



New Data, Small Data, Good Data, Fast Data

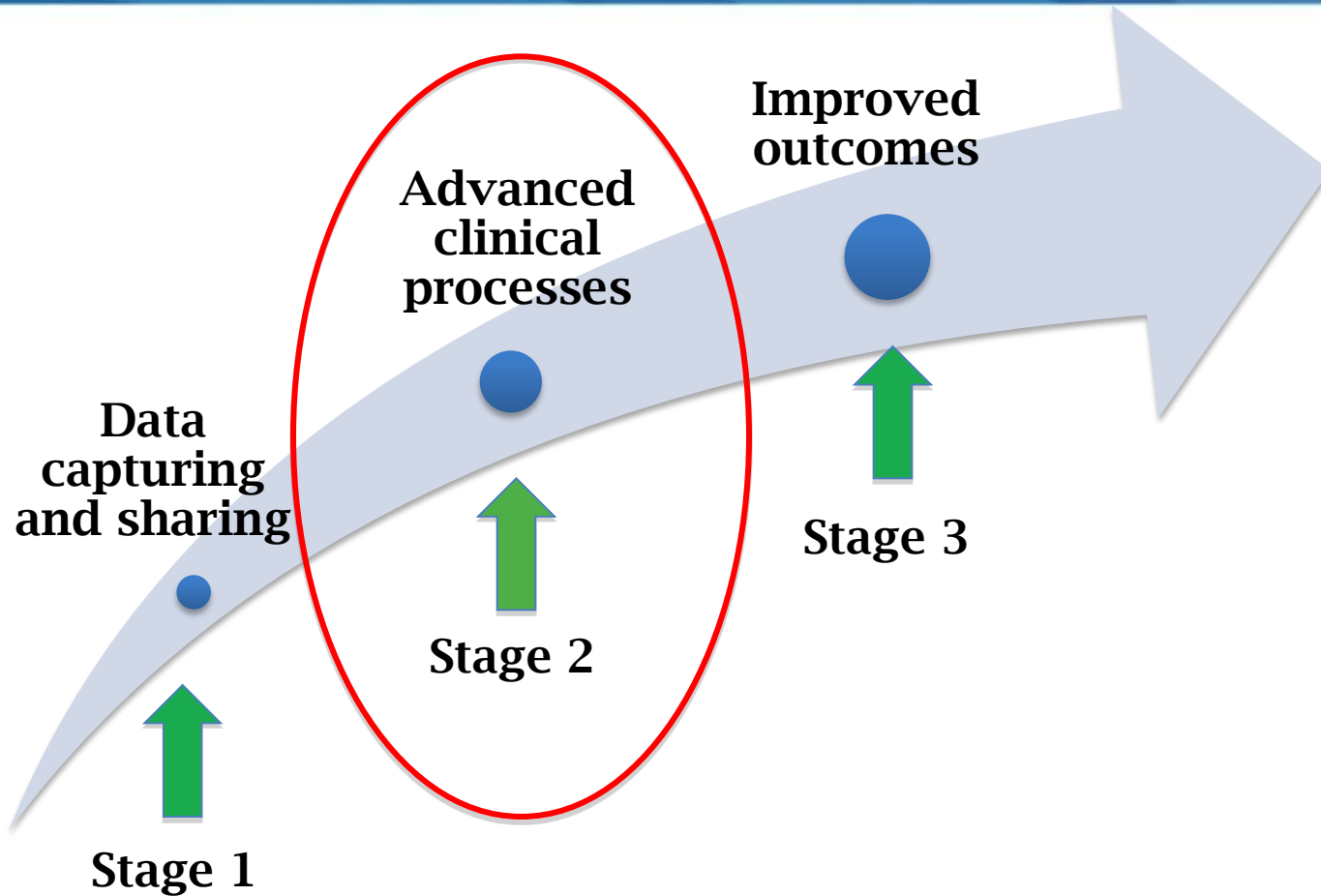
Kevin Larsen MD

Medical Director, Meaningful Use

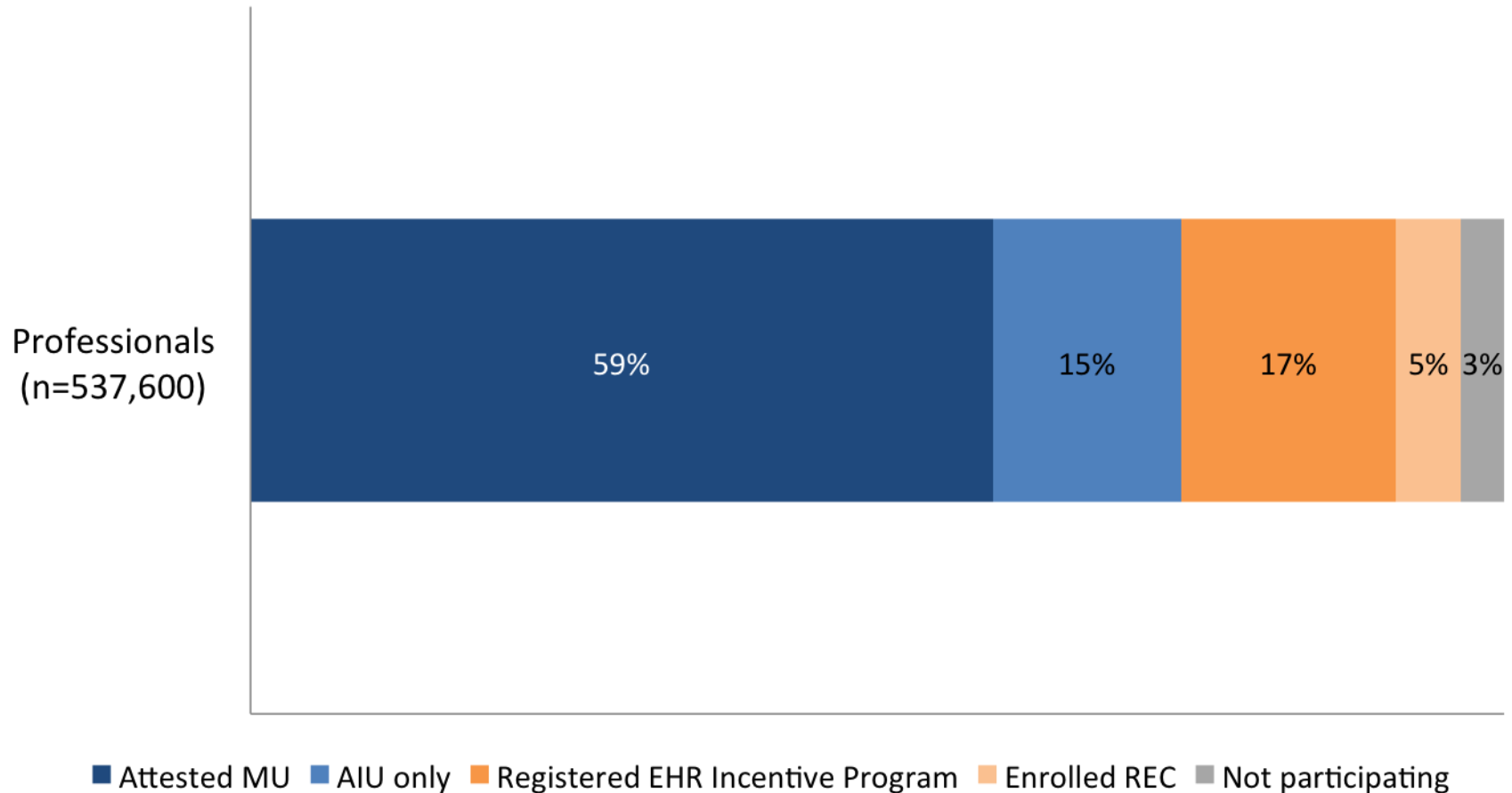
Office of the National Coordinator of Health IT

PBRN June 30, 2104

Meaningful Use



Majority of eligible professionals have attested to stage 1



NEW DATA

- Claims measures only capture activity, not quality
 - e.g. how many visits for blood pressure- not what is the blood pressure
- Paper abstraction measures are expensive-
 - Hospital Core measures- very expensive to run
- Claims + chart abstraction (ala HEDIS+) are also expensive- (estimate \$75 per chart)

How much cheaper?

