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




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# Infrastructure

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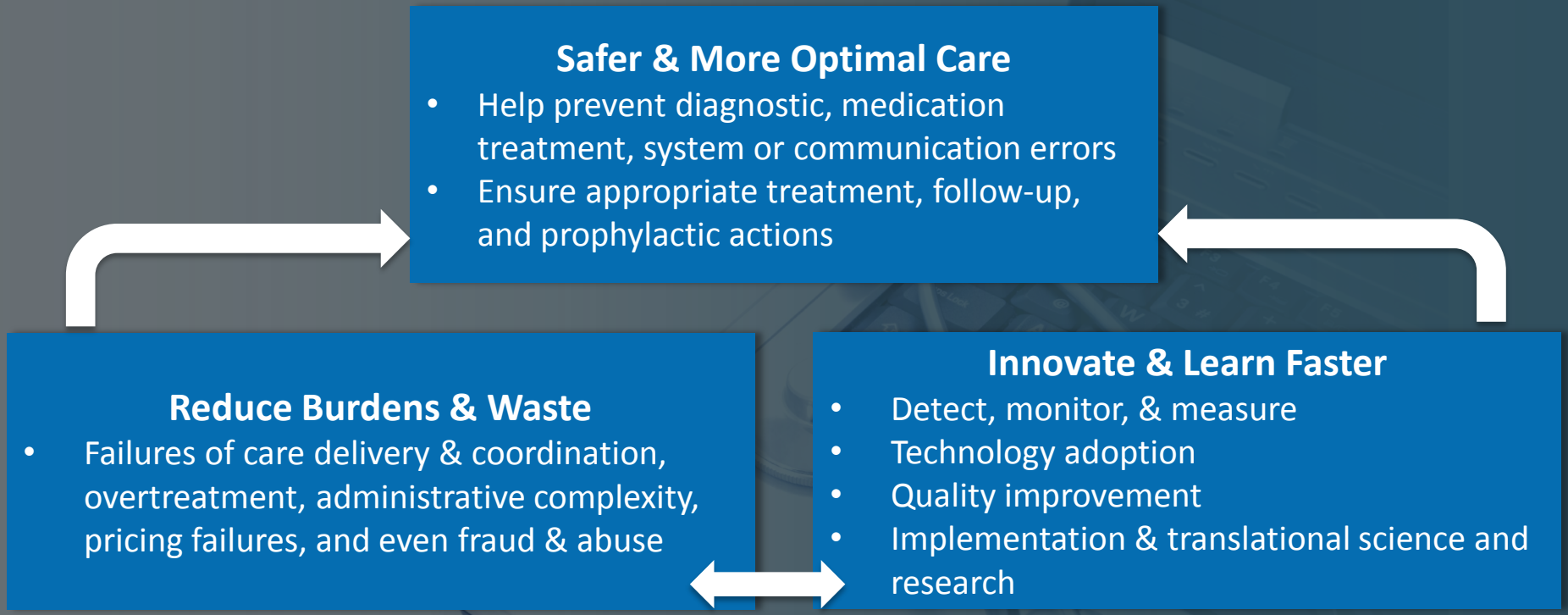
# Benefits of A Shared Infrastructure





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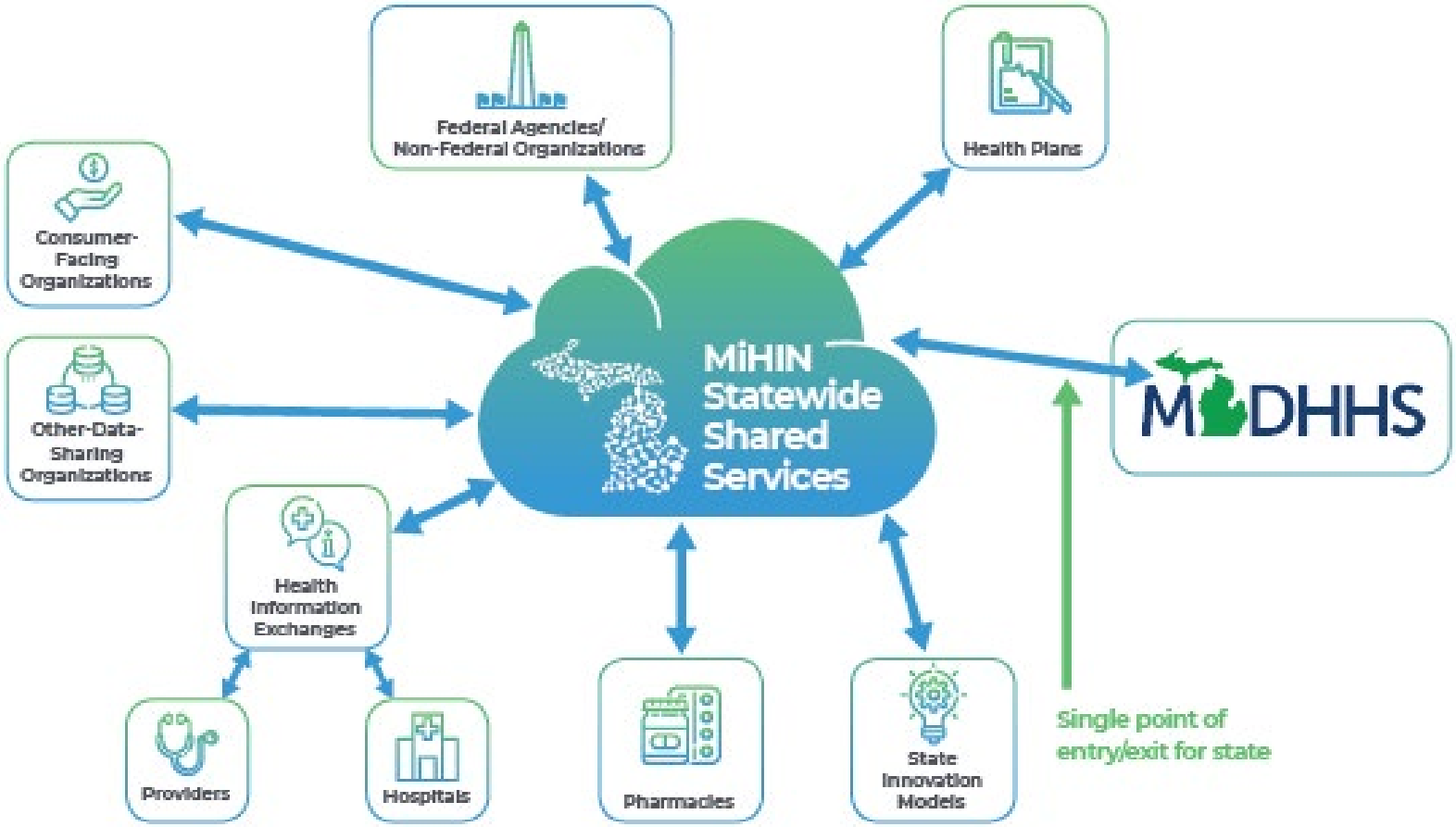
This is the

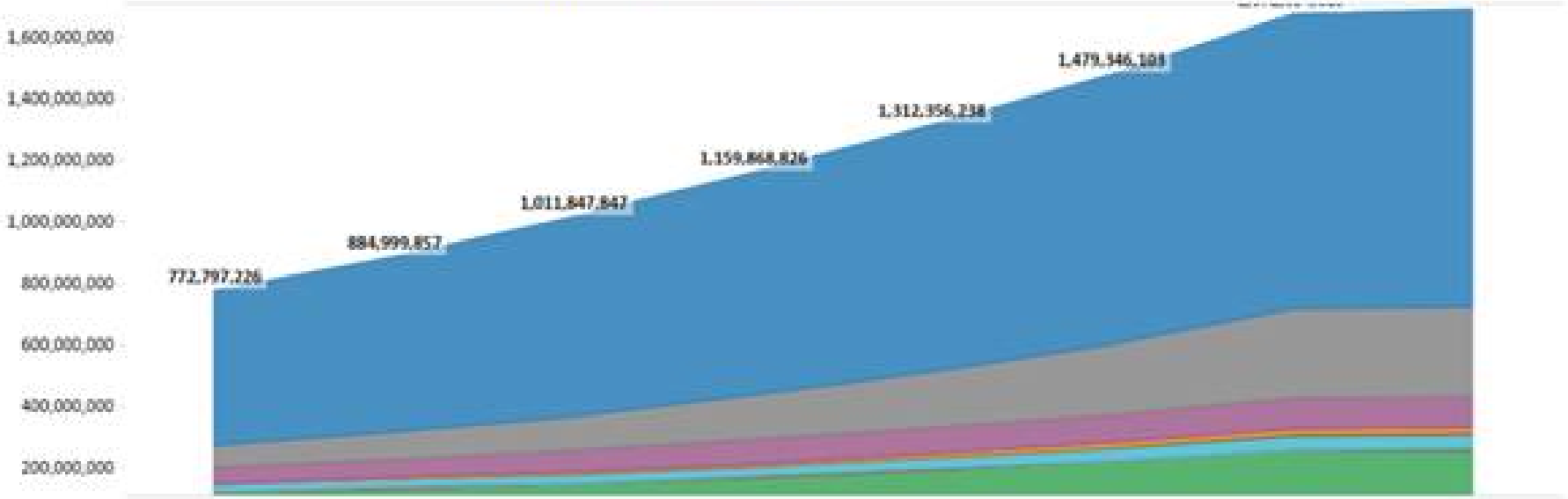
# Network of Networks



MiHIN Shared Services

# MiHIN M3 Report: Cumulative Totals by Quarter

## 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 | 501,941,123 | 572,952,331 | 649,229,795 | 727,861,806 | 805,510,111 | 881,889,644 | 960,796,712 | 966,006,639 |
| ADT ACRS Outbound | 72,405,193 | 87,300,522 | 110,932,841 | 144,261,924 | 179,918,771 | 226,849,596 | 286,558,507 | 290,924,010 |
| ADT Payer Outbound | 53,376,463 | 61,074,794 | 68,675,409 | 77,385,882 | 85,040,610 | 92,469,868 | 99,731,149 | 100,178,169 |
| Care Plan-ICBR | 4,435 | 7,258 | 16,150 | 19,945 | 24,272 | 29,116 | 33,210 | 33,549 |
| Medrec Inbound | 1,665,729 | 3,297,812 | 4,919,290 | 6,618,958 | 8,407,293 | 10,181,393 | 11,934,601 | 12,032,064 |
| Medrec Outbound | 48,274 | 226,012 | 789,702 | 1,363,137 | 1,861,864 | 2,672,711 | 3,721,263 | 3,776,367 |
| Immunization History-Forecast | 529,435 | 1,289,941 | 2,241,593 | 3,203,419 | 4,366,531 | 6,421,322 | 10,162,575 | 10,395,275 |
| Submit Immunizations | 23,823,779 | 26,346,330 | 29,758,097 | 32,089,266 | 33,870,295 | 38,364,508 | 45,054,164 | 45,411,816 |
| Submit Newborn Screening | 296 | 3,280 | 3,509 | 3,604 | 3,712 | 7,258 | 16,416 | 16,437 |
| Submit Reportable Labs | 1,352,059 | 1,430,888 | 1,529,120 | 1,654,998 | 1,832,346 | 1,947,739 | 2,072,195 | 2,078,251 |
| Submit Syndromic Surveillance | 117,650,440 | 131,168,929 | 143,749,006 | 154,646,713 | 168,195,913 | 178,343,614 | 189,240,065 | 189,823,326 |
| Cancer Pathology | | 1,768 | 3,335 | 3,396 | 3,821 | 4,281 | 5,590 | 5,590 |
| Statewide Labs | | | | 8,755,768 | 23,320,701 | 39,356,104 | 57,750,727 | 58,934,945 |
| Blood Lead | | | | | | | 303 | 303 |
| Cancer Notifications | | | | | | 258 | 3,331 | 3,696 |
| Cumulative Total | 772,797,226 | 884,999,857 | 1,011,847,847 | 1,159,868,826 | 1,312,356,238 | 1,479,346,103 | 1,672,354,619 | 1,685,378,321 |

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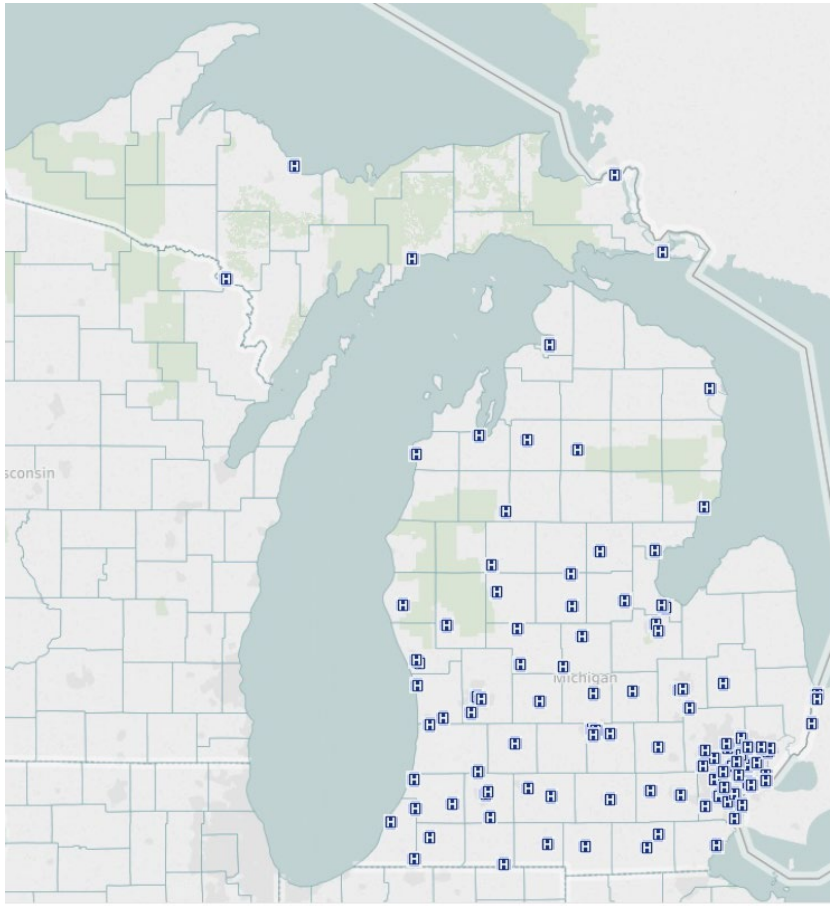
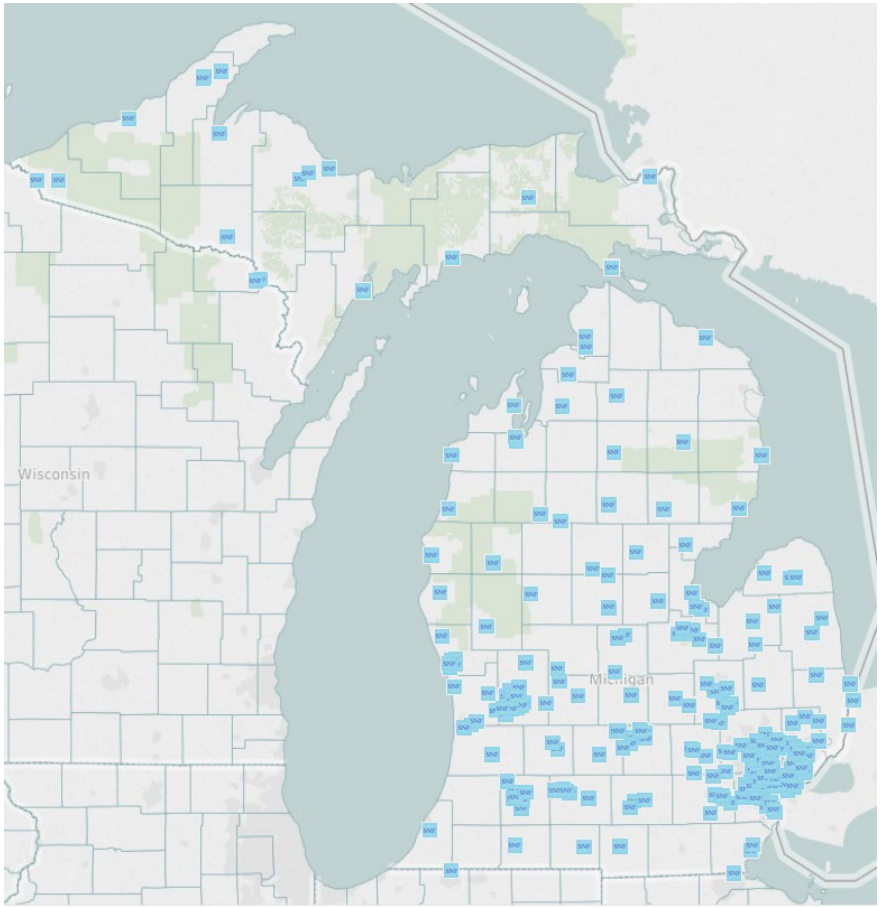
# Hospital & SNF Statewide Coverage



