



The Office of the National Coordinator for
Health Information Technology

State Data Sharing (HIE) Interoperability: Design and Implementation

A Panel Discussion with Connecticut, Michigan, and Oklahoma

Allan Hackney, Connecticut Health IT Officer, Office of the LT. Governor of Connecticut

Dr. David Kendrick, CEO, MyHealth Access Network

Dr. Tim Pletcher, Executive Director, Michigan Health Information Network Shared Services

Paul Klintworth, Lead, Health IT Resource Center, Office of Policy, ONC (Moderator)





MiHIN
Shared Services

Sharing Standards-Based Solutions Between Health and Human Services in the Cloud

Tim Pletcher, DHA

Executive Director, MiHIN

President & CEO, Velatura



velatura

Infrastructure



Benefits of A Shared Infrastructure

Safer & More Optimal Care

- Help prevent diagnostic, medication treatment, system or communication errors
- Ensure appropriate treatment, follow-up, and prophylactic actions

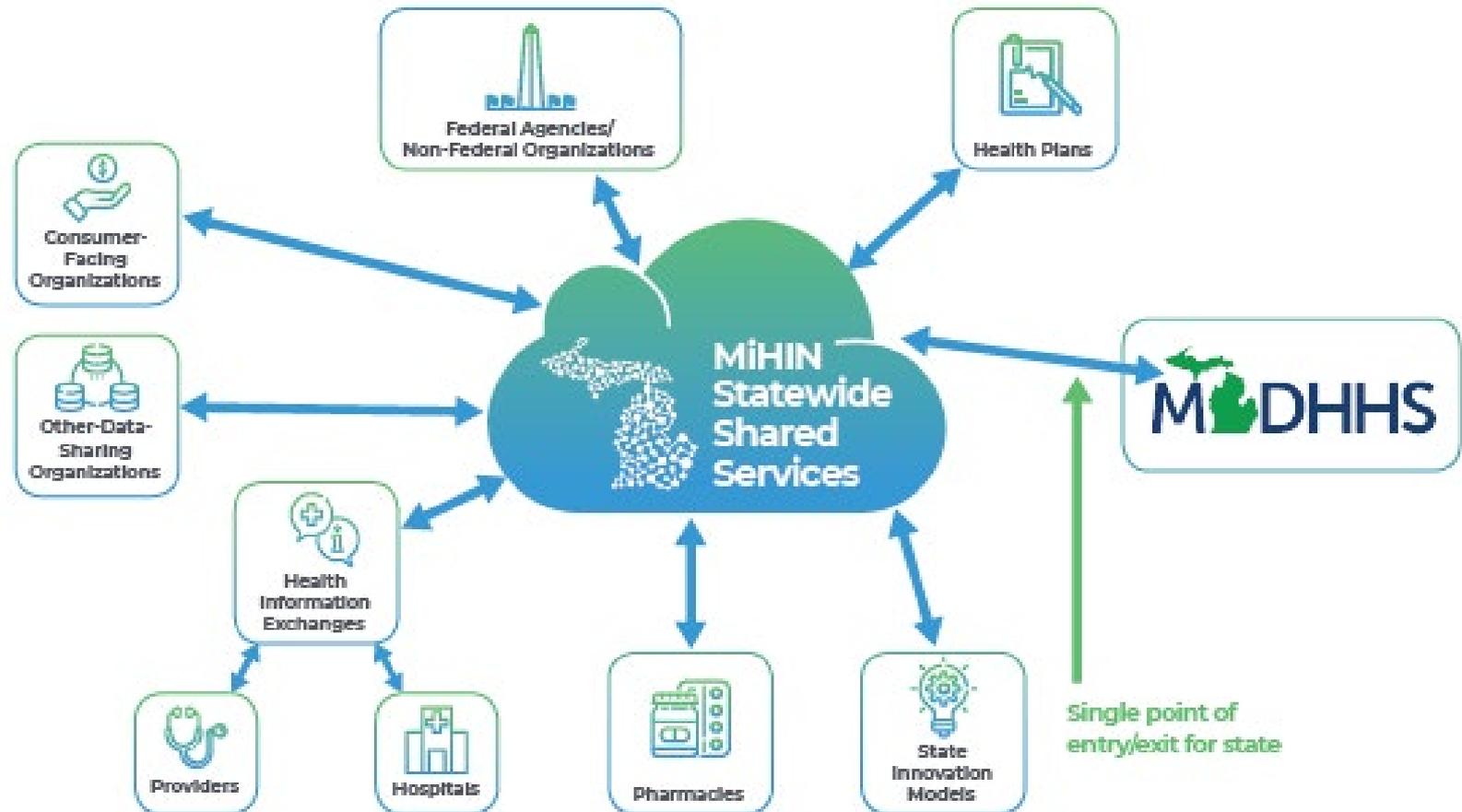
Reduce Burdens & Waste

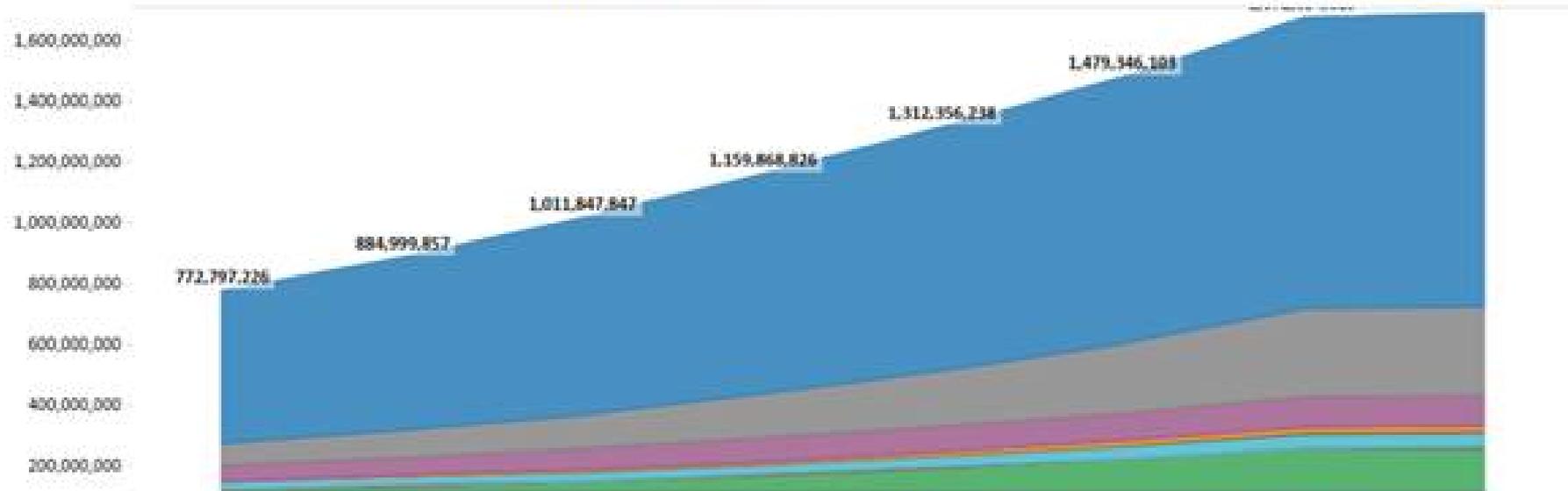
- Failures of care delivery & coordination, overtreatment, administrative complexity, pricing failures, and even fraud & abuse

Innovate & Learn Faster

- Detect, monitor, & measure
- Technology adoption
- Quality improvement
- Implementation & translational science and research

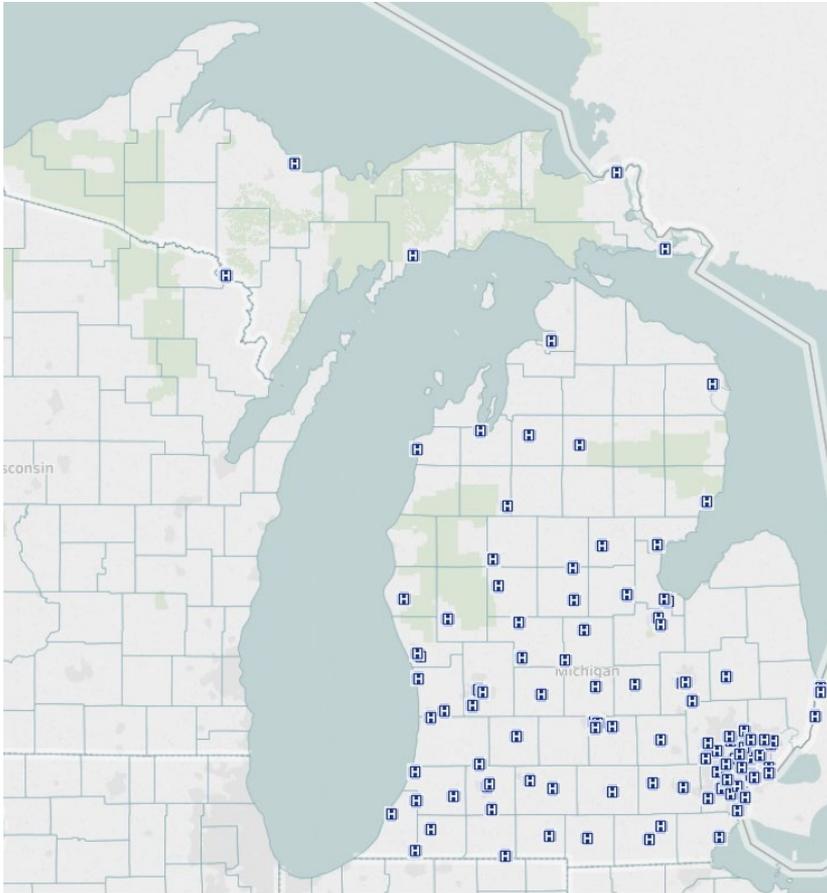
This is the Network of Networks



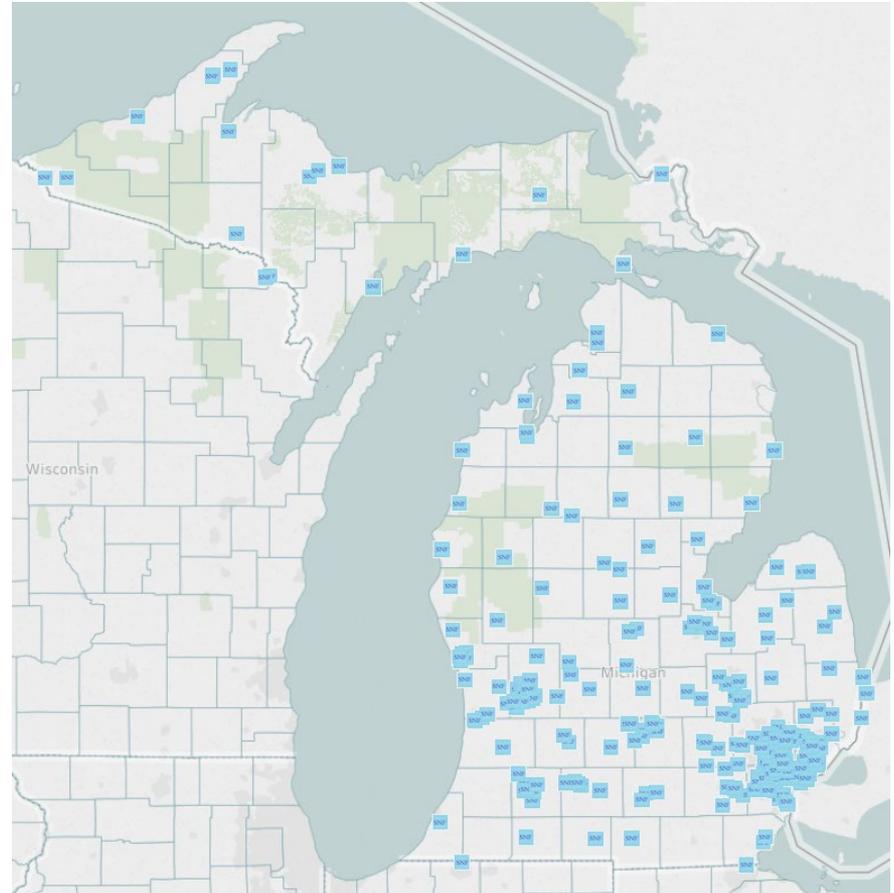
MIHIN M3 Report: Cumulative Totals


Use Case	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1
ADT Inbound	181,943,128	172,952,331	649,229,795	727,861,806	805,510,111	881,889,644	960,796,712	966,006,679
ADT ACRS Outbound	72,405,139	87,800,522	110,932,841	144,261,534	179,918,771	236,889,596	286,558,507	290,924,010
ADT Payer Outbound	53,176,469	61,074,794	68,675,409	77,385,882	85,040,610	92,469,868	99,731,149	100,178,169
Care Plan-ICER	4,435	7,358	16,150	19,945	24,272	29,116	31,710	33,549
Medrac Inbound	1,665,729	1,297,817	4,918,290	6,618,958	6,407,293	10,183,399	11,988,001	12,832,064
Medrac Outbound	68,379	139,017	795,702	1,763,187	1,863,964	2,672,713	3,731,263	5,776,367
Immunization History-Forecast	129,435	1,289,941	2,342,593	3,203,419	4,366,535	6,421,822	10,182,575	10,895,275
Submit Immunizations	21,823,779	26,346,130	29,758,097	32,089,260	31,870,291	38,964,508	45,064,384	45,411,816
Submit Newborn Screening	296	1,280	3,509	1,604	3,712	7,358	16,416	16,437
Submit Reportable Labs	1,652,059	1,430,888	1,529,120	1,654,998	1,832,846	1,947,789	2,073,195	2,078,251
Submit Syndromic Surveillance	117,650,640	111,168,529	143,749,006	154,626,713	168,195,913	178,943,614	189,340,045	189,823,926
Cancer Pathology		1,768	1,133	1,190	1,821	4,181	1,190	1,190
Statewide Labs				8,755,748	23,320,701	39,856,104	57,750,727	58,856,945
Blood Lead							393	393
Cancer Notifications						254	1,111	1,496
Cumulative Total	772,797,226	884,999,857	1,011,847,847	1,159,868,826	1,312,356,238	1,479,346,109	1,672,354,619	1,685,378,321

Hospital & SNF Statewide Coverage

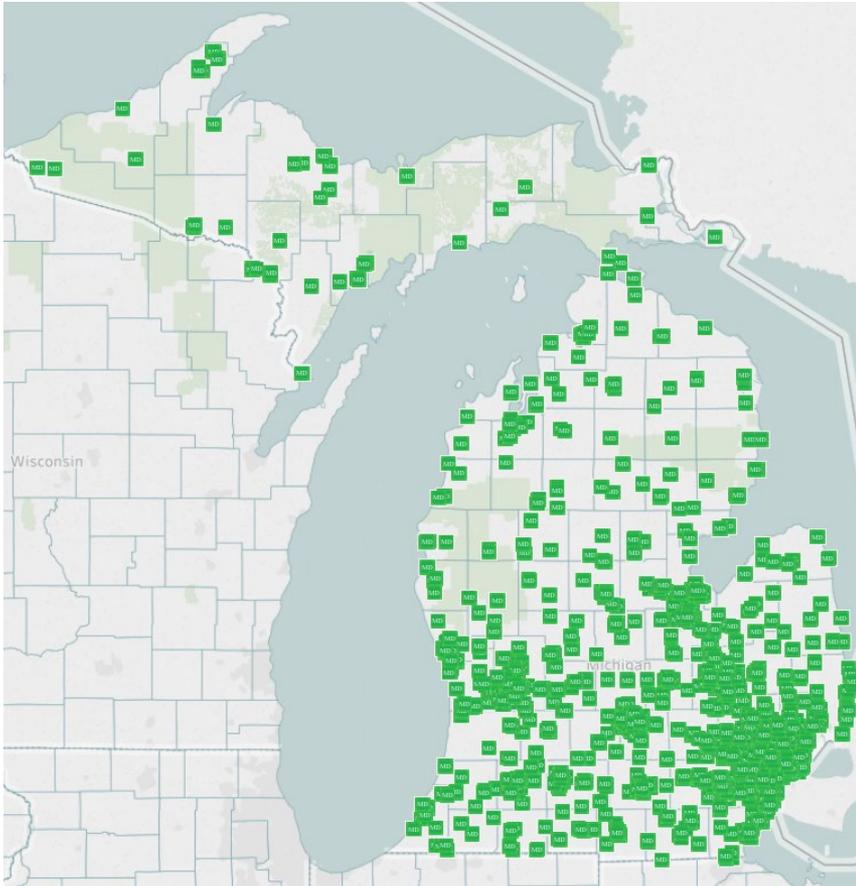


159 Hospitals (includes CAH & VA)

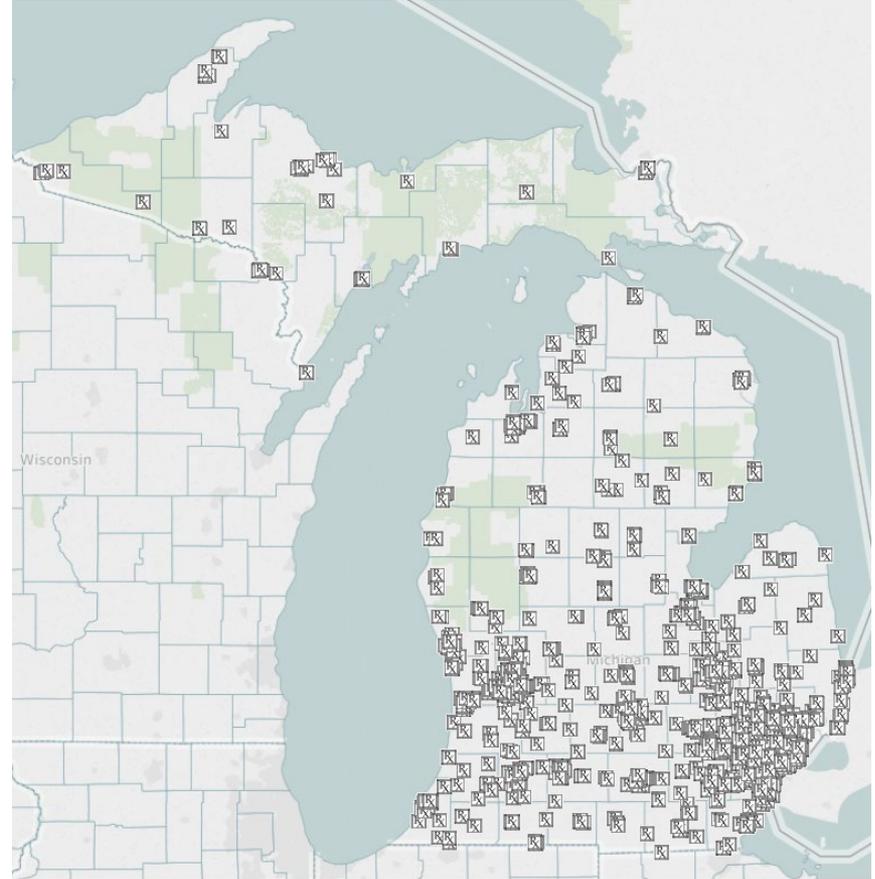


Over 310 SNFs

Practice & Pharmacy Coverage



5000+ Practices



1771 Pharmacies



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Use Case

MiHIN Use Case Factory: *Operational Governance*



A modular, highly standardized legal framework



Implementation guides and conformance



Synthetic data, personas, interoperability testbed (FHIR-PIT) simulation tools



A four-phase stage gate process to prioritize and incentivize use case adoption



Cost recovery and sustainability linked to mature use cases & value

How does the Use Case Factory process work?

Stage 1: Conceptual

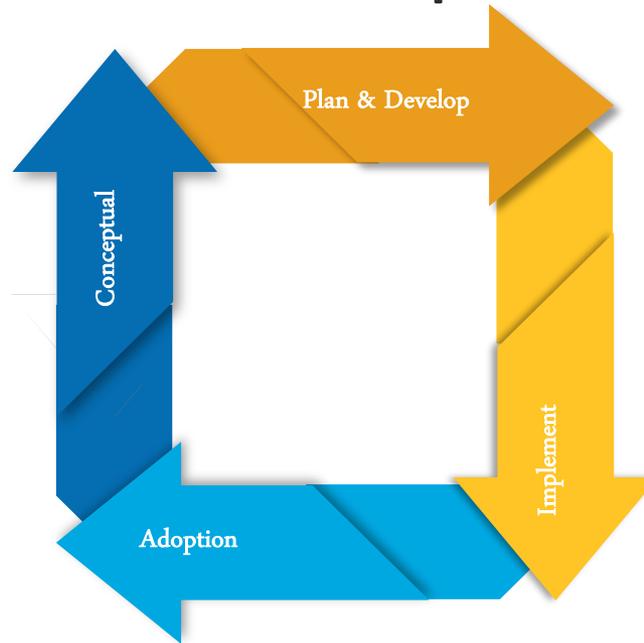
- Define purpose
- Establish sponsor

Idea begins with a sponsor...

Stage 4: Adoption

- Critical Mass
- Metrics

Continuous improvement...



Stage 2: Plan & Develop

- Technical planning
- Pilot and refine

...and moves on to MiHIN Board

Stage 3: Implement

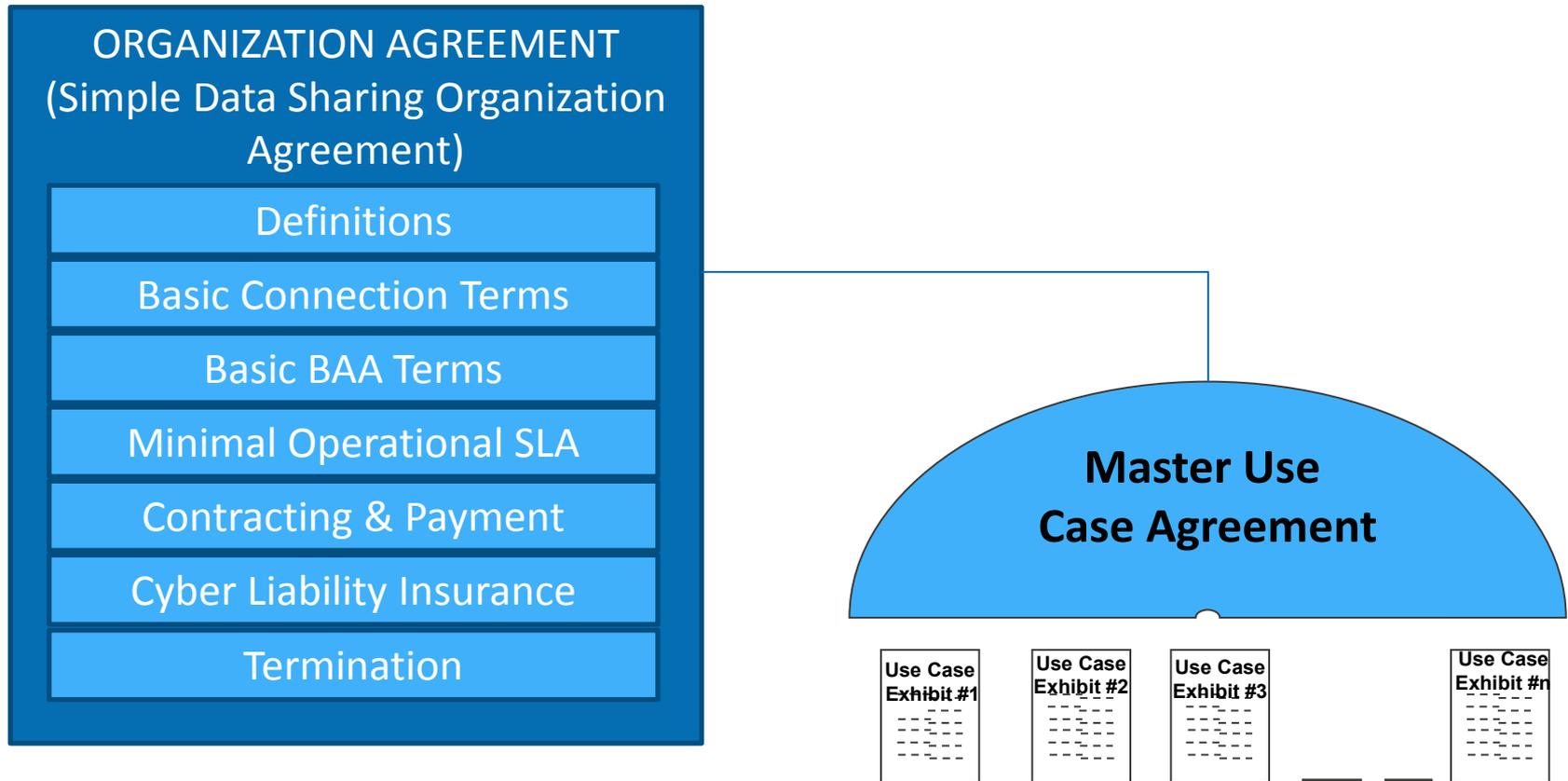
- Marketing and outreach
- Production status

