centric

Hyperlipidemia has a high prevalence in type 2 diabetes and causes high rates of macrovascular complications. Up to 80% of patients with type 2 diabetes will develop or die of macrovascular diseases.⁴ In order to control macrovascular risk factors among patients with type 2 diabetes for both primary and secondary prevention, the American College of Physicians (ACP) recommended widespread statin (3-HYDROXY-3-METHYL-glutaryl coenzyme A [HMG-CoA] reductase inhibitor) use to lower serum cholesterol, with a target low-density lipoprotein cholesterol (LDL-C) level of 100mg/dL.⁵

Despite the known high macrovascular risks and the evidence-based guidelines for vascular protection, suboptimal lipid control is widely observed among patients with type 2 diabetes in clinical settings.⁶ Clinical trials have analyzed statin adherence patterns and have found a significant correlation between adherence to statins and LDL-C reduction.⁷⁻⁸ However, these studies usually follow patient medication taking behavior for only a short time period, while medication adherence changes over time especially for patients with chronic conditions. In addition, patients in a usual-care setting often do not adhere to prescribed treatment regimens and regular LDL-C laboratory tests as closely as those in a clinical trial. Medication non-adherence to statins has been demonstrated to be a barrier for patients in usual care settings to obtain benefits from statins.⁹ These discrepancies suggest that a longitudinal study of real-world clinical settings is necessary to compare the magnitude of benefits of statin therapy to that which is demonstrated in clinical trials.

Research on medication adherence and health outcomes fundamentally relies on complete patient data including medication history and laboratory test results. Patients, especially with chronic conditions, often receive care from different health care facilities,

HIE Sustainability Models Survey Results and Analysis

HIMSS FY16 HIE *inPractice* Task Force



“...one of the most important things that an HIE can do is engage their community to better understand the specific gaps and needs that exist and how new services will translate into value for members.”

- Fourteen HIEs surveyed
- Services covered
 - Community health record (13/14)
 - Direct Messaging (13/14)
 - ADT Alerts (12/14)
 - Patient Matching (12/14)
 - Results Delivery (10/14)
- Funding model
 - Monthly Fee/Annual Subscription (9/14)
 - Combination of subscription and fee for service (3/14)
 - Fee for service (1/14)
 - Public good (1/14)
- Critical mass of adoption > 50%
- Services requested, but not provided
 - Image Exchange
 - Reporting and Analytics
 - Clinical Quality Measure (CQM) support
- No silver bullet

A Sustainable Business Model for Health Information Exchange Platforms: The Solution to Interoperability in Healthcare IT

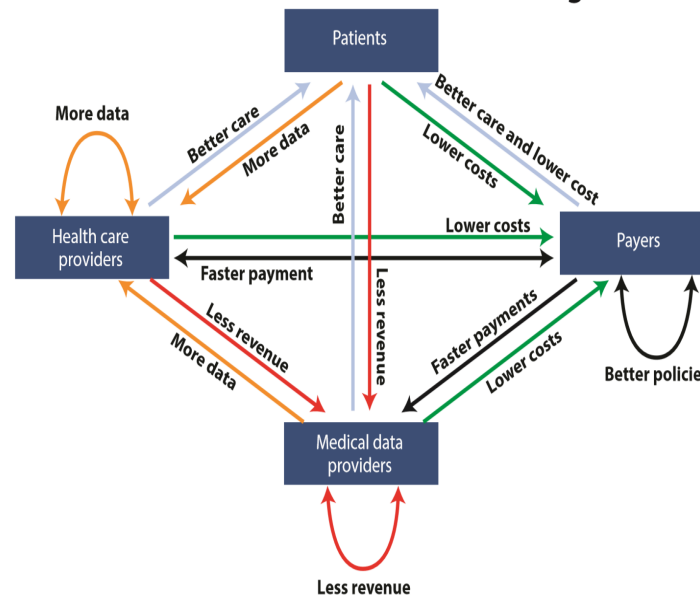
Niam Yaraghi

Center for
Technology Innovation
at BROOKINGS

Table 1: The HIE Platform's Potential Services and Financing Sources

Potential Customers	HIE Service	Financing sources
ACO	Access to health records	Reduced costs and increased margin of benefits
Payers	Prompting physicians to use the recent test results instead of ordering new ones / customized alerts and summaries of health data	Shared savings program between the HIE platforms, health care providers and payers
Patients	Access to organized personal health records	Customized reports and alerts provided through third party vendors such as mobile apps
NIH	Customized patient data summaries	A part of the budget of the research projects that are currently allocated to data collection
Pharmaceutical companies	Customized patient data summaries	Faster research projects and more efficient marketing strategies
Public health authorities	Data analytics / Customized summaries of health data	A part of the budget that are currently allocated to the slow and expensive data collection and analysis tasks

Network Effects in Health Information Exchange Market



Role of the State

■ Enablers

- Effective use of legislation
- Effective use of policy levers, such as grants, incentives, and executive orders
- Strategic leveraging of existing investments in HIE

■ Common challenges

- Limited demand for HIE
- Sustainability
- HIE integration into provider workflow

FINAL REPORT

Key Challenges to Enabling Health Information Exchange and How States Can Help

DATE:
August 2014

PRESENTED TO:
The Office of the National Coordinator
for Health Information Technology
U.S. Department of Health and Human
Services
Washington, DC

PRESENTED BY:
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Role of Policymakers