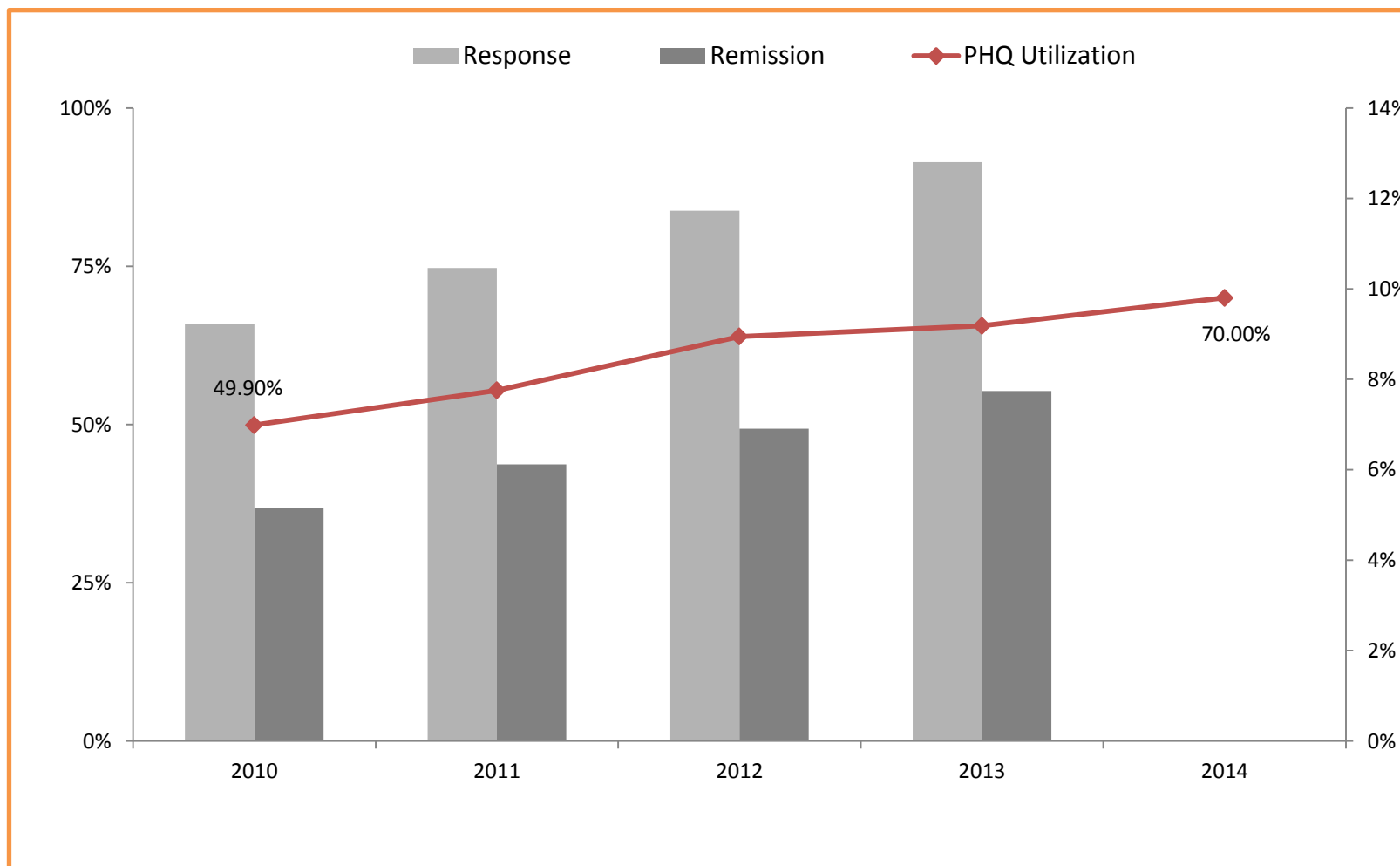
- Kaiser study showed that using stage 1 MU measures the cost was 50% reduced- even with the issues need to resolve the measures
- Outpatient care showing similar cost savings

- Patient reported outcomes
- Functional status
- Clinical outcomes- such as blood pressure at goal, diabetes controlled, asthma controlled, pain controlled etc.
- Data is “cheap”- e.g. can build measures of repeated variables



“I am the expert about me.”

Depression Improvement in Minnesota





current

EHR as primary reporting platform, with secondary reporting from registry, claims

DATA GETS BETTER THROUGH USE

PROMIS[®]

Dynamic Tools to Measure Health Outcomes from the Patient Perspective



About PROMIS[®]

Measures

Science

Software

What's New

Related Resources

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Search

Sample Questions

See samples of actual questions taken from selected physical health, mental health, and social health short forms.

[More ...](#)



1 2 3 4

<-Prev Next->

Twitter

- promisNIH PROMIS - NIH**
Know yourself? PROMIS[®] Computer Adaptive Test instantly reports on up to 9 diff moods like anger, fatigue. <http://t.co/v9LY4ANH>
Oct 29 (2 days ago)
Reply Retweet Favorite
- promisNIH PROMIS - NIH**
[#Researchers](#), [#Clinicians](#)..what is your preferred format to access research/pubs on Twitter? Presentation, PDF, or Video?
Oct 25 (6 days ago)
Reply Retweet Favorite

Researchers

Provides efficient, reliable, and valid assessments of adult and child (pediatric) self-reported health

- ▶ [PROMIS Instruments Selected References](#)
- ▶ [PROMIS In Research](#)



Clinicians

Provides data about the effect of therapy that cannot be found in traditional clinical measures

- ▶ [PROMIS for Clinicians](#)
- ▶ [Select Publications](#)
- ▶ [Computer Adaptive Test \(CAT\) Demonstration](#)



Patients

Measures what you are able to do and how you feel

- ▶ [More on PROMIS](#)
- ▶ [What Patient Reported Outcomes \(PROs\) are](#)
- ▶ [PROMIS Measures](#)