159 Hospitals (includes CAH & VA)




Over 310 SNFs



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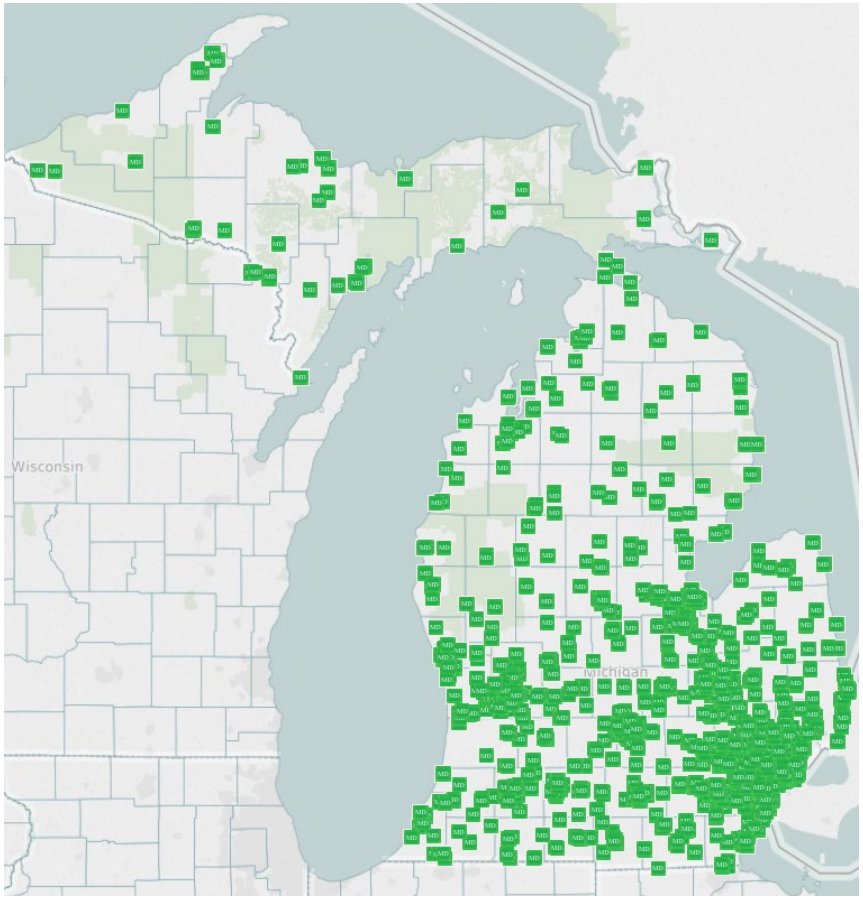
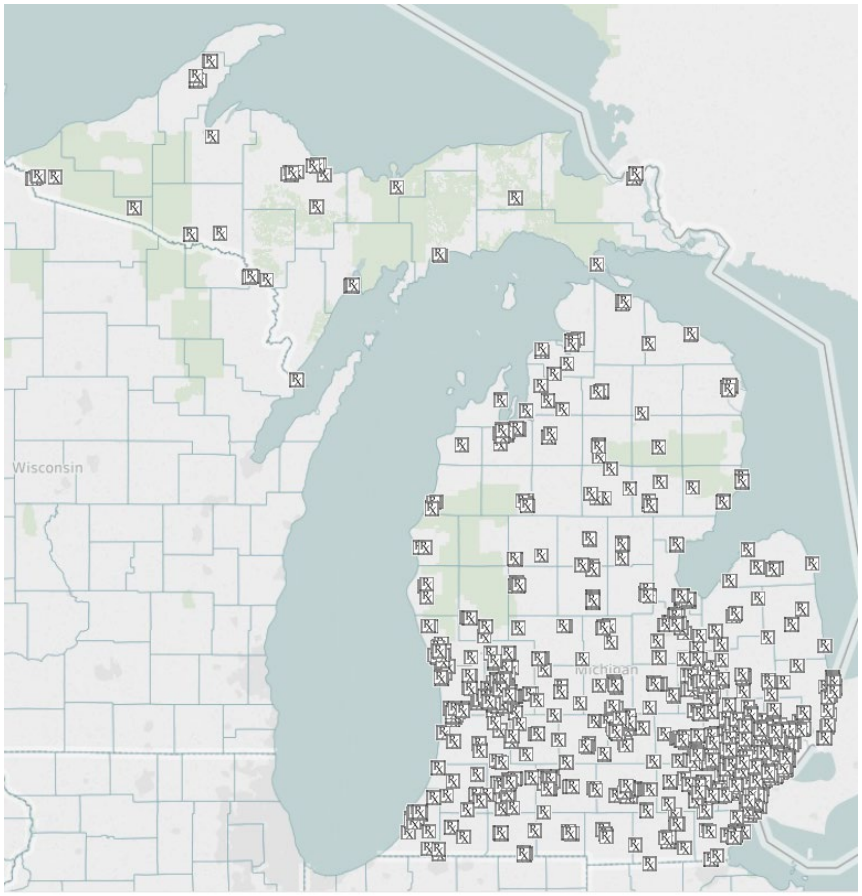
# Practice & Pharmacy Coverage




5000+ Practices




1771 Pharmacies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# Use Case

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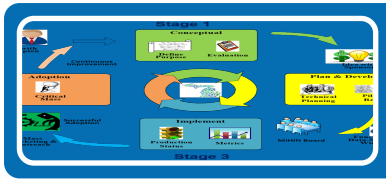
# MiHIN Use Case Factory: ***Operational Governance***

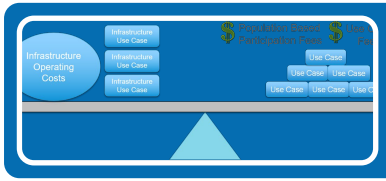
A modular, highly standardized legal framework

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



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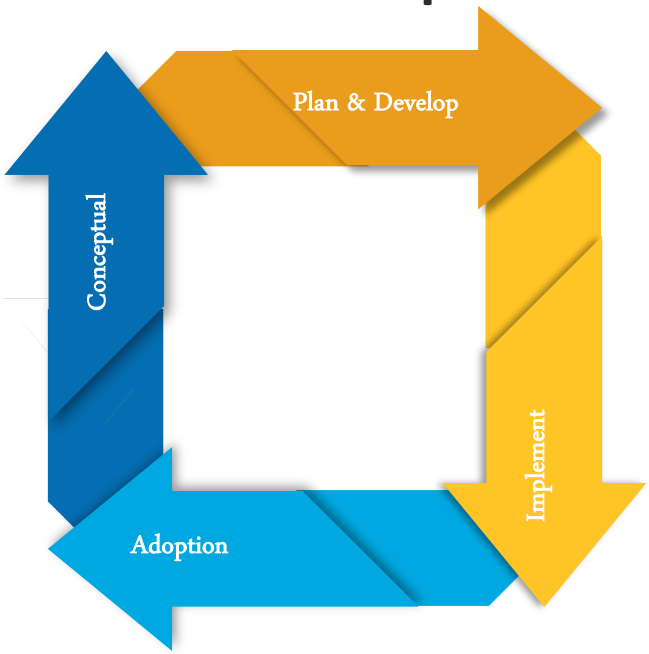
# How does the Use Case Factory process work?

## Stage 1: Conceptual
- Define purpose
- Establish sponsor

***Idea begins with a sponsor…***




## Stage 2: Plan & Develop
- Technical planning
- Pilot and refine

***…and moves on to MiHIN Board***

## Stage 4: Adoption
- Critical Mass
- Metrics

***Continuous improvement…***

## Stage 3: Implement
- Marketing and outreach
- Production status

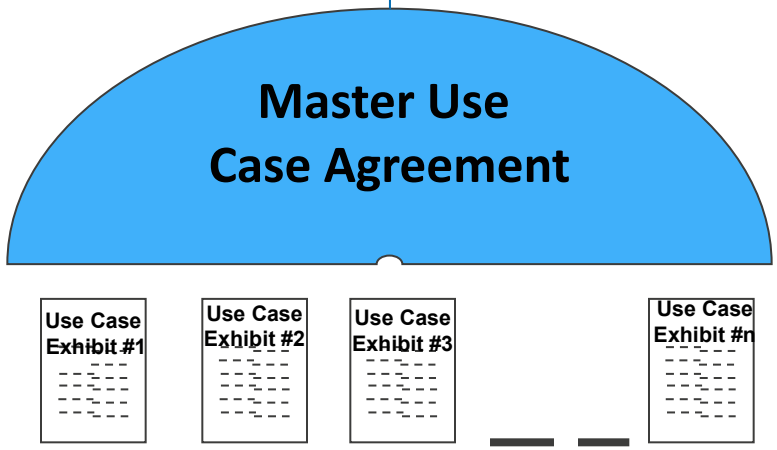
***…ensures successful adoption***

## Examples of Use Cases:
- Immunizations
- Admission Discharge Transfer (ADT) Notifications

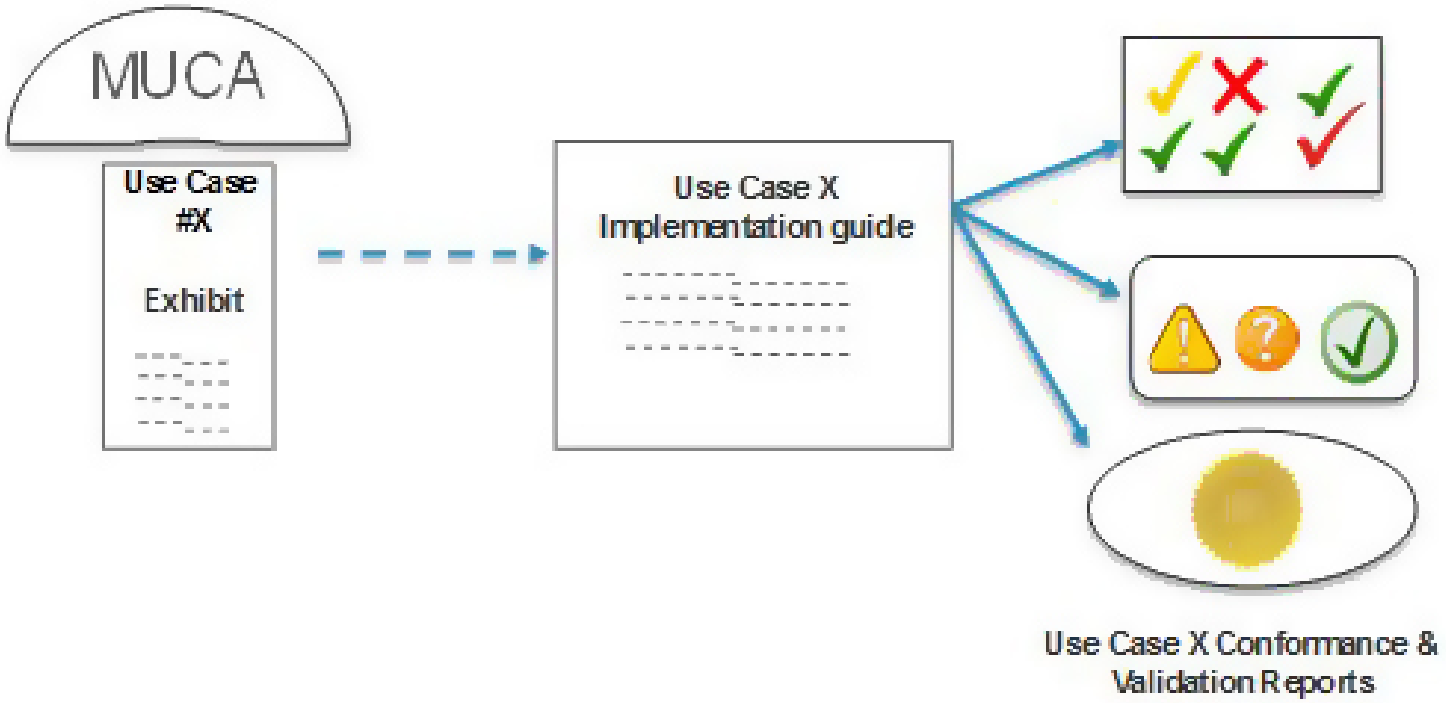
# Legal Trust Framework

ORGANIZATION AGREEMENT
(Simple Data Sharing Organization Agreement)

- Definitions
- Basic Connection Terms
- Basic BAA Terms
- Minimal Operational SLA
- Contracting & Payment
- Cyber Liability Insurance
- Termination



# Implementation Guides



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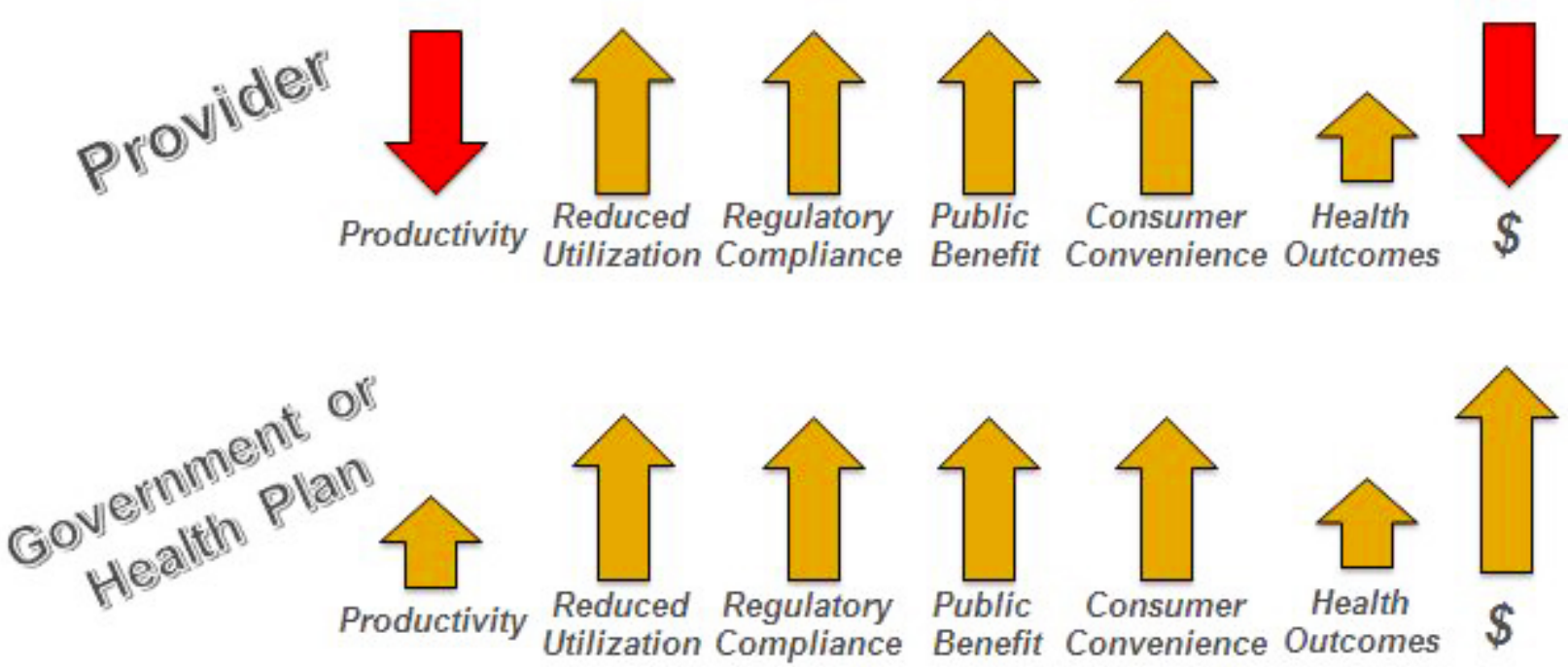
# Same Use Case: Different Value