...ensures successful adoption

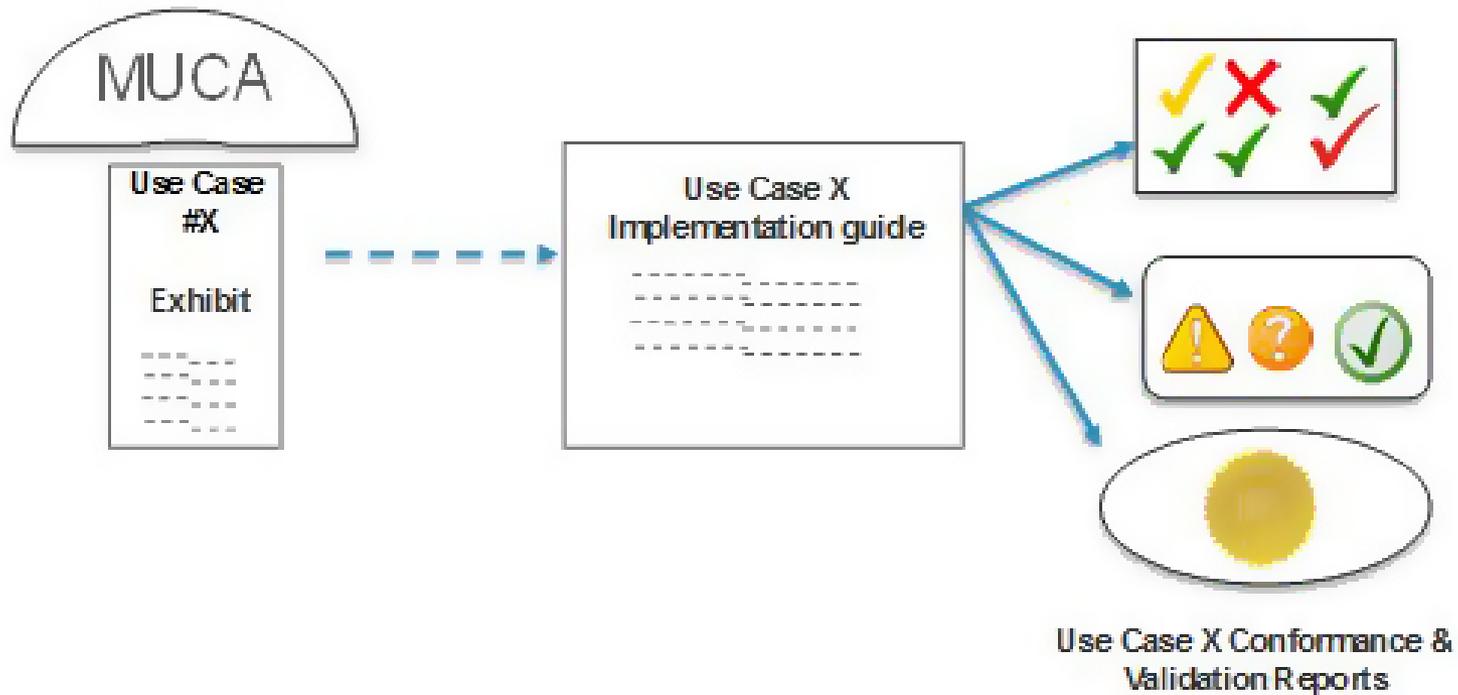
Examples of Use Cases:

- Immunizations
- Admission Discharge Transfer (ADT) Notifications

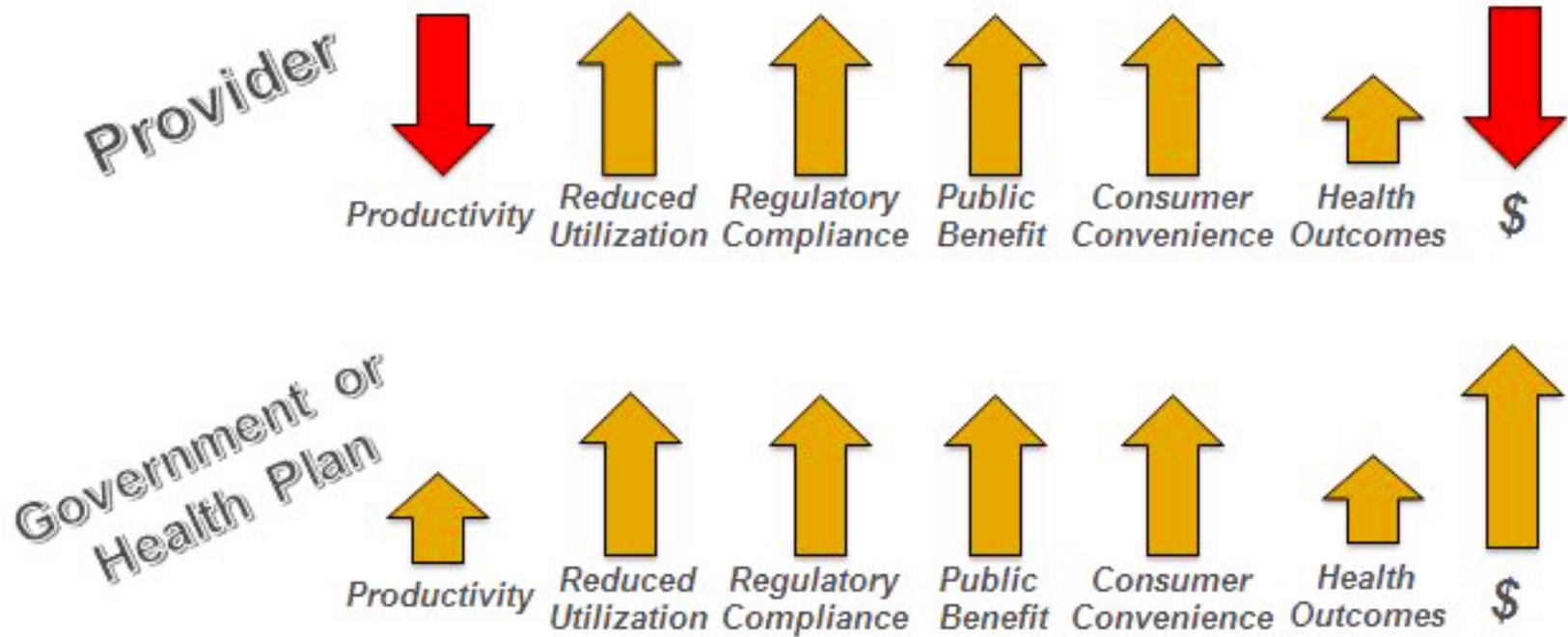
Legal Trust Framework



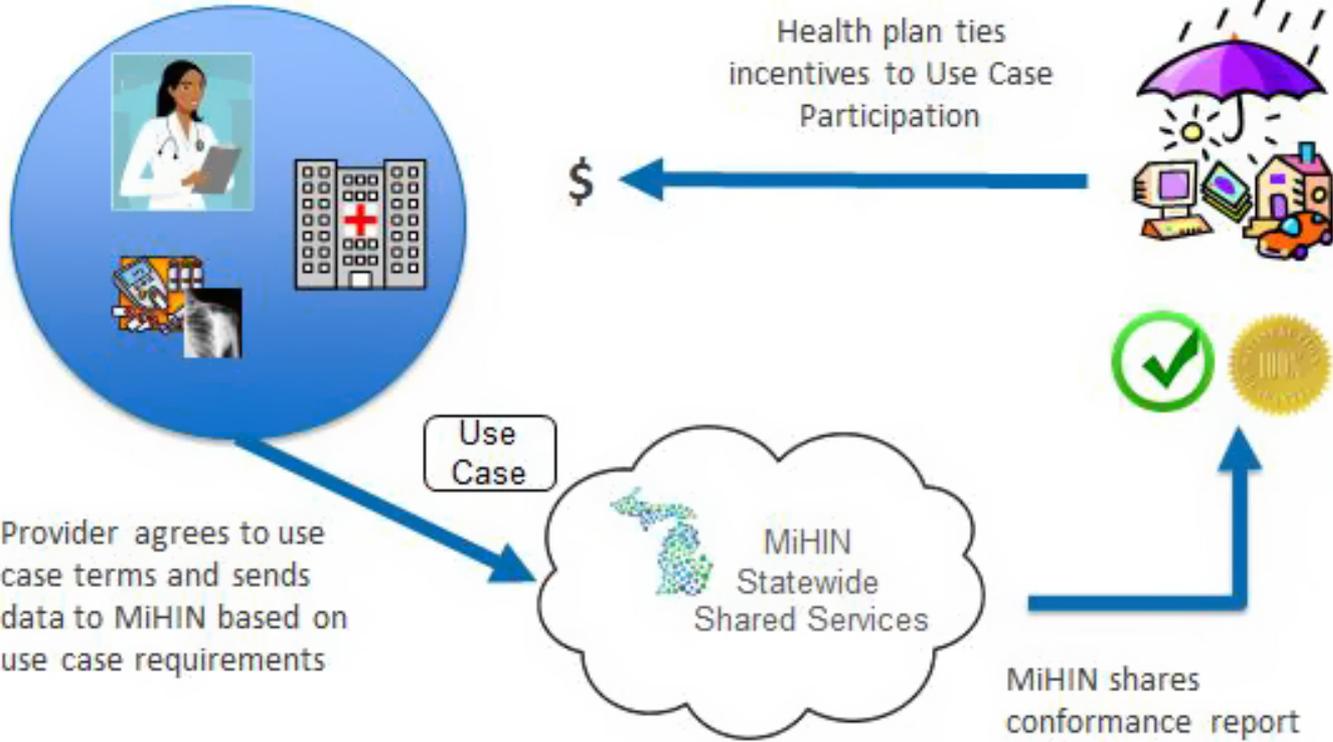
Implementation Guides



Same Use Case: Different Value



An Upward Spiral



Data Quality is Everything

Hospital System Conformance



December 2015 snapshot shows one health system by individual hospitals resulting in additional rows

ADT data quality: April 2015

Fields populated	Fields mapped	Enhanced fields
100.0%	100.0%	0.0%
63.6%	53.8%	0.0%
81.8%	53.8%	33.3%
90.9%	61.5%	0.0%
100.0%	38.5%	0.0%
90.9%	92.3%	0.0%
54.5%	15.4%	0.0%
54.5%	15.4%	0.0%
100.0%	0.0%	33.3%
90.9%	61.5%	0.0%
90.9%	76.9%	33.3%
90.9%	23.1%	0.0%
63.6%	69.2%	0.0%
63.6%	92.3%	0.0%
63.6%	0.0%	0.0%
63.6%	38.5%	33.3%
90.9%	92.3%	33.3%
63.6%	53.8%	0.0%
90.9%	92.3%	0.0%
90.9%	38.5%	33.3%
63.6%	38.5%	33.3%
81.8%	23.1%	0.0%
63.6%	53.8%	0.0%
81.8%	69.2%	33.3%



ADT data quality: December 2015

Fields populated	Fields mapped	Enhanced fields
100.0%	100.0%	100.0%
100.0%	100.0%	66.7%
100.0%	0.0%	33.3%
72.7%	100.0%	66.7%
100.0%	100.0%	66.7%
100.0%	100.0%	100.0%
90.9%	100.0%	100.0%
100.0%	92.3%	66.7%
100.0%	100.0%	66.7%
100.0%	100.0%	100.0%
100.0%	100.0%	100.0%
100.0%	100.0%	100.0%
100.0%	100.0%	100.0%
100.0%	100.0%	100.0%
100.0%	100.0%	100.0%
100.0%	100.0%	100.0%
100.0%	100.0%	100.0%
100.0%	100.0%	100.0%
100.0%	76.9%	66.7%
72.7%	100.0%	66.7%
63.6%	84.6%	66.7%
100.0%	92.3%	100.0%
100.0%	100.0%	33.3%
100.0%	53.8%	33.3%
100.0%	100.0%	66.7%
100.0%	84.6%	66.7%
100.0%	100.0%	66.7%
63.6%	92.3%	0.0%
72.7%	69.2%	66.7%
90.9%	100.0%	33.3%
100.0%	100.0%	66.7%

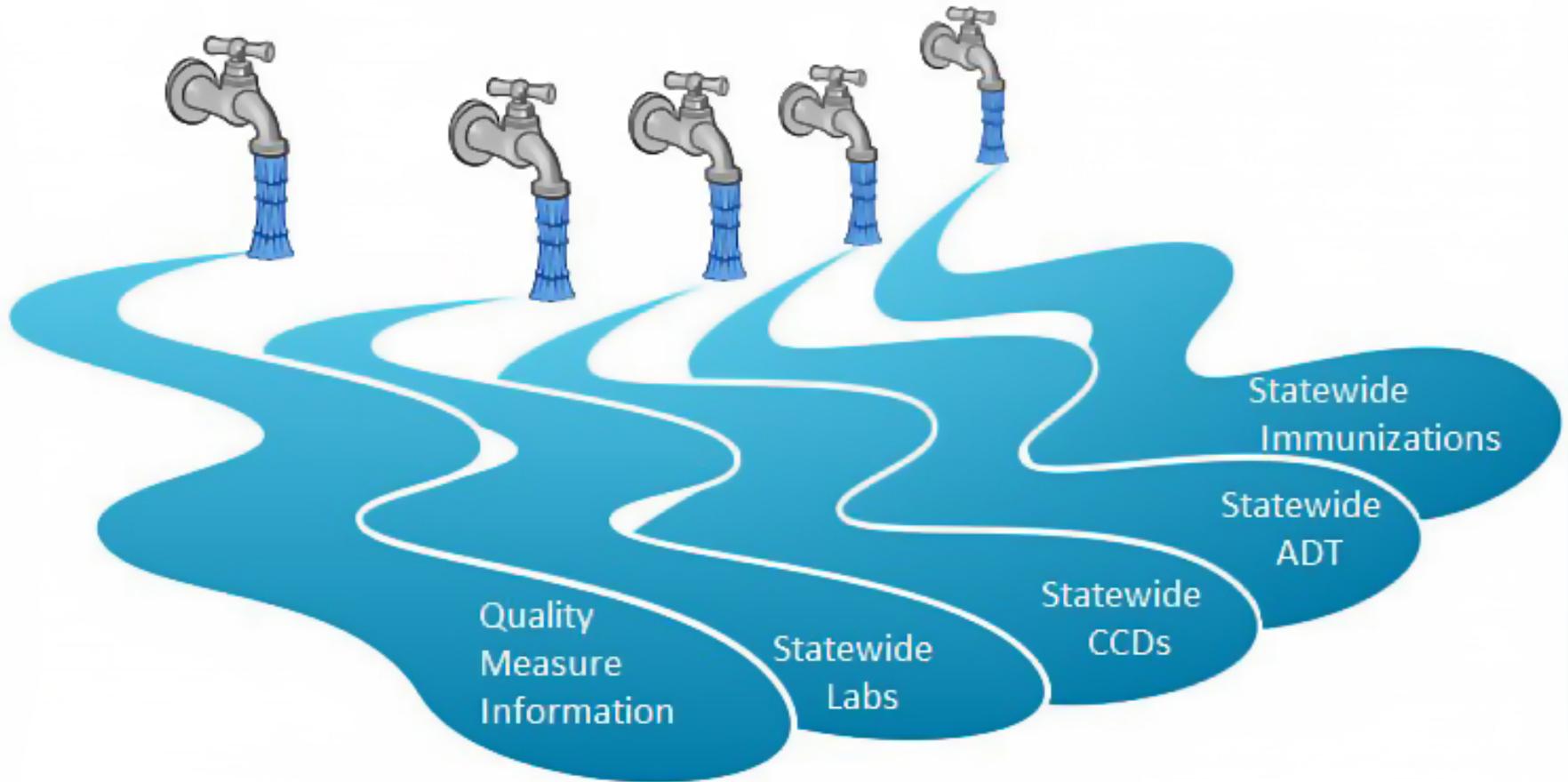
This Photo by Unknown Author is licensed under CC BY-SA

Push Data



1. Admit, Discharge, & Transfer Use Case
2. Care Summary (CDA CCD) Use Case
3. Lab Results Use Case
4. Quality Measure (QRDA) Use Case

Use Case Driven Data Lake



Active Care Relationships

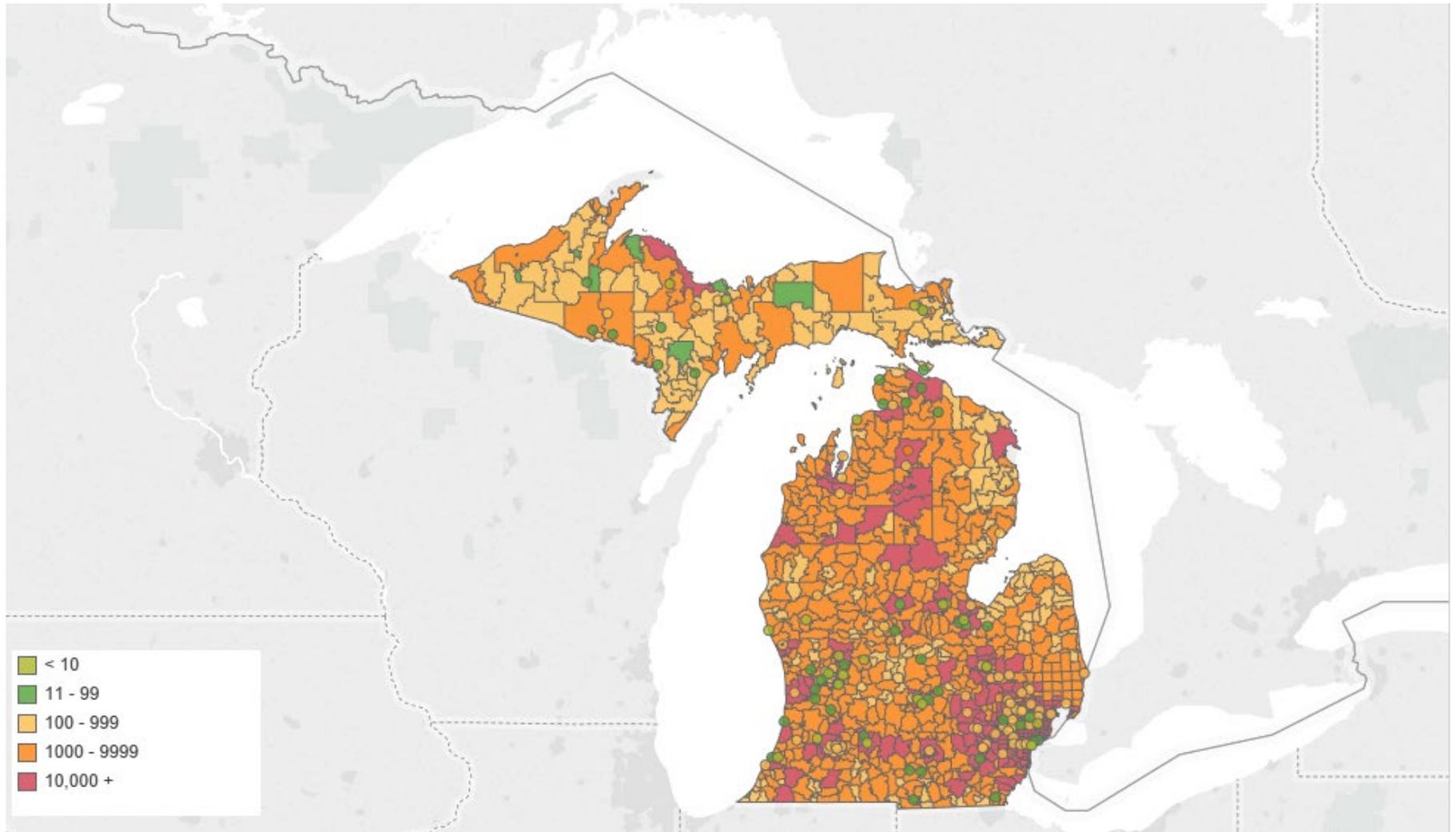


Patient



Provider

~ 30+ Million Active Care Relationships



Data for the Common Key Service



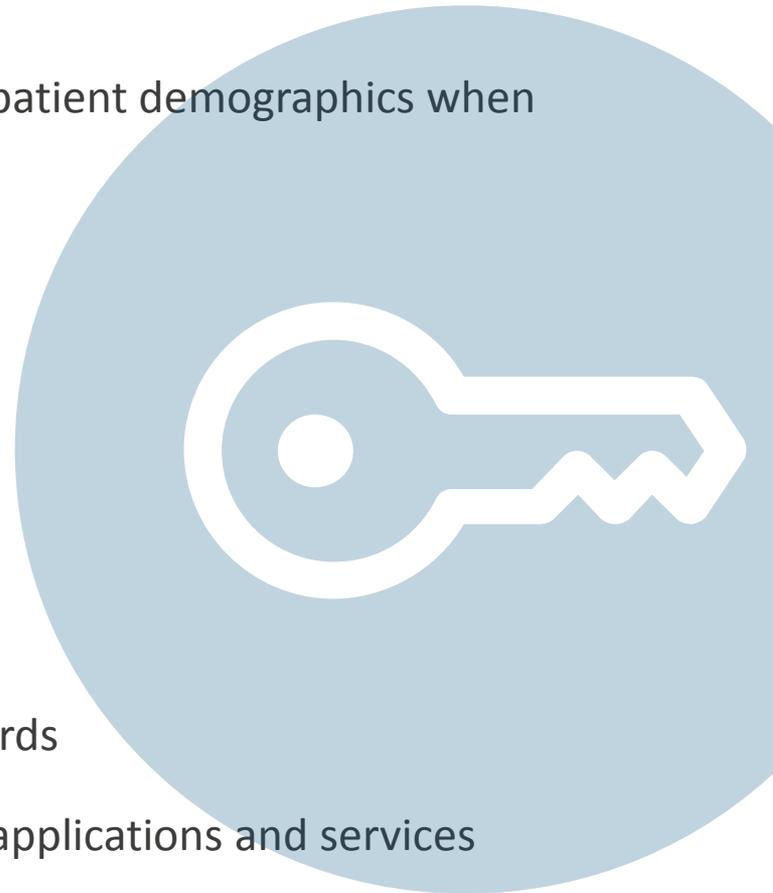
Common Key *Service* (CKS)

What:

- » An additional common identifier to include in patient demographics when sharing or merging data
- » Built upon:
 - Active Care Relationship Service
 - MiHIN legal trust framework
 - Leverages the State of Michigan MPI

Goal:

- » Improve match rates when linking patient records
- » Link individuals across multiple organizations, applications and services

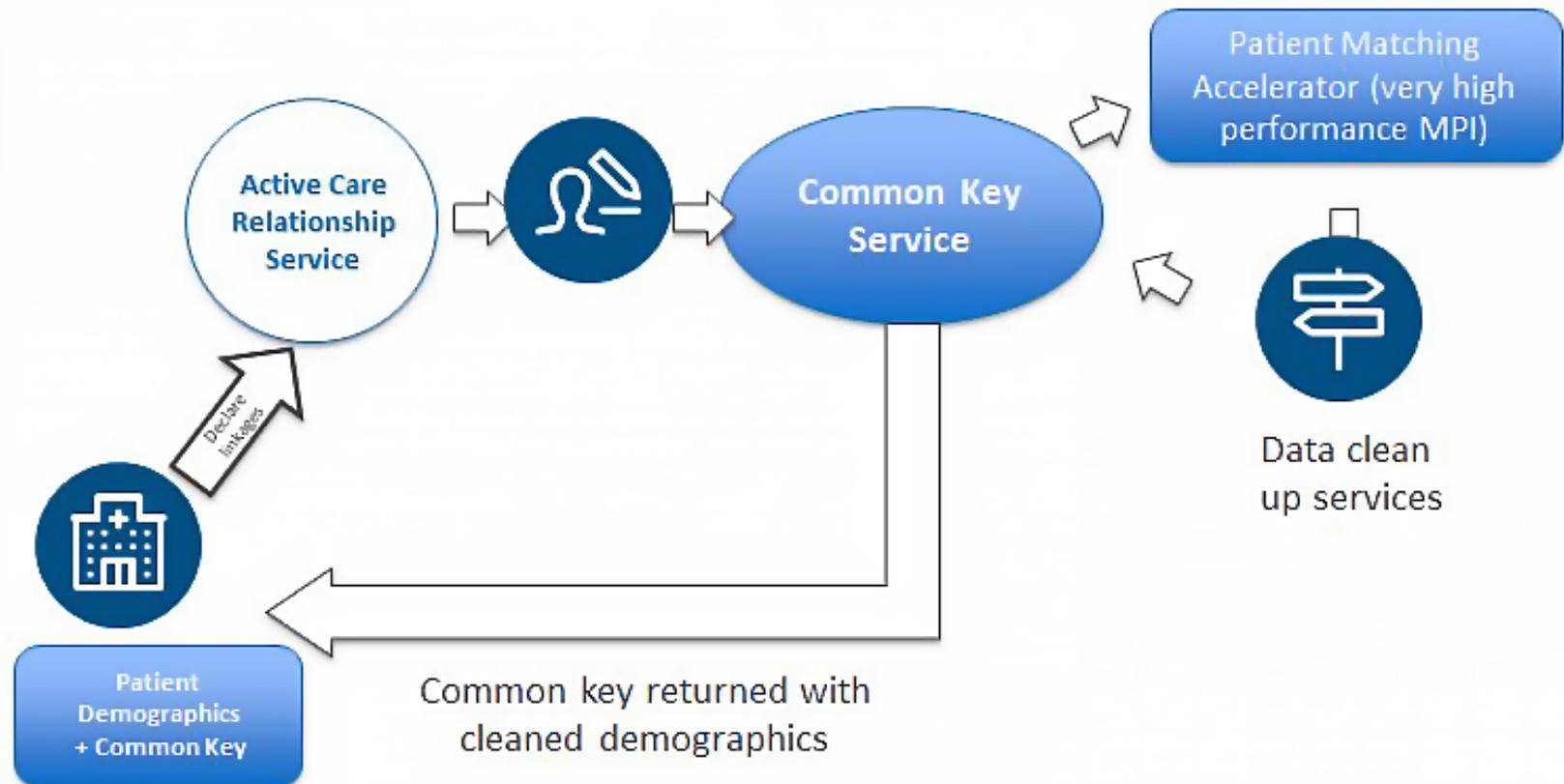


What does a common key look like?