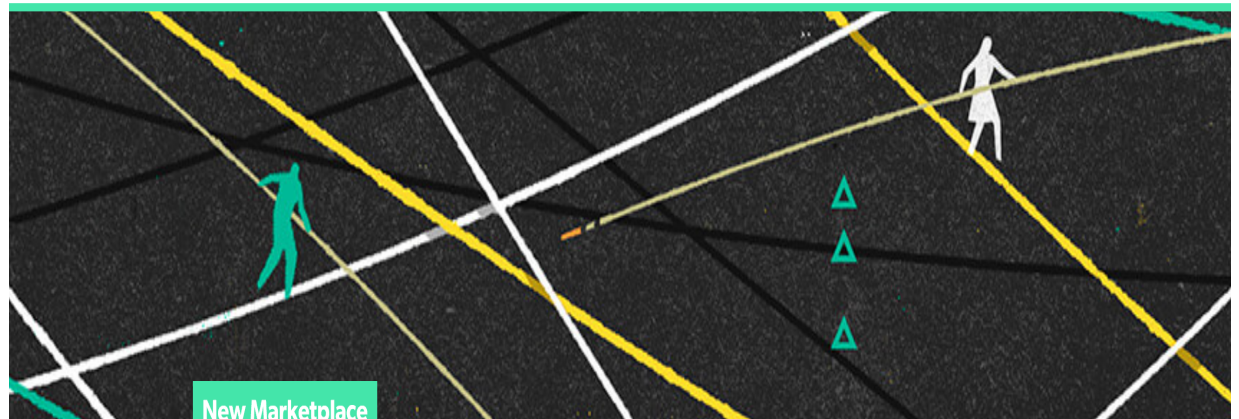
Without strong incentives that would have created market demand for robust interoperability from the start, we now must retrofit interoperability, rather than having it be a core attribute of our health IT ecosystem.”

Of the stakeholders, only policymakers have a clear, strong interest in promoting interoperability. Therefore, it is up to them to ensure that robust, cross-vendor interoperability is a stay-in-business issue for EHR vendors and providers.”



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NEW RISK, NEW BUSINESS MODELS

Julia Adler-Milstein, PhD

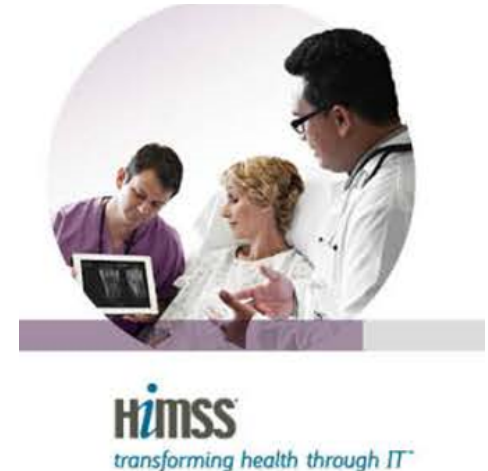
University of Michigan

Moving Past the EHR Interoperability Blame Game

Article · July 18, 2017

Creating a Healthcare Data Economy

- Healthcare data as an asset
- Data as currency
- Meaningful measures of interoperability
- Incentives through payment models