GOOD DATA- INTEROPERABILITY

Barriers to widespread adoption




INTEROPERABILITY

Patient: John Doe
Age: 38
Notes: Presented with acute abdominal pain

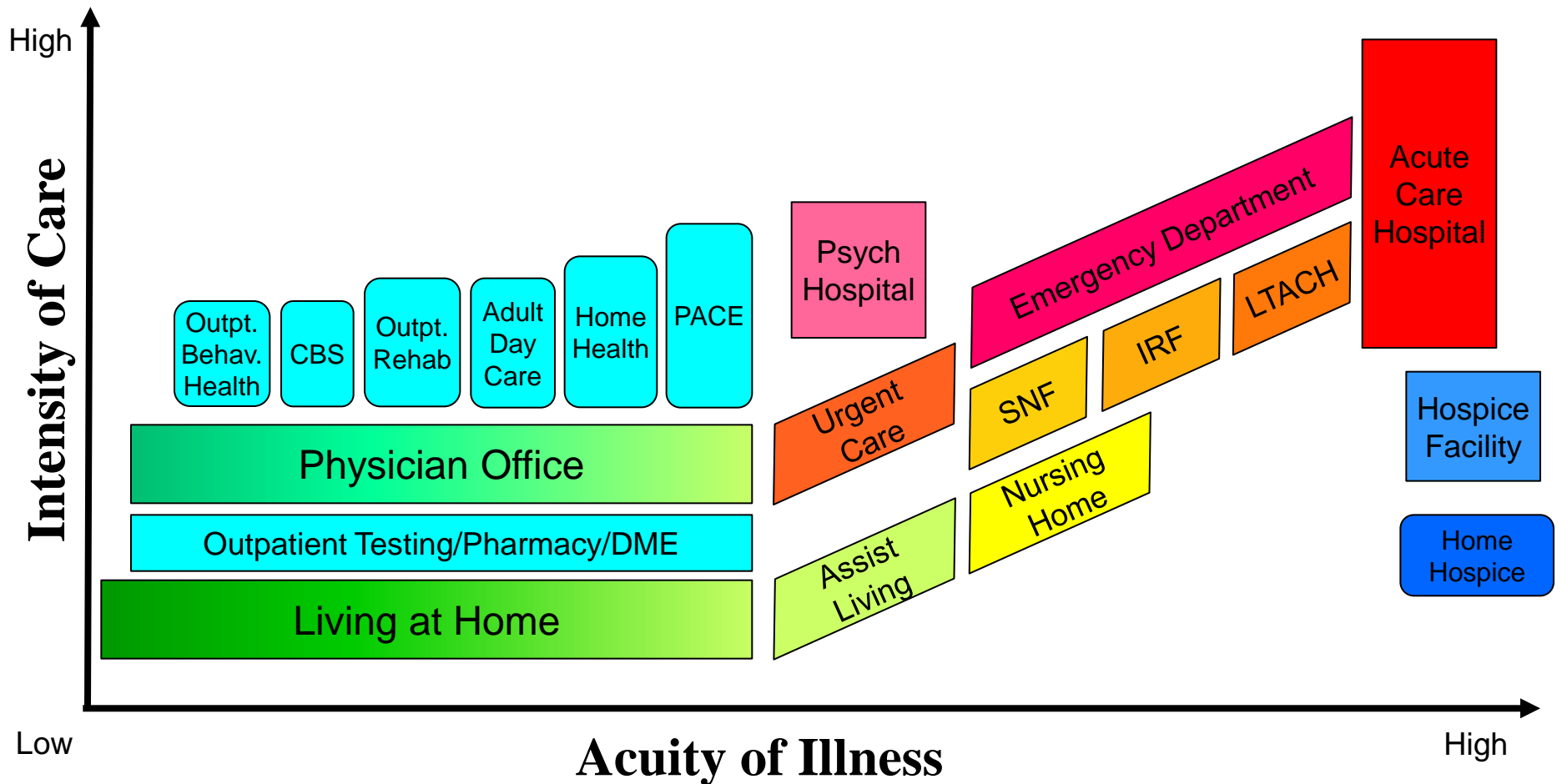


Patient: John Doe
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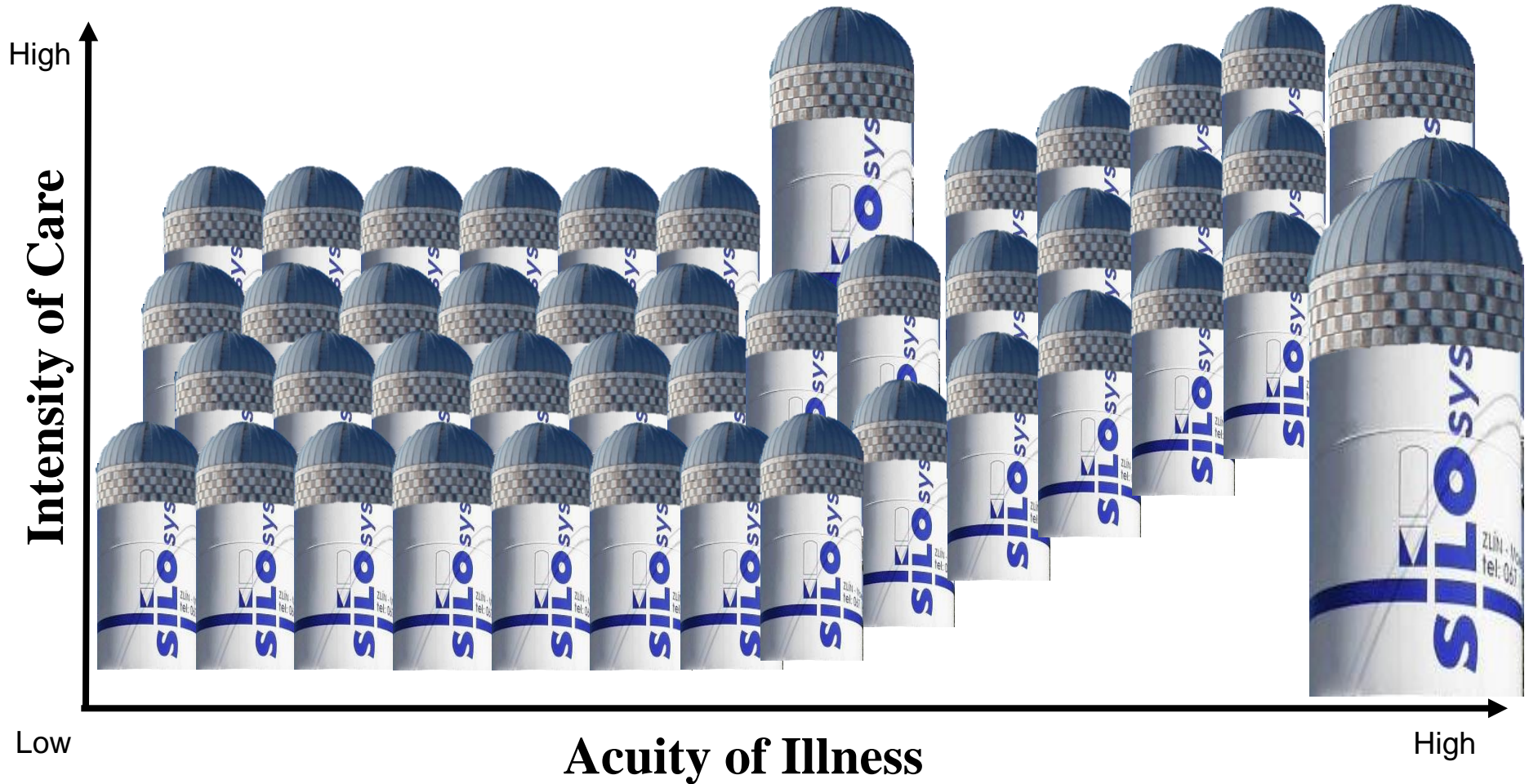
Nom%: To-awoi&
***A0I}** 2x--
2Qxwo: (*U*ej
ap9 w8u2 30j9P
af >w8zVo8w"ao

The Spectrum of Care is Vast...



Adapted from Derr and Wolf, 2012

...as are the Barriers to Care Coordination



Adapted from Derr and Wolf, 2012

Standard Interoperability

“Building Blocks”

Vocabulary & Code Sets

How should well-defined values be coded so that they are universally understood?

Semantic
Interoperability



Content Structure

How should the message be formatted so that it is computable?

Syntactic
Interoperability

Transport

How does the message move from A to B?

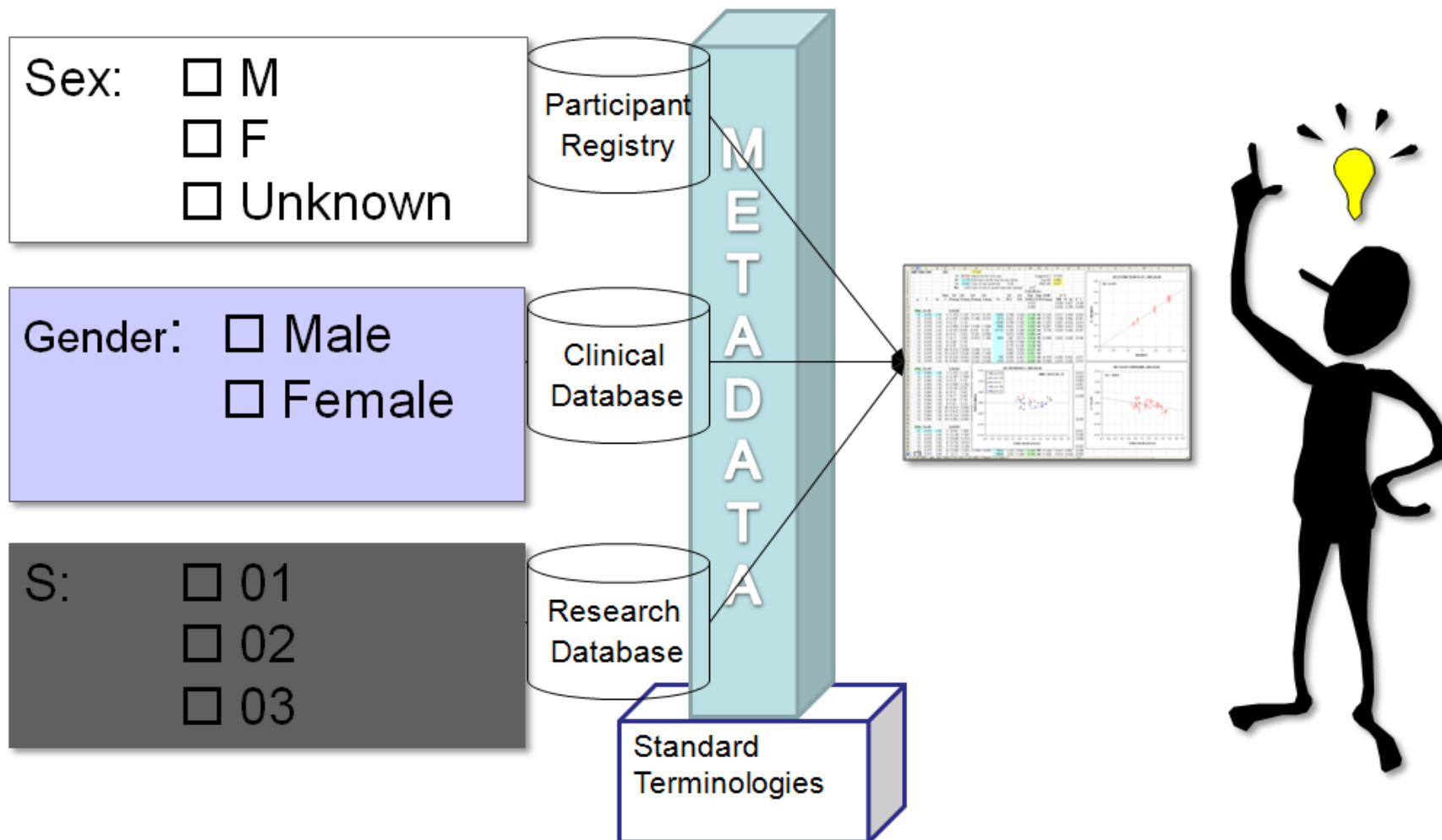
Security

How do we ensure that messages are secure and private?