- Forty characters, for example:
 - » **Ah7xct5hfl4bdznumnupokdyn67ruuxusrdj4qgc**
- The common key does not encode any patient specifics.
- The common key is tamper proof and is cryptographically signed and hashed by MiHIN

BYTE 1	BYTE 2-17	BYTE 18-25
Version	UUID	ENCRYPTED

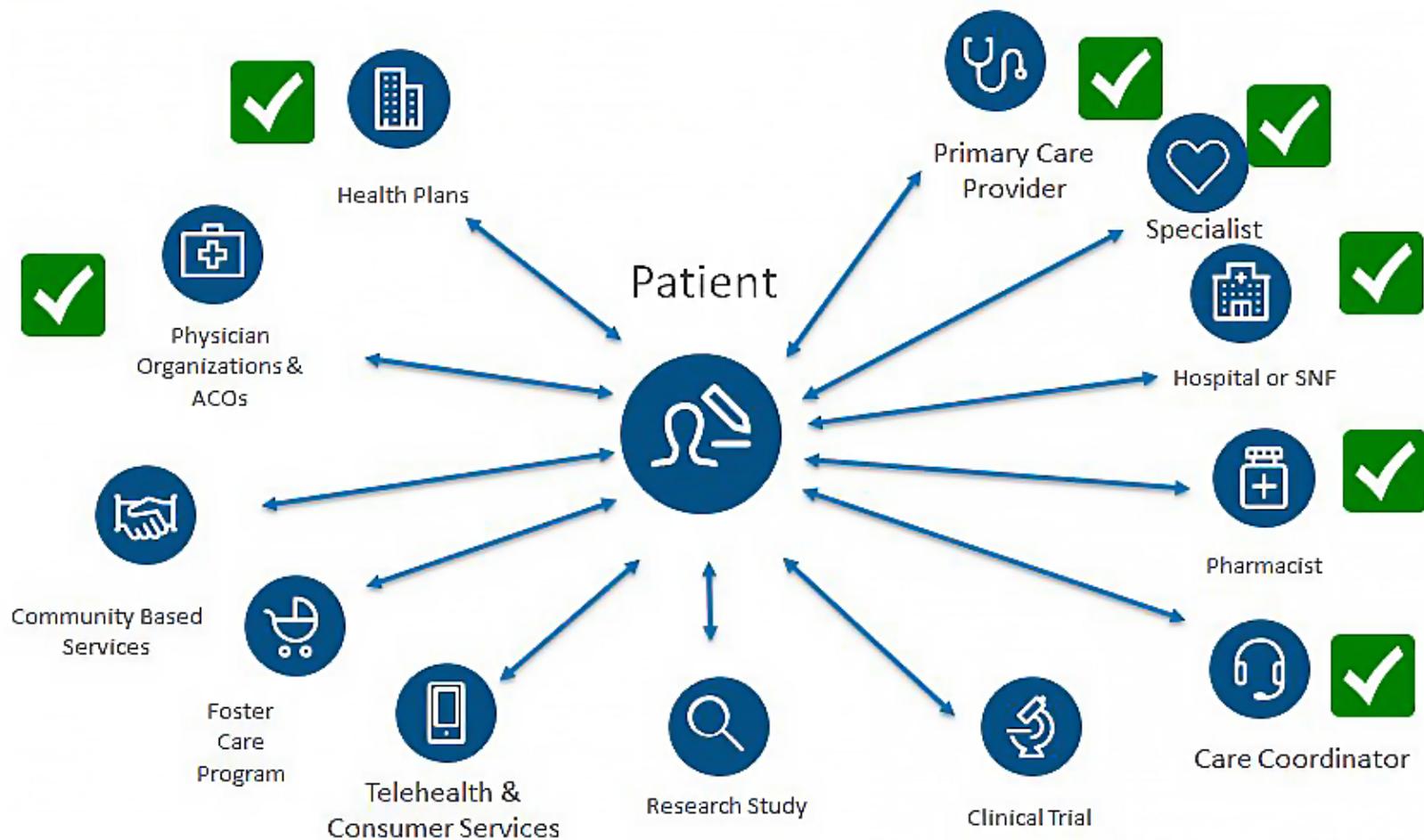
Improving Patient Matching



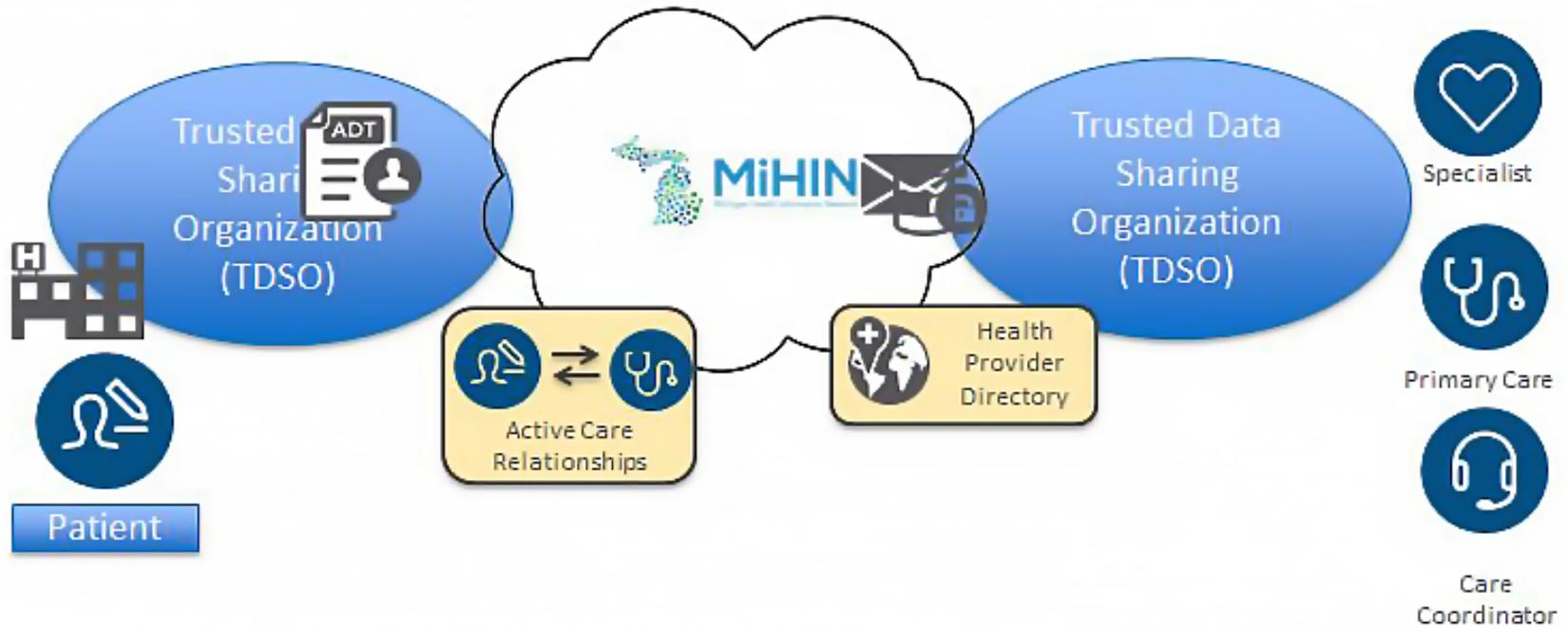
Provider & Affiliation Data



Active Care Relationship Service™ (ACRS™)

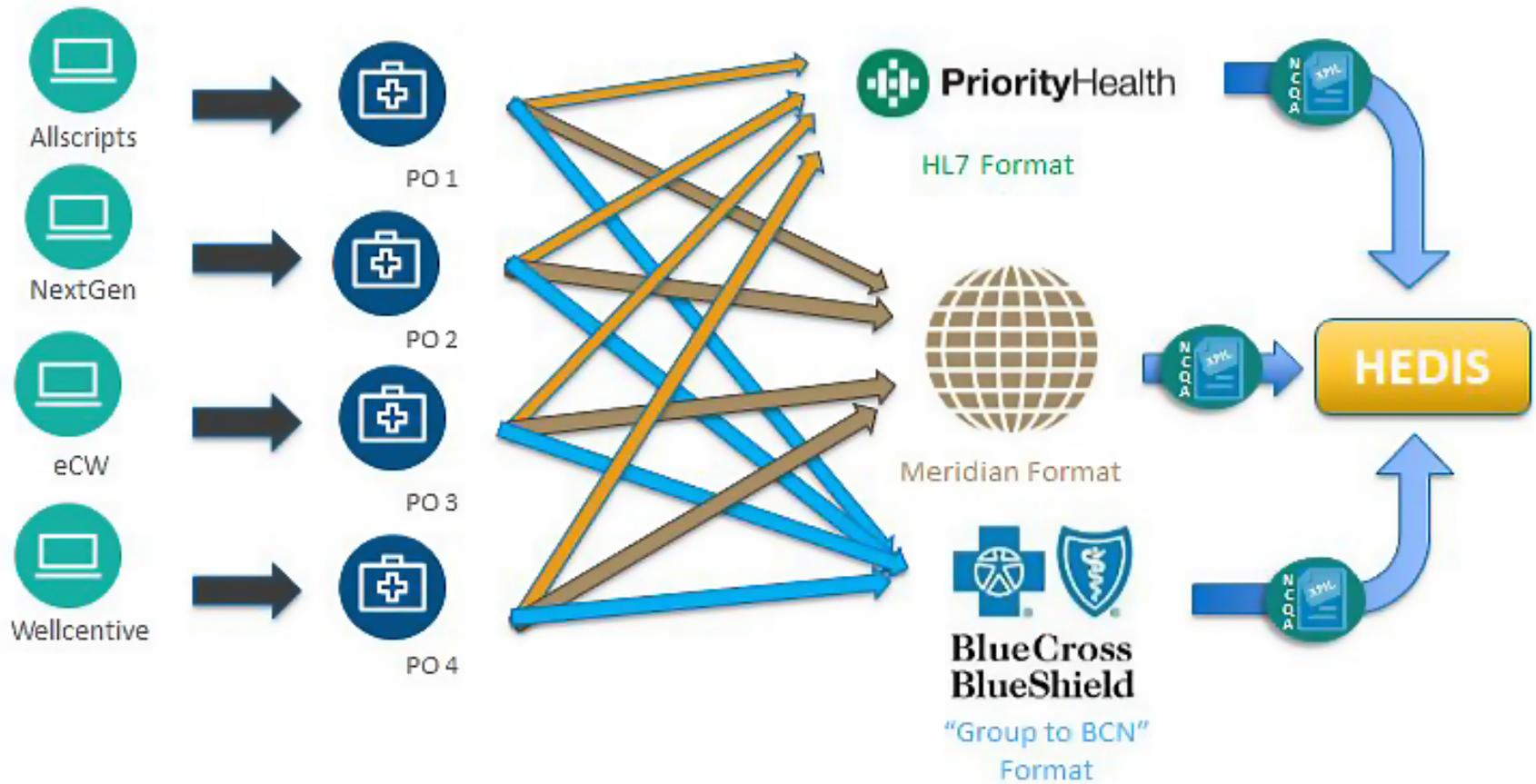


Almost Every Hospital, ED, and 70% of SNFs

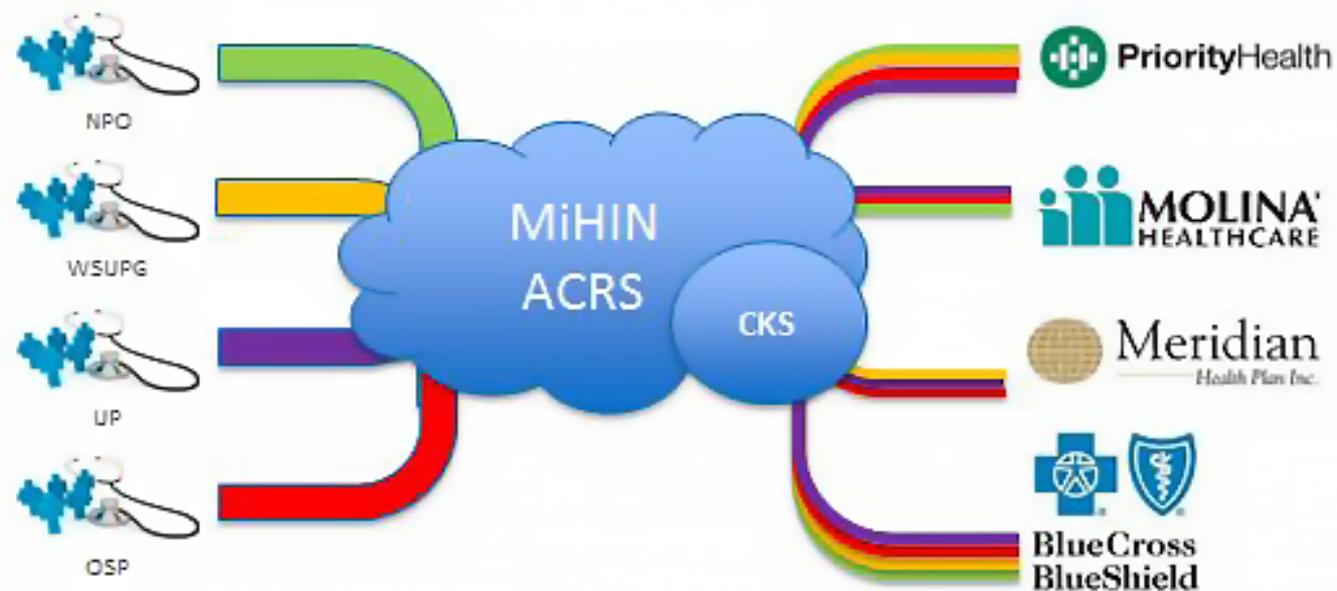


- 1) Patient goes to hospital which sends message to TDSO then to MiHIN
- 2) MiHIN checks Active Care Relationship Service and identifies providers
- 3) MiHIN retrieves contact and delivery preference for each provider from HPD
- 4) Notifications routed to providers based on electronic addresses and preferences

Supplemental data – status quo



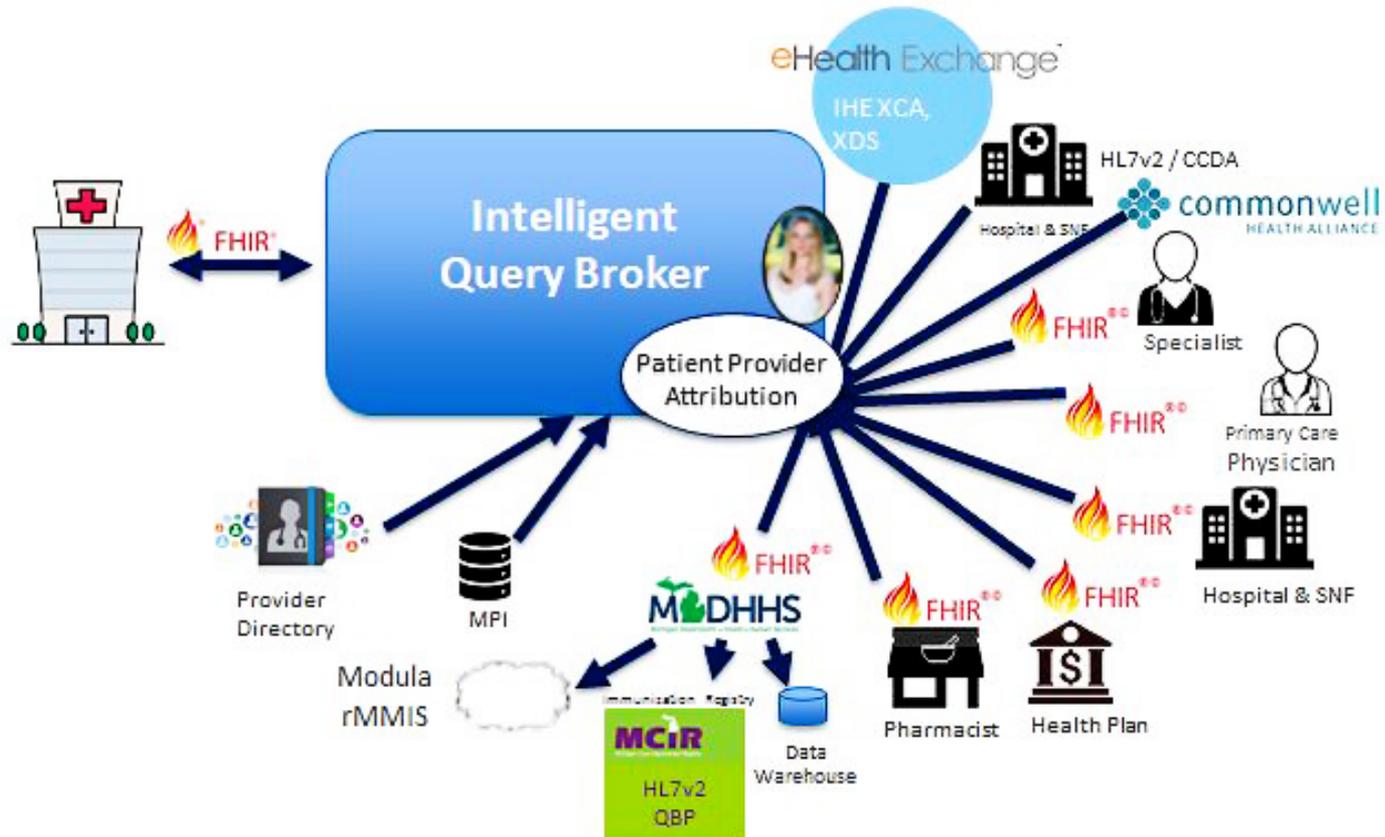
ACRS Streamlines Quality Reporting



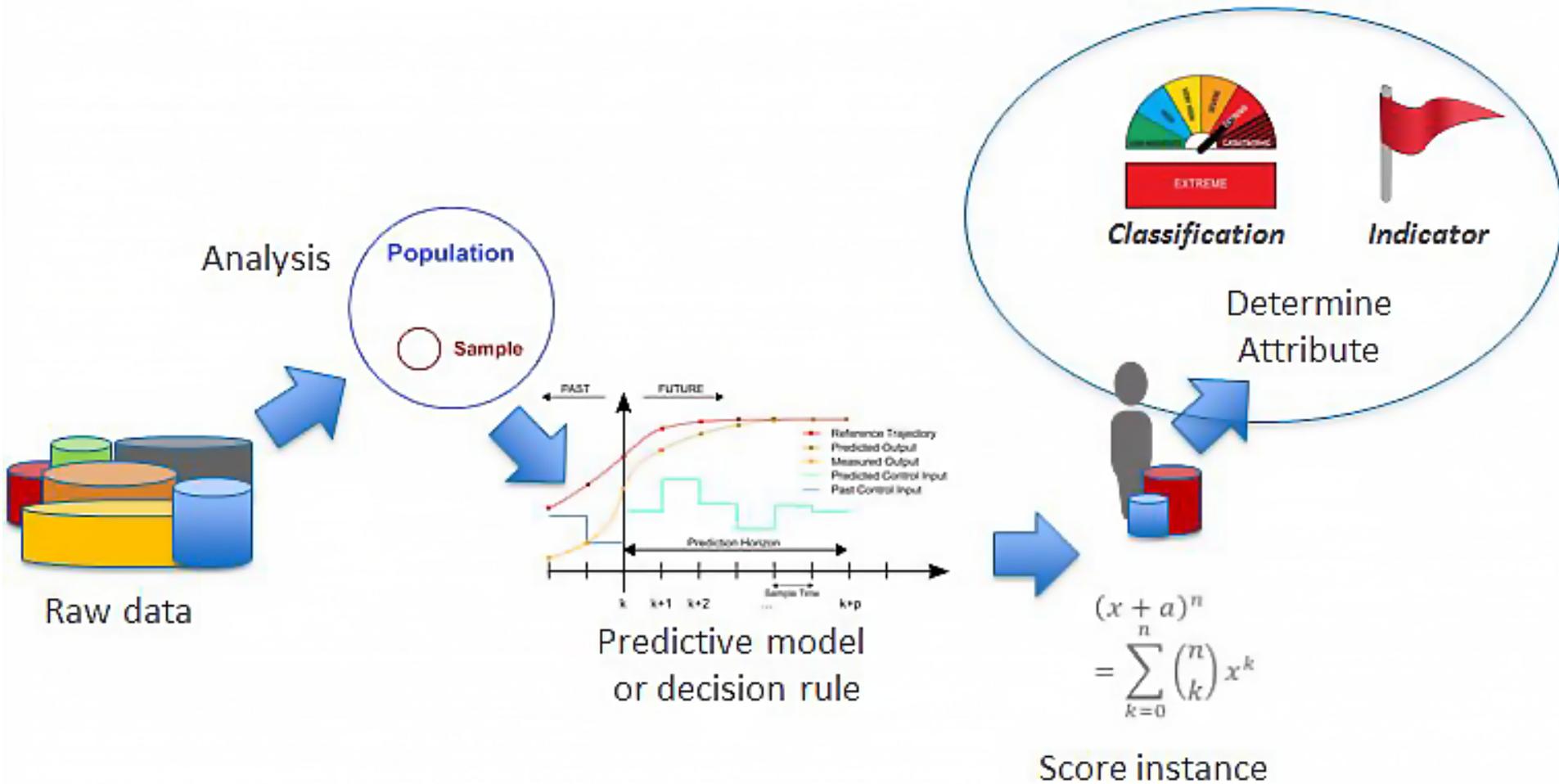
One format and one location for:

- PO's to submit supplemental data
- Payers to submit Gaps in Care
- PO's to close Gaps in Care

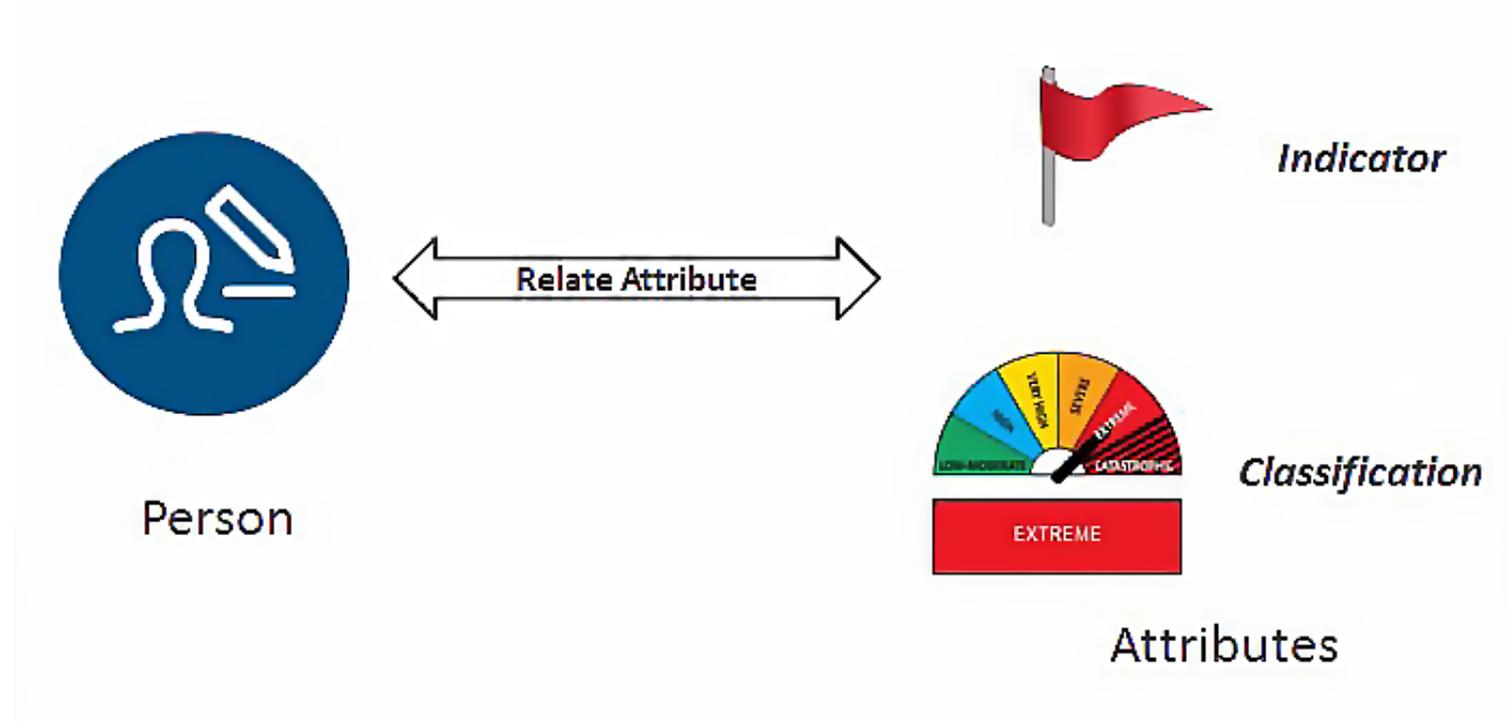
ACRS Foundation for the Next Generation Record Locator Service