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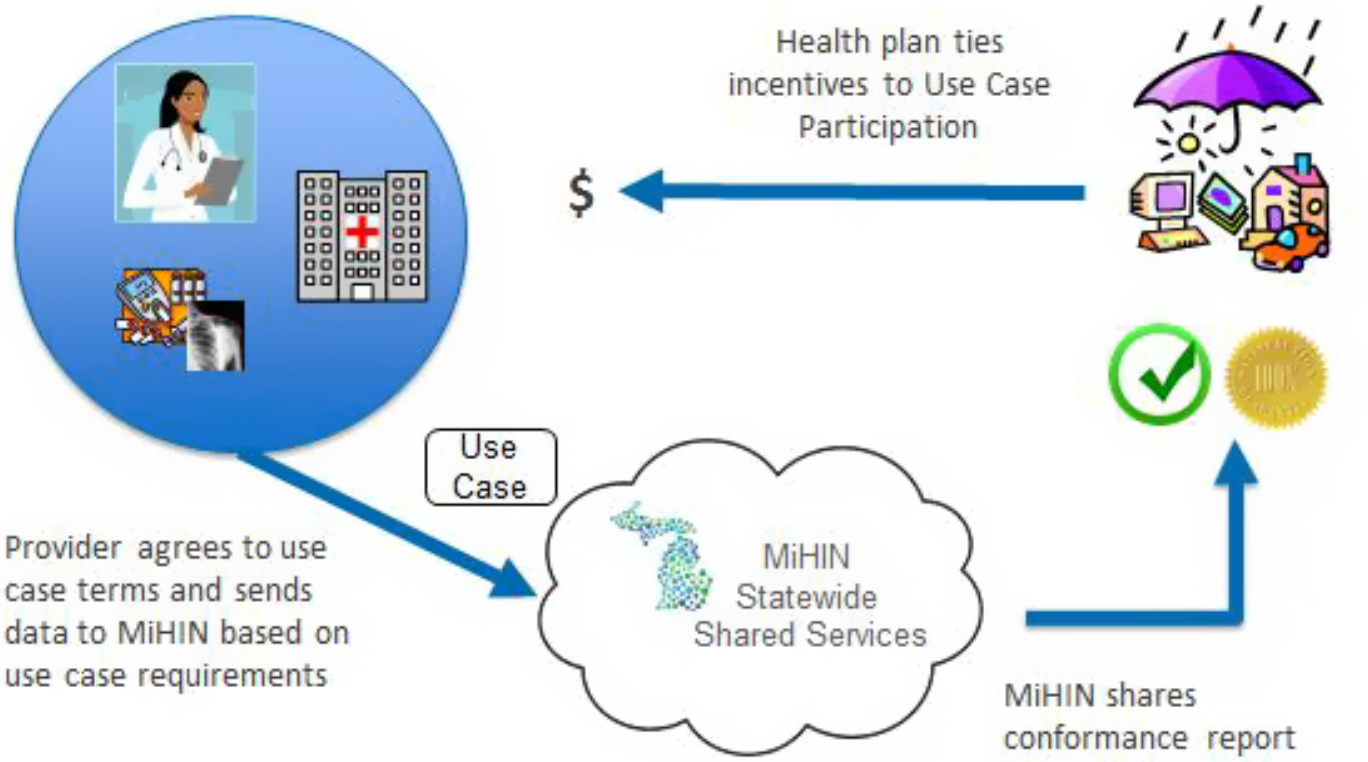
# An Upward Spiral

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# 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% | 66.7% |
| 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% |

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# 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


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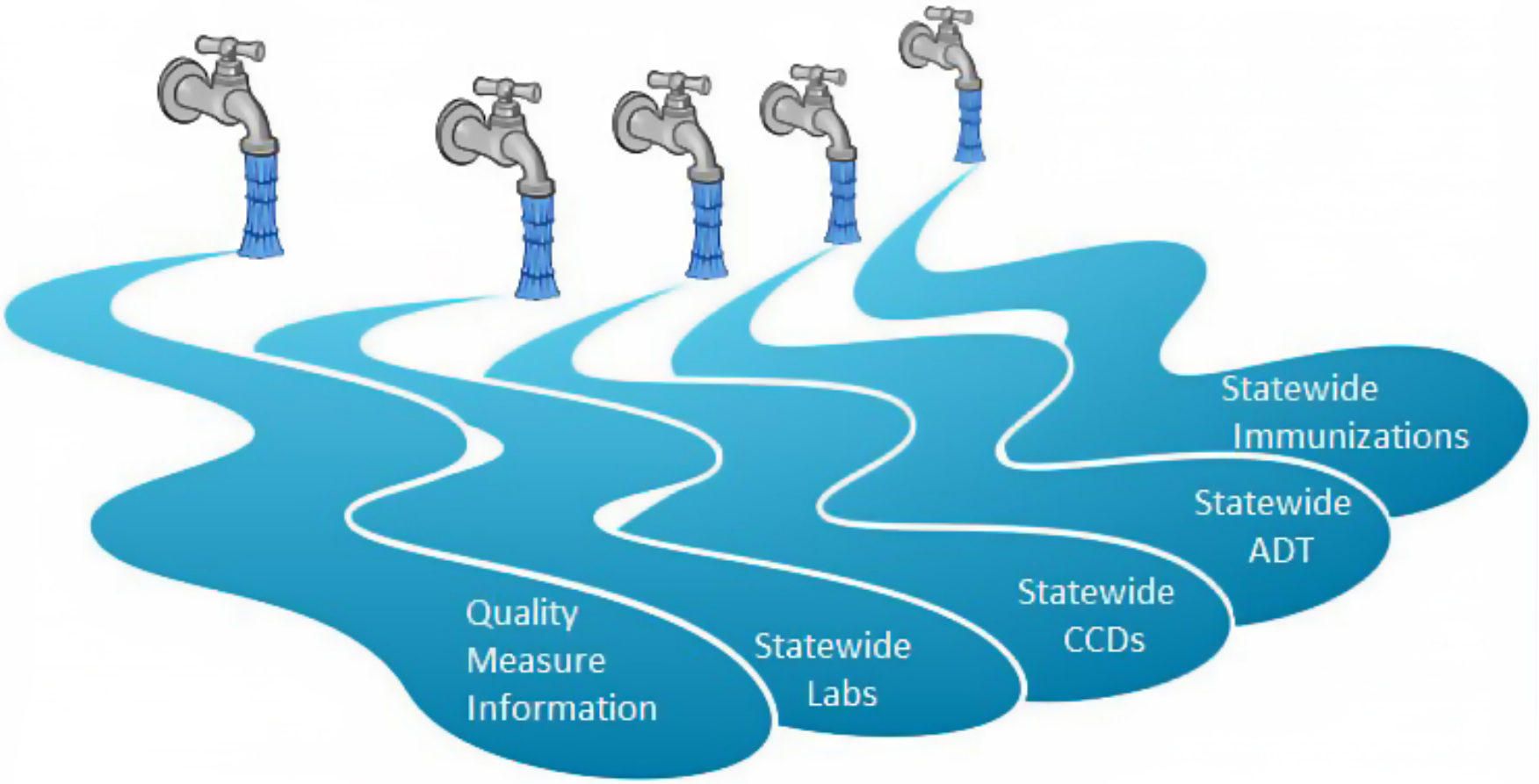
# Use Case Driven Data Lake

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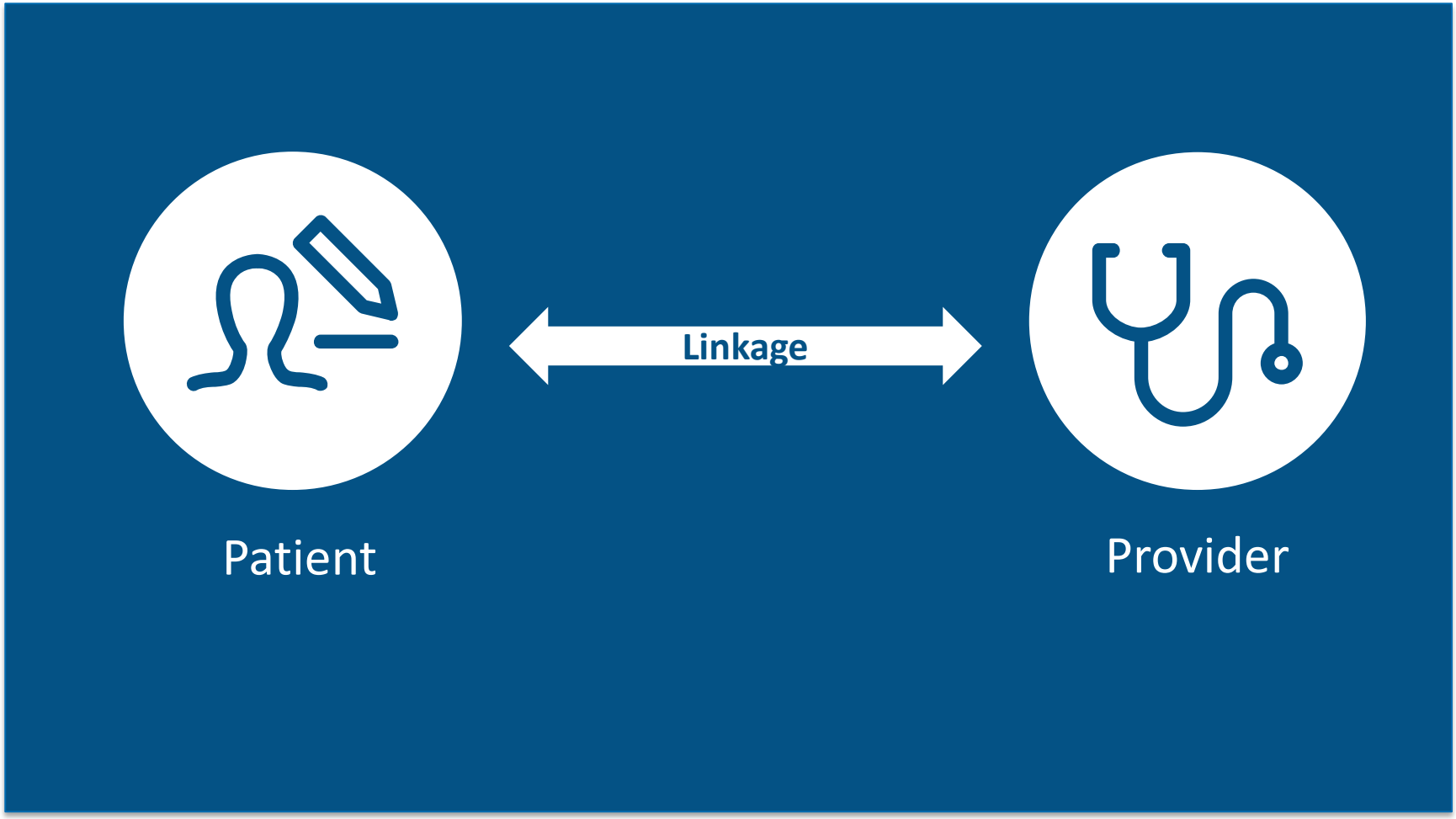
# Active Care Relationships





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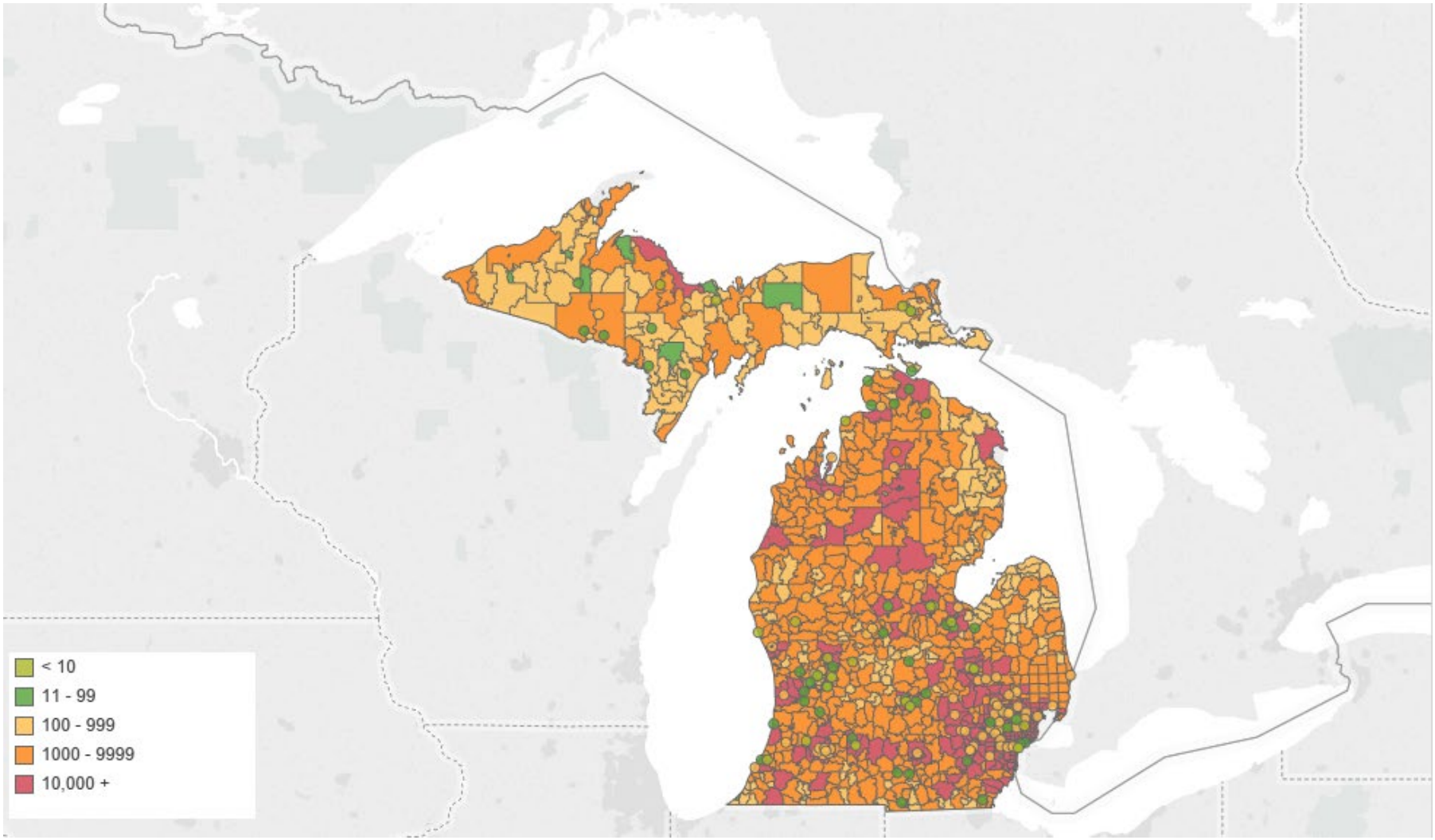
# ~ 30+ Million Active Care Relationships

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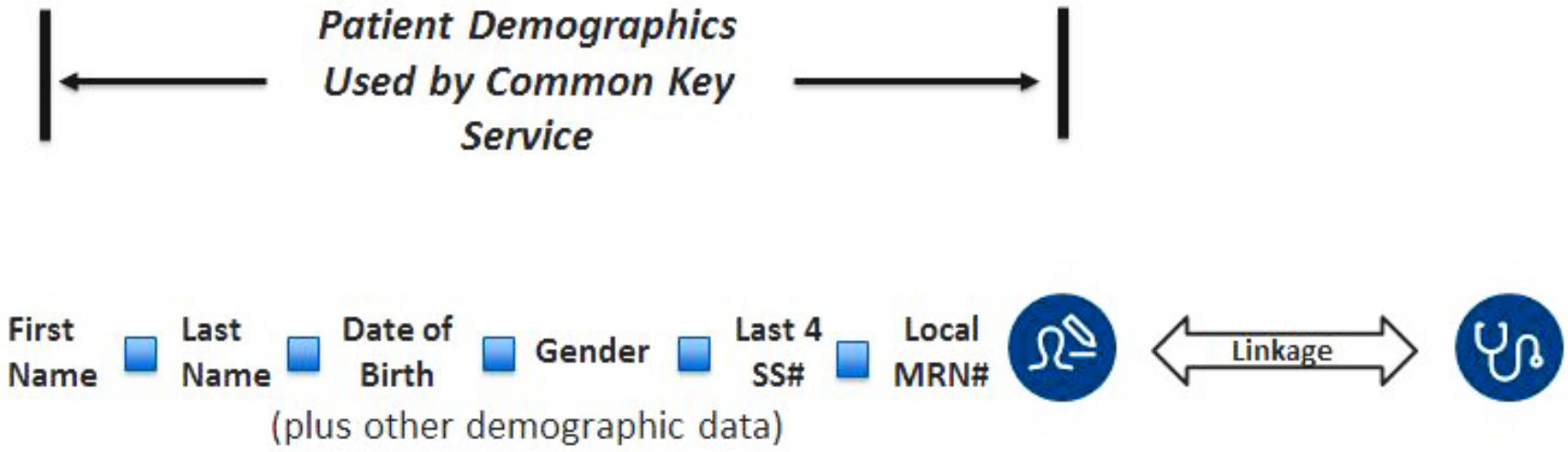
# Data for the Common Key Service

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# 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



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# 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 |