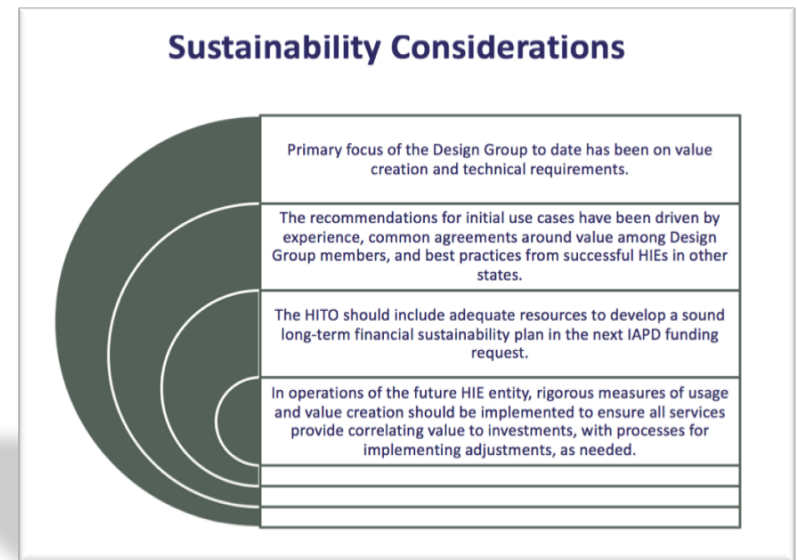


The Business Case for Interoperability and Health Information Exchange

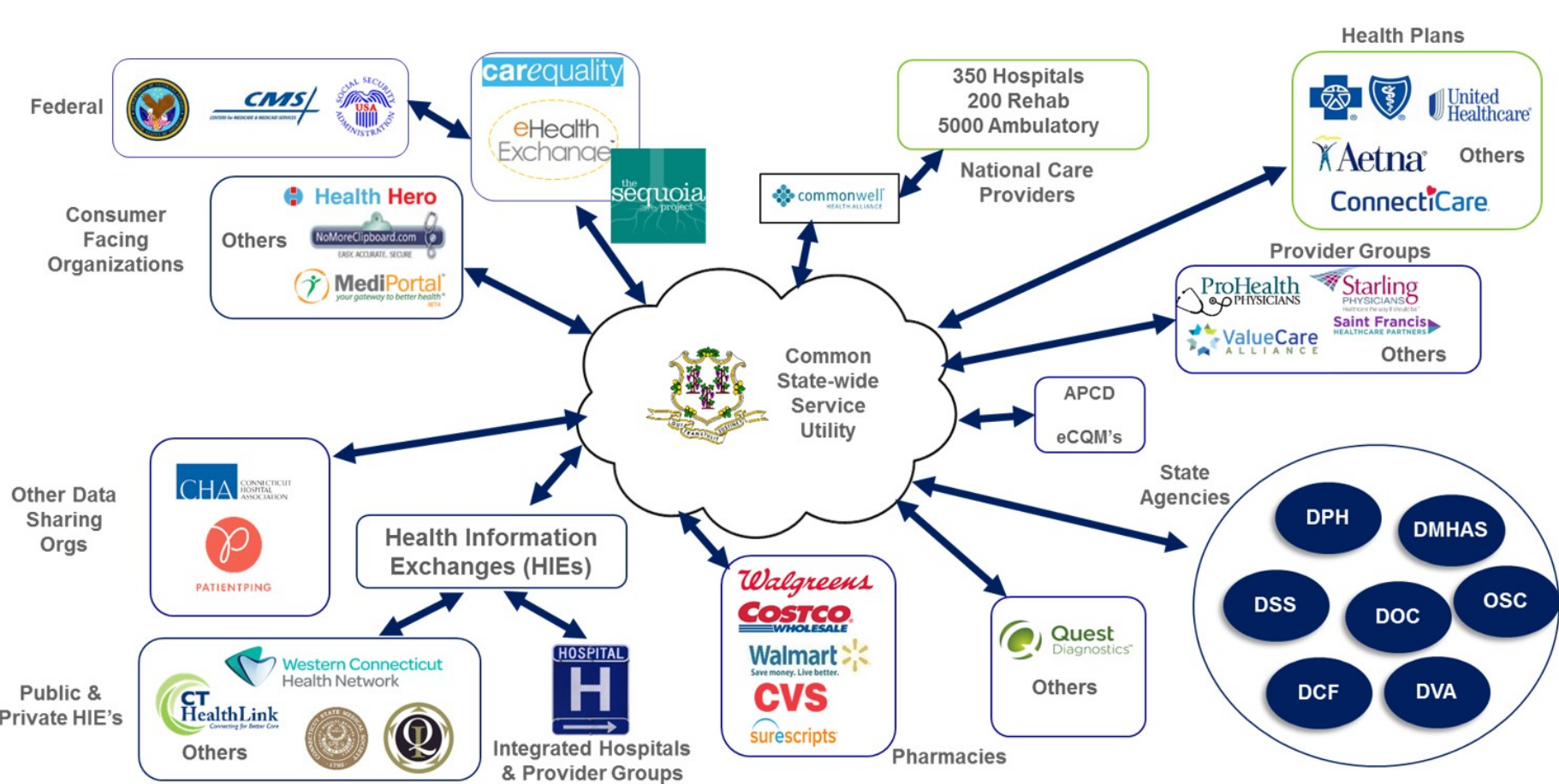
Analysis and Recommendations

Driving to Sustainability

1. Focus on demand
2. Leverage value-based care initiatives
3. Define and support a “healthcare data economy”
4. Support necessary workflow changes with technical assistance and education
5. Engage payers
6. Innovate (e.g., clinical research)
7. Allocate expenses judiciously
8. Include funding for development of a long-term financial sustainability plan in IAPD
9. Implement rigorous measures of usage and value
10. Ongoing communication avenues with all stakeholders