Services

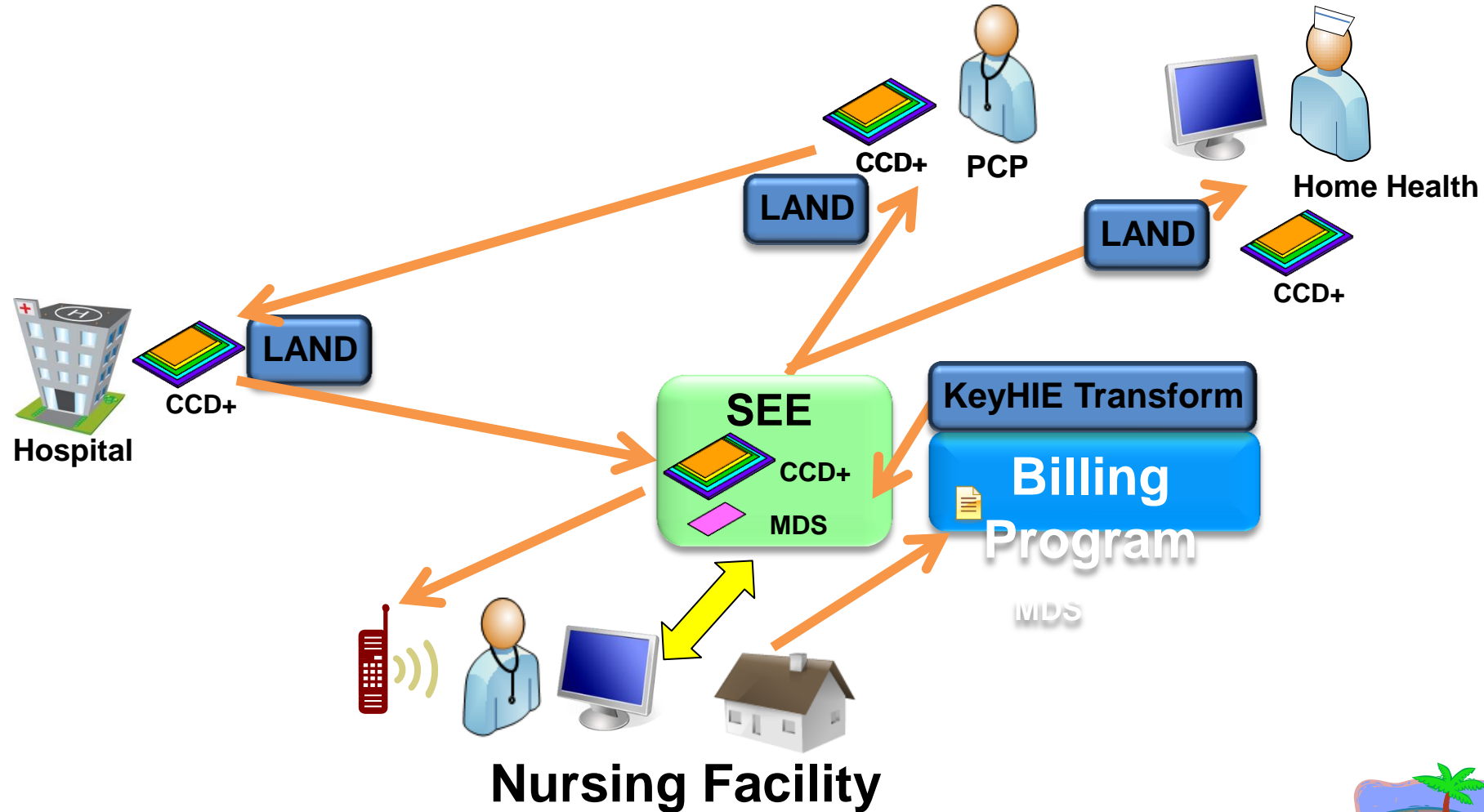
How do health information exchange participants find each other?

Common Data Elements- the future

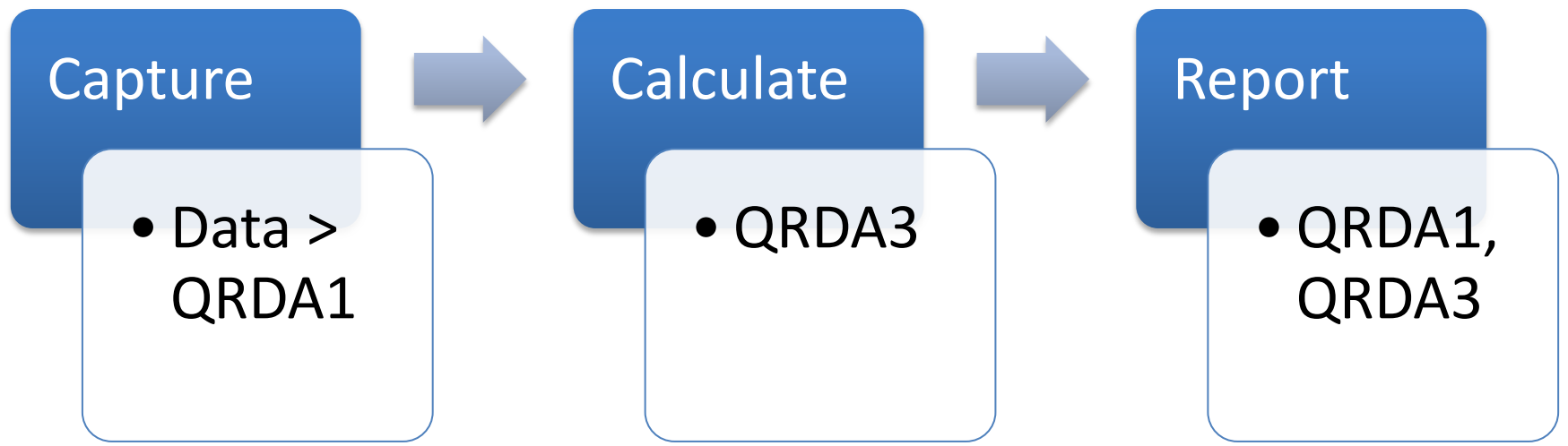


A terminology based metadata solution frees data consumers from data interpretation

CCD+ = Transfer Summary



Modular- choose which measures you want
Validate to QRDA standard (schematron)