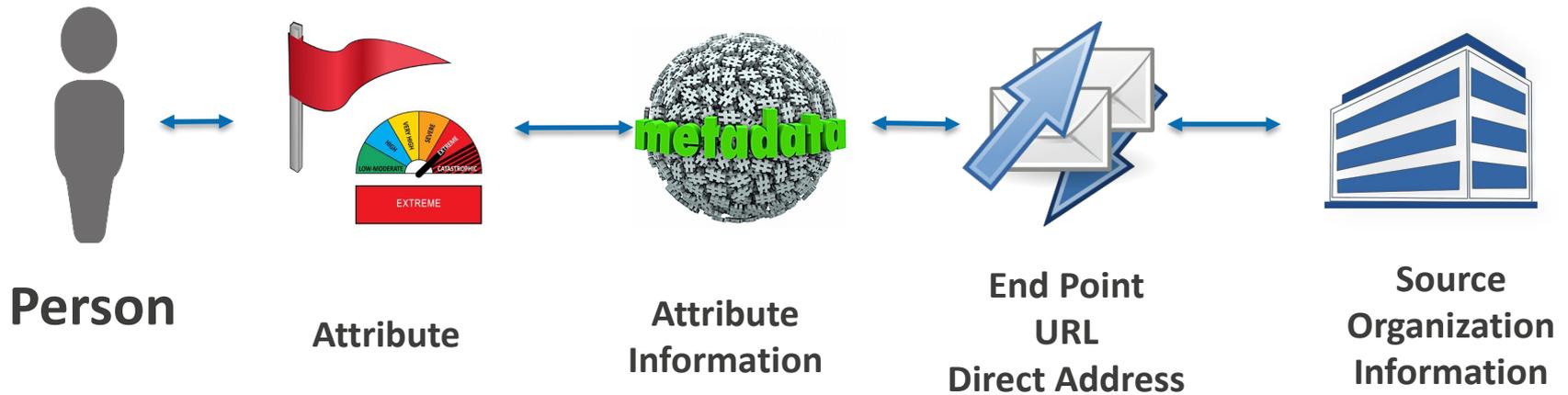
Analytics Pipeline



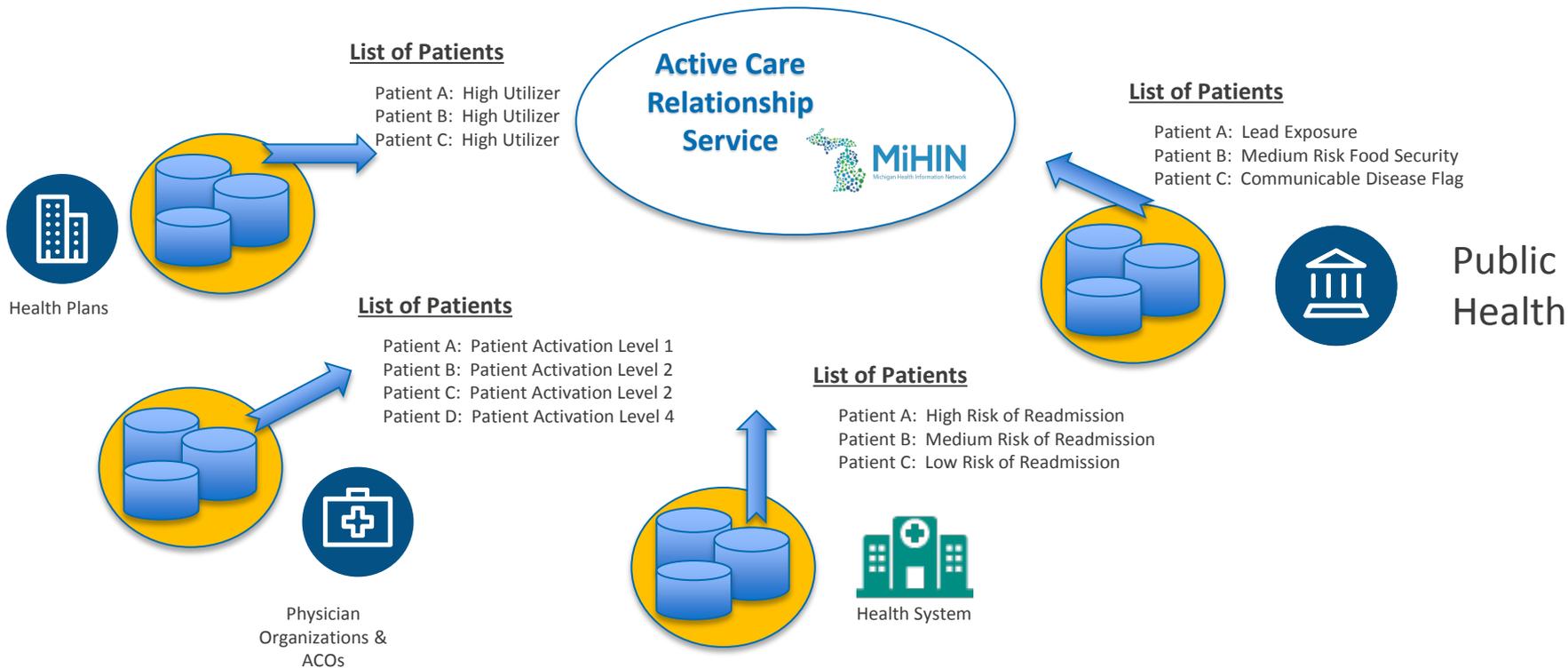
Active Care Relationship Attributes



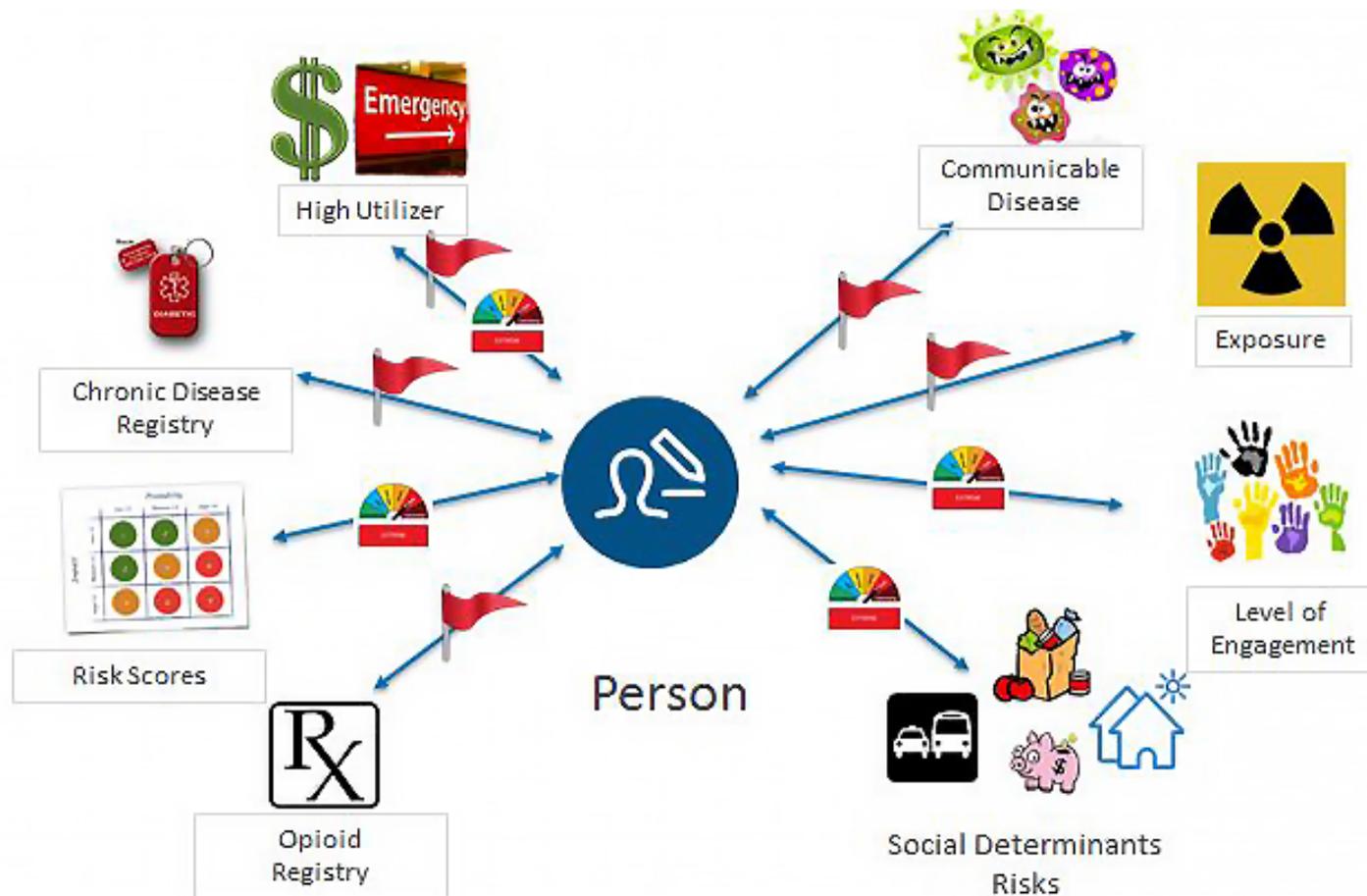
ACRS Attribute Data



Use of Prior Knowledge



ACRS Attribute Lists



ACRS Situational Awareness

Linkages



Health Plans



Primary Care Provider



Physician Organizations & ACOs



Specialist



Community Based Services



Hospital or SNF



Pharmacist



Government Programs



Care Coordinator



Patient

Attributes



High Utilizer



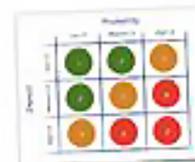
Communicable Disease



Chronic Disease Registry



Exposure



Risk Scores



Level of Engagement

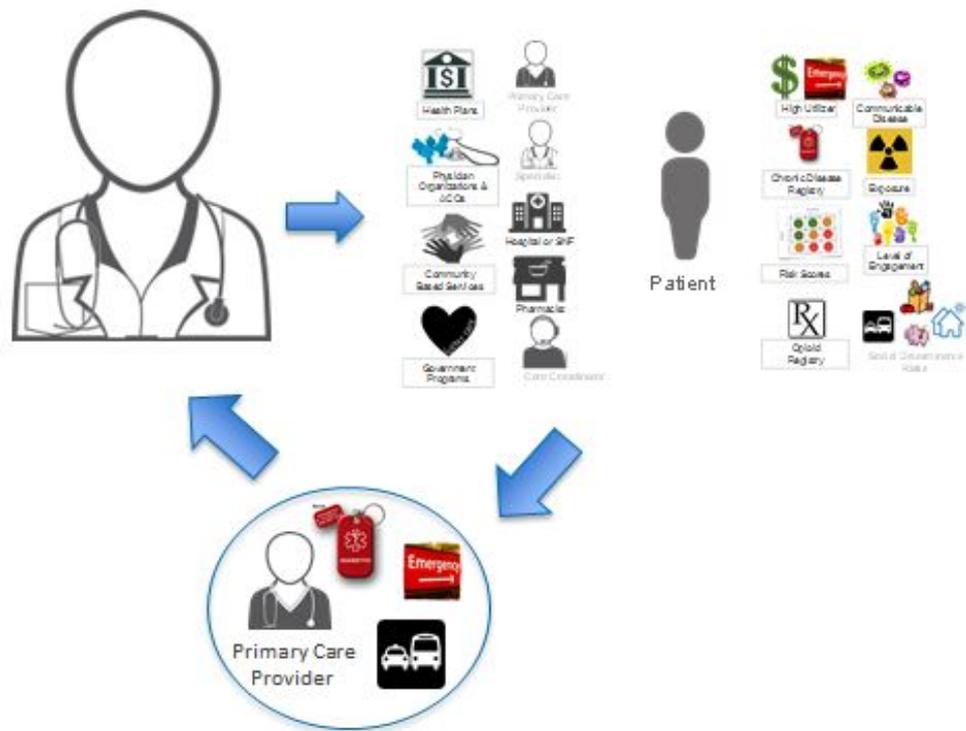


Opioid Registry

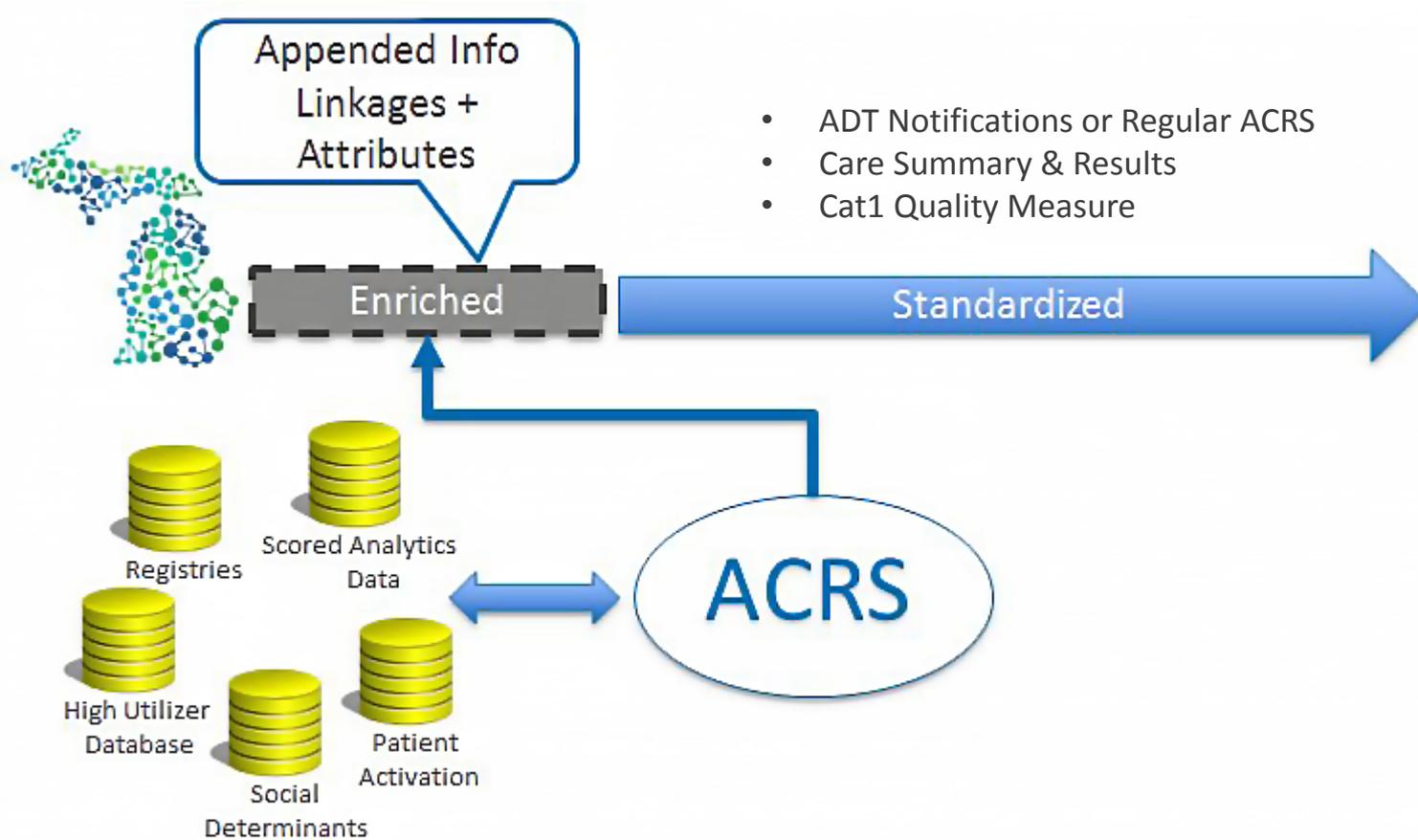


Social Determinants Risks

Situational Awareness & Minimum Necessary Principle

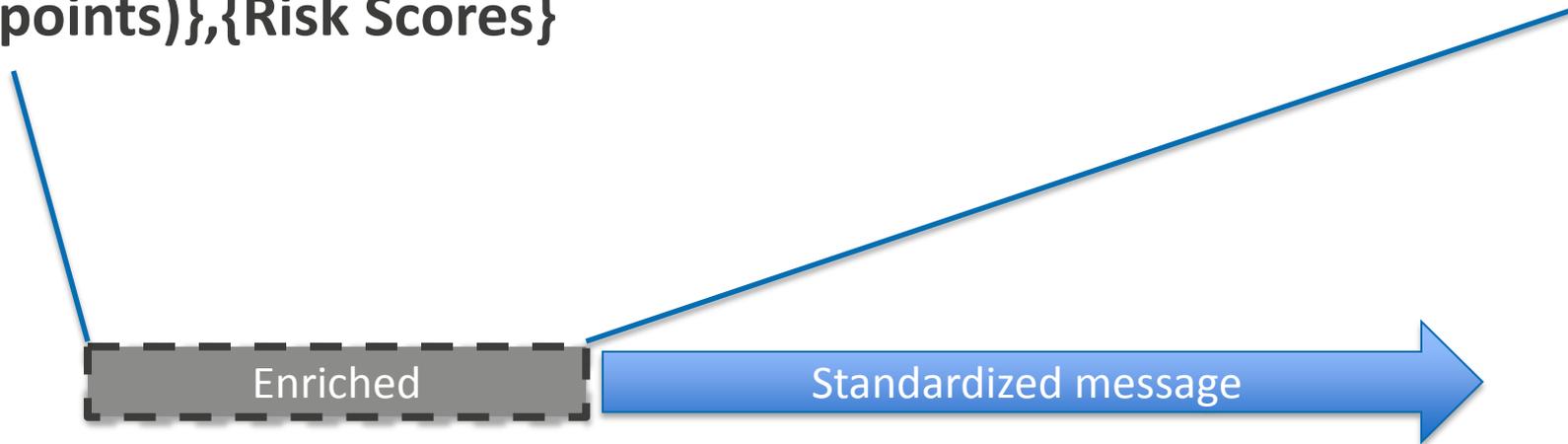


Enrichment Example



Data Enrichment on Simple Transactions

{Utilization} , {Public Health}, {Engagement}, {ACRS}, {URLS (end points)},{Risk Scores}



Health Plan High Utilizer Program
Chronic: Diabetes, CHF
PAM Score = Level 2
UMHS Epic Portal (<http://xxx>)
PCMH Contact:
jones@direct.clinic.com
LACE = 14

GEORGE TULLISON; 62 yo black male admitted to Windward Hospital on January 18, 2017 with Diagnosis Codes (ICD-10) I50.43 and E1010, DRGs 291 and 637

Questions & Thank You!

Tim Pletcher

Executive Director

pletcher@mihin.org





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Disclosures

David C. Kendrick, MD, MPH

- Chair, Department of Informatics, THE University of Oklahoma School of Community Medicine
- Assistant Provost for Strategic Planning, OU Health Sciences Center
- CEO, MyHealth Access Network
 - » Oklahoma Non-profit Health Information Exchange- does not sell products outside of Oklahoma
- TA Consultant for ONC
- Chair, Board of NCQA
- Board, Strategic HIE Collaborative
- Board, Patient Centered Data Home

Agenda

- What challenges do we face?
- Why is HIE (the noun) an important part of the solution?
- What evidence do we have that this can work?
- Are there other critical use cases?

Agenda

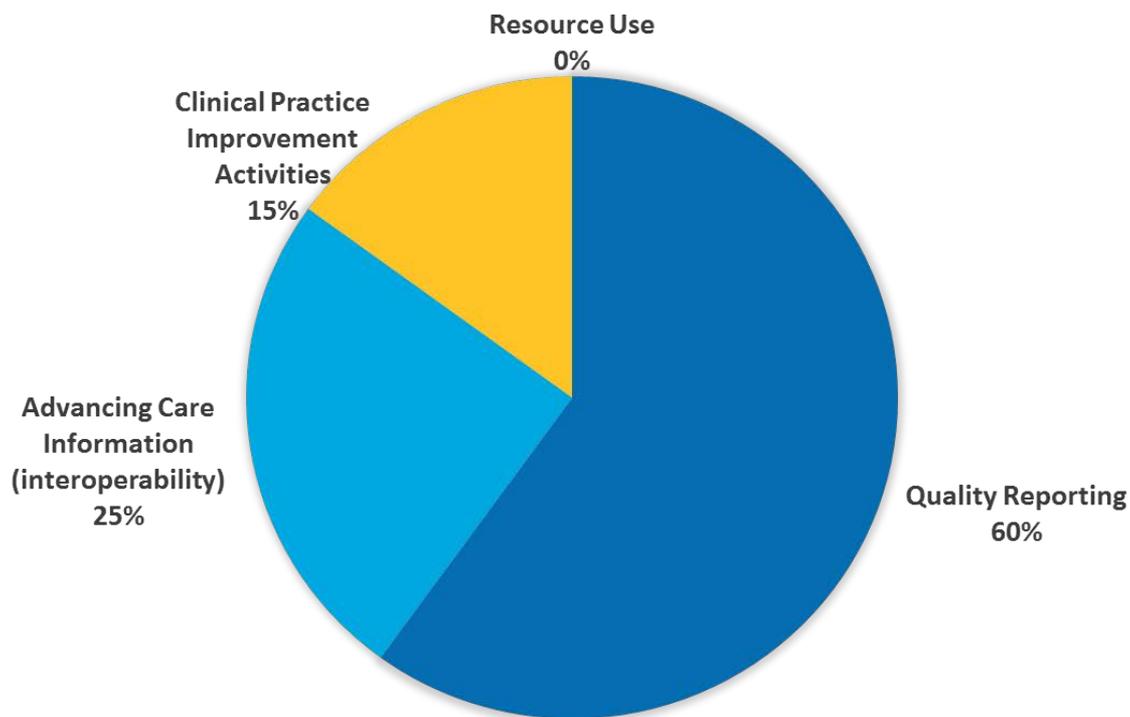
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Moving to Value Based Payment Models

$$\textit{Value} = \frac{\textit{Quality}}{\textit{Cost}}$$

Need to Measure Quality vs. Provider cost & burden

2017 MIPS COMPONENTS FINAL



Provider burden is creating disparities

HEALTH INFORMATION TECHNOLOGY

EXHIBIT 3

Association between practice characteristics and ability to create clinical quality reports at the practice level

Characteristic	Odds ratio	95% CI
PRACTICE SIZE (NUMBER OF CLINICIANS)		
1	0.59**	0.38, 0.93**
2-5	0.87	0.57, 1.33
6 or more	Ref	Ref
PRACTICE OWNERSHIP		
Clinician	Ref	Ref
Hospital/health system	2.88**	1.92, 4.33**
Federal	6.02**	3.65, 9.92**
Academic, other or none	1.14	0.64, 2.01
PRACTICE LOCATION		
Urban	Ref	Ref
Suburban	0.70	0.39, 1.26
Large town	1.03	0.64, 1.67
Rural area	0.61**	0.39, 0.96**
PRACTICE PARTICIPATION IN MEANINGFUL USE		
Neither stage 1 nor stage 2	Ref	Ref
Stage 1 only	1.09	0.65, 1.85
Stages 1 and 2	1.65**	1.08, 2.51**
PRACTICE PART OF EXTERNAL PAYMENT PROGRAM		
No	Ref	Ref
Yes	1.73**	1.19, 2.51**
PRACTICE PARTICIPATING IN DEMONSTRATION PROJECT		
No	Ref	Ref
Yes	1.51**	1.09, 2.09**

Disadvantaged:

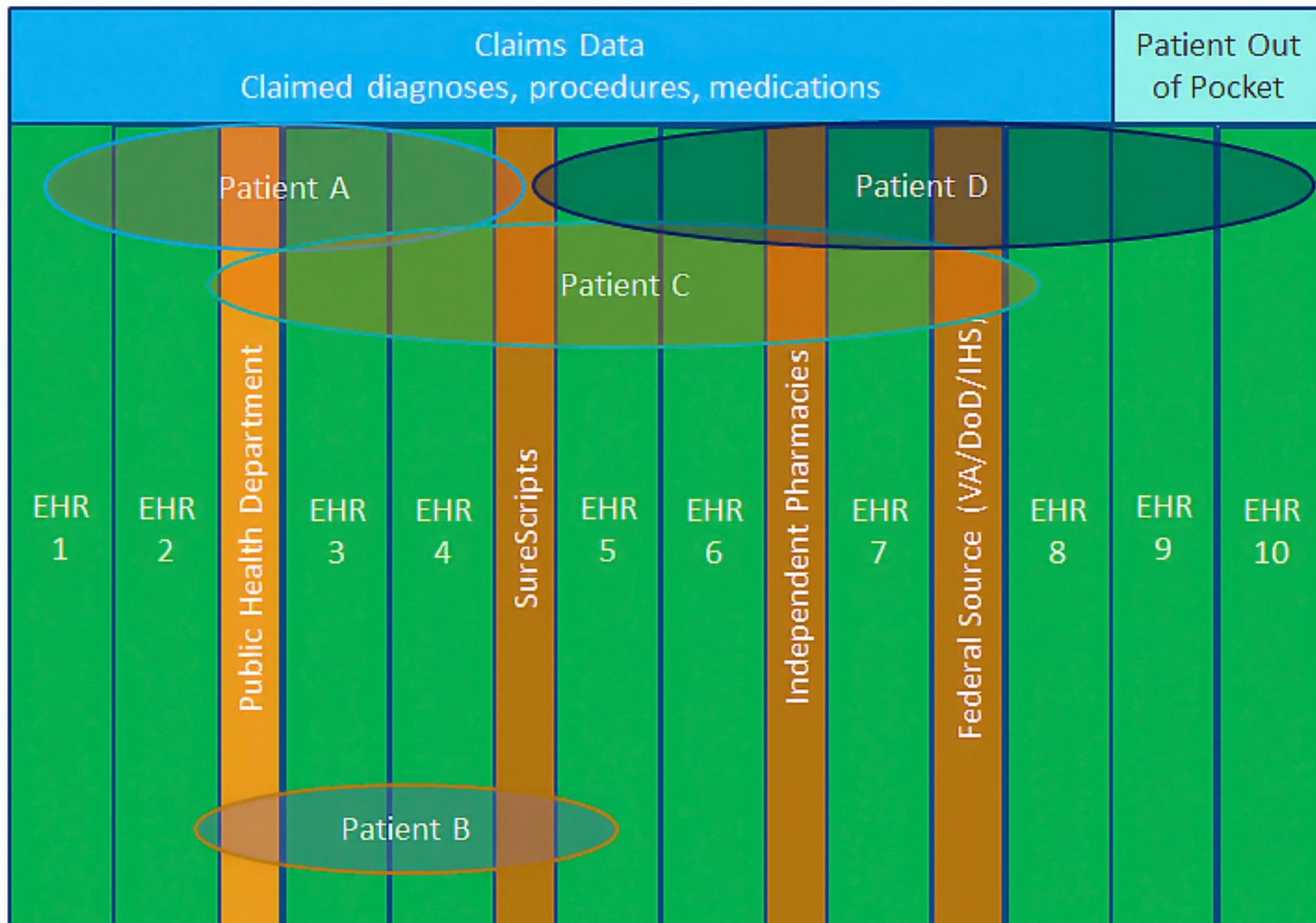
- Smaller practices
- Clinician owned (independent)
- Suburban and rural practices
- Academic practices
- No Meaningful Use participation
- Not participating in an external payment program
- Not participating in demonstration project

doi: 10.1377/hlthaff.2017.1254. HEALTH AFFAIRS 37, NO. 4 (2018): 635-643

Agenda

- What challenges do we face?
- **Why is HIE (the noun) an important part of the solution?**
- What evidence do we have that this can work?
- Are there other critical use cases?