Discussion and Next Steps





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Carol Robinson

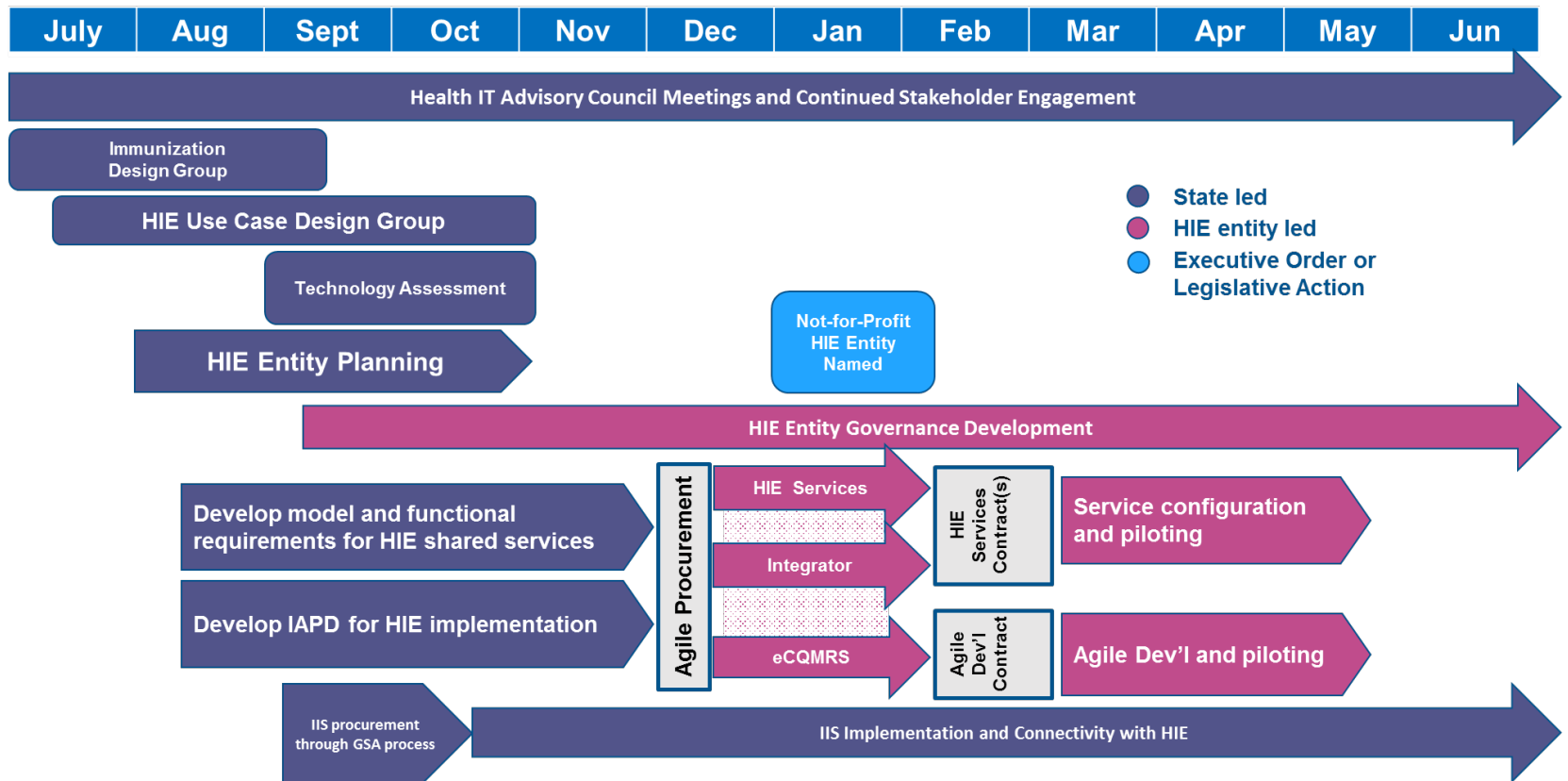
Carol@cedarbridgegroup.com

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Appendix

Procurement Timeline



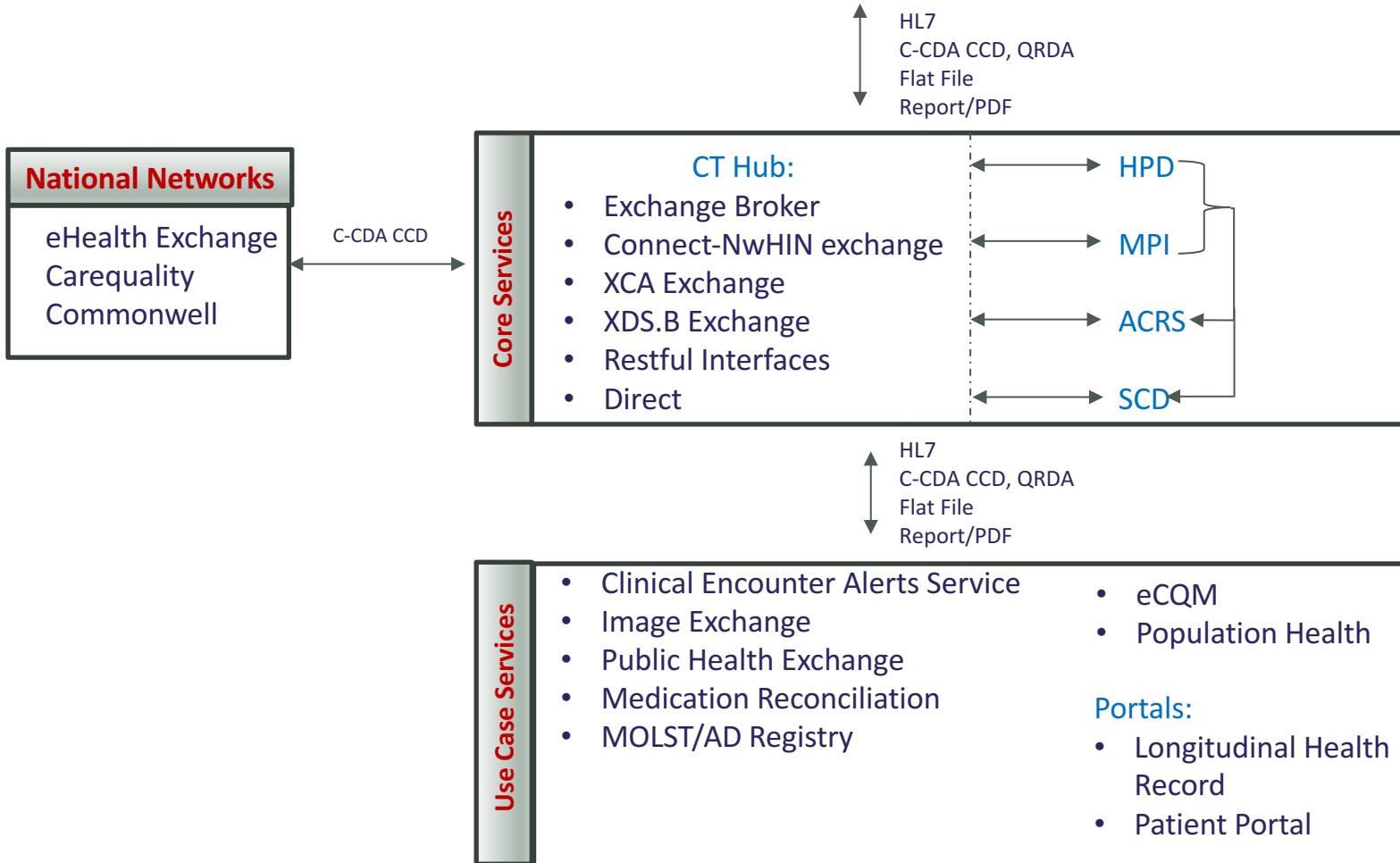
System Components

System Components and Services:	Clinical Encounter Alerts	Longitudinal Health Records	Public Health Reporting	Patient Portal	Image Exchange	eCQM Reporting
MPI	X	X	X	X	X	X
Provider Directory	X	X	X	X	X	X
Active Care Relationship	X	X		X		X
Transformation	X	X	X	X	X	X
Map concepts and codes across controlled terminologies (VSAC, SNOMED, HCPCs, etc.)	X	X		X		X
Normalization and standardization	X		X	X	X	X
Rules Engine(s)	X		X	X		
Deduplication	X					X
Consolidation	X	X		X		X
Error detection and correction	X	X	X	X	X	X
Interface engine: transport/validation/translation/routing	X		X			X
Data governance	X	X	X	X	X	X
Logging	X	X	X	X	X	X
Account management	X	X		X	X	X
Error trapping	X	X	X	X	X	X
Security	X	X	X	X	X	X
Auditing	X	X	X	X	X	X
Measure specification data						X
Schema Mapping	X	X	X	X	X	
Compliant Gateway		X		X		
Reporting tool integration (i.e. SSRS)	X					X
Image Exchange Gateway					X	
Enterprise Viewer					X	
Consent Management	X	X	X	X	X	X
API and other submission methods of measures to CMS						X

HIE Services

Data Sharing Organizations

Public Health BH ACO/AN/CIN HIEs Payers Hospitals Providers Labs Pharmacy LTPAC EMS Oral Other



Use Cases Under Review

- eCQM Reporting System
- Immunization Information System
- Longitudinal Health Record
- Public Health Reporting
- Clinical encounter alerts
- Image exchange
- Medication reconciliation
- MOLST / advance directives
- Population health analytics
- Patient portal / personal health record

eCQM Reporting System

Prior use case highlights	<ul style="list-style-type: none">• eCQM DG recommendations• Function and purpose• Value proposition• Actors
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations• Requirements documentation• RFP preparation
Proposed approach	<ul style="list-style-type: none">• Procurement• Necessary enabling services will be included in the IAPD-U; development and deployment of eCQM analytics will be funded by SIM

Immunization Information System

Prior use case highlights	<ul style="list-style-type: none">• IIS DG recommendations• Function and purpose• Value proposition• Actors
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations• Acceptance of recommendations by Health IT Advisory Council 9/21/17