HHS Currently

CMS ACO



CMS Hospital



FDA Sentinel



CMS PQRS



HRSA UDS



CDC NHSP



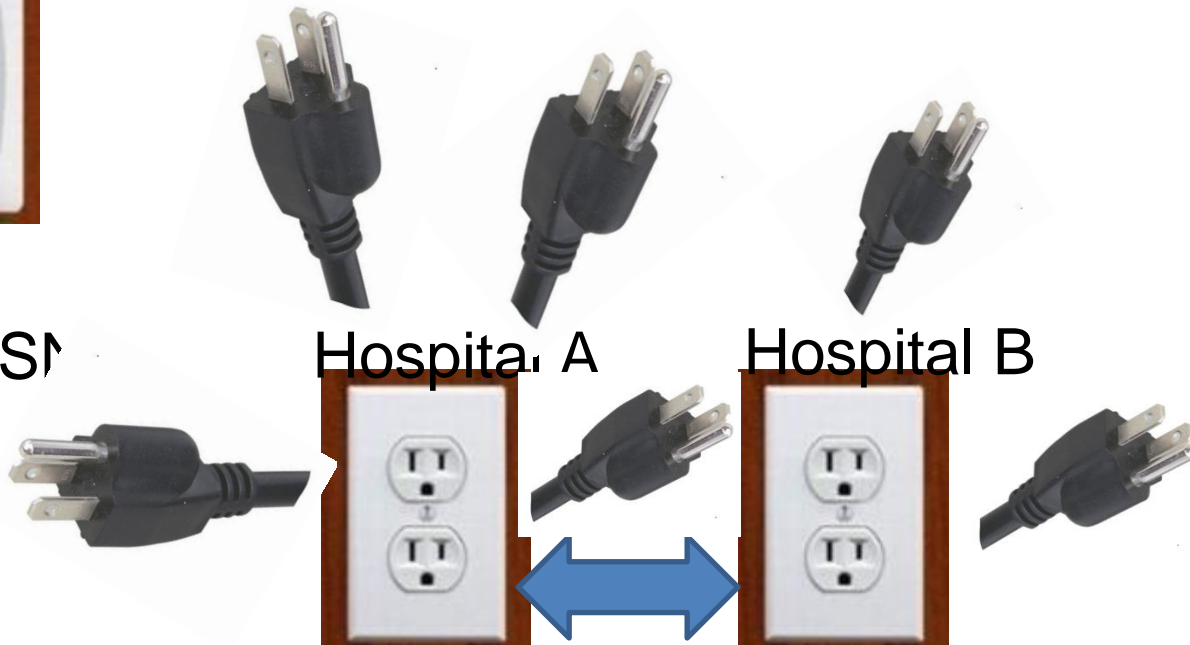
Hospital A

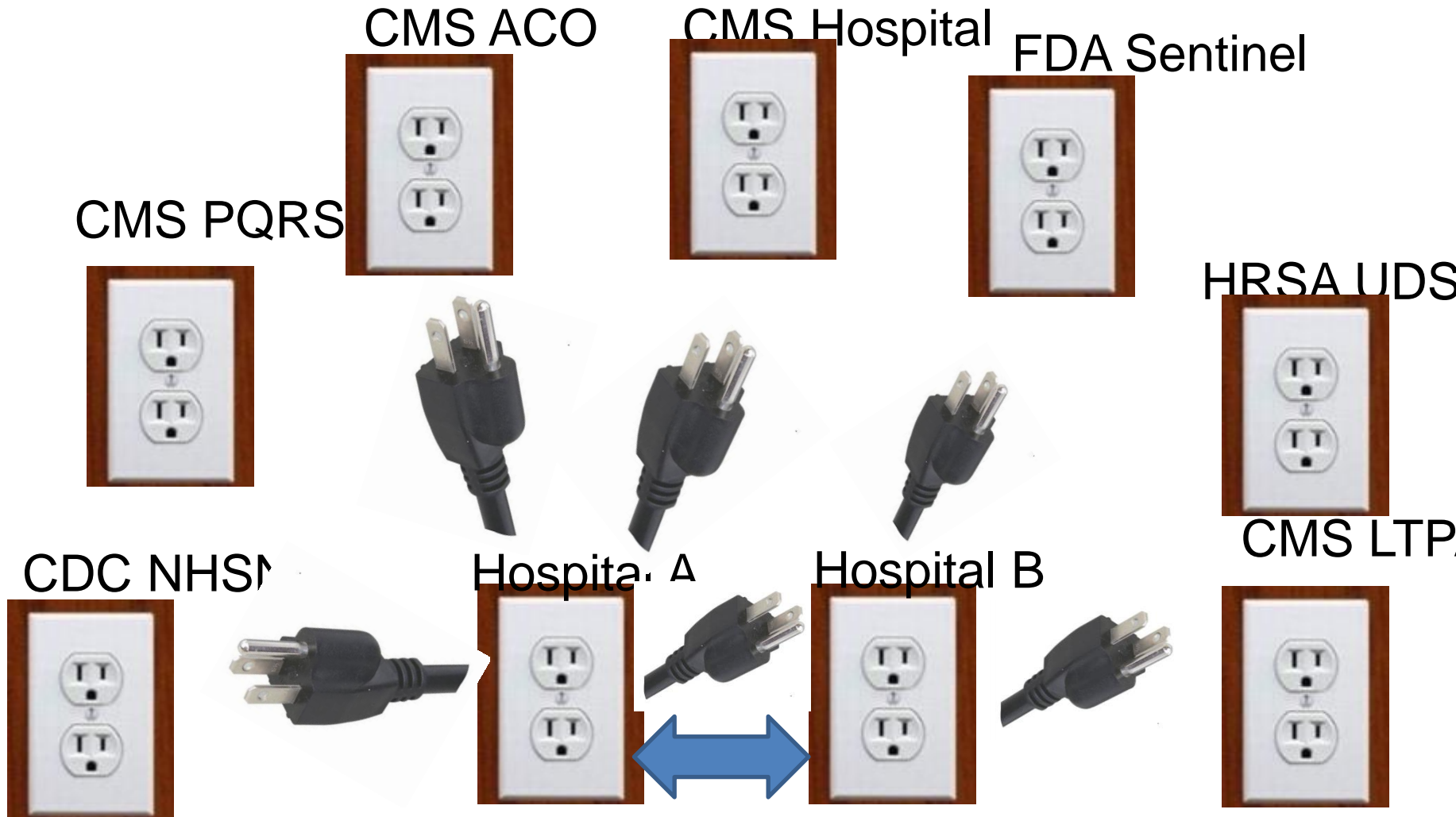


Hospital B



CMS LTP






SMALL DATA



Only those who
provide care can
improve care

Car with no dashboard



A photograph of two medical professionals in a clinical setting. A man in a white lab coat and glasses is leaning over a woman who is seated and looking at a computer monitor. Both are wearing white lab coats and have stethoscopes around their necks. The background shows a typical hospital or clinic environment with a computer monitor displaying a software interface, a printer, and some papers on a desk. The lighting is somewhat dim, with a bright light source visible in the background.

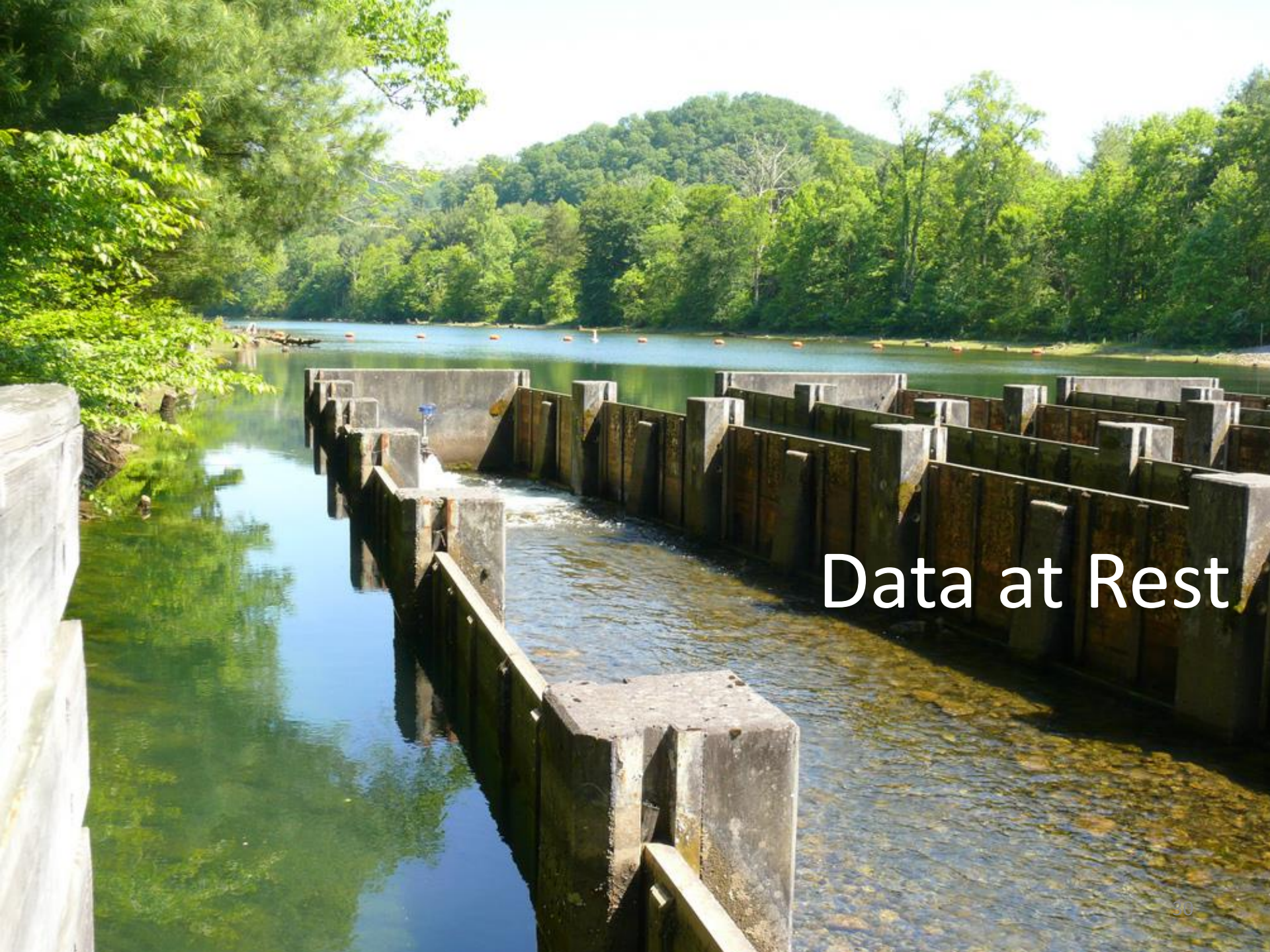
Small Data is our Short Term Focus.