Real patient data is . . .



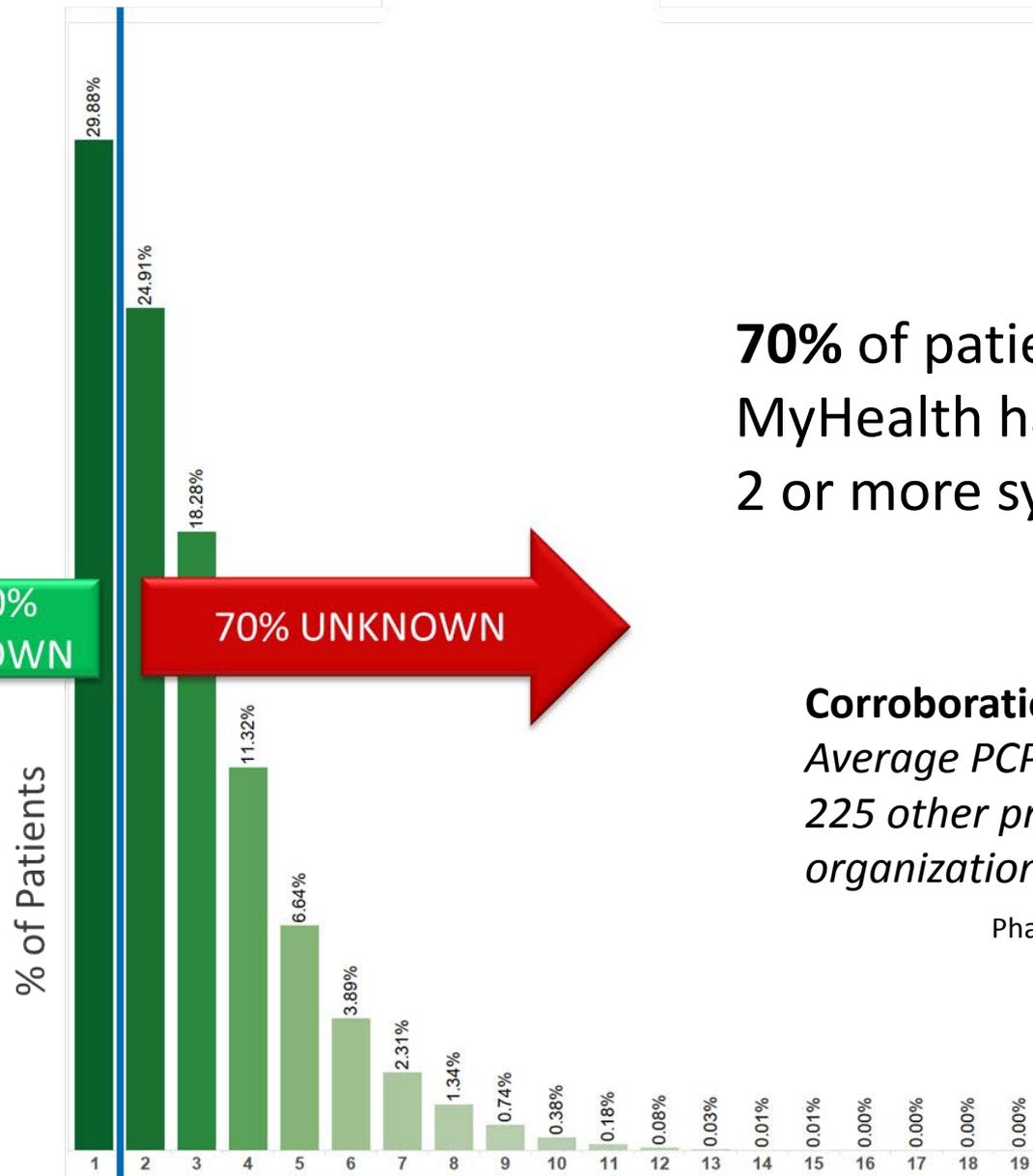
tified

70% of patients in MyHealth have records in 2 or more systems

Corroboration:

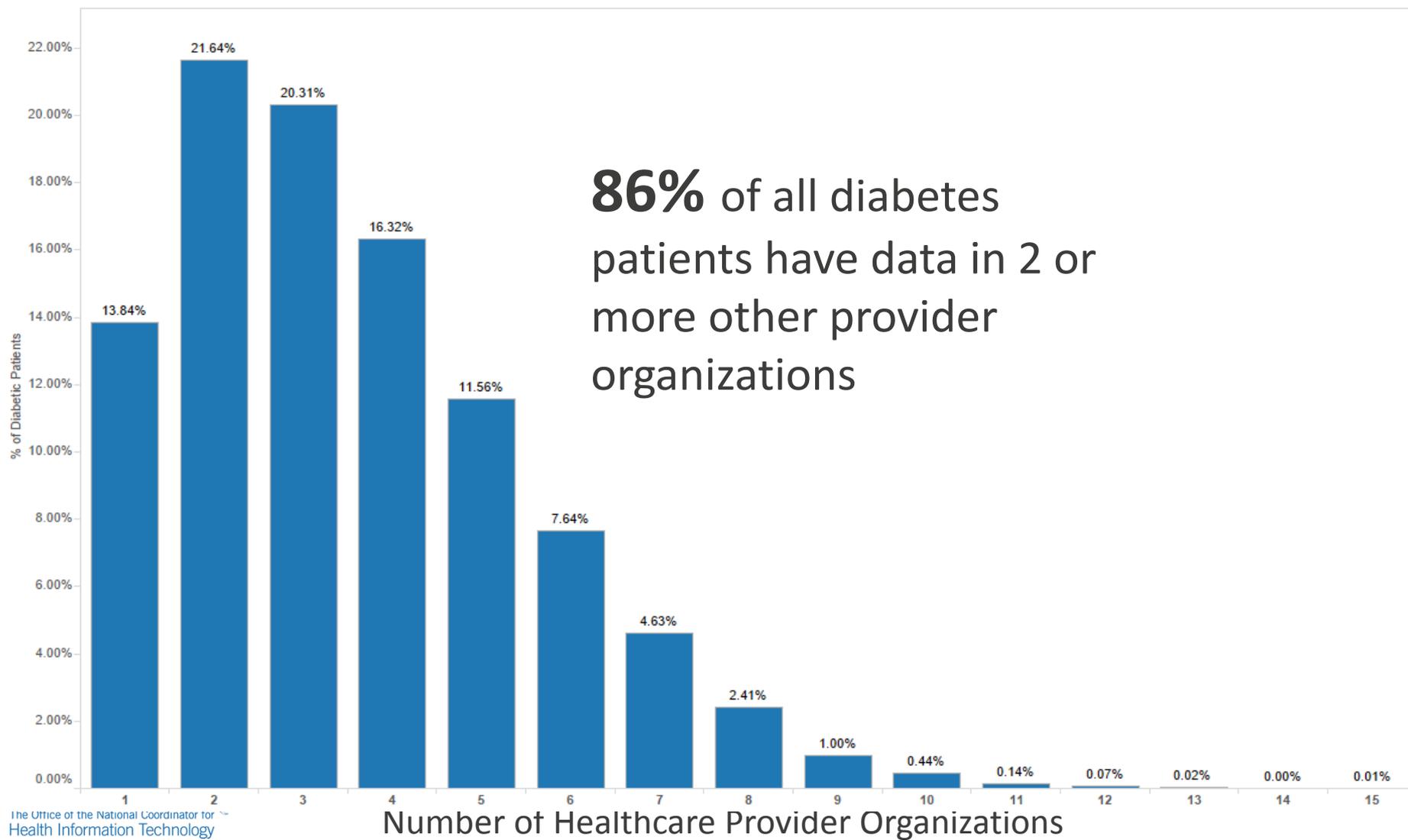
Average PCP must coordinate care with 225 other providers in 117 other organizations

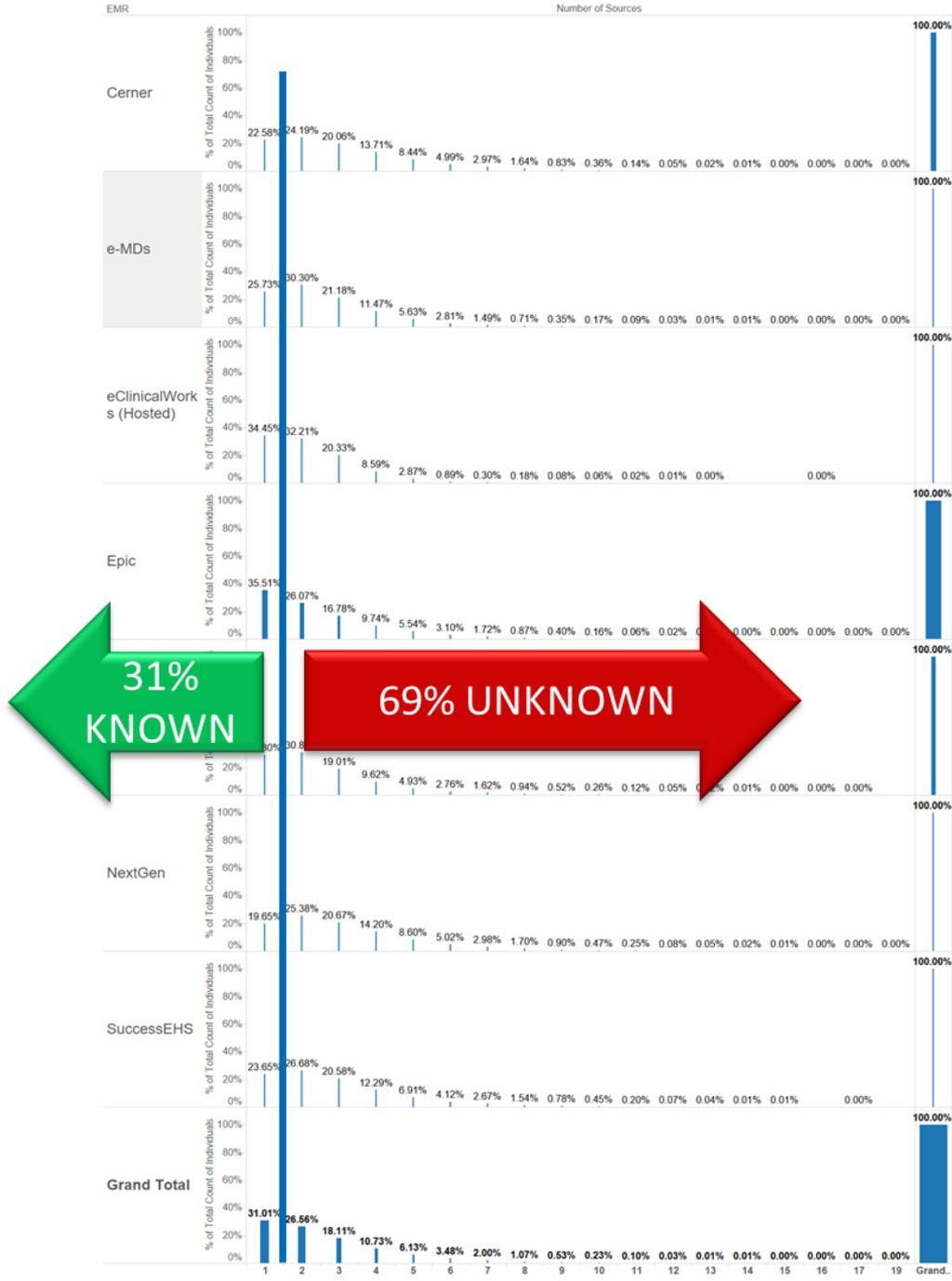
Pham, HH, NEJM 2007; 356: 1130-1139



Number of Clinical Sources each patient has

Diabetes patients with records elsewhere



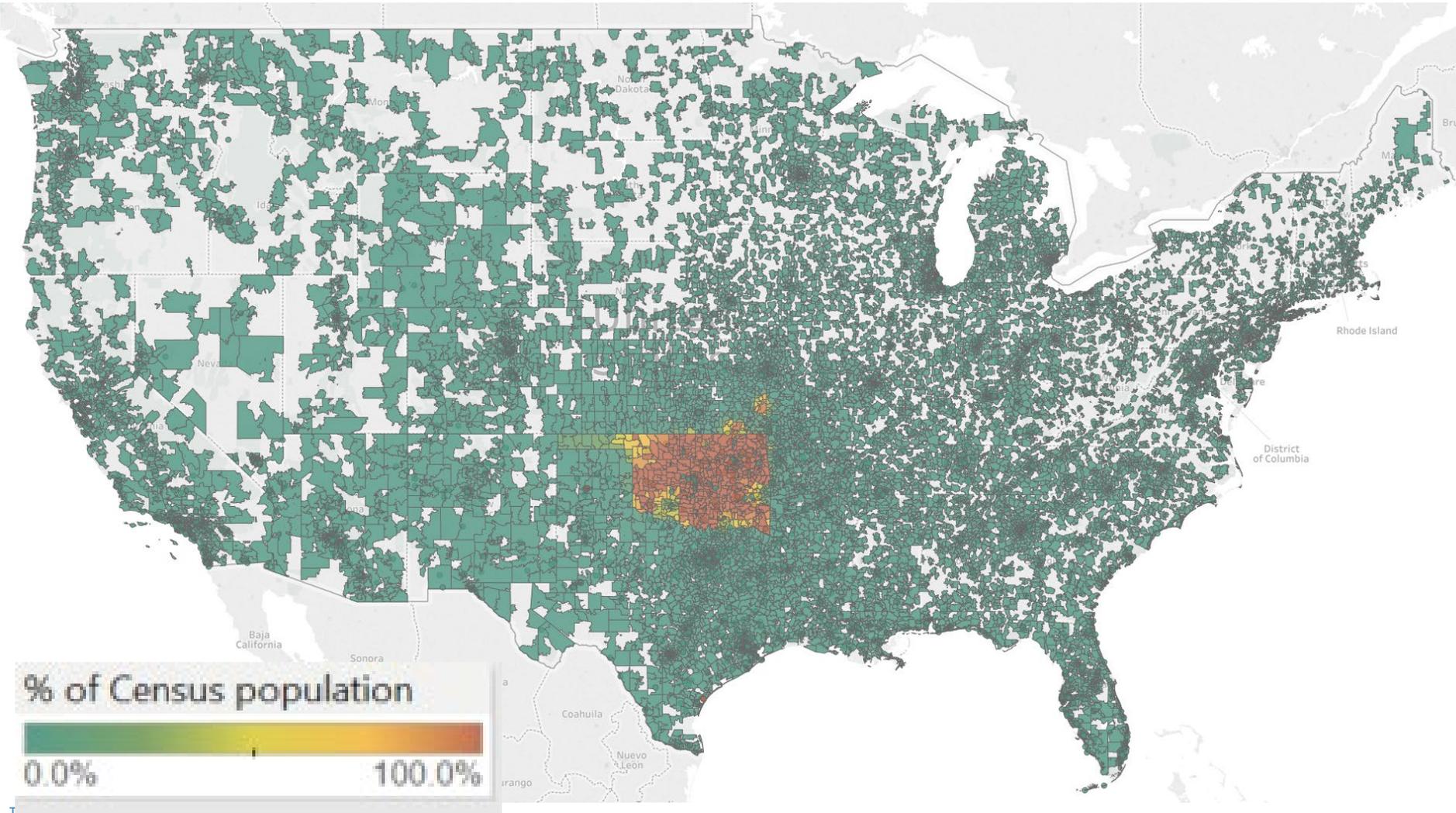


Data fragmentation by EHR Vendor (top 7 vendors in Oklahoma shown)

31% KNOWN (green arrow pointing left)

69% UNKNOWN (red arrow pointing right)

Oklahoma's Patient Population: Care Fragmentation beyond borders

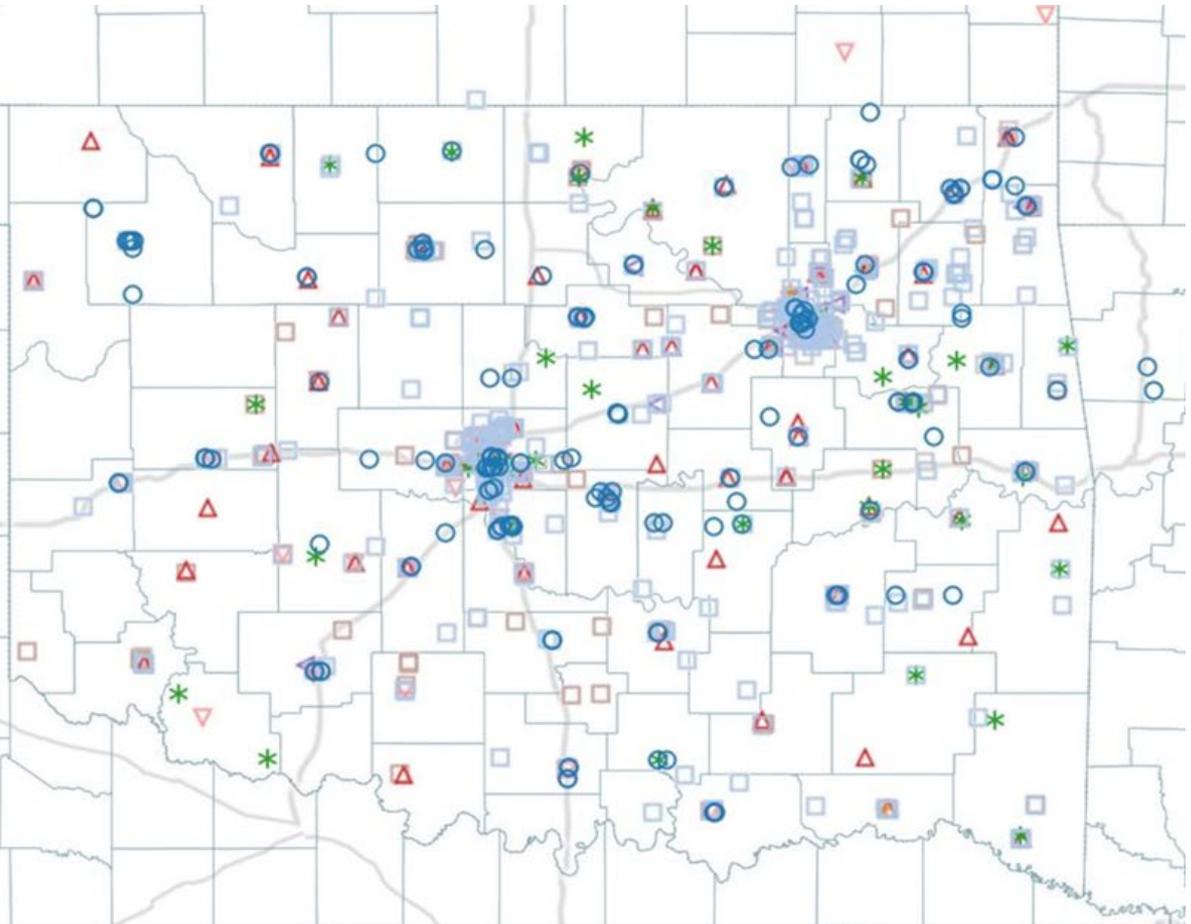


Critical Voices In Governance



MyHealth is

- 4M Unique Patients
- >70% of all hospital activity and
- >5,000 providers from
- >350 health-related organizations
- >45,000 clinical encounters daily



Facility Type

 Null	 Emergency Services	 Lab	 Pharmacy
 Behavioral Health...	 FQHC	 Long Term Care ...	 Public Health
 Clinic	 Hospice	 Ophthalmology/Op...	 Urgent Care Facility
 Community/Social...	 Hospital	 Payer	

Facility Type

 Null	 Emergency Services	 Lab	 Pharmacy
 Behavioral Health...	 FQHC	 Long Term Care ...	 Public Health
 Clinic	 Hospice	 Ophthalmology/Op...	 Urgent Care Facility
 Community/Social...	 Hospital	 Payer	

Comprehensive, Multi-sourced Health Record

Active Panel Monitoring | news.google.com | A Trump meltdown for ti | MACRA-MIPS Benchmar | Patient Profile - MyHealth | David

MyHealth Access Network, Inc. [US] | https://portal.myhealthaccess.net/Patient/Patient

Apps | MyHealth Portal | MyHealth Integration | MyHealth Analytics | MyHealth MOD | PCDH Hub | Value Set Authority | QPP | Quality Payment Proc | eCQMs for 2017 Perf | CMS Collaboration | Other bookmarks

MyHealth ACCESS NETWORK | Home | OBNDP PMP | Support | David Kendrick | Log Out

ELVIS AARON TEST | DOB: 1/18/1967 | Age: 50 | Filter Data Sources | Print

SUMMARY | ENCOUNTERS | PROBLEMS | MEDICATIONS | VITAL SIGNS | ORIGINAL DOCUMENTS | LAB RESULTS | CLINICAL DOCUMENTS | ALLERGIES | PROCEDURES | IMMUNIZATIONS | DISPENSED MEDICATIONS

Encounters (30) | Search

Patient	Admit Date	Source	Attending
O - ...	10/7/2016 9...	OUHSC-...	Vipul Pareek MI
O - ...	9/27/2016 9...	OUHSC-...	Wendy Wells,
O - ...	9/14/2016 4...	OUHSC-...	Adam McGann,
O - ...	9/7/2016 3...	OUHSC-...	Dana Driskill RN
O - ...	8/26/2016 9...	OUHSC-...	William Luttrell,
O - ...	8/4/2016 2...	OUHSC-...	William Luttrell,
O - ...	7/20/2016 9...	OUHSC-...	Rachel Minatee
O - ...	7/19/2016 4...	OUHSC-...	Renae Taber,
O - ...	7/18/2016 1...	OUHSC-...	Rachel Minatee

Problems (67) | Search

Description	Start Date	Source
CANCER, LARYNX	6/29/20...	(1)
INFLUENZA VACCINE	8/6/2015	(1)
ATOPIC RHINITIS	8/6/2015	(1)
ASTHMA, INTRINSIC NOS	6/29/20...	(1)
LEUKOPLAKIA - ORAL MUCOSA	10/23/2...	(1)
DIVERTICULOSIS, COLON	8/5/2015	(1)
RENAL MASS	7/19/20...	(1)
ABDOMINAL PAIN, RIGHT LOWE...	8/2/2013	(1)
ONYCHOMYCOSIS	2/26/20...	(1)
THYROID NODULE		(1)
DIAB W/NEURO MANIFESTS TYPE...	2/26/20...	(1)
DEPRESSIVE DISORDER NOS	12/20/2...	(1)
DEPRESSIVE DISORDER, NOT ELSE...	3/24/20...	(1)
ADHD - WITH HYPERACTIVITY	12/20/2...	(1)
CAD	9/29/20...	(1)
ASTHMA	11/14/2...	(1)
MALE GENITAL ITCHING	10/19/2...	(1)
LUMBAGO	3/24/20...	(1)
FEVER UNSPECIFIED	8/8/2011	(1)
MASS - NASAL	6/29/20...	(1)
DYSURIA	9/24/20...	(1)