Proposed approach	<ul style="list-style-type: none">• Inclusion in IAPD-U• Procurement

Longitudinal Health Records

Prior use case highlights	<ul style="list-style-type: none">• Function and purpose• Value proposition• Actors
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations<ul style="list-style-type: none">• Requirements of PA 16-77• 21st Century Cures Act• Privacy and security• Value-based care• National networks (eHealth Exchange, CareQuality, Commonwell)• Border states HIE initiatives• Existing interoperability assets in CT• Technical requirements
Proposed approach	<ul style="list-style-type: none">• “First Wave” use case• Federated model• Leverage national networks• Provider portal• Inclusion in IAPD-U

Sample Provider Portal

Participants

- Bon Secours VA 1/71
- DOD 33/33
- VA 9/70

Search Status

Clinical Sections

- Demographics
- Providers
- Allergies
- Encounters
- Immunizations
- Medications
- Problems
- Procedures
- Results
 - Clinical Notes
 - Laboratory
 - Pathology
 - Radiology
 - Vital Signs

Expand All Collapse All Print All Filter All Tables

chdrone
chdrzzztestpatient

Refine Search

You searched for

First Name: chdrone Date of Birth: 3/3/1960
 Middle Name: Social Security Number: 666000001
 Last Name: chdrzzztestpatient Gender: Male
 Date Range: 6/9/2000 to 6/9/2015

Demographics

Source	Name	DOB	SSN	Gender	Ethnicity	Address
Bon Secours VA	CHDRONE CHDRZZZTESTPATIENT	03/03/1960	666000001	Male	UNK	1234 HOWARD ST LA JOLLA CA 92038
DOD	CHDRONE CHDRZZZTESTPATIENT	03/03/1960	1463132140	Male		1234 Howard St La Jolla CA 92038-0000 United States

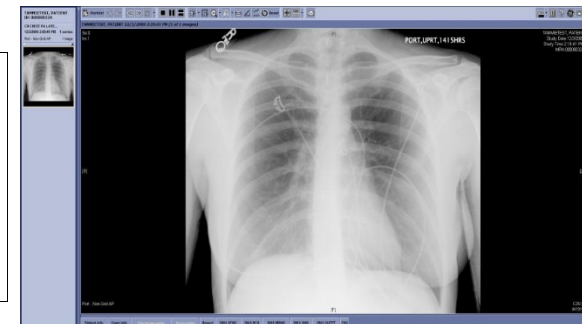
Results: Laboratory

Date/Time	Battery	Test	Result	Reference Range	Interpretation Code	Status	Source
07/01/2014	G3 ISTAT - PUL	PH ISTAT	7.137	7.35-7.45	LOW	completed	Bon Secours VA
07/01/2014	G3 ISTAT - PUL	PCO2 ISTAT	75.4 MMHG	35.0-45.0	HIGH	completed	Bon Secours VA
07/01/2014	G3 ISTAT - PUL	PO2 ISTAT	33 MMHG	80-100	LOW	completed	Bon Secours VA
07/01/2014	G3 ISTAT - PUL	HCO3 ISTAT	25.5 MMOL/L	22-26		completed	Bon Secours VA
07/01/2014	G3 ISTAT - PUL	SO2 ISTAT	44 %	92-97	LOW	completed	Bon Secours VA
07/01/2014	G3 ISTAT - PUL	BASE DEFICIT ISTAT	4 MMOL/L			completed	Bon Secours VA
07/01/2014	G3 ISTAT - PUL	SPECIMEN TYPE	ARTERIAL			completed	Bon Secours VA
07/01/2014	MONOSPOT	MONOSPOT	NEGATIVE	NEG		completed	Bon Secours VA
02/10/2010	D-DIMER SEMI QT.	D-DIMER SEMI QT.	0.69 MG/L FEU	0.00-0.65	HIGH	completed	Bon Secours VA