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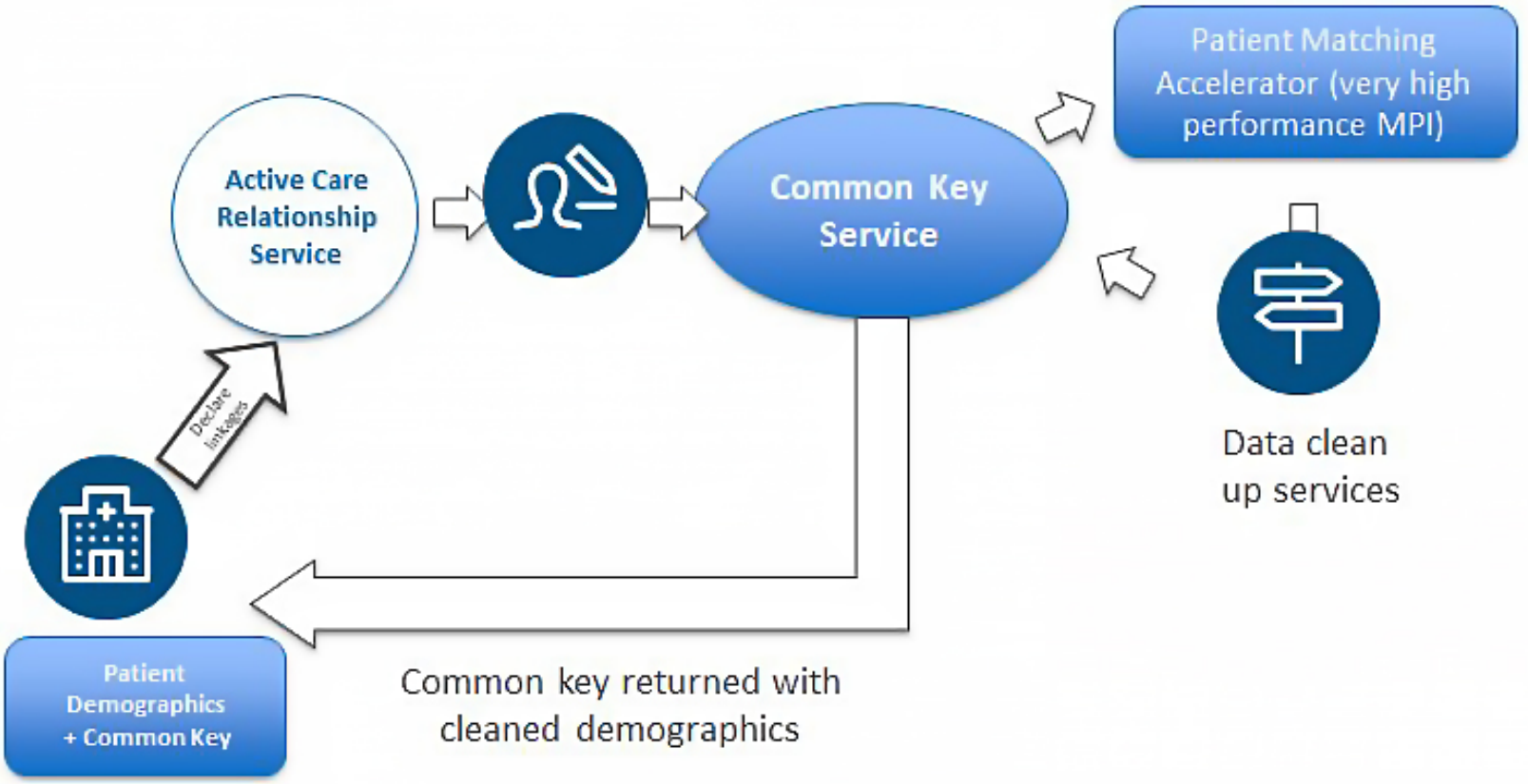
# Improving Patient Matching





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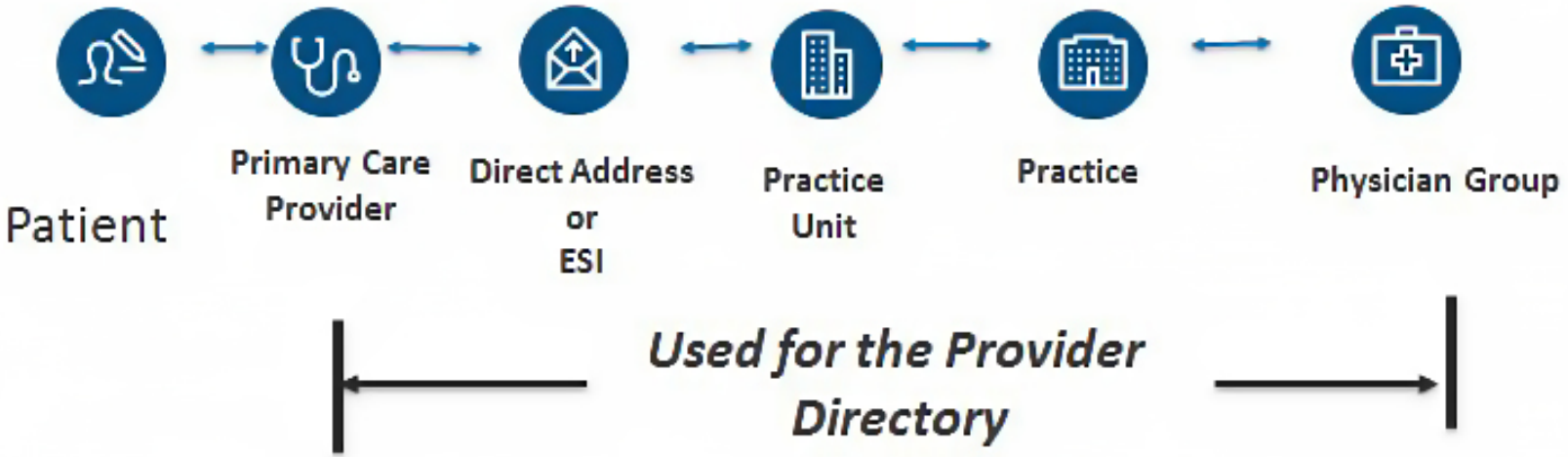
# Provider & Affiliation Data



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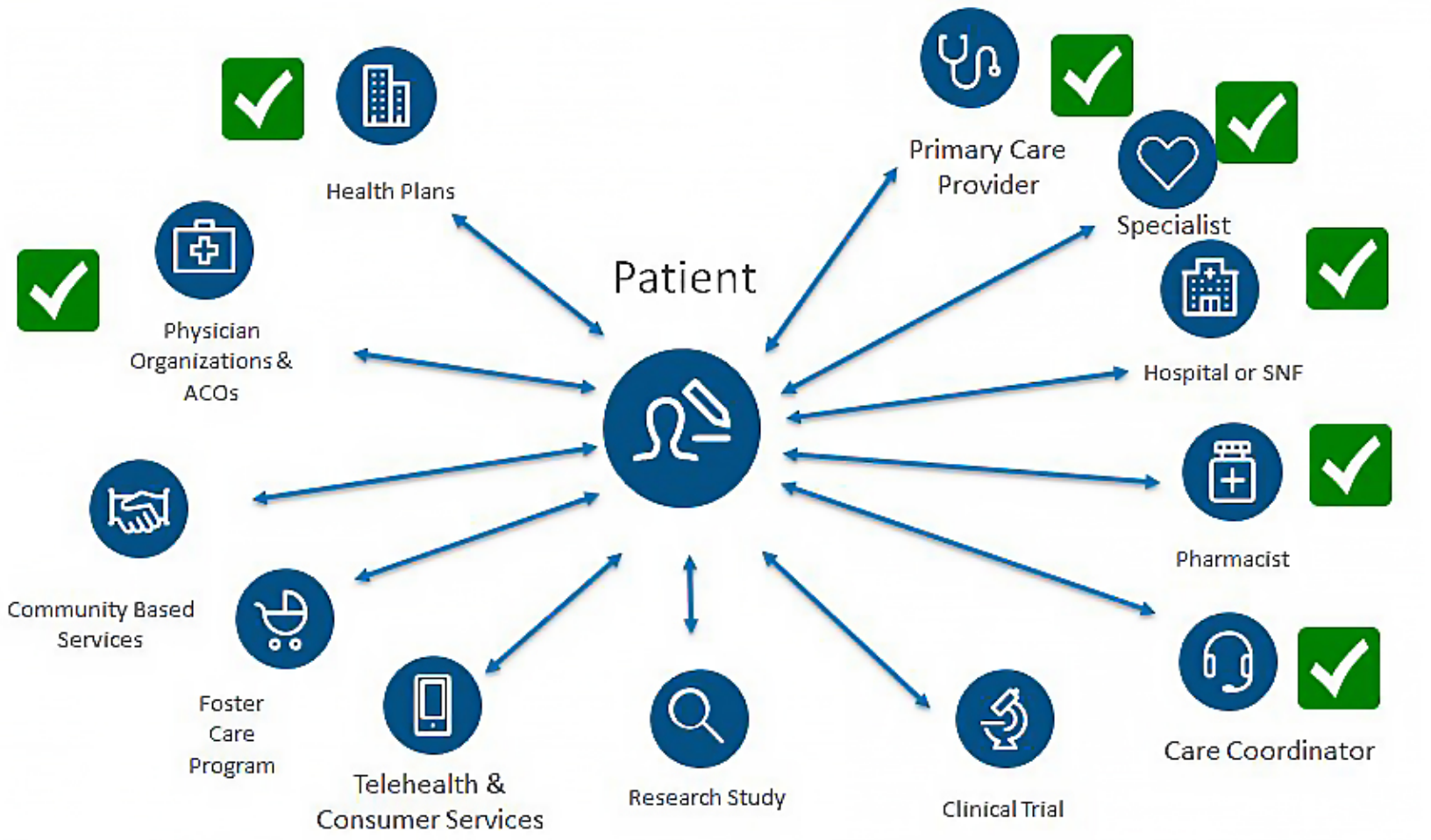
# Active Care Relationship Service™ (ACRS™)

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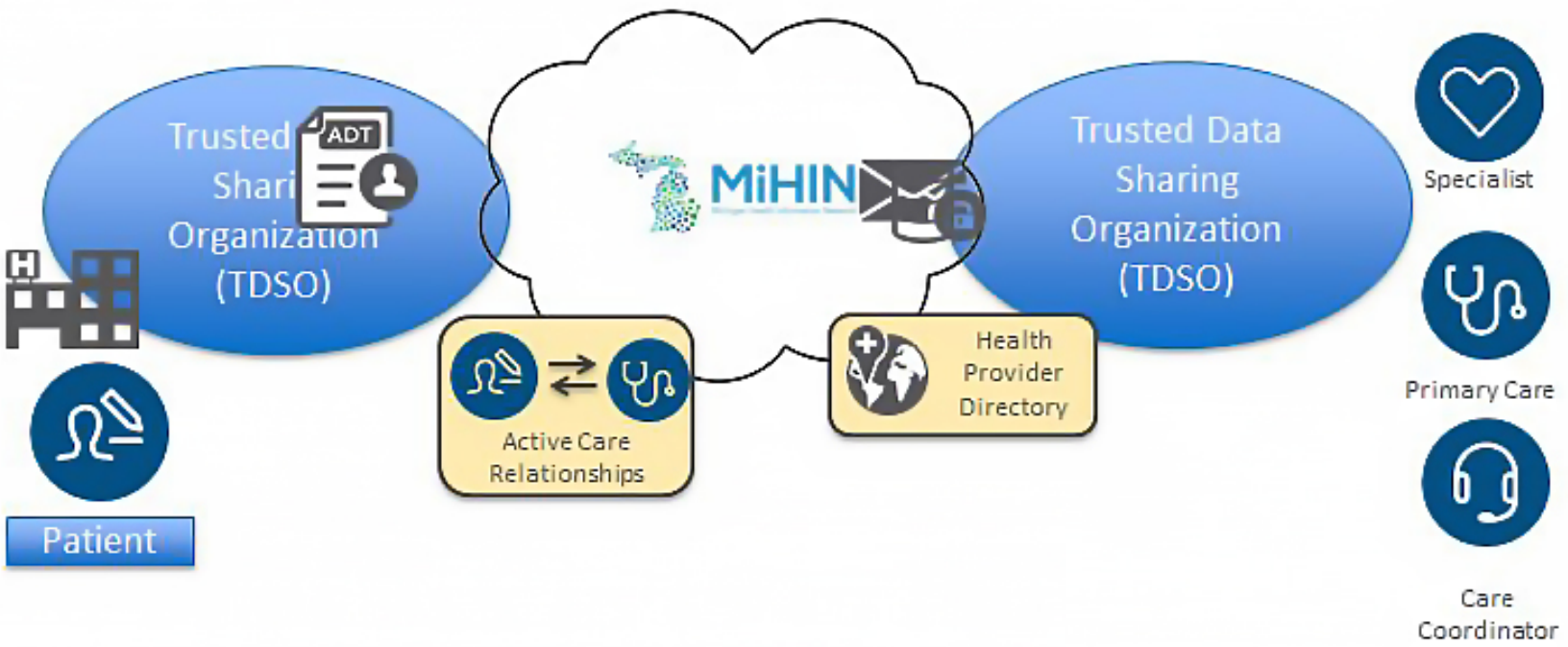
# Almost Every Hospital, ED, and 70% of SNFs




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

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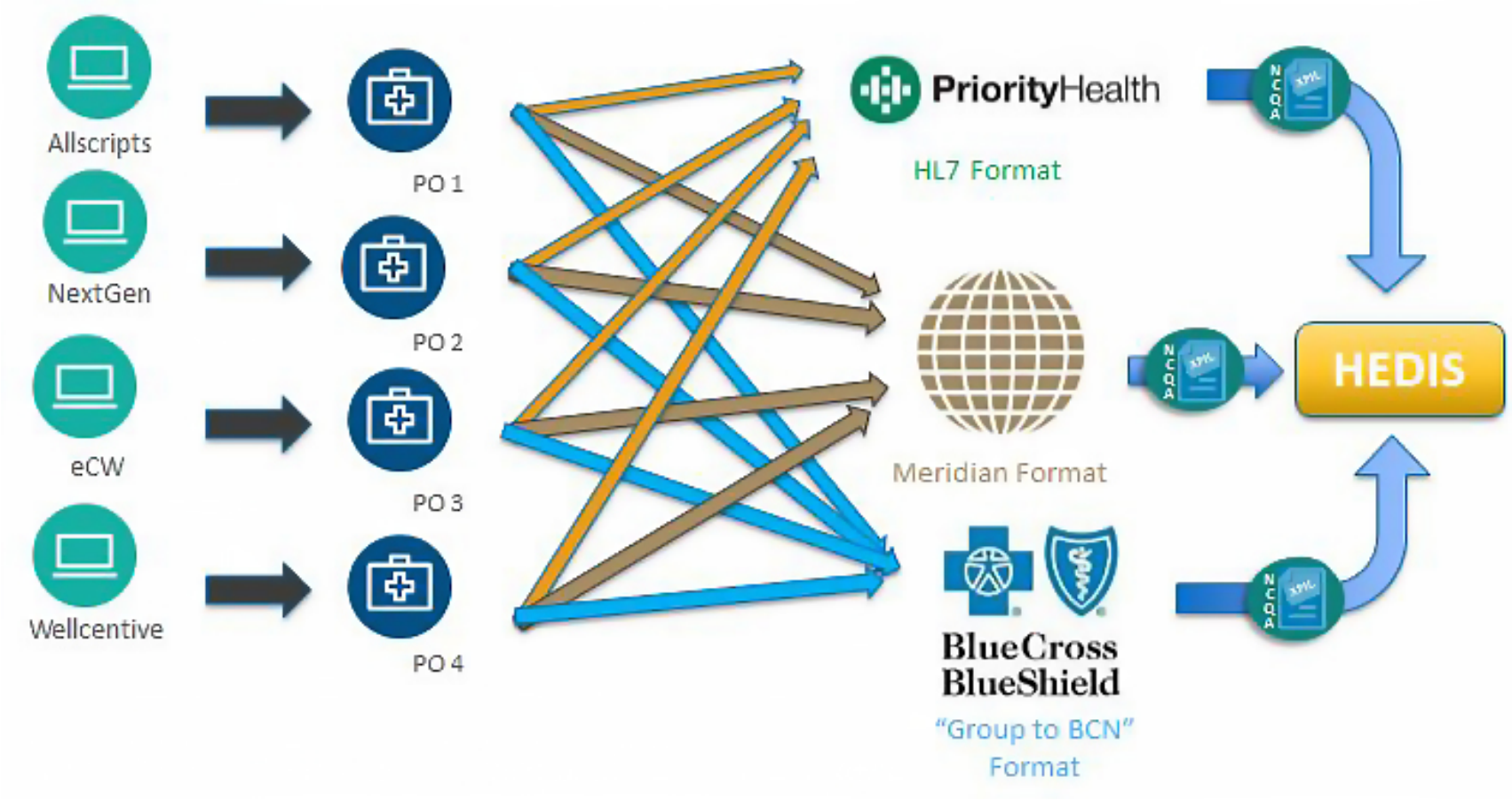
# Supplemental data – status quo