Medications (66) | Search

Medication Name	Active	Source
GILLESPIE'S SOLUTION	Active	OUHSC-
AZITHROMYCIN 250 MG TA...	Active	OUHSC-
BACTRIM DS TABS	Active	OUHSC-
BACTRIM DS TABS	Active	OUHSC-
TYLENOL COLD MULTI-SY...	Inactive	OUHSC-
GREENBERGER PROTOCOL	Active	OUHSC-
BACITRACIN 500 UNIT/GM ...	Active	OUHSC-
CELECOXIB 100 MG CAPS	Active	OUHSC-

Vital Signs (31) | Search

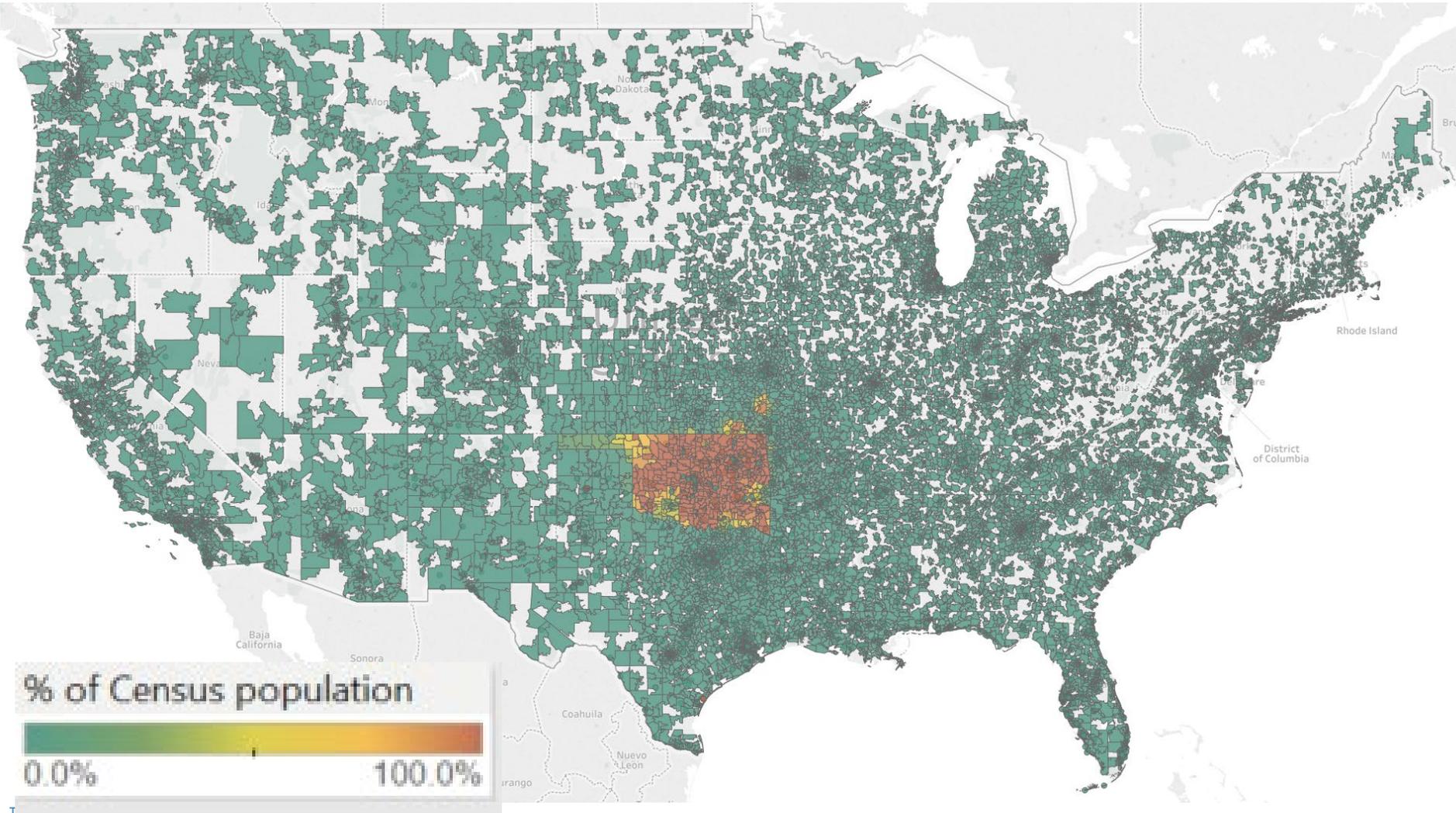
Measurement Type	Value	Source
height E&M - 8302-2	72	OUHSC-...
height E&M - 8302-2	72	OUHSC-...
height E&M - 8302-2	72	OUHSC-...
height E&M - 8302-2	72	OUHSC-...
weight E&M - 3141-9	210	OUHSC-...
blood pressure, systolic - 8...	122	OUHSC-...
temperature E&M	98.6	OUHSC-...
blood pressure, diastolic - ...	78	OUHSC-...
pulse rate E&M - 8867-4	60	OUHSC-...
height E&M - 8302-2	72	OUHSC-...
temperature E&M	102	OUHSC-...
weight E&M - 3141-9	210	OUHSC-...
respiratory rate E&M - 927...	20	OUHSC-...
pulse rate E&M - 8867-4	75	OUHSC-...
height E&M - 8302-2	65	OUHSC-...
weight E&M - 3141-9	300	OUHSC-...
height E&M - 8302-2	72	OUHSC-...
pulse rate E&M - 8867-4	75	OUHSC-...
blood pressure, systolic - 8...	135	OUHSC-...
weight E&M - 3141-9	175	OUHSC-...
blood pressure, diastolic - ...	60	OUHSC-...

Allergies (8) | Search

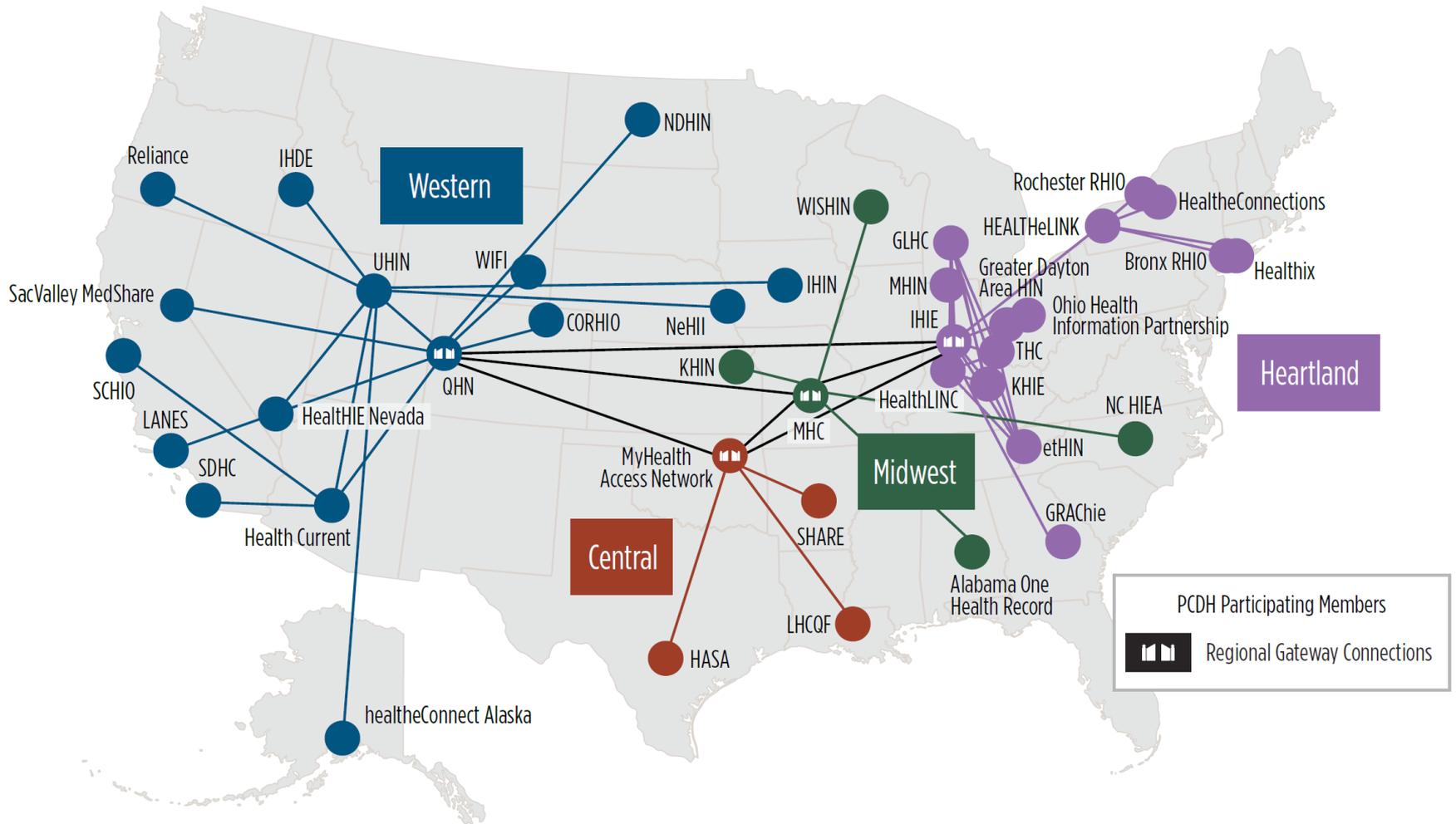
Allergen	Establishment	Source
AMOXIL (AMOXICILLIN)	8/21/2013	(1) OUH
BACTRIM DS	5/6/2016	(1) OUH
CEPHALOSPORINS	8/1/2005	(1) OUH
PEANOUTS	8/21/2013	(1) OUH
PEANUT	8/1/1995	(1) OUH
POISON OAK	10/1/2001	(1) OUH
TEGRETOL	11/14/2013	(1) OUH
ULTRAM	8/18/2011	(1) OUH

© 2017 MyHealth Access Network

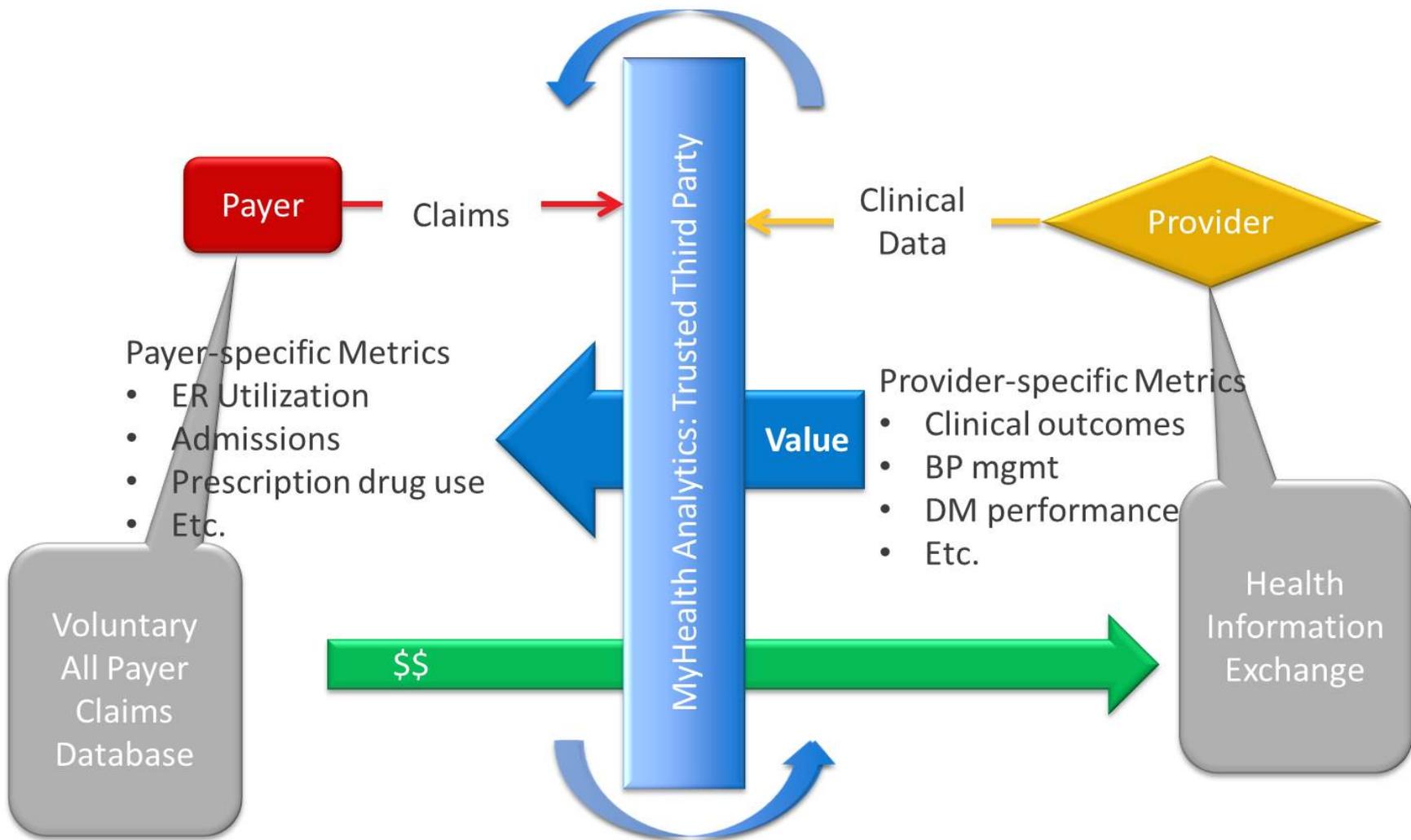
Oklahoma's Patient Population: Care Fragmentation beyond borders



Patient Centered Data Home™ now includes >30 HIE's serving >150M patients

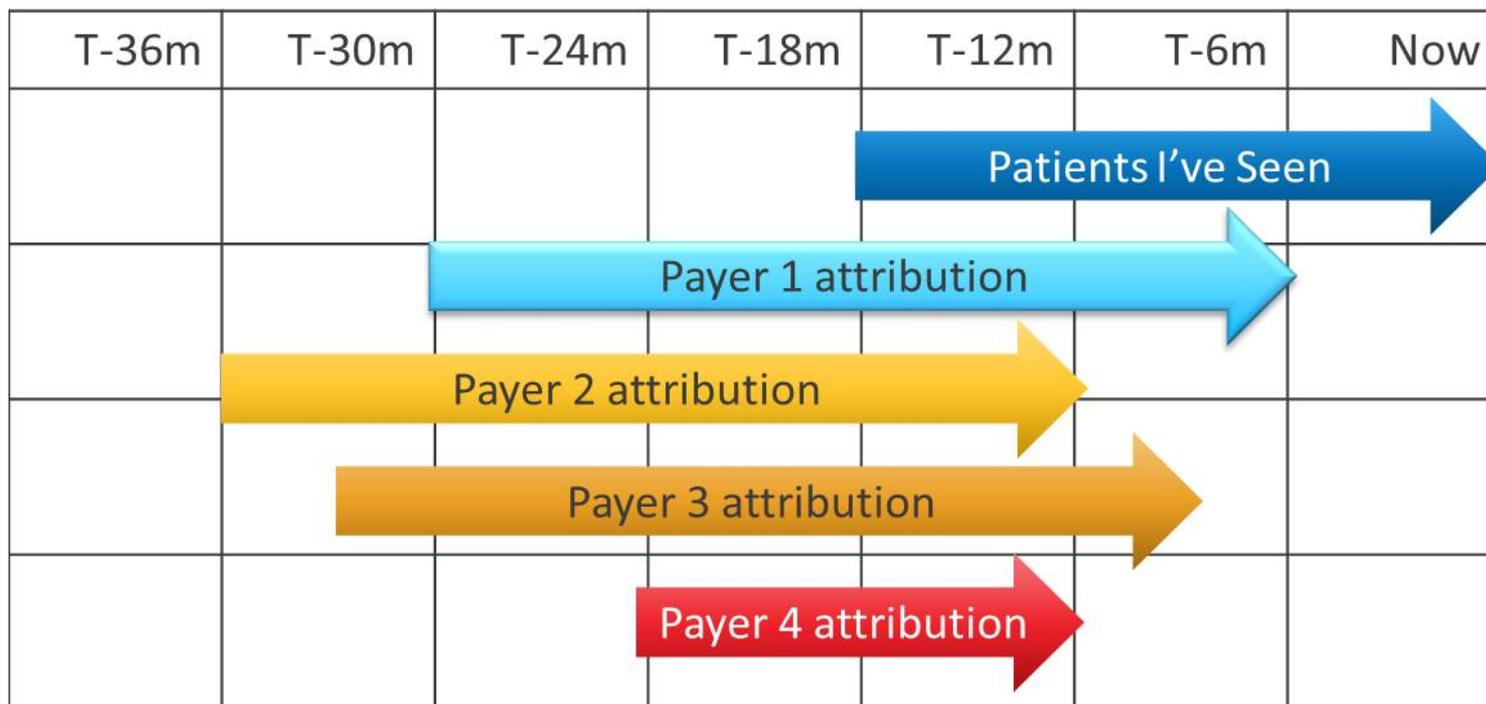


Pay for Value: Trusted 3rd Party



Who are my patients?

Attribution can be confusing, but is critical to understand . . .

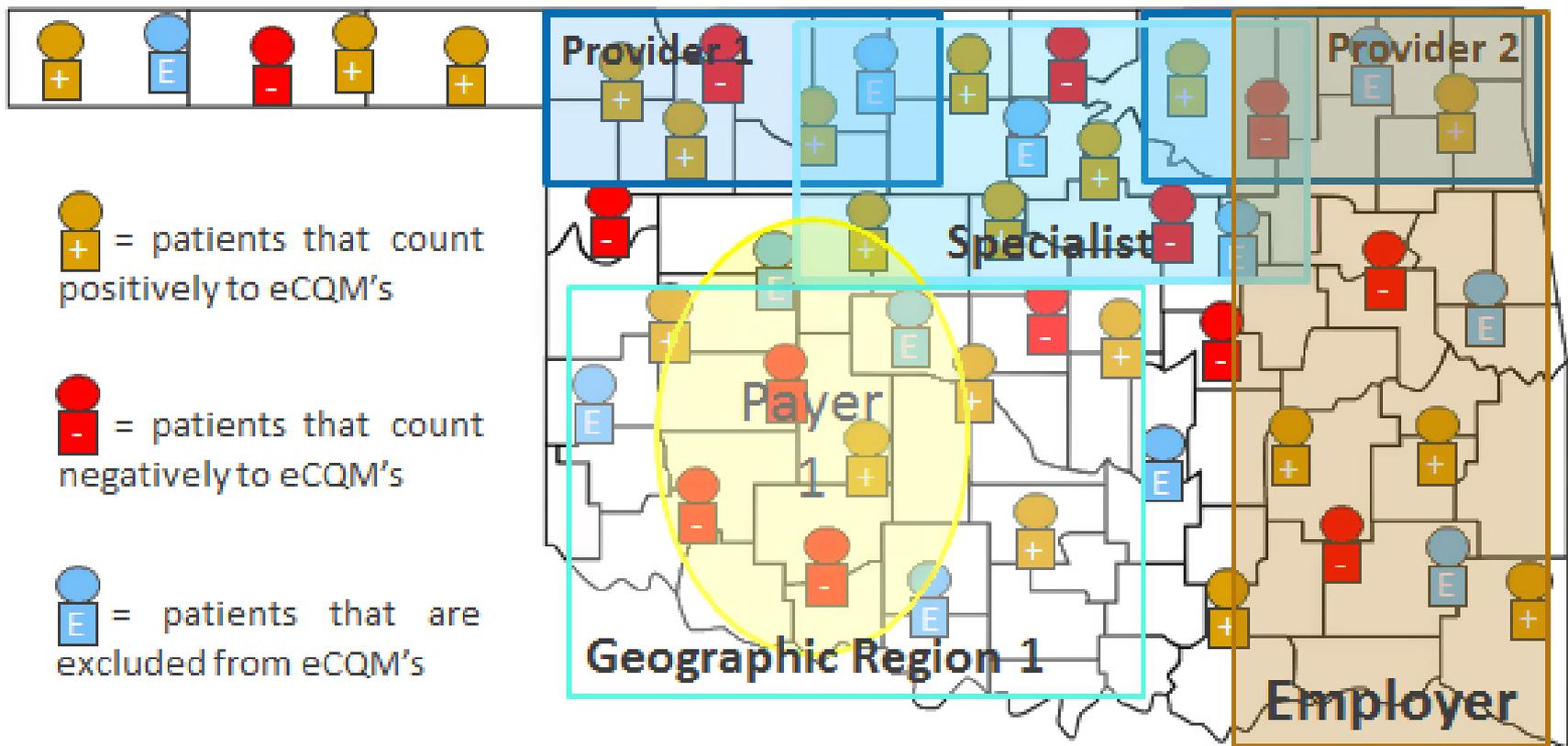


Attribution Method				Payer Assigned		Source A...	Touch Based			
Org	NPI	Provider Name	Patient Name	Payer Assigned PCP (BCBS)	Payer Assigned PCP (CCOK)	Source Assigned PCP from Message Data	Highest Frequency (Last 12 months)	Highest Frequency (Last 18 months)	Highest Frequency (Last 24 months)	Highest Frequency (Last 36 months)
			RE3D0, I01957 (30)							
			RE5ED, A01956 (52)	■		■	■	■	■	■
			RE9A7, A01956 (52)			■				
			RE9DD, A01956 (82)		■	■				■
			RE066, I01956 (65)			■	■	■	■	■
			RE501, L01956 (52)			■		■	■	■
			REA3E, A01956 (36)			■				■
			REAB4, H01956 (60)			■		■	■	■
			REAF3, Y01956 (17)			■		■	■	■
			RECD0, Y01956 (76)			■		■	■	■
			REF5F, Y01956 (43)			■				■
			RF92B, A01956 (66)			■				■
			RF092, L01956 (25)			■				
			RF411, I01956 (22)	■		■				
			RF562, N01956 (3)		■	■		■	■	■
			RF628, E01956 (53)	■		■				■
			RFB39, Y01956 (68)	■		■				■
			RFBE9, A01956 (53)			■				
			S0B6B, T01956 (51)			■				
			S0BE6, N01956 (33)	■		■				
			S0DB8, N01912 (21)		■	■				
			S0ECF, A01956 (40)			■				■
			S0F0C, S01956 (37)	■		■				
			S0FF7, Y01956 (32)	■		■				
			S1C75, Y01956 (60)			■				
			S1C97, A01A5C (76)			■				
			S1D72, W01956 (15)		■	■				
			S1DFD, E01956 (56)		■	■		■	■	■
			S1EDF, N01956 (25)		■	■		■	■	■
			S2B28, Y01956 (31)	■		■				■
			S2BFE, N01956 (48)		■	■		■	■	■
			S2D2B, A01956 (66)			■				■
			S2DF5, A019AC (39)	■		■				
			S2EA2, N01956 (63)			■				
			S2EE5, L01956 (35)			■	■	■	■	■
			S2FE3, R0192E (46)		■	■				
			S3BA8, N01956 (14)			■				
			S3C2C, N01956 (22)			■				
			S3C9F, A018B8 (1)			■	■	■	■	■
			S3DFB, L01956 (60)			■	■			■
			S3EED, Y01956 (52)			■	■	■	■	■
			S4C3D, S01956 (75)			■				

Patient-centric measurement

Measure once, reuse many times for many perspectives . . .

$$4+, 3-, 3E = 4/7 = 57\%$$



eCQM's calculated in real time based on changes in a patients cross-community data by placing a box around any portion of a population.

MIPS View of Quality Measures

Benchmarks Dash | Patient Care Gaps | Roster Overview | Roster Counts | Period Totals | Period Totals by Location | Period Totals by Provider

Benchmarks

BCBS Moving Window VBP

Result Date: 6/21/2017

Measurement Window

BCBS Moving Window...