Results

Radiology

Date/Time	ID	Test	Source
10/10/2013	8613548	CHEST PA LATERAL	Bon Secours VA
12/03/2009	8613548	CHEST PA LATERAL	Bon Secours VA



- Clinical Document Summary (C-CDA and C62) rendering that has multiple clinical components – Demographics, Providers, Allergies, Encounters, Immunizations, Medications, Payers, Problems, Procedures, Results-Clinical Notes, Laboratory, Radiology, Pathology, etc.
- Filtering and printing by participant, across sources, within sections, within results

Public Health Reporting

Prior use case highlights	<ul style="list-style-type: none">• Function and purpose• Value proposition• Actors
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations• IIS DG recommendations accepted by Health IT Advisory Council• Need for gateway to submit/query for immunizations (plus syndromic surveillance, reportable labs, tumor registry)• APHL Informatics Messaging Services (AIMS)• Technical requirements
Proposed approach	<ul style="list-style-type: none">• “First Wave” use case• Further assess potential to leverage / expand AIMS• Onboarding• Technical assistance• Inclusion in IAPD-U

AIMS:

APHL Informatics Messaging Service

Platform Applications

Hosted Solutions

- Route-Not-Read
- Web Services
- SFTP
- ELR
- Hosting
- Transport Interop
- Message Routing
- Message Transform
- DB
- Backups
- Disaster Recovery

Services



Systems Management

Security & Information Assurance



- Compute
- Storage & Content Delivery
- Databases
- Networking
- Administration & Security



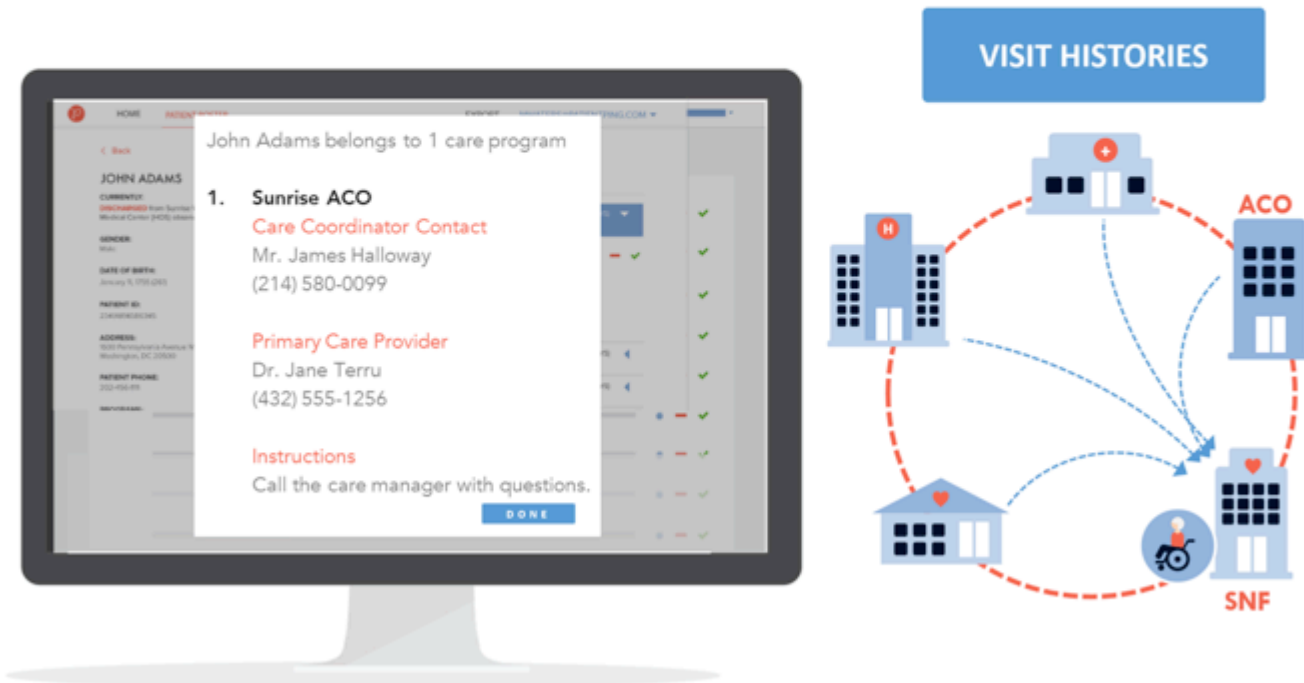
Clinical Encounter Alerts

Prior use case highlights	<ul style="list-style-type: none">• Function and purpose• Value proposition• Actors
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations<ul style="list-style-type: none">• PA 16-77• Value-based care• Connecticut Hospital Association / PatientPing review• Technical requirements
Proposed approach	<ul style="list-style-type: none">• “First Wave” use case• Further refine business and technical requirements• RFI to assess existing CT assets• Procurement/contracting• Inclusion in IAPD-U

PatientPing

RELEVANT INFORMATION

To all stakeholders in real time



Medication Reconciliation

Prior use case highlights	<ul style="list-style-type: none">• Function and purpose• Value proposition• Actors
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations• Further research on medication reconciliation process• Discussions with UCONN Pharmacy re: initiative to address process and technology
Proposed approach	<ul style="list-style-type: none">• Initial project focus on process re-design and associated technology support• Technology procurement as indicated• Statewide rollout• Inclusion in IAPD-U