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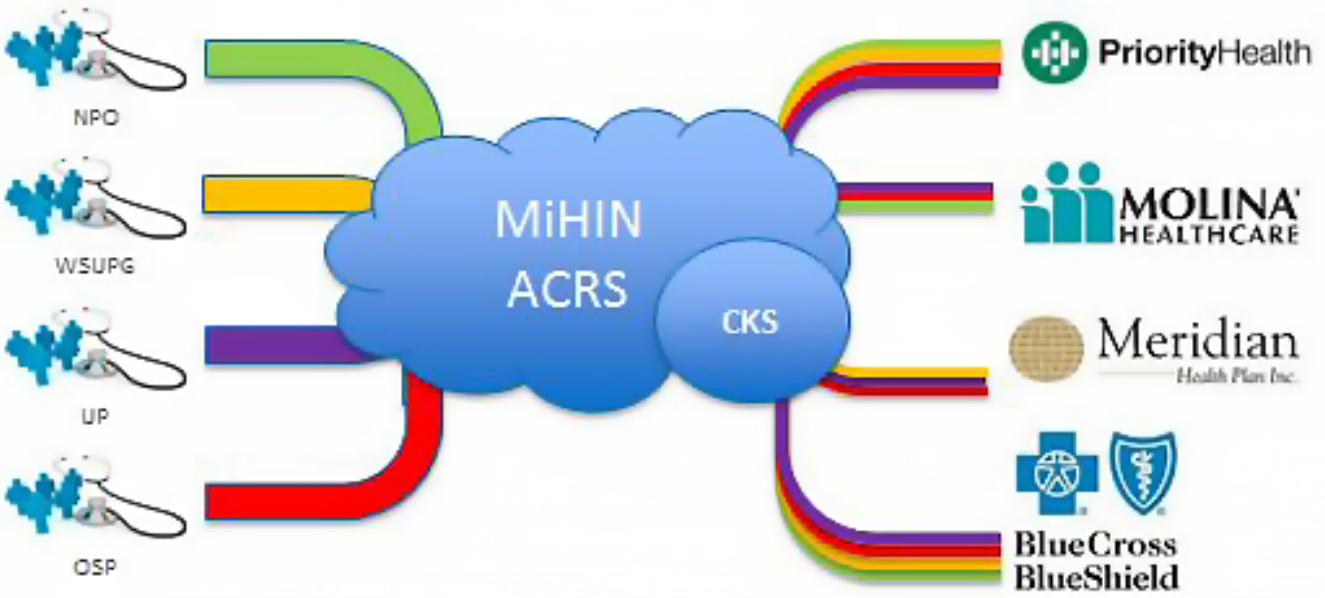
# ACRS Streamlines Quality Reporting




**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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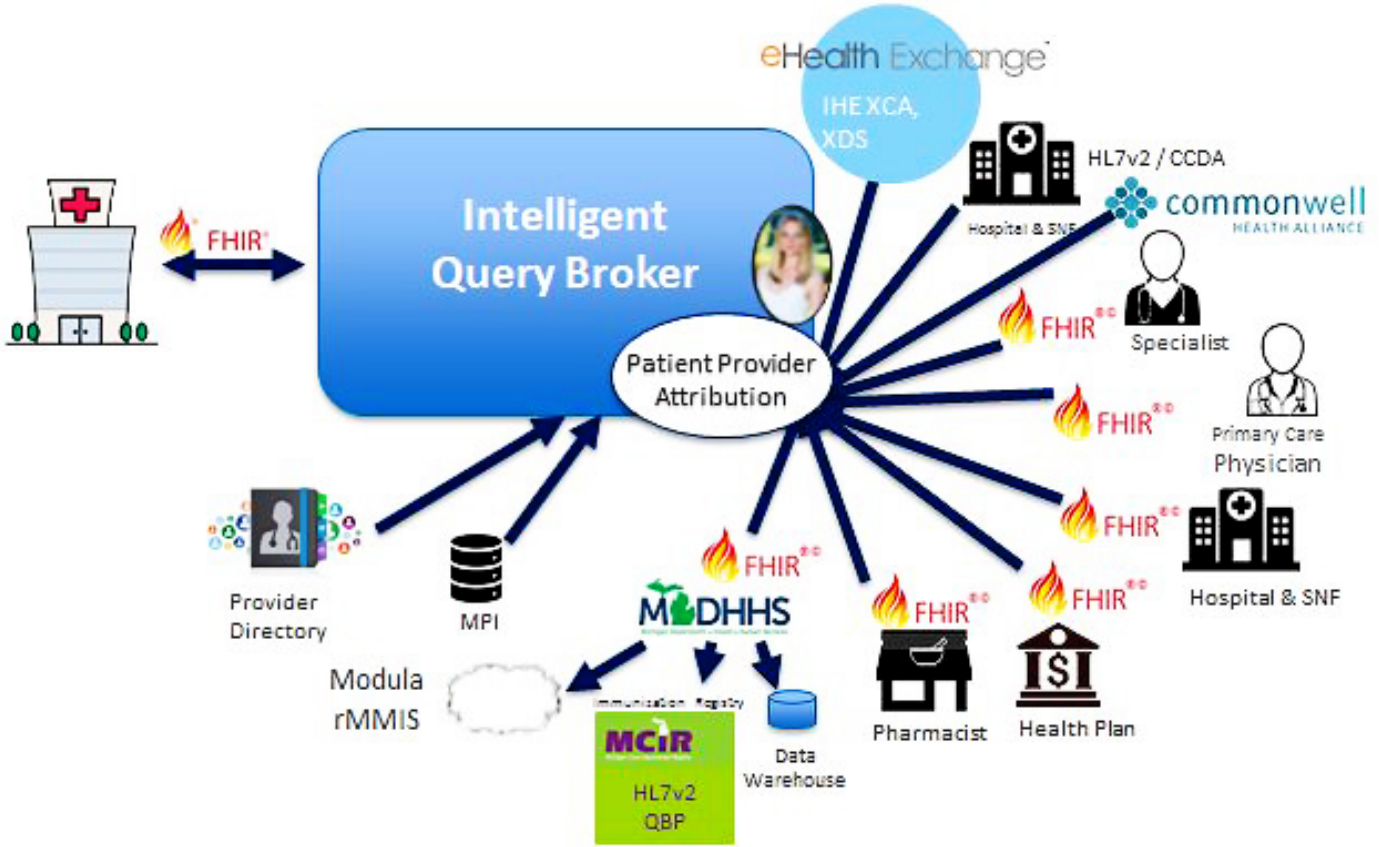
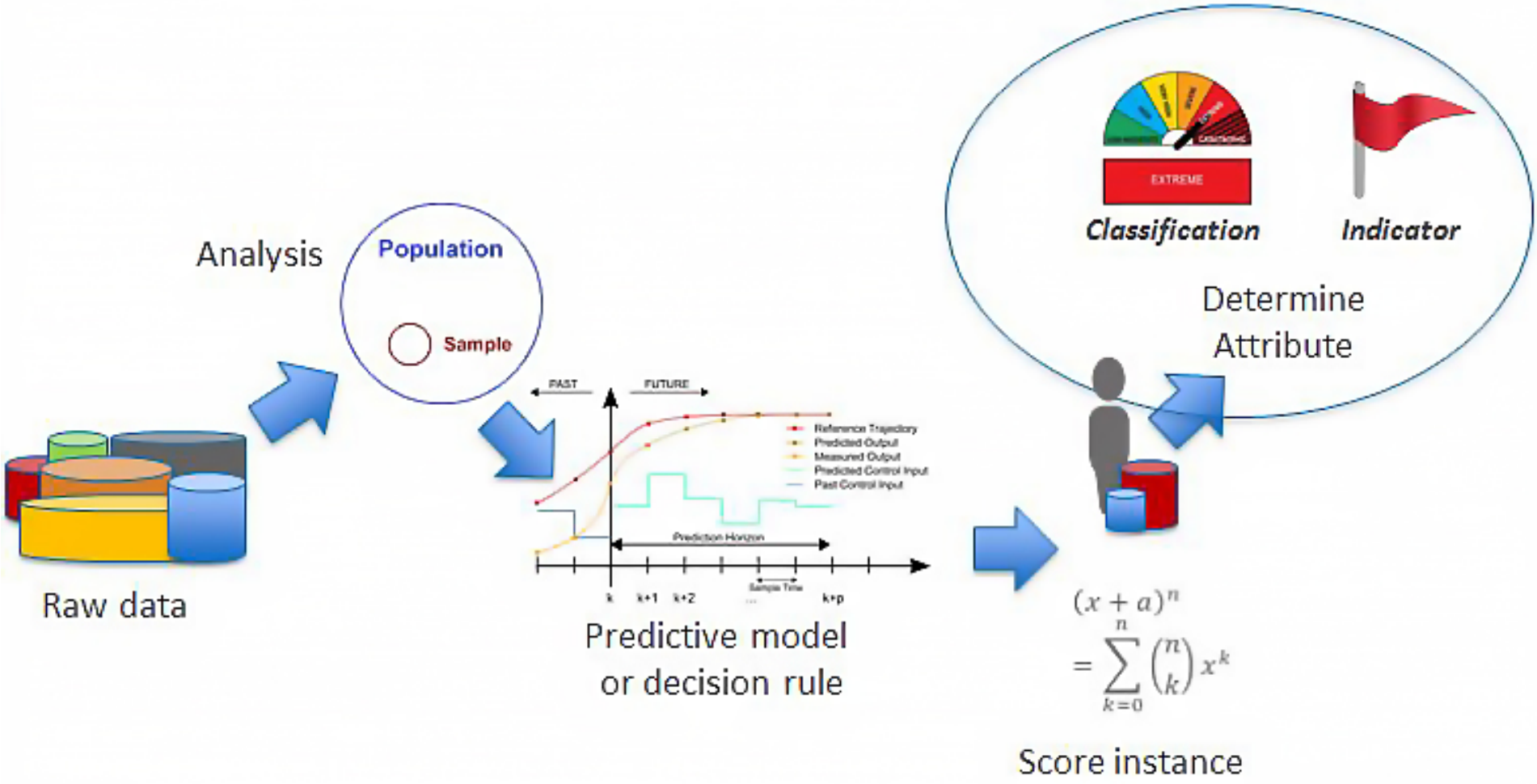
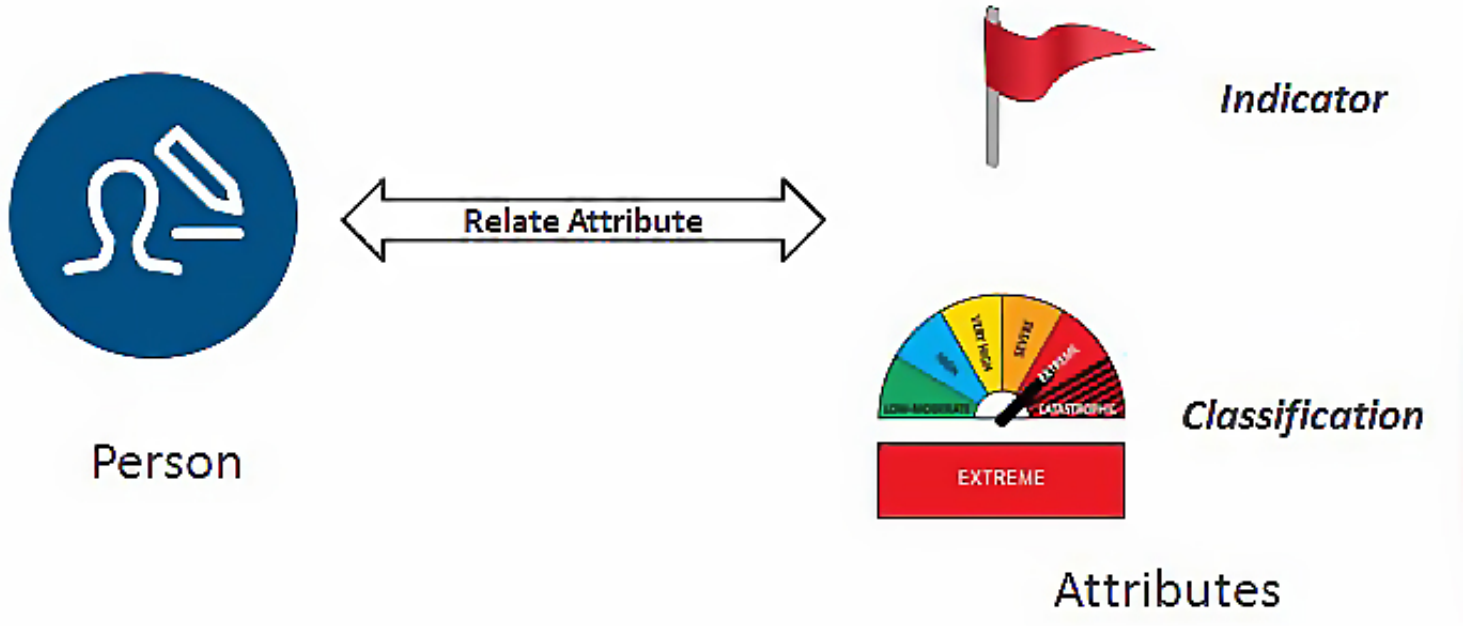
# ACRS Foundation for the Next Generation Record Locator Service



# Analytics Pipeline



# Active Care Relationship Attributes

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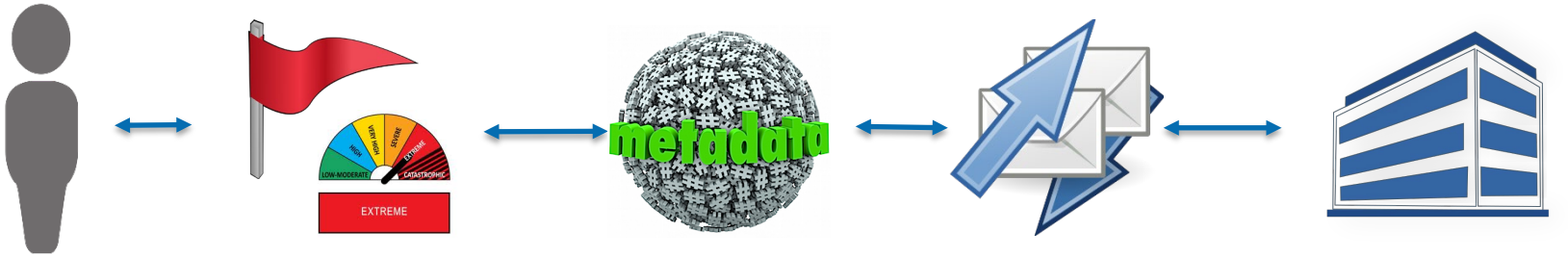
# ACRS Attribute Data