Result Date

6/21/2017

Set Benchmarks for

MIPS Registry/QC DR

Percentile

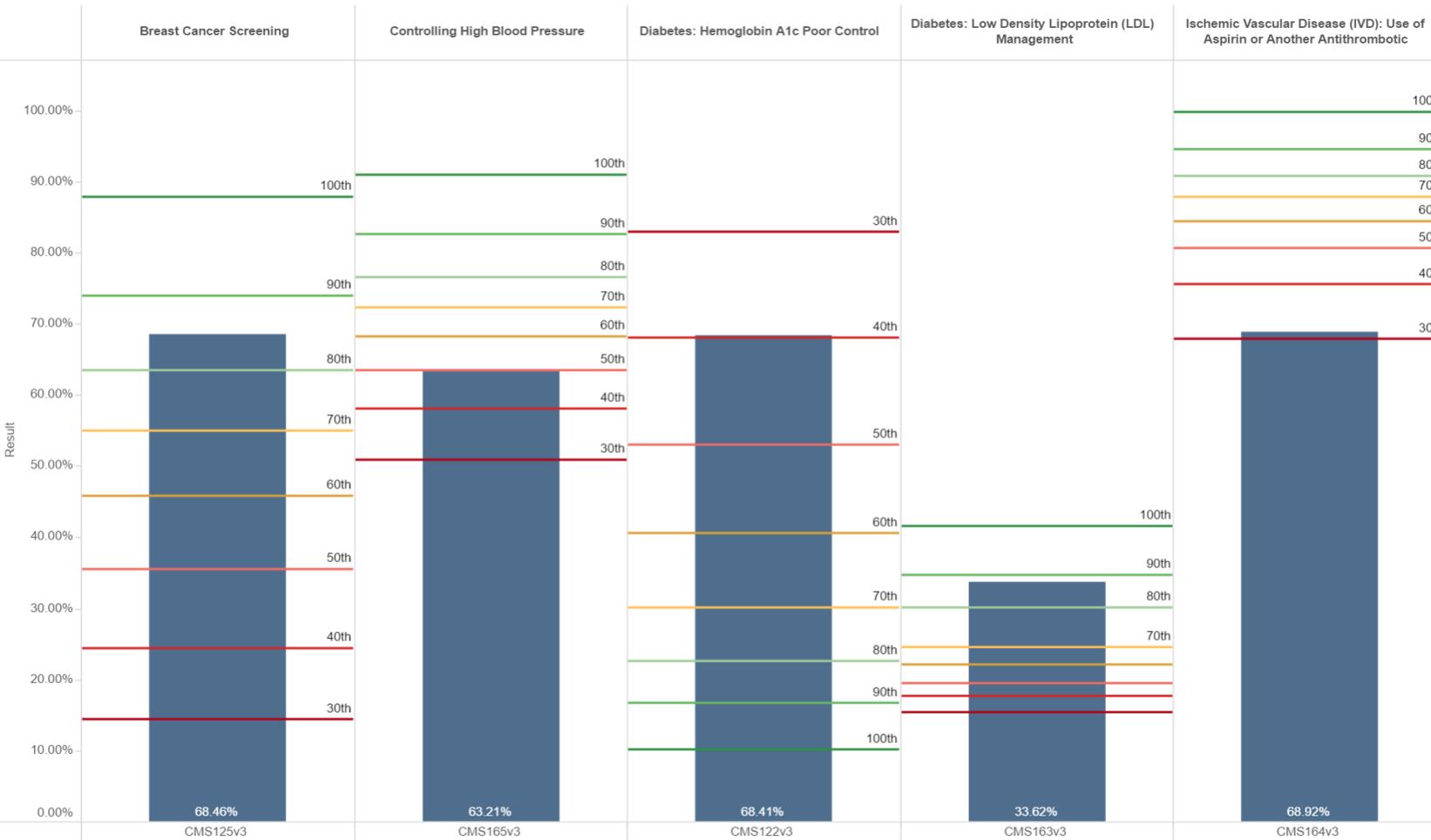
- (All)
- 30th Percentile
- 40th Percentile
- 50th Percentile
- 60th Percentile
- 70th Percentile
- 80th Percentile
- 90th Percentile
- 100th Percentile

Measure

- (All)
- Breast Cancer Scree...
- Colorectal Cancer Sc...
- Controlling High Bloo...
- Diabetes: Eye Exam
- Diabetes: Hemoglobi...
- Diabetes: Low Densi...
- Heart Failure (HF): B...
- Ischemic Vascular Di...
- Preventive Care and ...
- Preventive Care and ...
- Use of Appropriate M...
- *
- NI-II

Percentile

- 30th Percentile
- 40th Percentile
- 50th Percentile
- 60th Percentile
- 70th Percentile
- 80th Percentile
- 90th Percentile
- 100th Percentile



Actionable: Number needed to treat

Benchmarks Dash | Patient Care Gaps | Roster Overview | Roster Counts | Period Totals | Period Totals by Location | Period Totals by Provider

Benchmarks

CCOK 2016
Result Date: 6/21/2017

Measurement Window

CCOK 2016

Result Date

6/21/2017

Set Benchmarks for

MIPS Registry/QCQR

Percentile

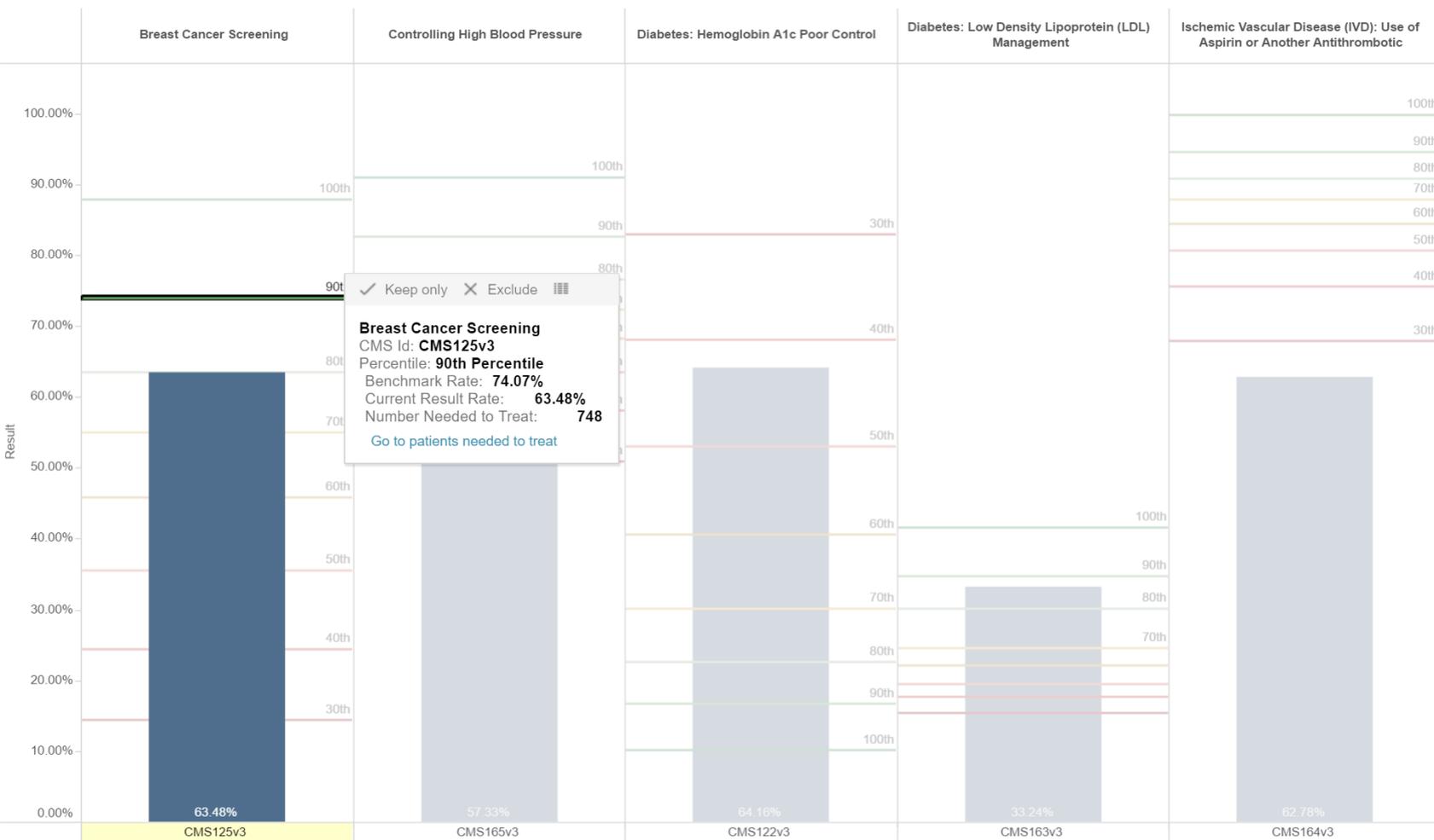
- (All)
- 30th Percentile
- 40th Percentile
- 50th Percentile
- 60th Percentile
- 70th Percentile
- 80th Percentile
- 90th Percentile
- 100th Percentile

Measure

- (All)
- Breast Cancer Scree...
- Colorectal Cancer Sc...
- Controlling High Bloo...
- Diabetes: Eye Exam
- Diabetes: Hemoglobi...
- Diabetes: Low Densi...
- Heart Failure (HF): B...
- Ischemic Vascular Di...
- Preventive Care and ...
- Preventive Care and ...
- Use of Appropriate M...
- *
- Multi

Percentile

- 30th Percentile
- 40th Percentile
- 50th Percentile
- 60th Percentile
- 70th Percentile
- 80th Percentile
- 90th Percentile
- 100th Percentile



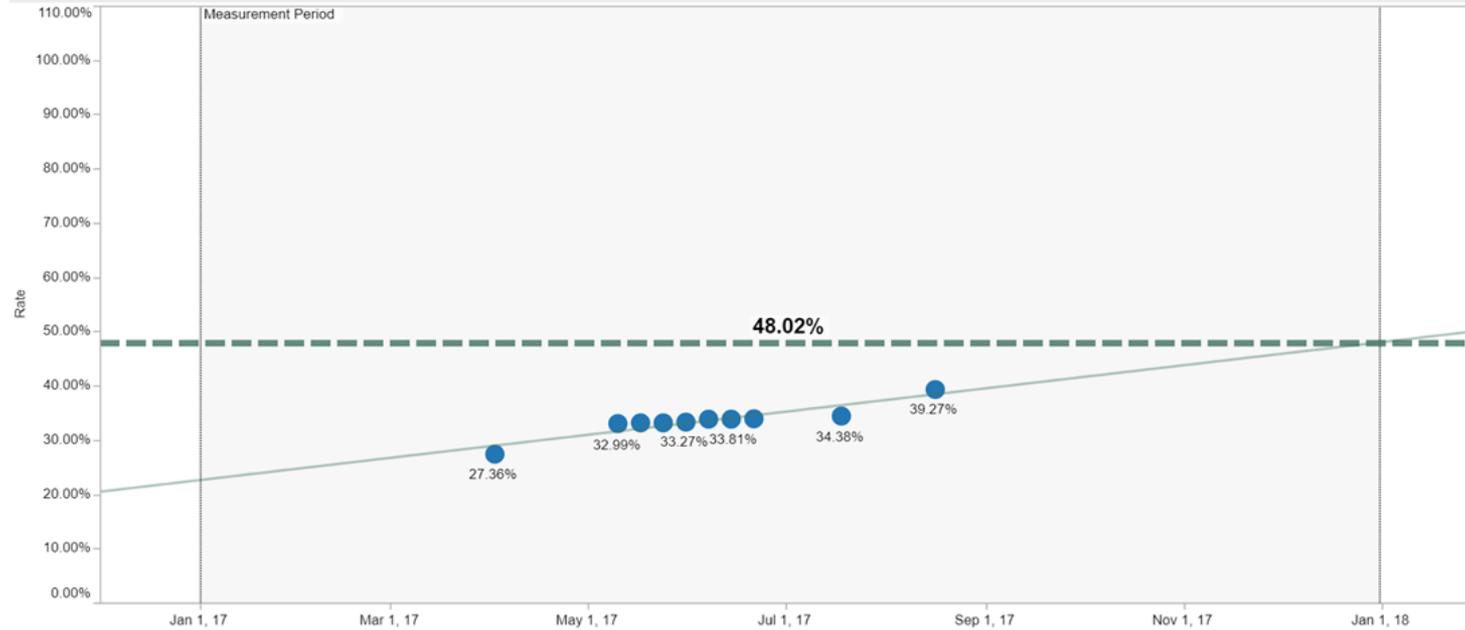
Keep only
 Exclude

Breast Cancer Screening
 CMS Id: CMS125v3
 Percentile: 90th Percentile
 Benchmark Rate: 74.07%
 Current Result Rate: 63.48%
 Number Needed to Treat: 748
[Go to patients needed to treat](#)

Predicting Performance focuses effort

Result Rate Projection

Location: **All**
 Provider: **All**
 Measure: **Breast Cancer Screening**
 MyHealth Projected Rate: **48.02%**



Submission Method

- Blue Cross CPC
- Claims
- EHR
- Registry/QCQR

Benchmark Projection

Submission Method: **Blue Cross CPC**



Select Measure

- Breast Cancer Screening
- Colorectal Cancer Screening
- Controlling High Blood Pressure
- Diabetes: Blood Pressure Management
- Diabetes: Eye Exam
- Diabetes: Hemoglobin A1c Poor Control
- Diabetes: Low Density Lipoprotein (LDL) Manag...
- Heart Failure (HF): Beta-Blocker Therapy for Lef...
- Ischemic Vascular Disease (IVD): Use of Aspirin...
- Preventive Care and Screening: Influenza Immu...
- Preventive Care and Screening: Tobacco Use: S...
- Statin Therapy for the Prevention and Treatment...
- Use of Appropriate Medications for Asthma

Provider (Last Name, First Name)

Select Location

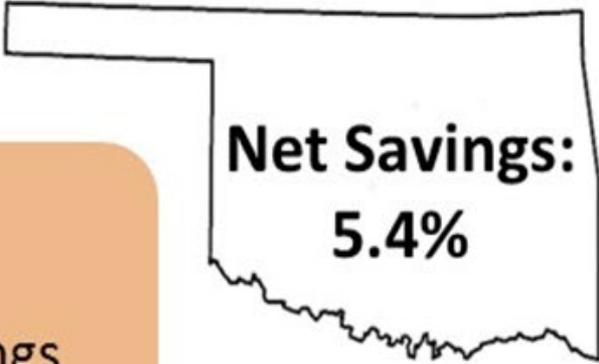
(All)

Practices

Agenda

- What challenges do we face?
- Why is HIE (the noun) an important part of the solution?
- **What evidence do we have that this can work?**
- Are there other critical use cases?

\$33 million in gross savings
\$25 million in net savings
\$12.5 million in potential shared savings
\$10.8 million shared with **52 of 61 practices**



**Net Savings:
5.4%**

Overall Quality Performance

92% of practices successfully reported eQMs
85% of practices met quality requirements

Claims-based Measures

Exceeded benchmarks for all 3 measures

- All-cause readmissions: 14.68% (highest benchmark)
- HF admissions: 0.97 (first benchmark)
- COPD admissions: 1.12 (first benchmark)

Results: eConsultations

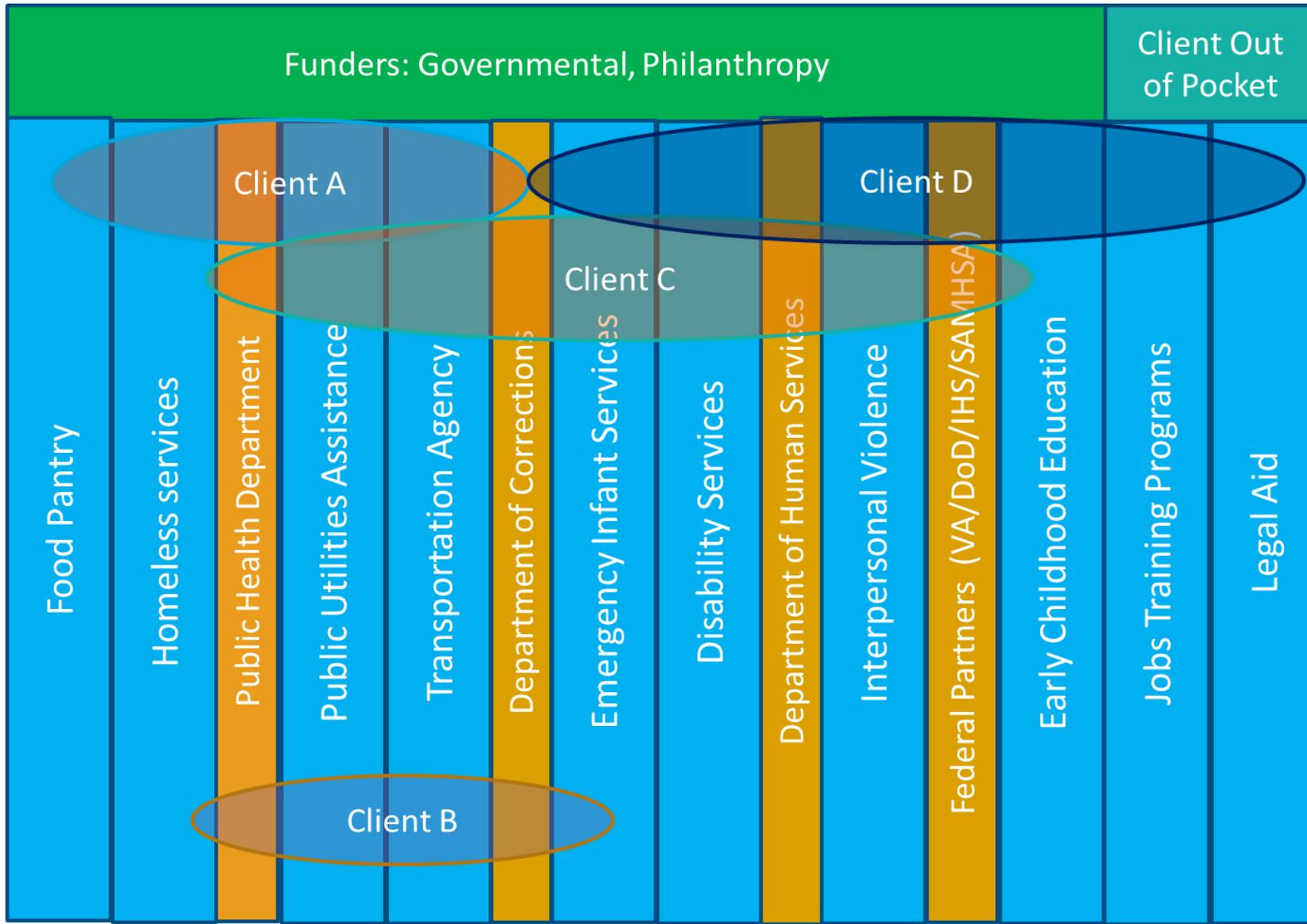
- Patients receiving an online consult had a significant reduction in PMPM cost of care when compared with themselves as historical controls:
 - » *\$140.53 Pre Consult vs. \$78.16 Post Consult*
 - » *Net savings of \$62.37, p=0.021*
- Compared with patients who received a referral but NOT a consult:

Cost Type	Mean PMPM Cost Change	Mean Percentage Change
Facility Costs (UB92)	-\$13.00	-20%
Professional Costs (HCFA 1500)	-\$108.04	-34%
Pharmacy Costs (PBM)	-\$9.14	-14%
Total Costs	-\$130.18	-

Agenda

- What challenges do we face?
- Why is HIE (the noun) an important part of the solution?
- What evidence do we have that this can work?
- **Are there other critical use cases?**

MyHealth now working with social needs and early childhood programs, where data is even more fragmented . . .



Accountable Health Community Model Structure

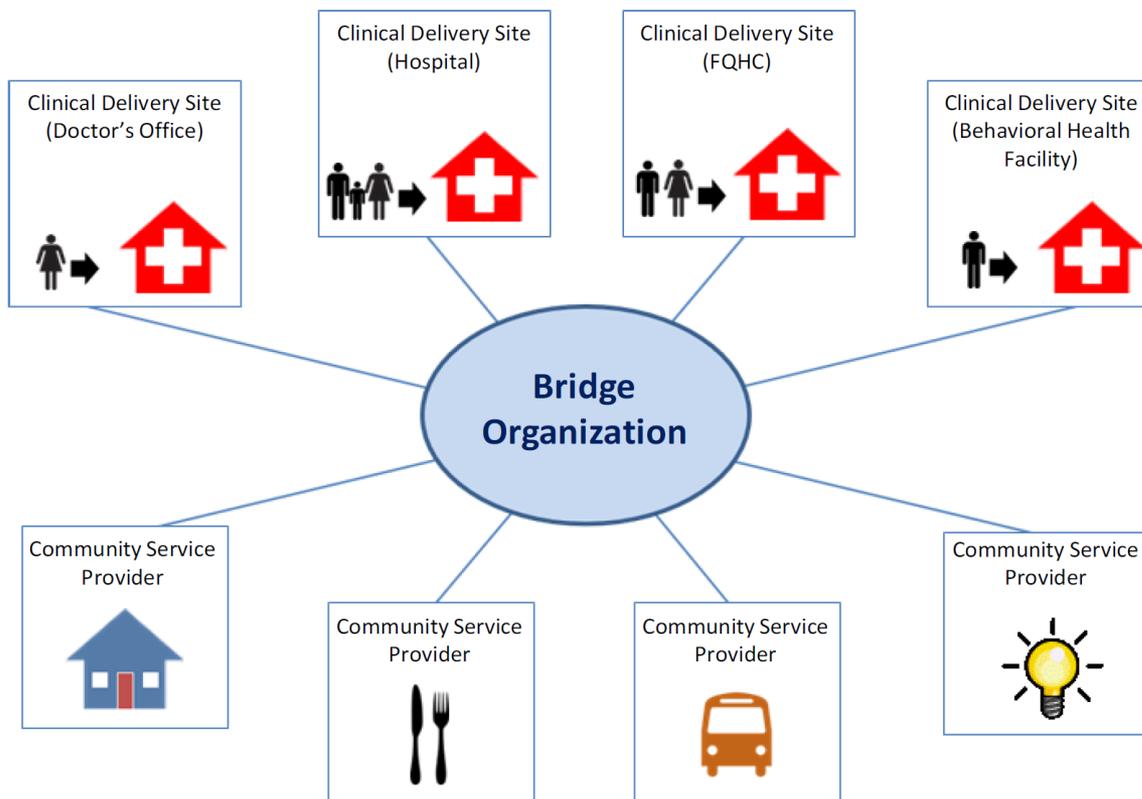


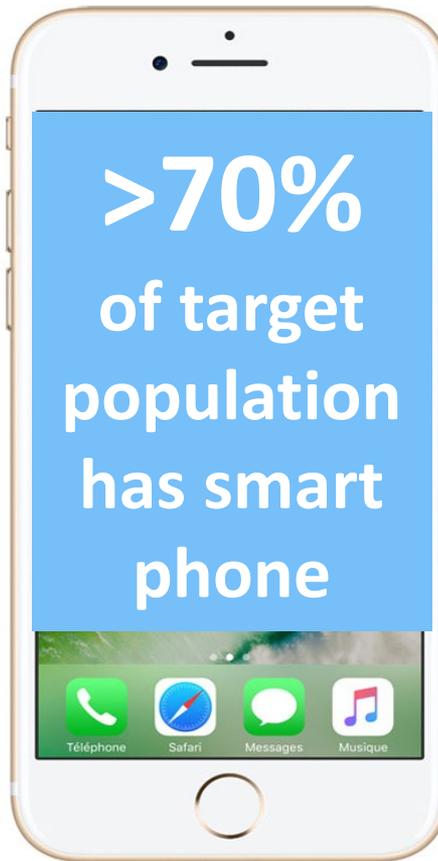
Figure 3. AHC Model Structure¹⁷

Who owns cellphones and smartphones

A substantial majority of Americans are cellphone owners across a wide range of demographic groups. By contrast, smartphone ownership exhibits variation based on age, household income and educational attainment.

% of U.S. adults who own the following devices

	Any cellphone	Smartphone	Cellphone, but not smartphone
Total	95%	77%	
Men	95%	80%	
Women	94%	75%	
Ages 18-29	100%	94%	
30-49	98%	89%	
50-64	94%	73%	
65+	85%	46%	
White	94%	77%	
Black	98%	75%	
Hispanic	97%	77%	



Attainment	Any cellphone	Smartphone	Cellphone, but not smartphone
Less than high school	90%	57%	33%
High school	92%	69%	24%
Some college	96%	80%	16%
Bachelor's	97%	91%	6%
Postgraduate	92%	67%	25%
Less than \$10,000	98%	82%	15%
\$10,000-\$24,999	98%	83%	15%
\$25,000-\$49,999	98%	93%	5%
\$50,000-\$74,999	96%	83%	13%
\$75,000-\$99,999	94%	78%	16%
\$100,000+	91%	65%	26%

Source: Pew Research Center, 2018.

Route 66 AHC: Screening Approach



Accountable Health Communities

Demo of Accountable Health Communities HRSN Screening Tool

Language

1. Which of the following languages would you feel comfortable completing a survey in?

English
 Spanish

Click the link below if you would like to view the Privacy Act Notice for the Accountable Health Communities Model:
<https://myhealthaccess.info/privacy-act-notice-ahc>

OK

5. What is your living situation today?

I have a steady place to live

I have a place to live today, but I am worried about losing it in the future

I do not have a steady place to live (I am temporarily staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, abandoned building, bus or train station, or in a park)

7. Within the past 12 months, you worried that your food would run out before you got money to buy more.

Often true
 Sometimes true
 Never true

9. In the past 12 months, has lack of reliable transportation kept you from medical appointments, meetings, work or from getting to things needed for daily living?