Medication Reconciliation Challenges

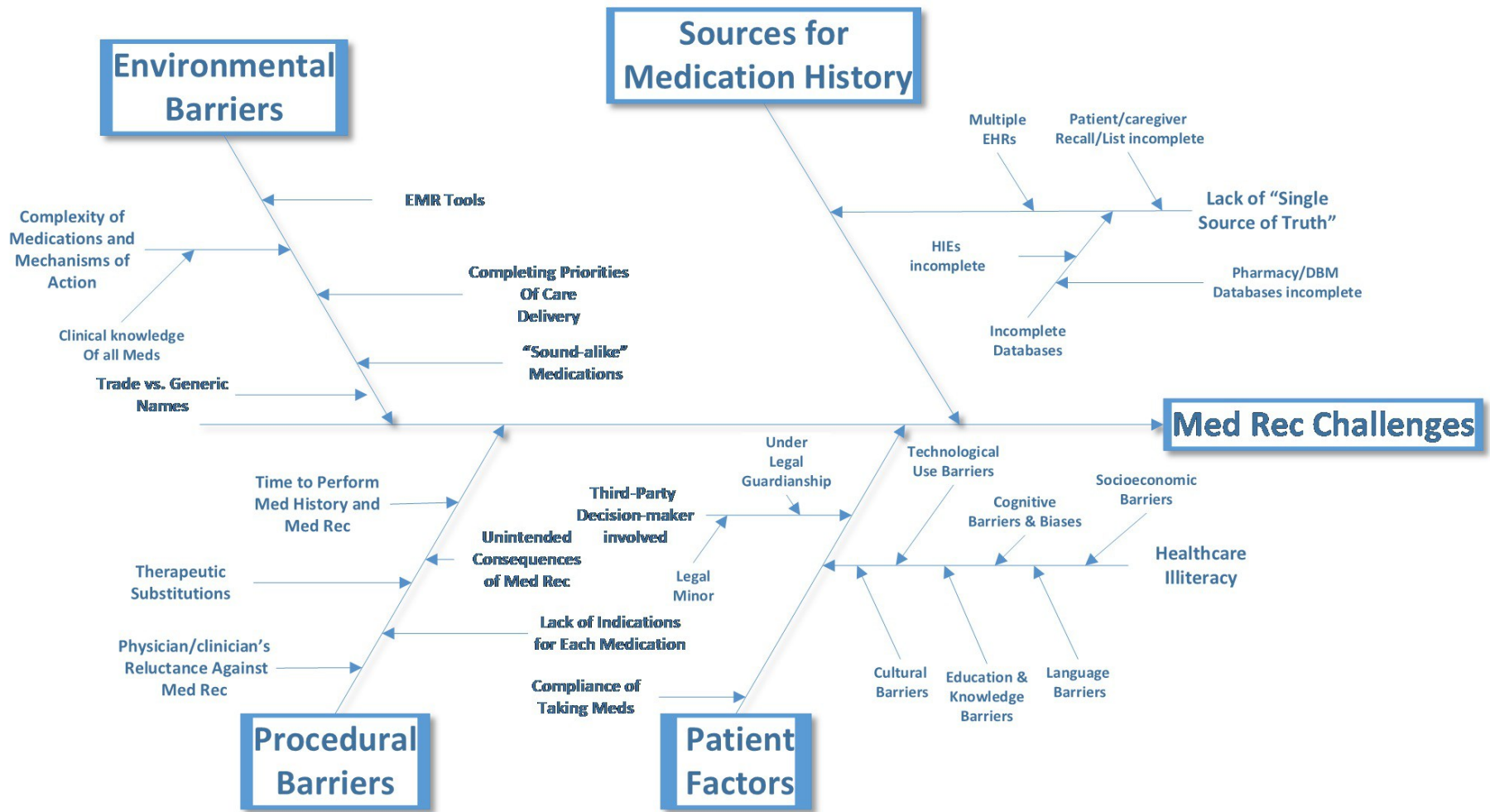


Image Exchange

Prior use case highlights	<ul style="list-style-type: none">• Function and purpose• Value proposition• Actors
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations• Further research on image exchange• Discussion / information from NYeC• Radiology-to-radiology use case• Referral use case
Proposed approach	<ul style="list-style-type: none">• “First Wave” use case• Inclusion in IAPD-U

NYeC Image Exchange Solution

Image Exchange Workflow Capabilities

eHealth Connect® Image Exchange has been designed to integrate with all common PACS technologies and with virtually all HIE and EHR platforms, providing the following image-enabled clinical workflows:

View all imaging studies from within the patient record on an HIE portal

With a single click, authorized HIE users can launch a study of interest from any connected imaging location on eHealthViewer® ZF—a zero-footprint, web-based viewing platform—a fully diagnostic-quality FDA 510(k) Class II medical device.

View and compare imaging studies from different locations

Authorized HIE users can access a Community-Wide Imaging Worklist for their patient. Users can manipulate, sort, and view one or multiple imaging studies from different imaging provider locations in a common eHealthViewer ZF image viewing session.

Collaborate with other healthcare providers anywhere in the community in real time

With a single click from the eHealthViewer ZF, users can initiate an immediate screen sharing consultation session with any other authorized care provider in the community—for wet reads, second opinions, and consultations between referring physicians and specialists.

Access images from external locations directly from their EMR or Direct Messaging inbox

Care providers seeking access to patient records from their Direct Messaging inboxes, or as delivered to directly to their EMRs can be provided “one-click” access to view imaging studies on eHealthViewer ZF. This capability has the added benefit of enabling participating institutions to meet a key imaging menu criterion of Meaningful Use Stage 2.