**Person**

**Attribute**

**Attribute Information**

**End Point URL Direct Address**

**Source Organization Information**

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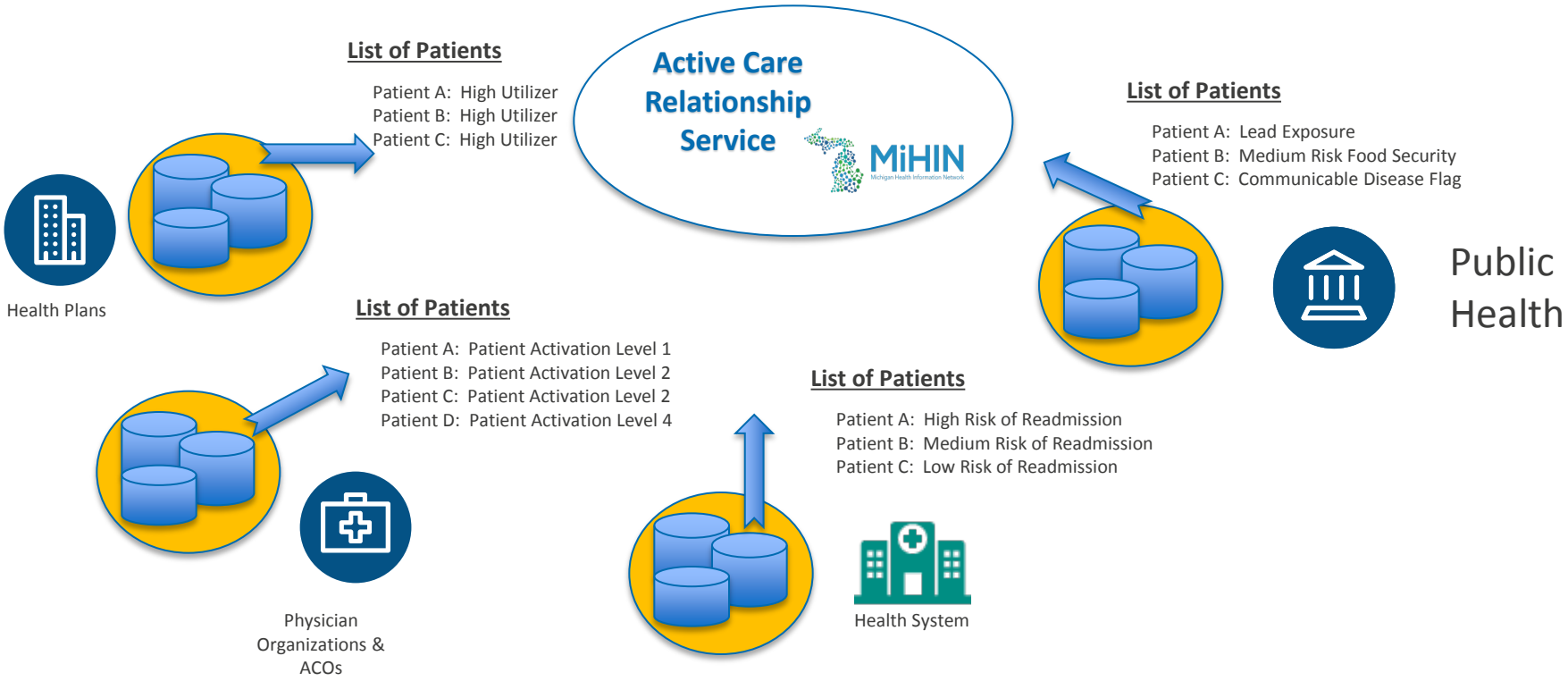
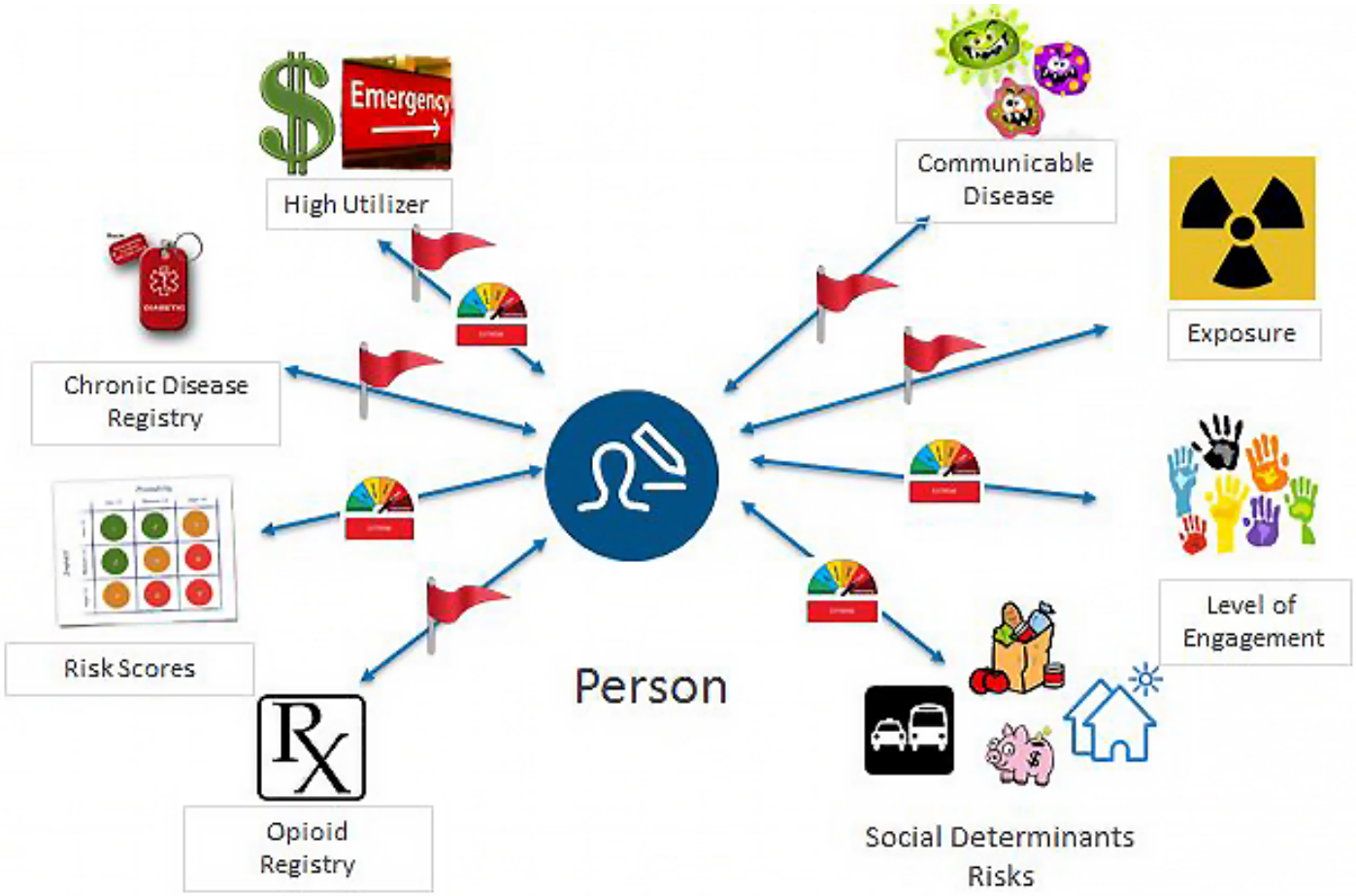
# Use of Prior Knowledge



# ACRS Attribute Lists

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# ACRS Situational Awareness

## Linkages

- Health Plans
- Primary Care Provider
- Physician Organizations & ACOs
- Specialist
- Community Based Services
- Hospital or SNF
- Government Programs
- Pharmacist
- Care Coordinator

Patient

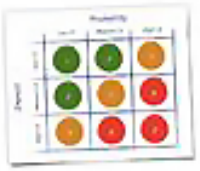
## Attributes

High Utilizer

Communicable Disease

Chronic Disease Registry

Exposure



Risk Scores

Level of Engagement

Opioid Registry

Social Determinants Risks

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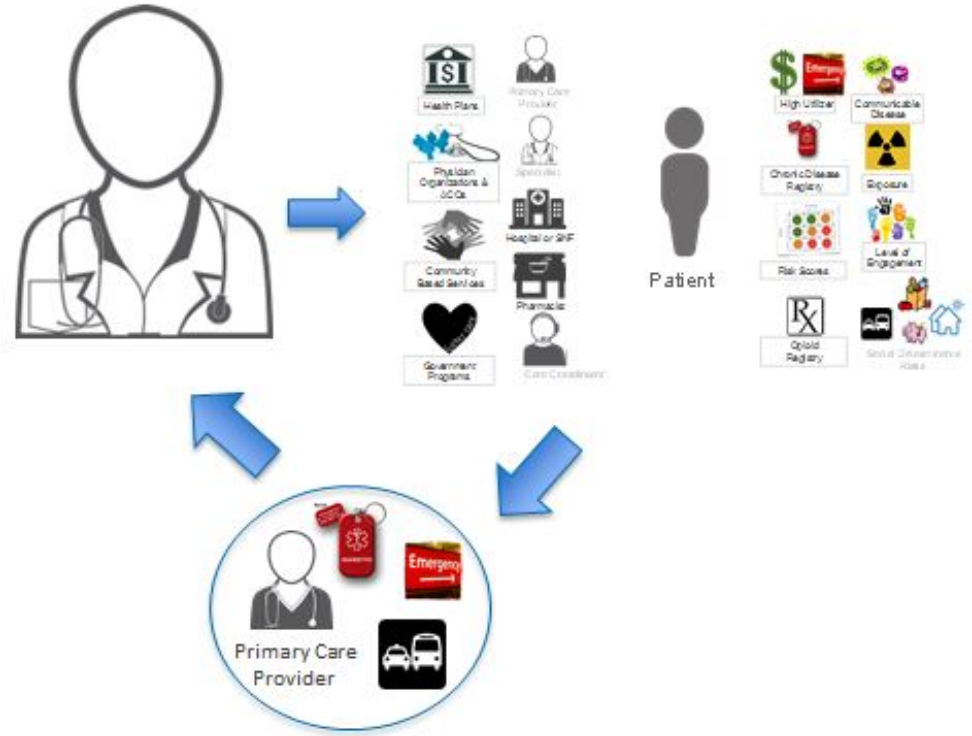
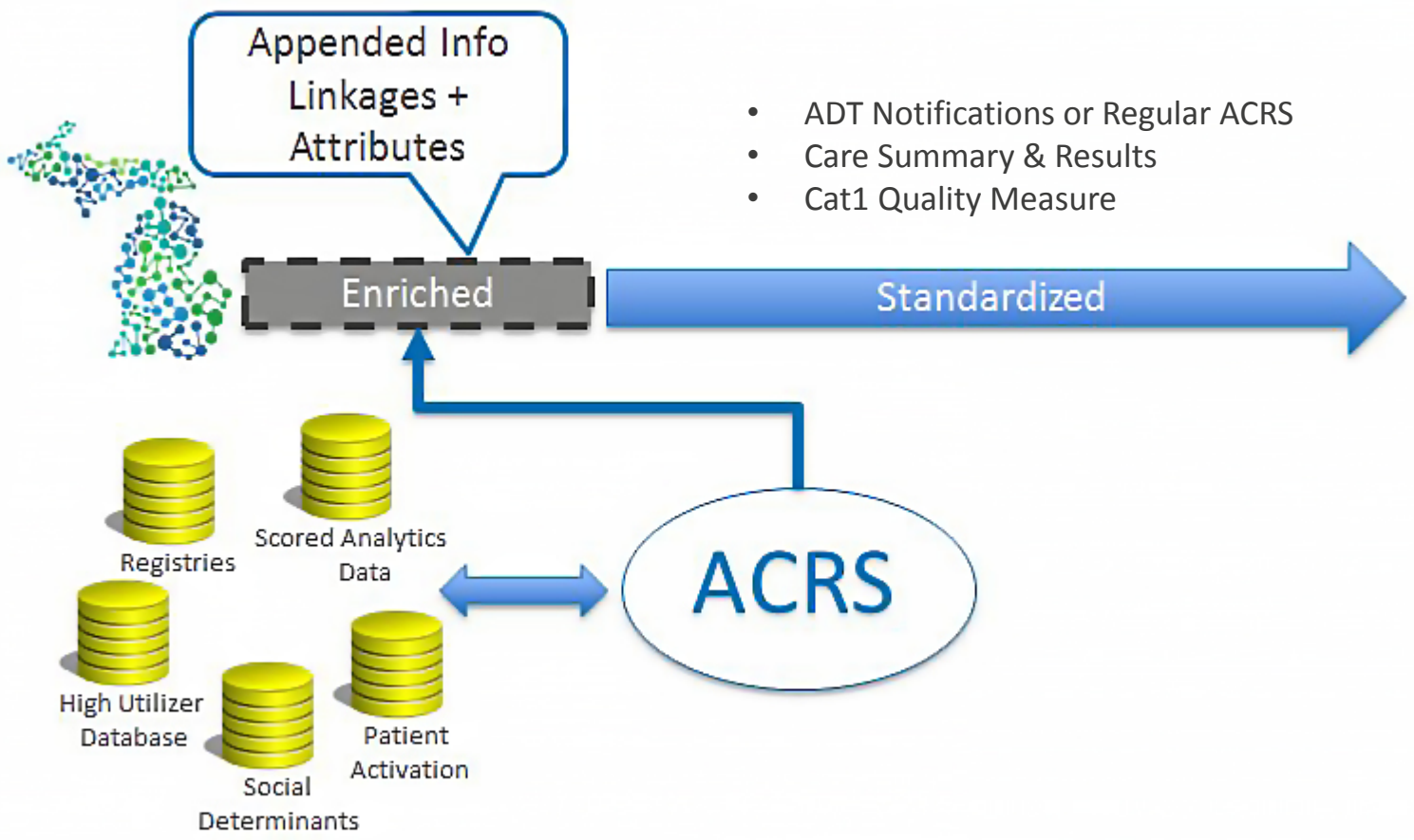
# Situational Awareness & Minimum Necessary Principle



# Enrichment Example




- ADT Notifications or Regular ACRS
- Care Summary & Results
- Cat1 Quality Measure

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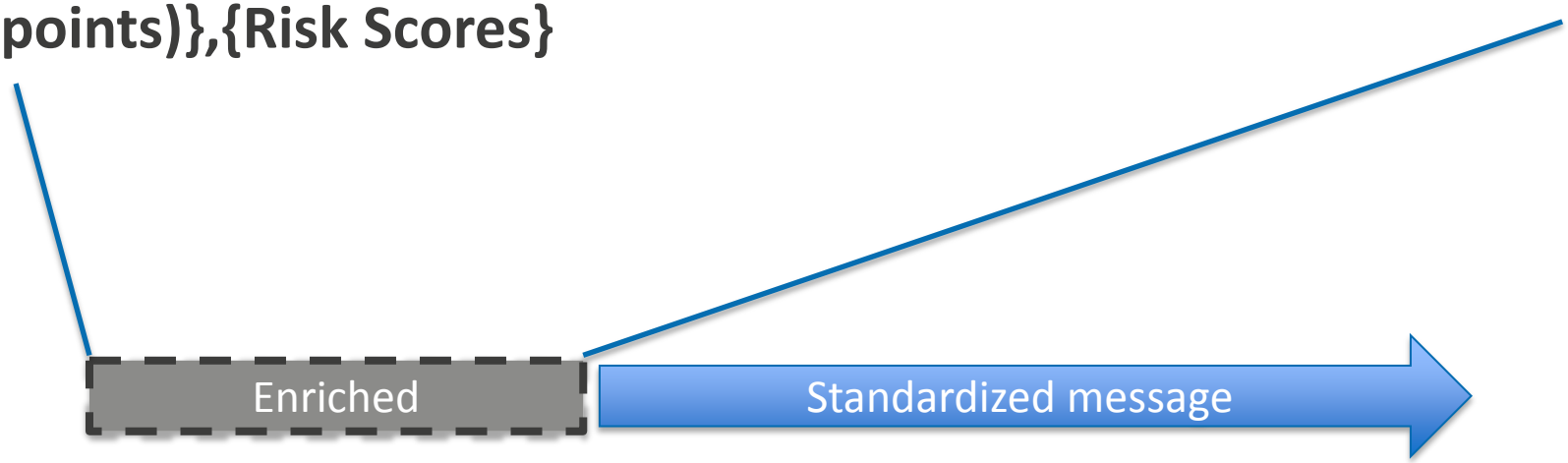
# Data Enrichment on Simple Transactions

**{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

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# Questions & Thank You!

Tim Pletcher

Executive Director

pletcher@mihin.org

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# 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)

# 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?

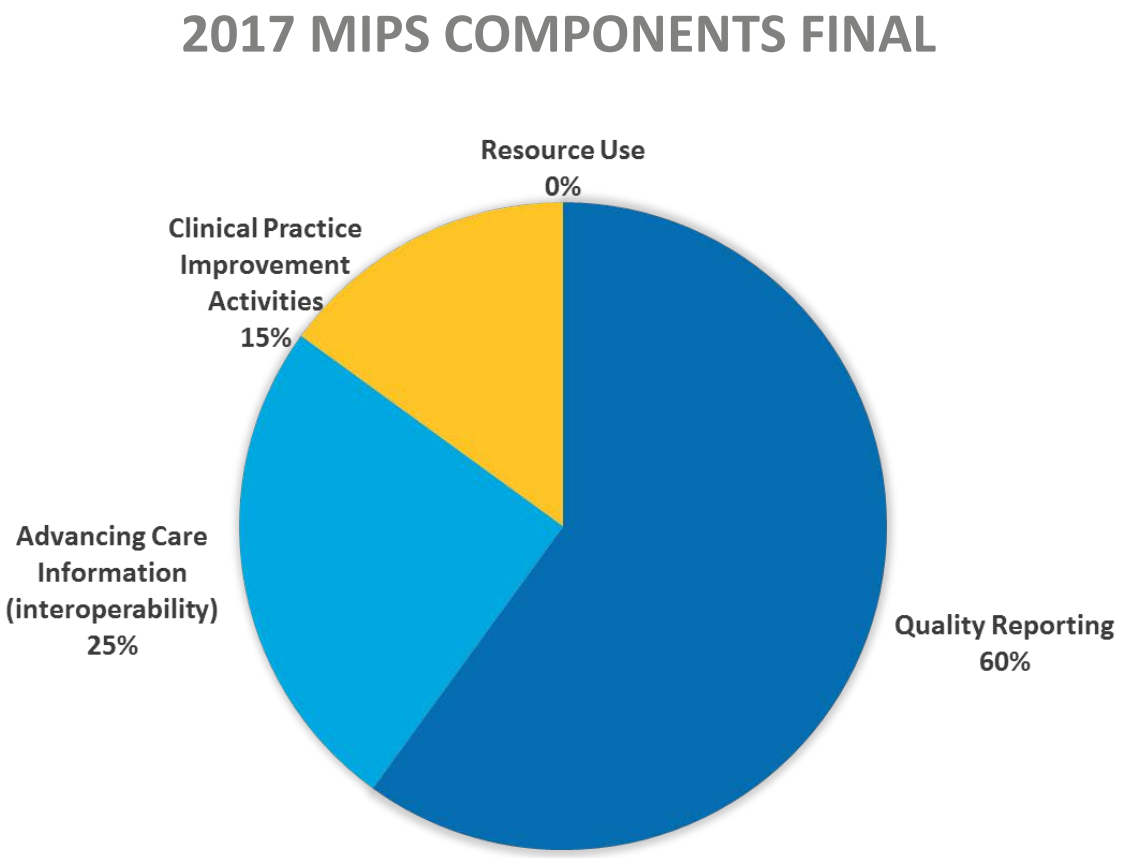
# Agenda

- **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?