Dr. Joe Kimura

FAST DATA

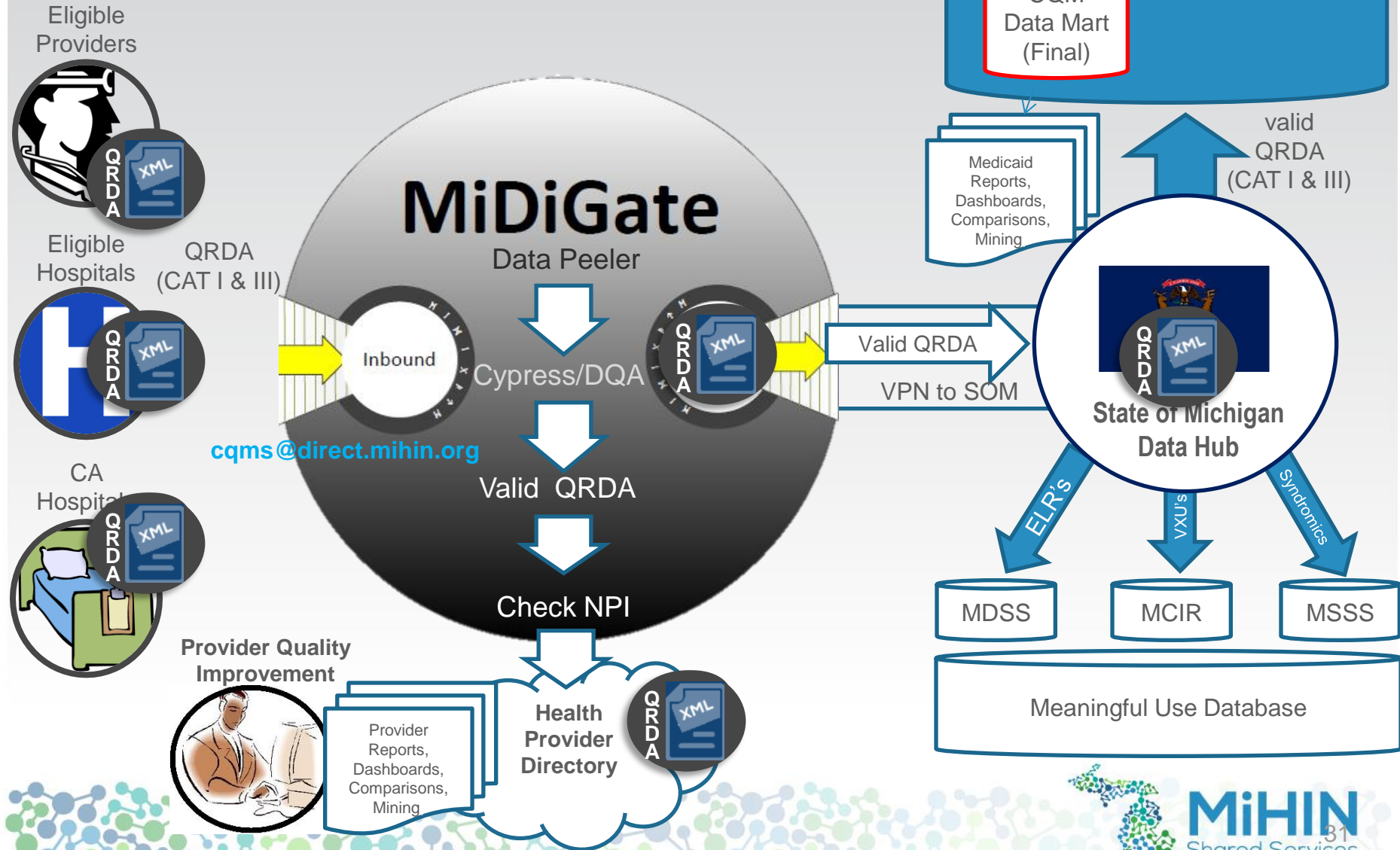


Data in Motion



Data at Rest

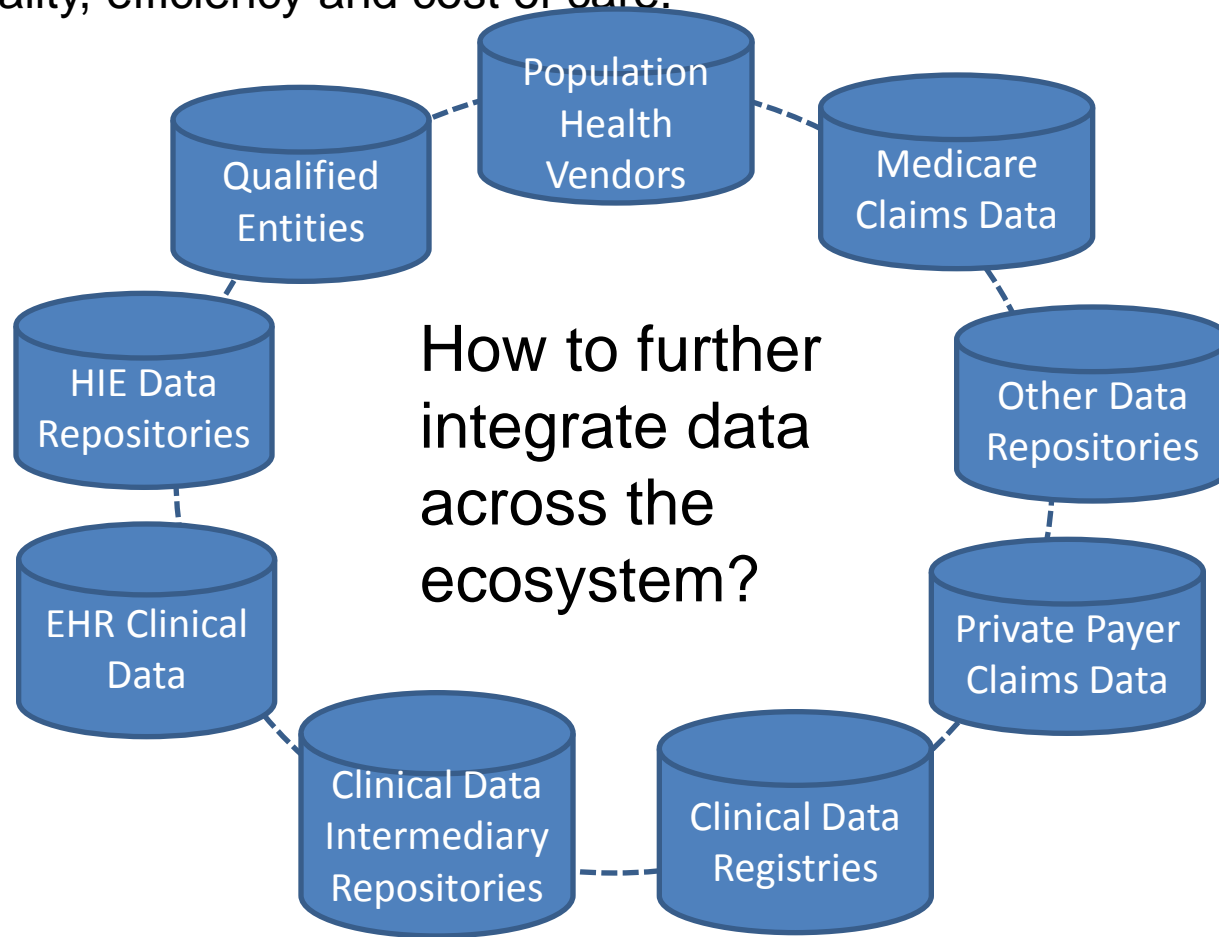
CQMRR



Future Orientated Data Architecture

Problem Statement:

Need to describe a set of capabilities to allow HIT applications and architecture to better manage disparate data with an ecosystem of players beyond just EHRs to enable performance reporting to public and private payers and actionable, timely feedback to providers on quality, efficiency and cost of care.



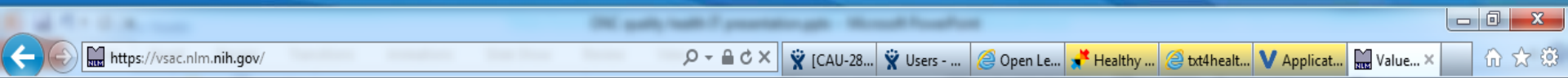
Complex Adaptive System



MODERN TOOLS

Value Set Authority Center

<http://vsac.nlm.nih.gov/>



[Welcome](#) | [Search Value Sets](#) | [Download](#) | [Help](#) | [Authoring Guidance](#)

Welcome to the NLM Value Set Authority Center (VSAC)

 The VSAC Authoring Tool will be down for scheduled maintenance from 8:00 AM until 4:00 PM EST on Dec. 8th, 2013.

For VSAC announcements, please subscribe to the [VSAC Updates listserv](#).

The Value Set Authority Center (VSAC) is provided by the National Library of Medicine (NLM), in collaboration with the Office of the National Coordinator for Health Information Technology and the Centers for Medicare & Medicaid Services.

The VSAC has published the annual update for the 2014 Eligible Hospital Clinical Quality Measure (CQM) Value Sets. The update includes revised value sets to address deleted and remapped codes in the latest terminology versions, as well as new codes for addressing CQM logic corrections and clarifications.

The VSAC provides downloadable access to all official [versions](#) of vocabulary [value sets](#) contained in the 2014 Clinical Quality Measures (CQMs). The value sets in the VSAC describe the specific populations included and excluded in order to properly calculate each 2014 CQM.

Each value set consists of the numerical values and human-readable names, drawn from standard vocabularies such as SNOMED CT® and ICD-10-CM, which are used to define clinical concepts used in clinical quality measures (e.g., patients with diabetes, clinical visit).

The content of the VSAC will gradually expand to incorporate value sets for other use cases, as well as for new measures and updates to existing measures. **Viewing and/or downloading value sets requires a free [Unified Medical Language System® Metathesaurus License](#), due to usage restrictions on some of the [codes](#) included in the value sets.**

The [Data Element Catalog](#) contains the complete list of 2014 CQMs and value set names.

▼ What services does the Value Set Authority Center offer?

The Value Set Authority Center (VSAC) currently serves as the authority and central repository for the official [versions](#) of [value sets](#) that support Meaningful Use 2014

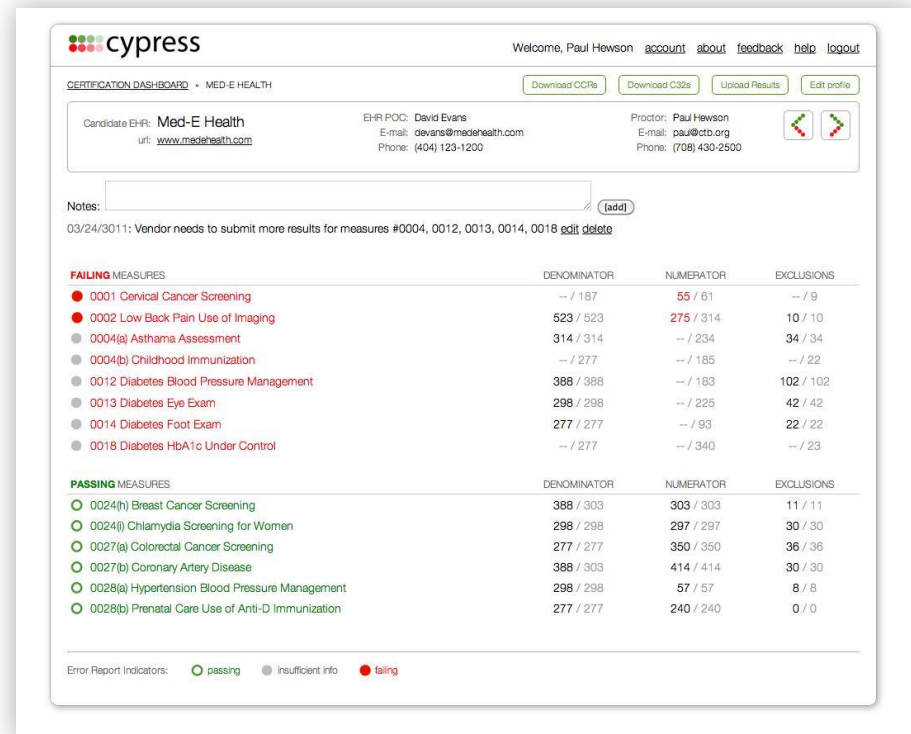


- Cypress is an open source tool that can test and verify the accurate calculation of Stage 1 and stage 2 Meaningful Use Clinical Quality Measures reported by Electronic Health Record (EHR) software systems or modules