Transfer external imaging studies directly into a local PACS


Radiologists and other clinicians frequently have access to relevant external prior imaging studies on their local PACS in order to properly diagnose and treat more complex medical conditions. eHealth Connect® Image Exchange accomplishes this transfer with a few clicks directly from an HIE user interface, and will assure the key image attributes in the DICOM header, such as patient ID (MRN) and accession number, are updated prior to transferring images.



MOLST / Advance Directives

Prior use case highlights	<ul style="list-style-type: none">• Function and purpose• Value proposition• Actors• Associated use case of Advance Directives
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations• Legislation for MOLST Pilot• Expansion of MOLST statewide 10/1/17• Paper-based / patient-controlled process• Discussion with members of MOLST Task Force and Advisory Committee 9/25/17
Proposed approach	<ul style="list-style-type: none">• Partner with MOLST Task Force and Advisory Committee to assess technology value-add• Further assess complementary Advance Directives Registry


MOLST Form



Connecticut

Medical Orders for Life Sustaining Treatment (MOLST)

PILOT PROGRAM



PATIENT INFORMATION

Patient Last Name/First/Middle Initial		
Street	City/Town	ZIP
Date of Birth (mm/dd/yyyy)	Sex: M <input type="checkbox"/> F <input type="checkbox"/>	

ELIGIBLE DIAGNOSIS:
 END STAGE SERIOUS, LIFE LIMITING ILLNESS: (specify) _____ OR
 ADVANCED CHRONIC PROGRESSIVE FRAILTY CONDITION:

GOALS OF TREATMENT- MEDICAL INTERVENTIONS: (check one box only)
 a. No limitations to medical treatment & intervention
 b. Limited medical treatment or intervention
 c. Comfort care; allow natural death with symptom management for comfort purposes

Section A (Check one box only)

CARDIOPULMONARY RESUSCITATION (CPR): PERSON HAS NO PULSE AND IS NOT BREATHING
 Perform CPR Do Not Perform CPR
 If patient is not in cardiopulmonary arrest, follow orders in section B & C.

Section B (Check one box only)

Transfer to Hospital
 Transfer to hospital
 ICU care Do not transfer to hospital
 No ICU care (unless needed for my comfort)

Intubation and Ventilation (Non CPR related)
 Use invasive airway management or mechanical ventilation
 Use invasive airway management or mechanical ventilation, defined trial period
 Length of trial period: _____
 No invasive airway management or mechanical ventilation

Non-Invasive Ventilation
 Use non-invasive ventilation or rescue breathing for respiratory distress, such as BiPAP or CPAP
 Use non-invasive ventilation defined trial period
 Length of trial period: _____
 Do not use non-invasive ventilation

HIPAA PERMITS DISCLOSURE OF MOLST TO ANY HEALTH CARE PROFESSIONAL AS NEEDED FOR PATIENT CARE

Section C (Check one box only)

Medically Administered Hydration (oral or by mouth hydration will always be offered if feasible)
 Use medically administered hydration No medically administered hydration Undecided
 Use medically administered hydration, defined trial period Did not discuss
 Length of trial period: _____

Medically Administered Nutrition (oral or by mouth nutrition will always be offered if feasible)
 Use medically administered nutrition, such as total parenteral nutrition or tube feedings No medically administered nutrition Undecided
 Use medically administered nutrition defined trial period Did not discuss
 Length of trial period: _____

Dialysis
 Use dialysis No dialysis Undecided
 Use dialysis, defined trial period Did not discuss
 Length of trial period: _____

Other treatment preferences specific to the patient's medical condition, e.g. vasopressors, medications, antibiotics, etc.

Section D

For this form to be valid: The form must be a lime green original MOLST form and the provider signing must ensure the form is thoroughly completed and signed by the patient or patient's legally authorized representative, provider and witness. A form that is incomplete, improperly completed or amended, except as permitted in Section E shall be deemed invalid and of no effect.

Discussed with:
 Patient
 Legally Authorized Representative (specify) _____
 Signature below confirms this form was signed by the patient or Legally Authorized Representative **voluntarily** and reflects his/her wishes and goals of treatment as expressed to the provider signing below. Signature by a patient representative as indicated above confirms the form reflects his/her assessment of the patient's preferences or goals of care, or if those preferences are unknown, his/her understanding of the patient's best interests.

Signature of Patient or Legally Authorized Representative:	Date:
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Printed Name of Patient or Legally Authorized Representative:	
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Signature of Provider:	[] MD/DO [] APRN [] PA
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Printed Name of Provider:	Date:
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Provider Phone Number:

Signature of Witness:

Printed Name of Witness:	Date:
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Interpreter Name or ID# and/or Service	Date:
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Patient Portal

Prior use case highlights	<ul style="list-style-type: none">• Function and purpose• Value proposition• Actors
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations• Patient as “North Star”• MU requirements• MACRA• Technical requirements• Safety concerns• Competitive issues• Funding
Proposed approach	<ul style="list-style-type: none">• Further assess business and functional requirements• Assess marketplace vendor solutions• Consider implementation after Longitudinal Health Record implementation

Population Health Analytics

Prior use case highlights	<ul style="list-style-type: none">• Function and purpose• Value proposition• Actors
Additional information	<ul style="list-style-type: none">• Business, financial, legal, and policy considerations• Technical requirements• Overlap with eCQM Reporting System use case
Proposed approach	<ul style="list-style-type: none">• Further assess business and functional requirements• Consider for implementation after eCQM Reporting System implementation

Governance