Yes
 No

10. In the past 12 months has the electric, gas, oil, or water company threatened to shut off services in your home?

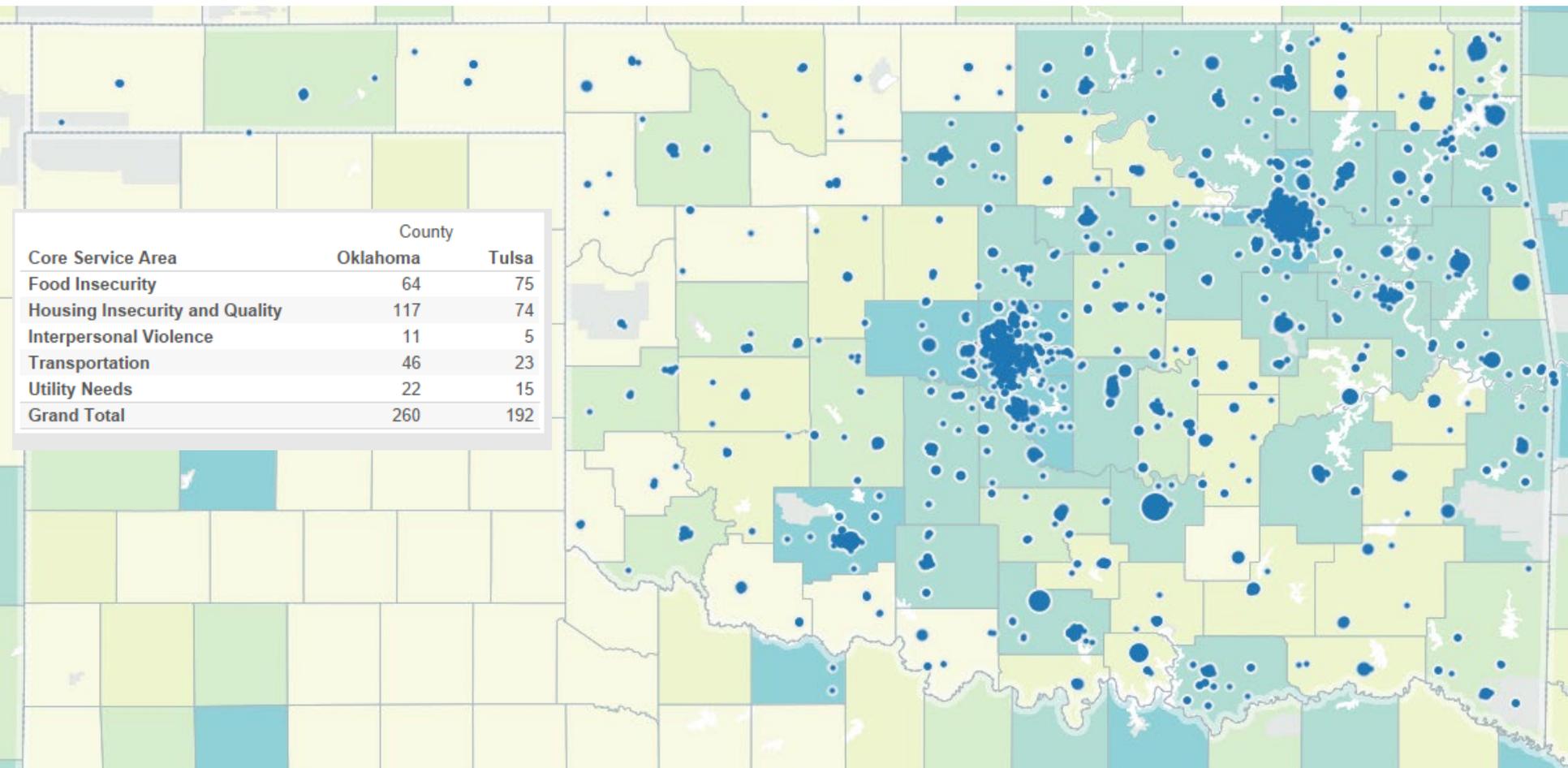
Yes
 No
 Already shut off

11. How often does anyone, including family and friends, physically hurt you?

Never
 Rarely
 Sometimes
 Fairly often
 Frequently

Route 66 AHC Social Services Resource Directory

4,857 Resources in CRS Database, All 77 Counties in OK Covered by CRS Database



Immediate response with tailored, local services “prescription”



Accountable
Health
Communities

Thank you for completing the Accountable Health Communities Survey!

Listed below are free or reduced cost resources that could help meet your needs.

We strongly encourage you to call ahead before you visit any service or program! It is important to confirm the hours the program is open, the qualifications for the program and how they can help before you visit any location.

For additional resources, you can text your zip code to 898-211, call 2-1-1 or visit www.211ok.org

Food

BOSTON AVENUE HELPING HANDS

Provides food to clients every 6 months.
Must bring some form of ID

Phone

9185821356

Address

709 S Boston Ave
Tulsa, OK 74119

Website

Service Website:
<https://www.firstchurchtulsa.org>

Location

Website:<https://www.firstchurchtulsa.org>

Hours of Operation

Mon- Fri 9am-12pm

Living Situation

DAY CENTER FOR THE HOMELESS

Provides shelter for women and men.

Phone

9185835588

Address

415 W Archer St
Tulsa, OK 74103

Website

Location
Website:<http://www.tulsadaycenter.org>

Hours of Operation

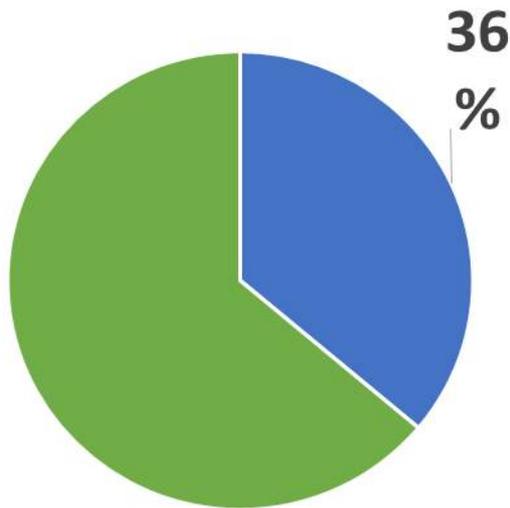
Mon-Sun 5:30pm-7am

Elegibility

Must be a woman of any age, or a man 55

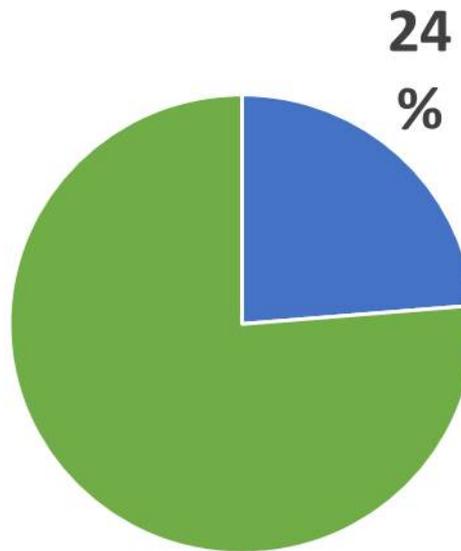
Route 66 AHC: Early Social Needs Screening Results

Medicaid



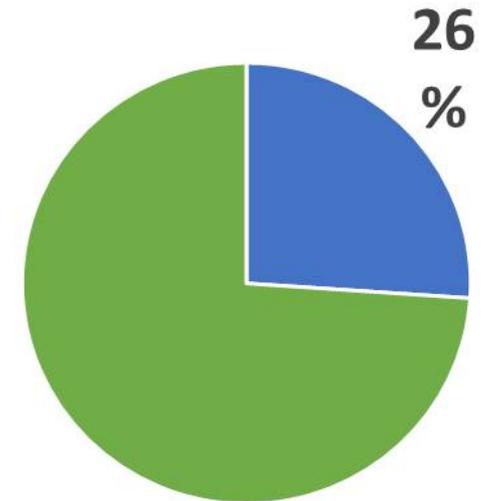
- Patients with Social Needs
- Patients with no Social Needs

Medicare



- Patients with Social Needs
- Patients with no Social Needs

Commercially Insured



- Patients with Social Needs
- Patients with no Social Needs

Additional roles for HIE

- Workforce planning
- Disaster Preparedness and Response
- Disease Surveillance
- Generation of new knowledge (research)
- Dissemination of best practices
- Fraud & Abuse detection and prevention
- Evidence-based Policy-making



The Office of the National Coordinator for
Health Information Technology

State Data Sharing (HIE) Interoperability: Design and Implementation

A Panel Discussion with Connecticut, Michigan, and Oklahoma.

Allan Hackney, Connecticut Health IT Officer, Office of the LT. Governor of Connecticut

Dr. David Kendrick, CEO, MyHealth Access Network

Dr. Tim Pletcher, Executive Director, Michigan Health Information Network Shared Services

Paul Klintworth, Lead, Health IT Resource Center, Office of Policy, ONC (Proposed Panel Moderator)



Speaker and Disclosures

Speaker Information

Allan Hackney, CISM, CRISC
Health Information Technology Officer
CT Office of Health Strategy
allan.hackney@ct.gov
+1-860-310-9708



Disclosure

Connecticut Office of Health Strategy has contracted with Velatura, an affiliate of the Michigan Health Information Network (MiHIN), to plan and deploy health information data sharing and electronic clinical quality measure services, and develop a sustainability business plan for Connecticut's health information exchange.

[Health IT Office Website:](https://portal.ct.gov/OHS/Services/Health-Information-Technology)

<https://portal.ct.gov/OHS/Services/Health-Information-Technology>

Drivers for CT HIT Solutions

Stakeholder Drivers



- Patient is “North Star”
- Embrace existing capabilities
- Focus on whole-person care
- Workflow...workflow...workflow
- Harness ACO’s
- Solve for today while anticipating the future

SIM Drivers

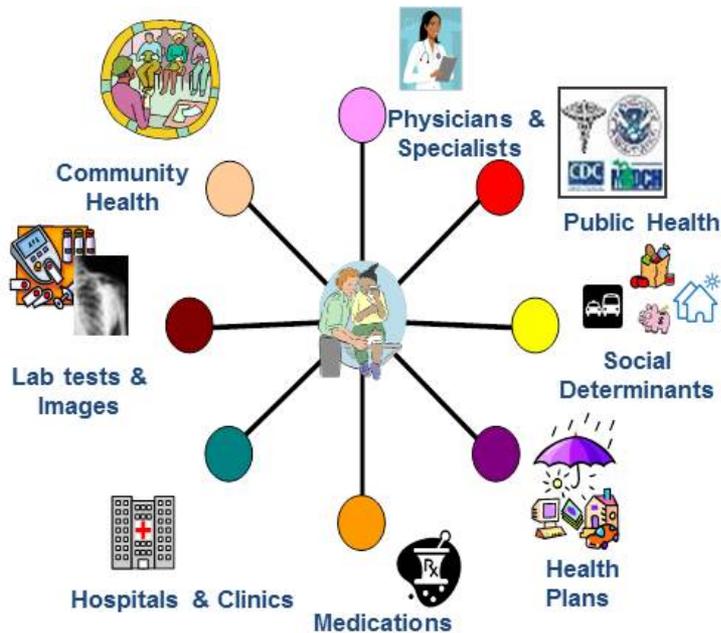
- ❑ **Promote payment models that reward improved quality, care experience, health equity and lower cost:**
 - Objective: eCQM’s and health equity quality measures to payers’ value-based payment scorecards
 - Desired outcome: achieve multi-payer quality measure alignment, health equity, and reduced provider burden

An electronic clinical quality measure (eCQM) is a metric calculated based on certain raw clinical or claims data for a provider, organization, geography, etc.

Environmental Drivers

- ❑ **CT health systems invested while State struggled with HIE:**
 - \$’s MM invested in EHR’s and analytics
 - Dense EPIC, PatientPing presence
- ❑ **CT surrounded by HIE’s:**
 - Plenty of service options
 - Watching HIE consolidations, transformations
- ❑ **National solutions gaining traction:**
 - Commonwell, Carequality, eHealth Exchange, SHIEC
- ❑ **ONC bringing forward TEFCA?**
 - Rationalization of data sharing agreements would be key

Care and Consent Mapping - The Key Data Sharing Need



Adapted from MiHIN Shared Services

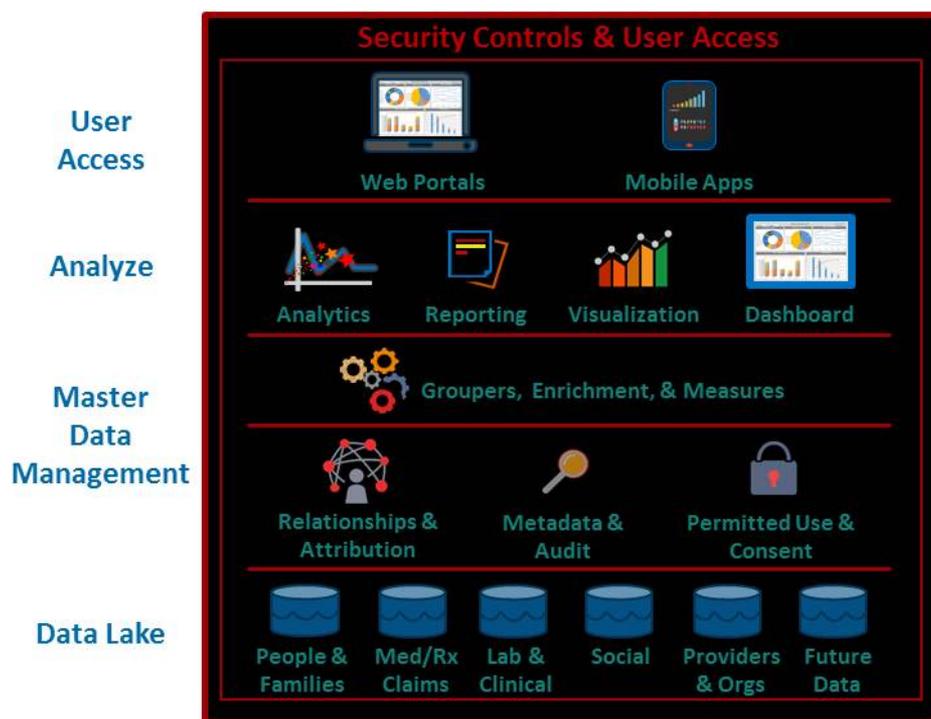
Mapping the Continuum of Care and Consent

- ❑ ***A primary focus for our utility will be a 360° view of patient care:***
 - Provides a universal view of care
- ❑ ***Objective is a rapid picture of care:***
 - Identifies care-giver, care-receiver, when, where, what, why
 - Facilitates queries, subscriptions
- ❑ ***Social determinants can also be linked to the care map as attributes or risk ratings:***
 - Designed so that demographic facts such as race or language are associated directly with the care map
- ❑ ***The Care and Consent Map is necessary for any practical use of HIE data sharing:***
 - Basis for basic query, subscription, redistribution
 - Can be delivered by “Super” CCD-A or FHIR (eventually)

Core Data and Analytic Solution - Foundation for Health Analytics

CDAS Componentry

Design Approach

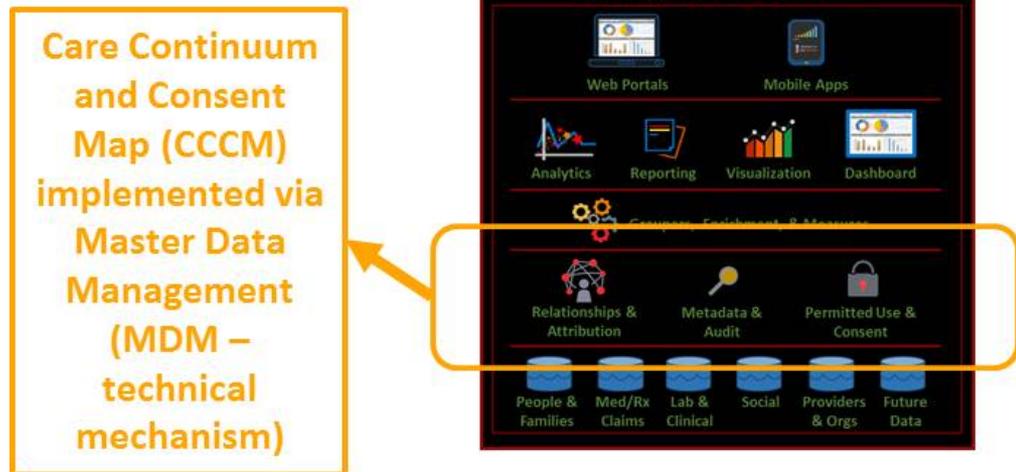


- ❑ **Solving for eQMs while anticipating the future:**
 - Potential to integrate claims, health equity data, etc.
- ❑ **Using “open” architecture:**
 - Open Application Programming Interfaces (API’s) offer flexibility, reduces costs, and avoids vendor “lock-in”
- ❑ **“Agile” iterative process delivers “minimum viable products” repeatedly:**
 - Short time to deliver value
 - Pivoting around changing priorities is a central and expected concept

Intersection of CDAS and Health Data Sharing

Shared Identity Management

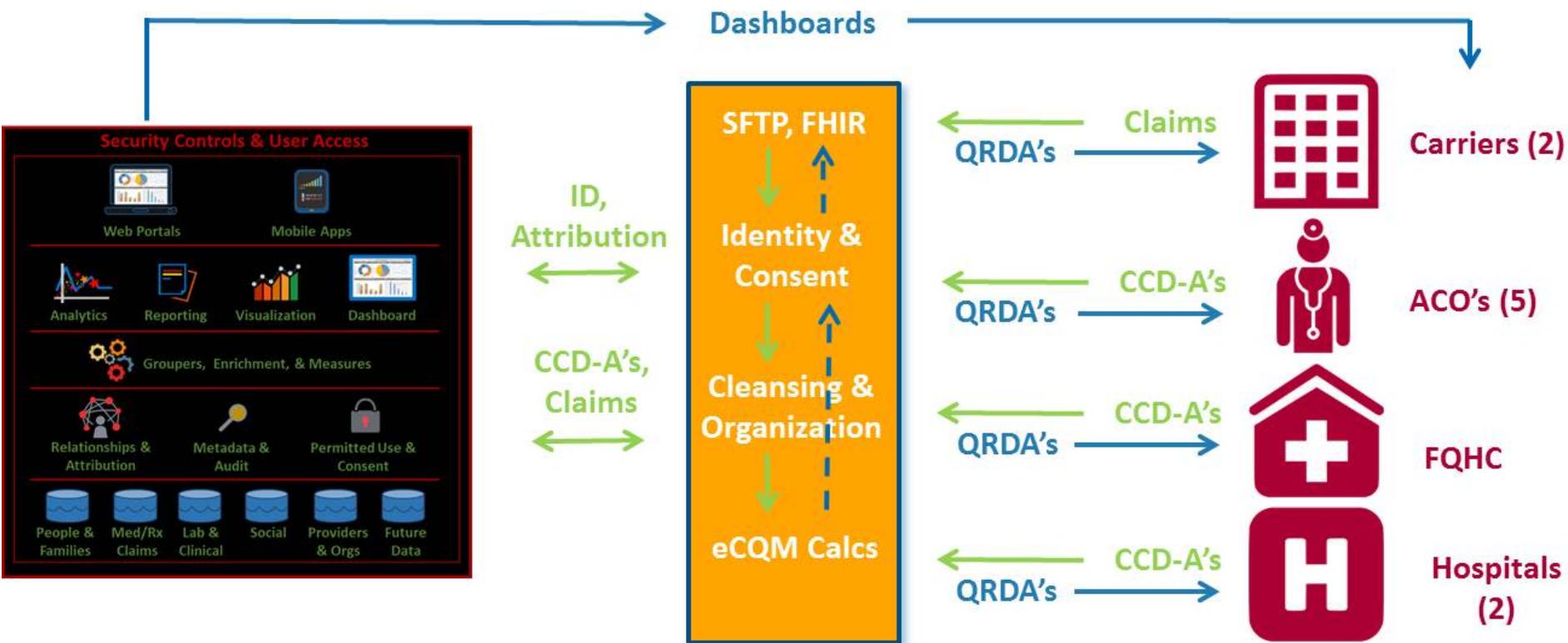
- ❑ **One source of truth for identity:**
 - Common care map for all data sharing and data analytic needs:
 - Patients, care givers, relationships, events
- ❑ **Consent is “like breathing air”:**
 - Consent models are embedded with patient’s demographics and relationships
- ❑ **Security classification attached to data objects:**
 - All data elements assigned classifications
 - Access control enabled by the union of roles and consent
 - Masking applied by data element when needed
- ❑ **Extensible to become authentication authority:**
 - Emerging as a potential value-add service to support authentication in a distributed data exchange environment



Collaborating with the Office of the State Comptroller to Prototype CDAS

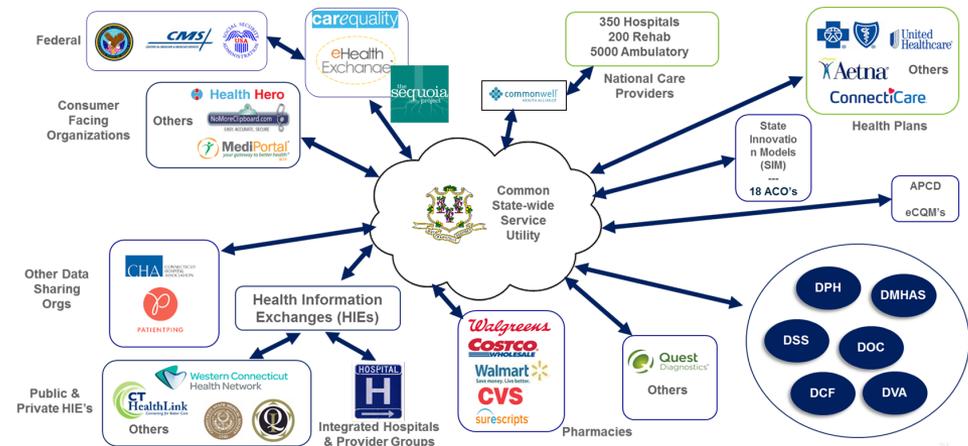
- Collecting raw clinical and claims data to support extending to the State's Health Enhancement Plan (HEP) for state and municipal employees
- Measure quality outcomes through the clinical stratification of members' data (claims and clinical) to understand the health status complexity
- Enhance data analytics to enable the ability to measure person-centric (members) health outcomes and better gauge the overall effectiveness of HEP
- Building the Care Continuum and Consent Map to enable statewide data sharing
- Establishing a "network of networks" model for data sharing statewide

CDAS Prototype



Focusing on Building an Ecosystem

- ❑ **Taking a “Use Case” approach:**
 - Following guidance from CT HIT Advisory Council on priority use cases, but adjusting for “quick wins”
- ❑ **Partner rather than build/procure:**
 - Lot’s of opportunities to harness efforts already in place
 - Enable practitioner innovation
- ❑ **Use flexibility of architecture to explore emerging CT opportunities:**
 - HIE use cases in precision medicine, eConsultations, eConsents
 - Go straight to FHIR in some situations?



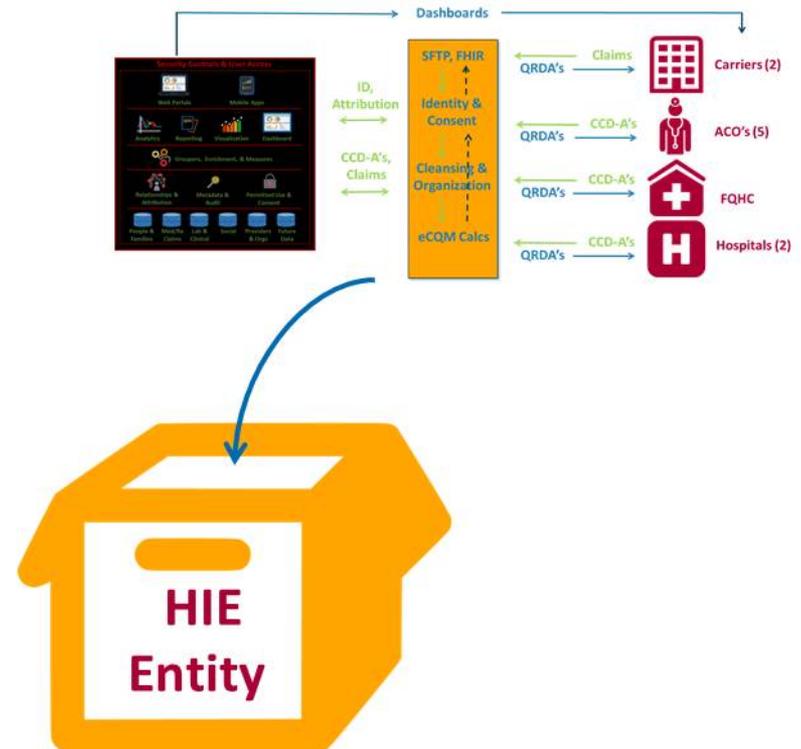
Speed is of the Essence!

Adapted from MiHIN Shared Services

“Neutral and Trusted” Entity – Key to Buy-In

Establishing a Delivery Vehicle

- ❑ **Statewide stakeholder engagement identified the need for trust:**
 - Two characteristics needed to overcome execution skepticism:
 - “Neutral” – no participant in the services is advantaged over any other
 - “Trusted” – the services are overseen by representatives reflective of the participants
- ❑ **Incorporating a non-governmental entity to ensure stakeholder governance:**
 - Non-profit
 - Will operate the CDAS and data sharing as a shared services utility for the benefit of all



eCQM Prototype

- ❑ **CDAS infrastructure available for testing Oct 12**
- ❑ **Prototyping participants identified:**
 - “Wave 1” in-flight (4 clinical, 2 insurance)
 - “Wave 2” target Dec 2018 (4 clinical)

HIE Launch Status

- ❑ **Federal match funding approved Sep 5 (\$12.2M)**
- ❑ **Rapidly developing deployment plan:**
 - Incorporating entity (Dec 2018)
 - Post-prototype rollouts (target Jan 2019)
 - Trust framework (target Mar 2019)

HIE Deployment

- ❑ **Preparing follow-on Federal match funding for FFY19-20 (~\$29.9M):**
 - HIE deployment to hospitals, physician groups, other care-giving settings
 - Developing a eConsent model for sensitive data
 - Establishing a Use Case Factory
 - Developing statewide medication reconciliation services
 - Enabling eConsultations

Q&A



The Office of the National Coordinator for
Health Information Technology



Thank you for joining us this morning.

Thank you.



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