# Moving to Value Based Payment Models

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

# Need to Measure Quality vs. Provider cost & burden



# 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:

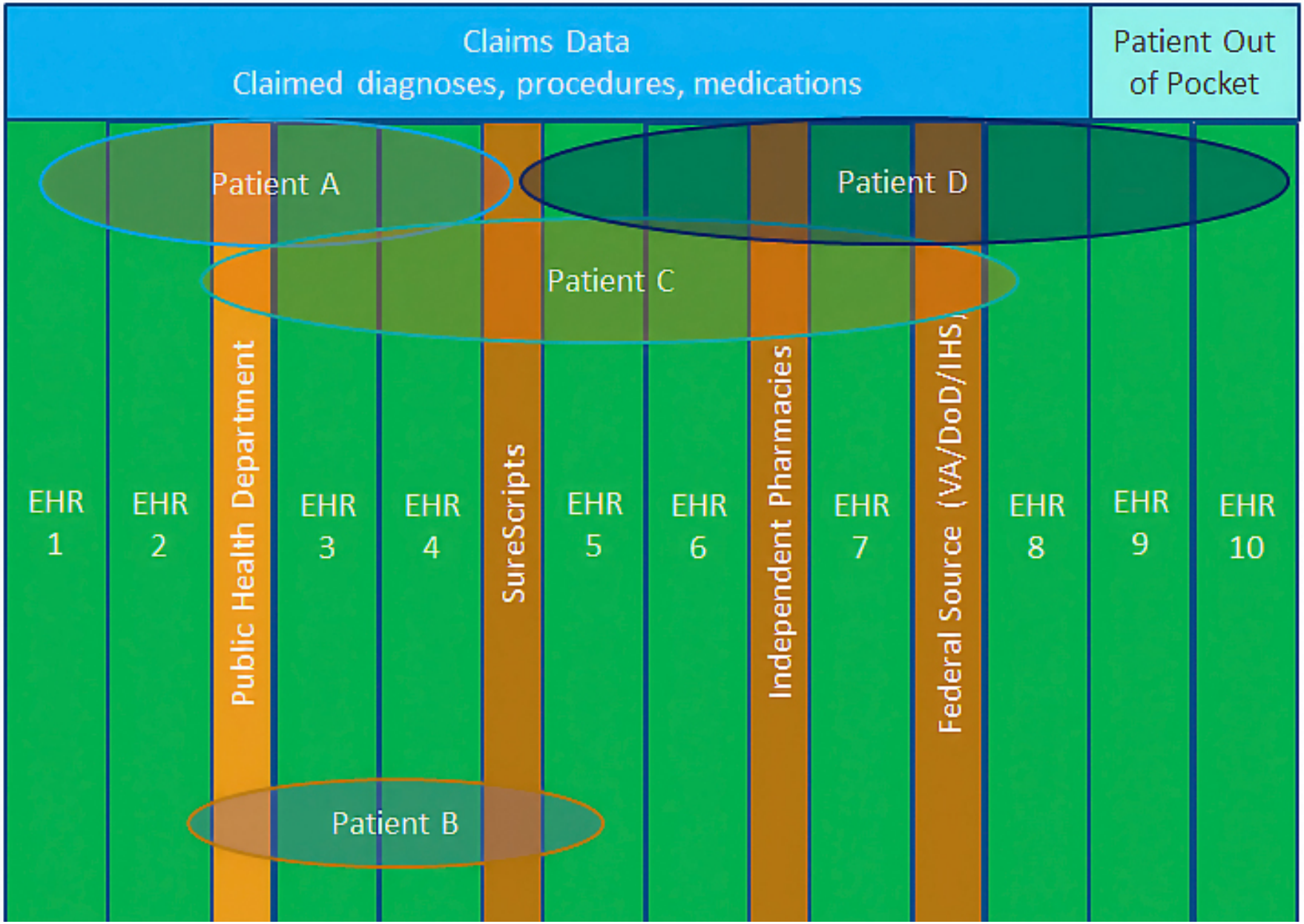
- Smaller practices
- Clinician owned (independent)
- Suburban and rural practices
- Academic practices
- No Meaningful Use participation
- Not participating in an external payment program
- Not participating in demonstration project

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

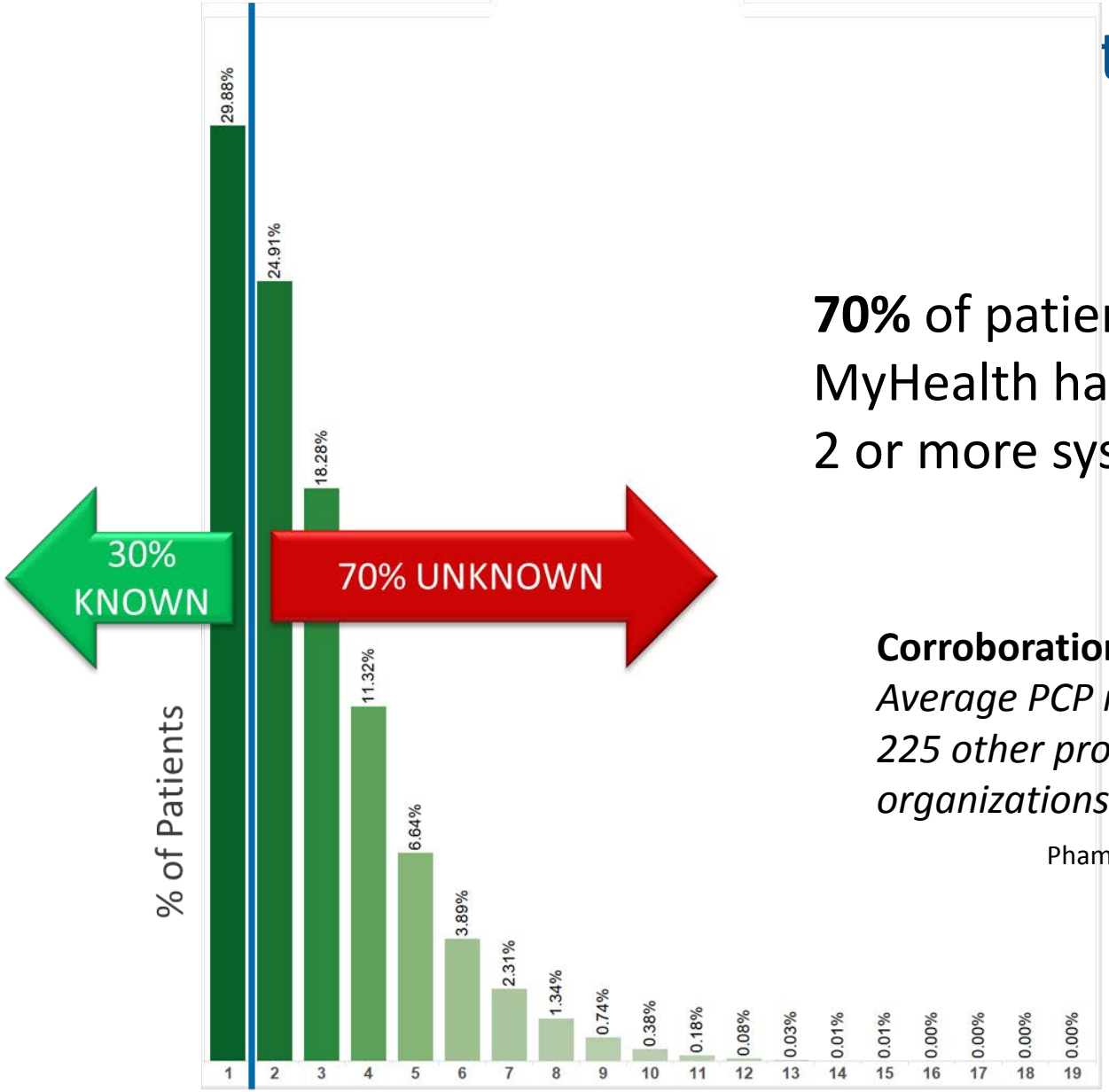
# Agenda

- 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



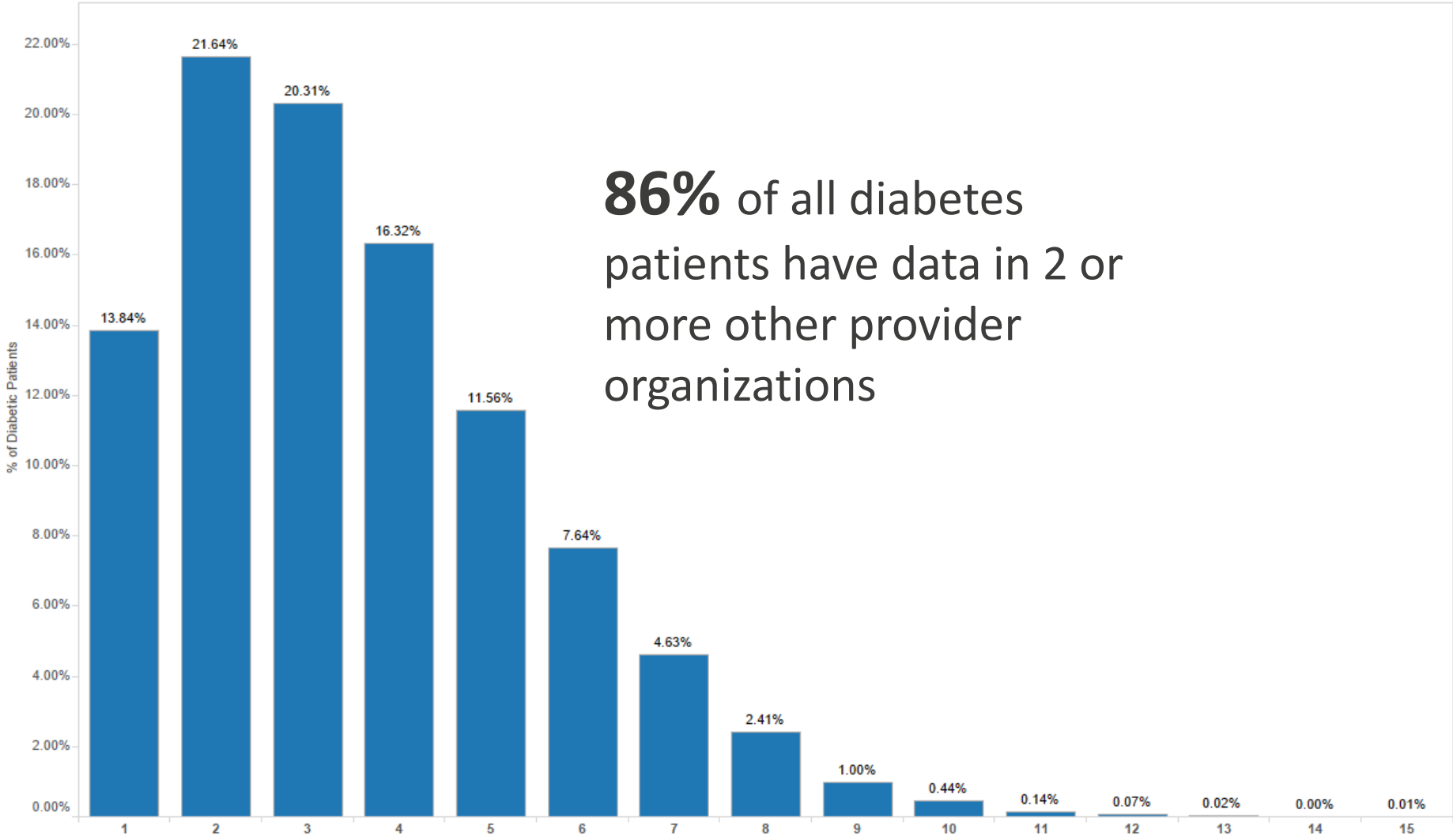

**70%** of patients in MyHealth have records in 2 or more systems

**Corroboration:**

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

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

# Diabetes patients with records elsewhere




**86%** of all diabetes patients have data in 2 or more other provider organizations

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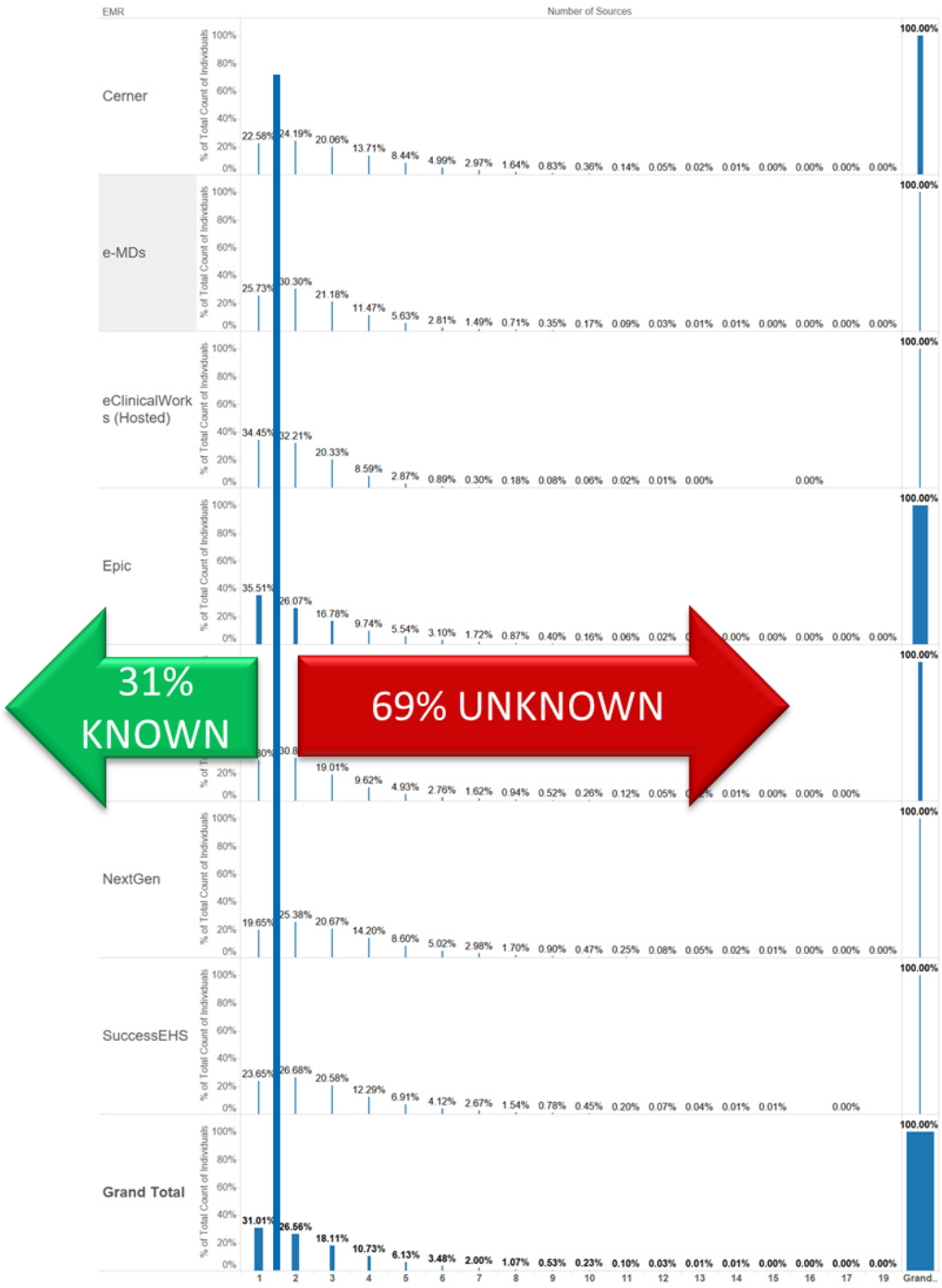
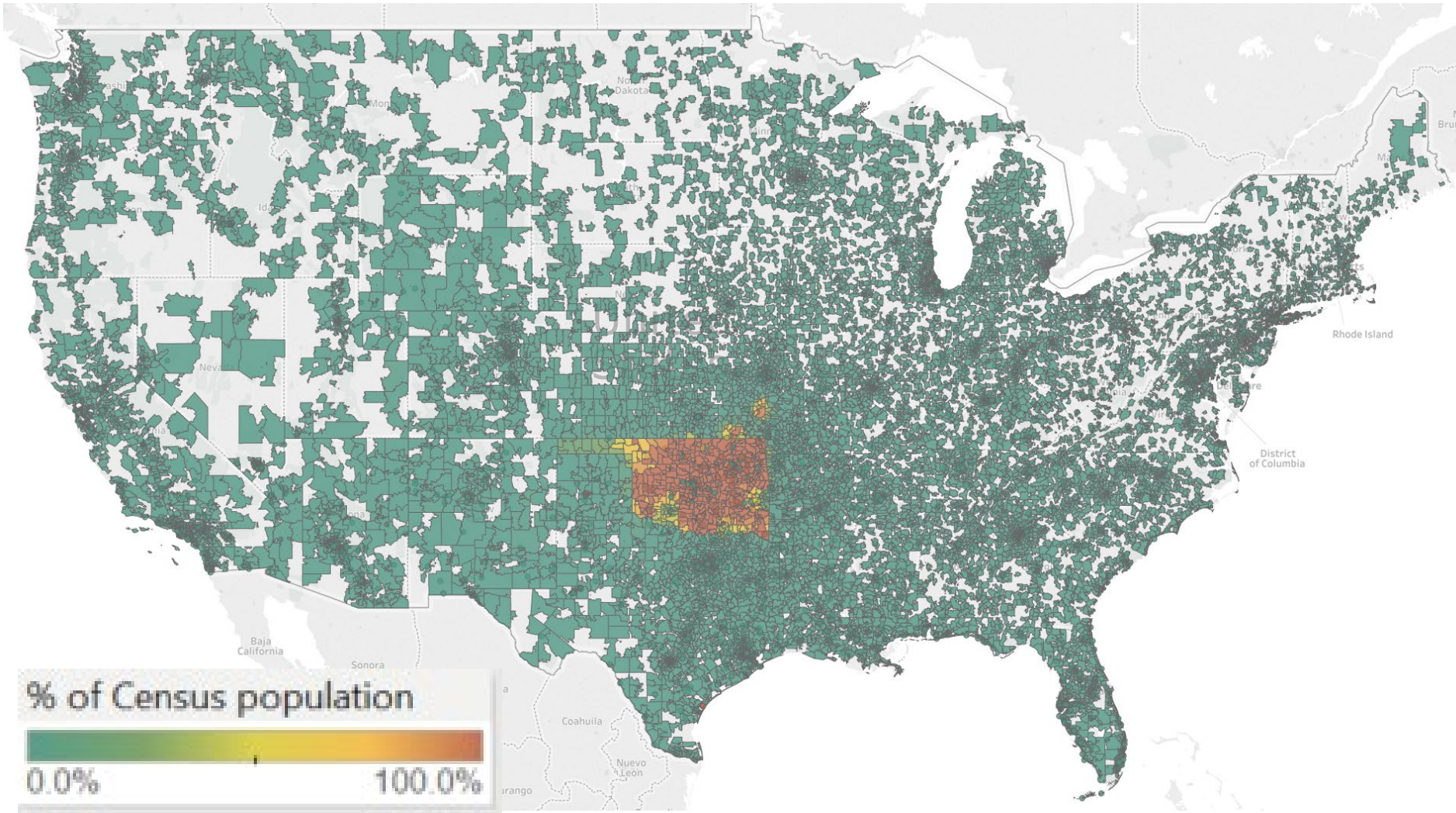