- Users of Cypress :

1. EHR software vendors
2. The EHR testing community

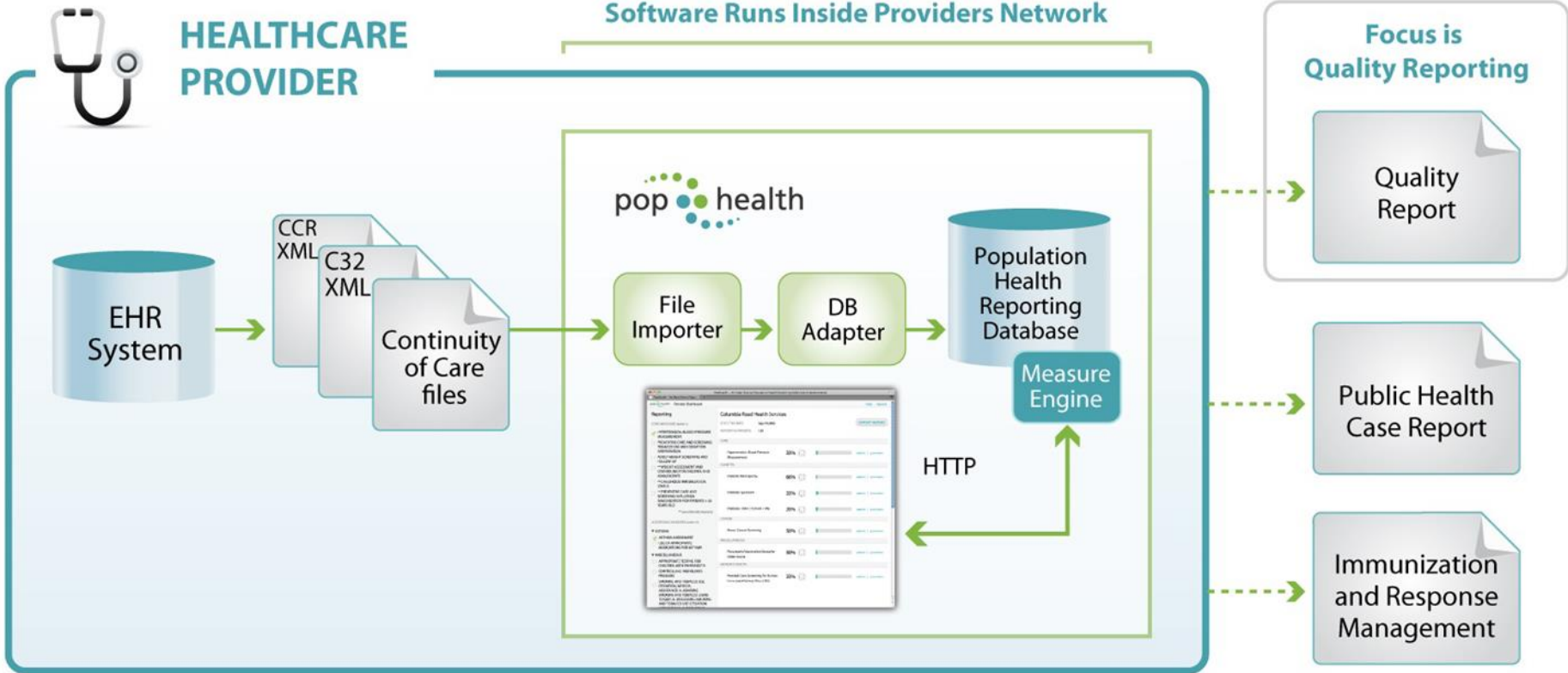
- Used for Certification



03/24/3011: Vendor needs to submit more results for measures #0004, 0012, 0013, 0014, 0018 [edit](#) [delete](#)


	DENOMINATOR	NUMERATOR	EXCLUSIONS
FAILING MEASURES			
● 0001 Cervical Cancer Screening	-- / 187	55 / 61	-- / 9
● 0002 Low Back Pain Use of Imaging	523 / 523	275 / 314	10 / 10
● 0004(a) Asthma Assessment	314 / 314	-- / 234	34 / 34
● 0004(b) Childhood Immunization	-- / 277	-- / 185	-- / 22
● 0012 Diabetes Blood Pressure Management	388 / 388	-- / 183	102 / 102
● 0013 Diabetes Eye Exam	298 / 298	-- / 225	42 / 42
● 0014 Diabetes Foot Exam	277 / 277	-- / 93	22 / 22
● 0018 Diabetes HbA1c Under Control	-- / 277	-- / 340	-- / 23
PASSING MEASURES			
○ 0024(h) Breast Cancer Screening	388 / 303	303 / 303	11 / 11
○ 0024(i) Chlamydia Screening for Women	298 / 298	297 / 297	30 / 30
○ 0027(a) Colorectal Cancer Screening	277 / 277	350 / 350	36 / 36
○ 0027(b) Coronary Artery Disease	388 / 303	414 / 414	30 / 30
○ 0028(a) Hypertension Blood Pressure Management	298 / 298	57 / 57	8 / 8
○ 0028(b) Prenatal Care Use of Anti-D Immunization	277 / 277	240 / 240	0 / 0

Error Report Indicators: ○ passing ● insufficient info ● failing



BONNIE Testing Tool

BONNIE

 0435: Discharged on Antithrombotic Therapy

Description:

Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge



Initial Patient Population:

- **AND :** Patient Characteristic Birthdate: birth date >= 18 years starts before start of Occurrence A: Encounter, Performed: Inpatient Encounter
- **AND :** Occurrence A: Encounter, Performed: Inpatient Encounter (Length of Stay <= 120 days)
- **AND :** Occurrence A: Encounter, Performed: Inpatient Encounter (Discharge Date/Time) during "Measurement Period"
- **AND :**
 - **OR :** **Diagnosis, Active: Hemorrhagic Stroke (Ordinal : Principal Diagnosis) starts during** Occurrence A: Encounter, Performed: Inpatient Encounter
 - **OR :** **Diagnosis, Active: Ischemic Stroke (Ordinal : Principal Diagnosis) starts during** Occurrence A: Encounter, Performed: Inpatient Encounter

Denominator: None

Numerator:

- **AND :** Medication, Discharge: Antithrombotic Therapy during Occurrence A: Encounter, Performed: Inpatient Encounter

Denominator Exceptions:

- **AND :**
 - **OR :** Medication, Order: Antithrombotic Therapy (Not Done: Medical Reason) starts during Occurrence A: Encounter, Performed: Inpatient Encounter
 - **OR :** Medication, Order: Antithrombotic Therapy (Not Done: Patient Refusal) starts during Occurrence A: Encounter, Performed: Inpatient Encounter

Denominator Exclusions:

- **AND :**
 - **OR :** Occurrence A: Encounter, Performed: Inpatient Encounter (Reason : Carotid Intervention)
 - **OR :** Occurrence A: Encounter, Performed: Inpatient Encounter (Discharge Status : Discharge To Another Hospital)
 - **OR :** Occurrence A: Encounter, Performed: Inpatient Encounter (Discharge Status : Left Against Medical Advice)
 - **OR :** Occurrence A: Encounter, Performed: Inpatient Encounter (Discharge Status :

TEST PATIENTS














FAIL

2 / 3



Total Coverage: 21%


		Hemorrhagic No Meds	FAIL
		Ischemic No Meds	PASS
		Ischemic With Meds	PASS

Population	Expected	Actual
 IPP	1	1
 DENOM	1	1
 NUMER	1	1
 DENEXCEP	0	0
 DENEX	0	0

[EDIT](#) [CLONE](#) 

BONNIE Testing Tool

BONNIE

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Denominator: None

Numerator:

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TEST PATIENTS



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Population	Expected	Actual
 IPP	1	1
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 NUMER	1	1
 DENEXCEP	0	0
 DENEX	0	0

EDIT **CLONE** 

pop health
Fort Defiance Health » NQF0028a
Welcome, popHealth | [help](#) | [account](#) | [providers](#) | [logout](#)


Providers

Providers

- ▶ Internal Med. Team A
- ▶ Family Practice Team B
- ▶ Other

Demographics

- ▶ Races
- ▶ Ethnicities
- ▶ Genders
- ▶ Languages



75% $\left(\frac{213}{284}\right)$



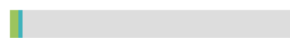




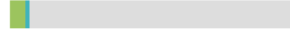
MEASURE NAME: **NQF0028 Preventive Care and Screening: Tobacco - (a) Use Assessment**

REPORTING PERIOD: 07/31/2010 - 10/31/2010

DESCRIPTION: Percentage of patients aged 18 years or older who have been seen for at least 2 office visits, who were queried about tobacco use one or more times within 24 months. If identified as tobacco users, patient received cessation intervention.

parameters
patients

INDIVIDUAL PROVIDER STATISTICS

ADAM, Gino	69% $\left(\frac{18}{26}\right)$	
CAMPBELL, John	71% $\left(\frac{20}{28}\right)$	
COOPER, Edmund	61% $\left(\frac{13}{21}\right)$	
COOPER, George	68% $\left(\frac{15}{22}\right)$	
COOPER, Jane	75% $\left(\frac{18}{24}\right)$	
DARLING, Duane	79% $\left(\frac{23}{29}\right)$	
EDWARDS, Robert	78% $\left(\frac{22}{28}\right)$	
MYERS, Jamie	81% $\left(\frac{27}{33}\right)$	

Test Patient Data

popHealth Open Source Community

The screenshot shows the popHealth website with the following content:

- Navigation:** Home, About, Screen Shots, Demo, Download, Code, Participate, News, FAQ, Contact
- Main Announcement:** "An Open-Source Quality Measure Reference Implementation" - Empowers healthcare providers to perform Meaningful Use quality measure reporting and promotes easier submission of quality measures to public health organizations.
- popHealth Spotlight:** November 7: Join the popHealth Challenge! The Office of the National Coordinator popHealth Tool Development Challenge is now open until January 20th. [More details.](#)
- Upcoming Events and Milestones:**
 - December:** See software release dates [here](#). New feature to be added: **Multi-Provider**. [See designs.](#)
 - January:** New feature to be added: **Stratification by Race, Ethnicity and Language**. [See designs.](#) New feature to be added: **Clinician Input Feature**. [See designs.](#) New feature to be added: **Patient Centric View**. [See notional designs.](#) Improved installation process. Deadline for Challenge Grant submission: **January 20**.
 - February:** Version 1.4 Final Release [See release dates here](#). Challenge Grant Winner Announced: **February 20th**. popHealth at [HIMSS](#): **February 20-24**.
 - March:** popHealth showcased at the [Human Factors Conference](#): **March, 2012**.
- Footer:** This project was funded by a contract from the [Office of the National Coordinator for Health Information Technology \(ONC\)](#). [Privacy Policy](#) [Disclaimer](#). Page Last Revised: December 21, 2011.

Publicly available demonstration via the popHealth website or <http://demo.projectpophealth.org>

Open Source Development Occurring Including:
1. Popeye
2. Viral Hepatitis

Jira Issue Tracking for eCQMs

<http://jira.oncprojectracking.org/>

[Edit](#) [Comment](#) [Assign](#) [More ▾](#) [Reopen](#) [Admin ▾](#)

[Share](#) [Export ▾](#)

Details

Type:	Intent/Governance	Status:	Closed (View Workflow)
Priority:	↑ Major	Resolution:	Fixed
Component/s:	None	Labels:	None
Solution:	▾ The missing or inaccurate data guidance initially listed in the eligible hospital (EH) chart-based measures was carried over into the eCQM per the measure steward's original direction. This guidance has been removed from Stroke measures NQF/CMS: 0441/102, 0435/104, 0436/71, 0437/91, 0438/72, 0439/105, and 0440/107.		
2014 EH Measures:	CMS102v1/NQF441, CMS104v1/NQF435, CMS105v1/NQF439, CMS107v1/NQF440, ... (2)		

People

Assignee:	Ngoc Nguyen Assign to me
Reporter:	Julia Skapik
Votes:	0
Watchers:	Stop watching this issue

Dates

Created:	14/Jan/13 2:27 PM
Updated:	15/Feb/13 3:35 PM
Resolved:	15/Feb/13 3:35 PM

Description

The logic for Carotid Interventions seems as though there is potential for encounters to be excluded that are not intended to be excluded. Recommend: Standardize the logic across all measures.

Agile

[View on Board](#)

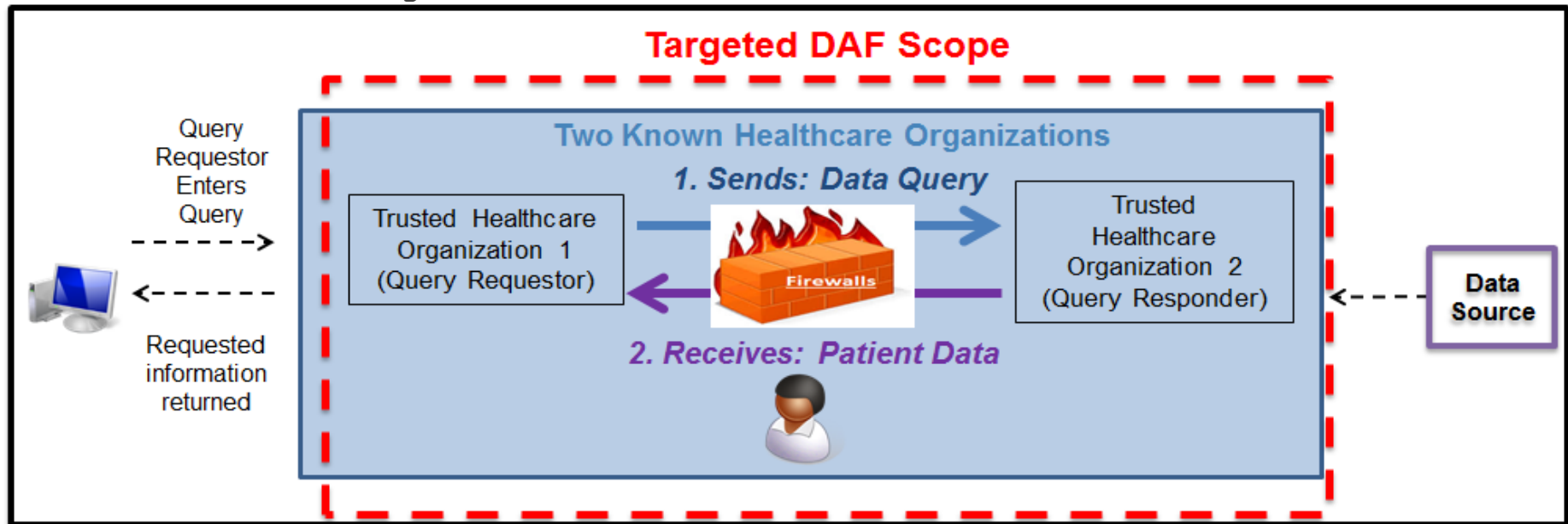
Activity

[All](#) **[Comments](#)** [History](#) [Activity](#) [Transitions](#) [Commits](#)

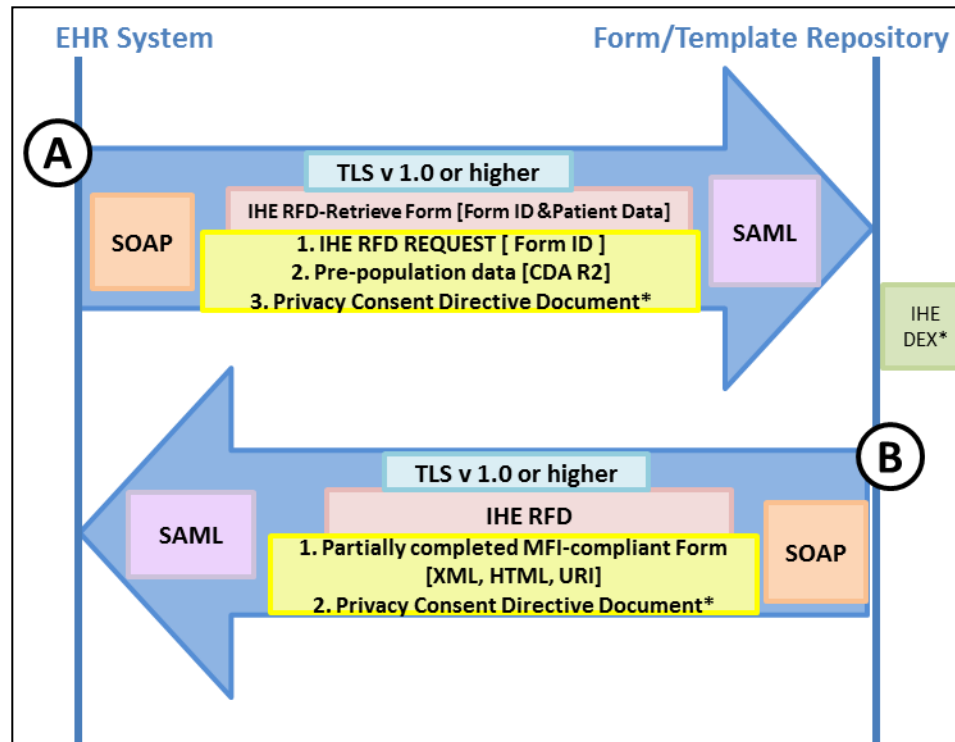
There are no comments yet on this issue.

GET INVOLVED

The scope of the Targeted Data Access Use Case is to define the requirements for inter-organizational access to individual patient data. The requirements in this use case will focus on the interchange between applications across two trusted healthcare organizations willing to exchange data. The diagram below illustrates the scope within the larger workflow of a user (e.g. Healthcare Professional) accessing patient data from a trusted external healthcare organization.



Structured Documents



<http://wiki.siframework.org/Structured+Data+Capture+Initiative>

“I wouldn’t give a fig for simplicity on this side of complexity but I’d give my right arm for simplicity on the other side of complexity.”

Oliver Wendell Holmes

Questions?

Kevin.larsen@hhs.gov

For more information about ONC visit: healthIT.gov