# Data fragmentation by EHR Vendor

(top 7 vendors in Oklahoma shown)

# Oklahoma's Patient Population: Care Fragmentation beyond borders

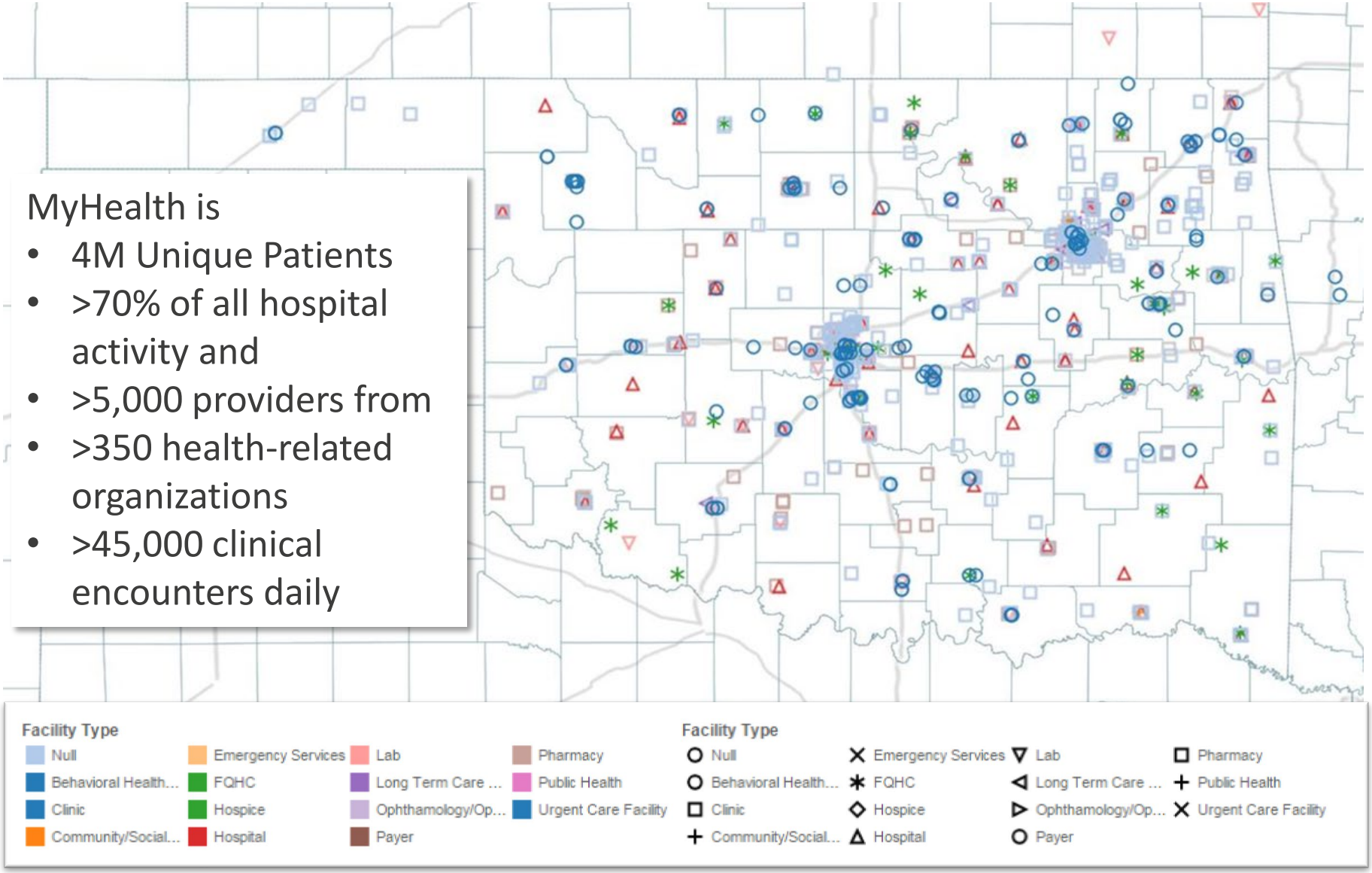


# Critical Voices In Governance

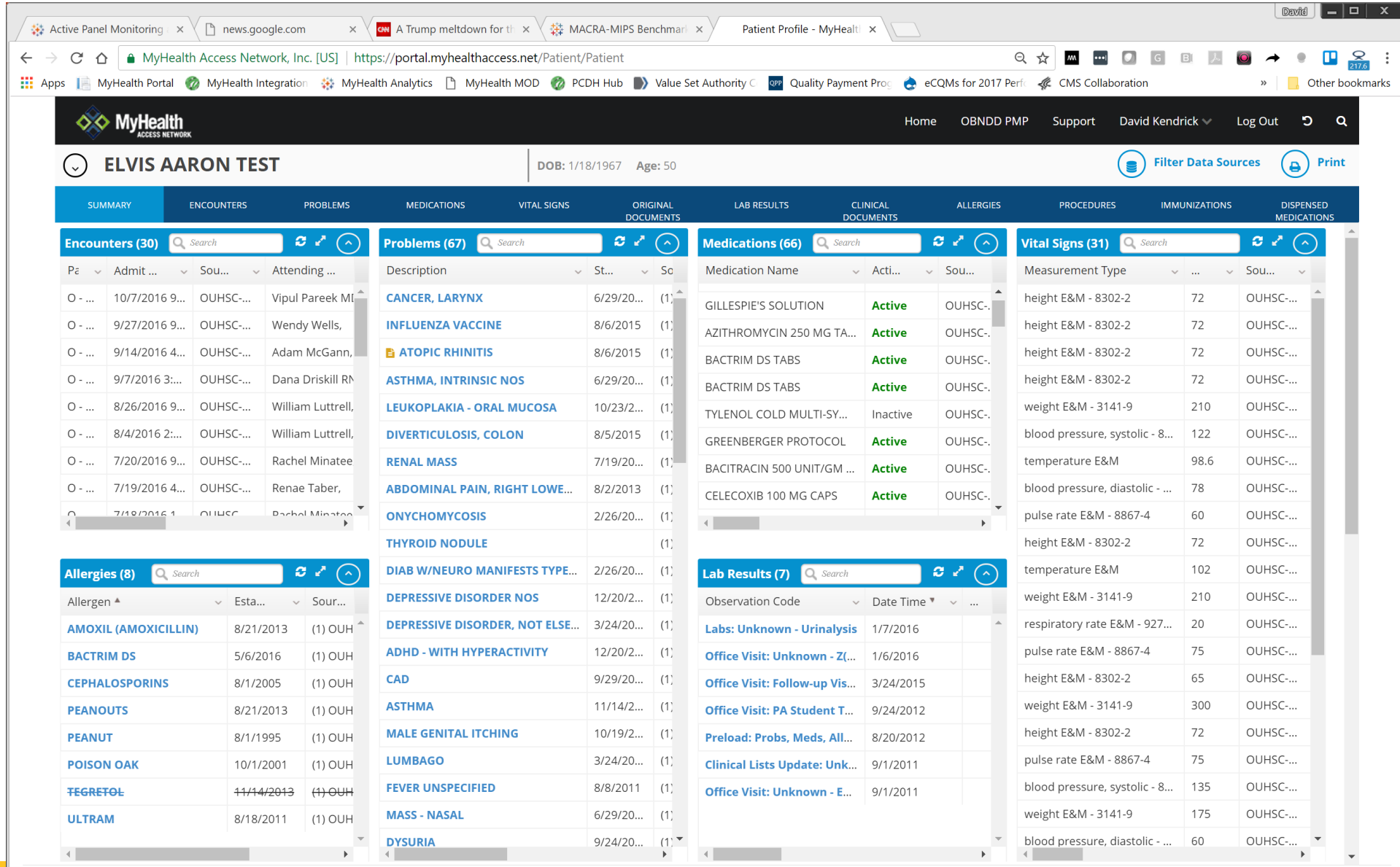
# >1,000 Locations, > 50 EHRs

MyHealth is

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

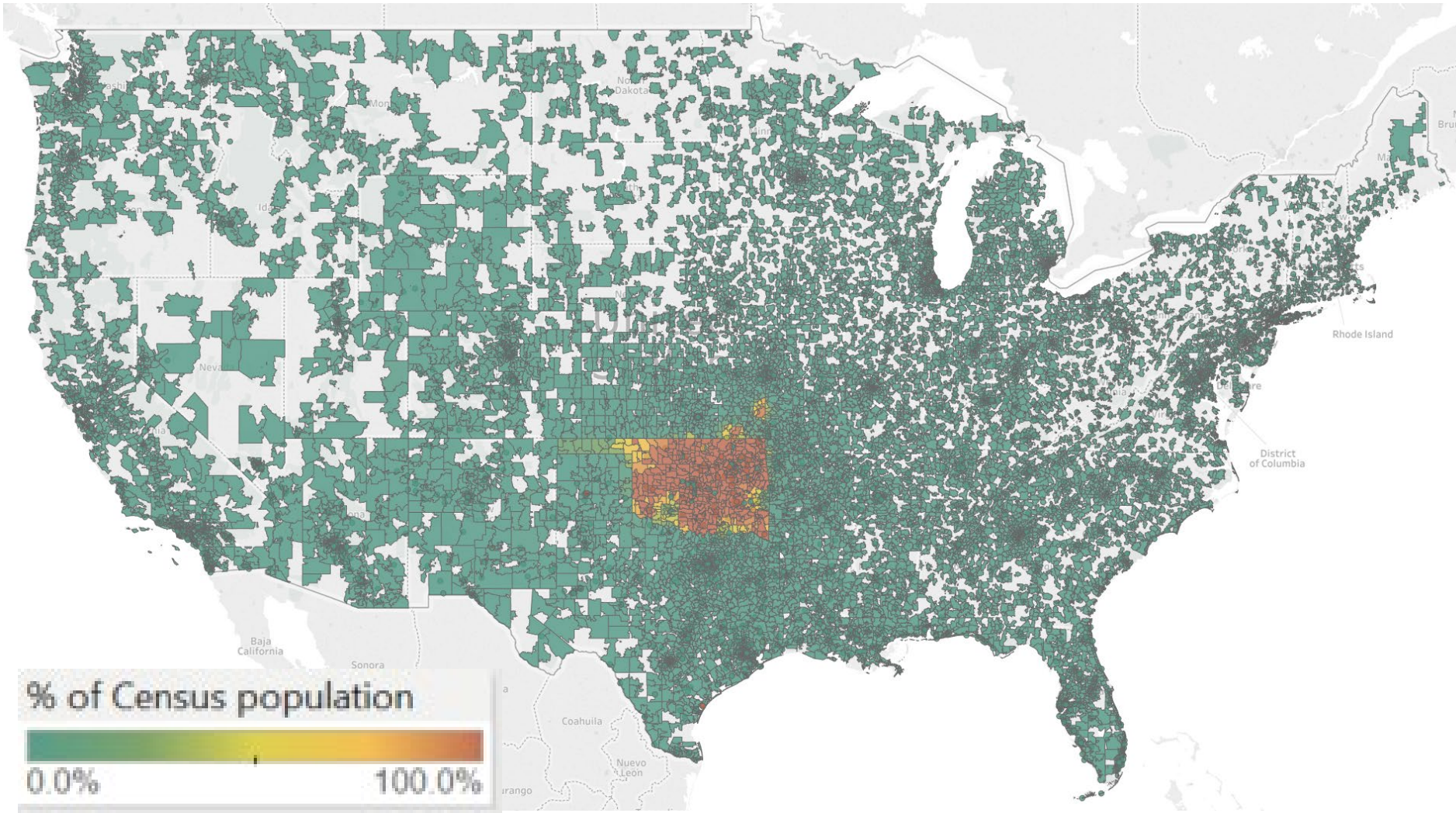


# Comprehensive, Multi-sourced Health Record

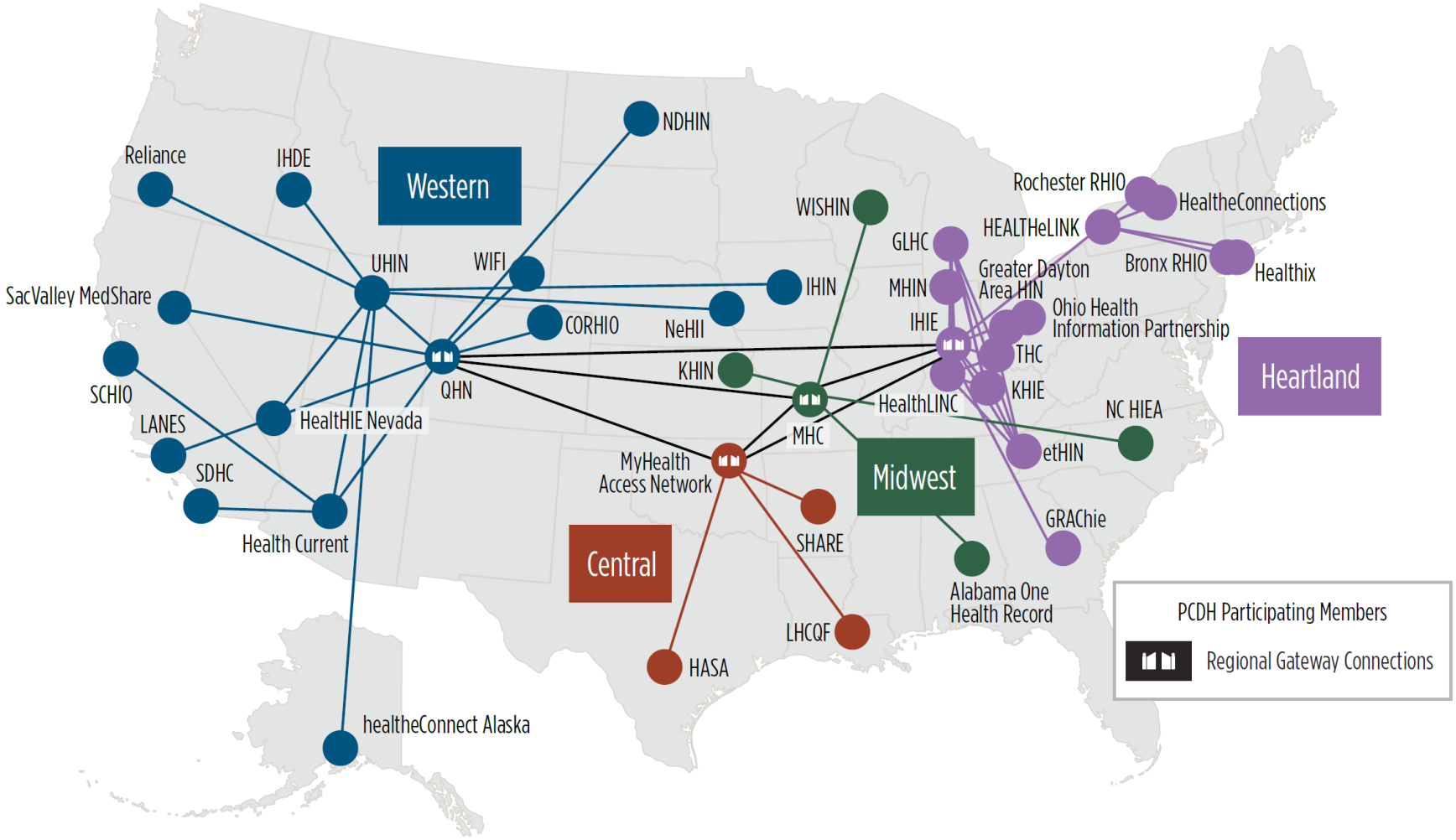



© 2017 MyHealth Access Network

# Oklahoma's Patient Population: Care Fragmentation beyond borders

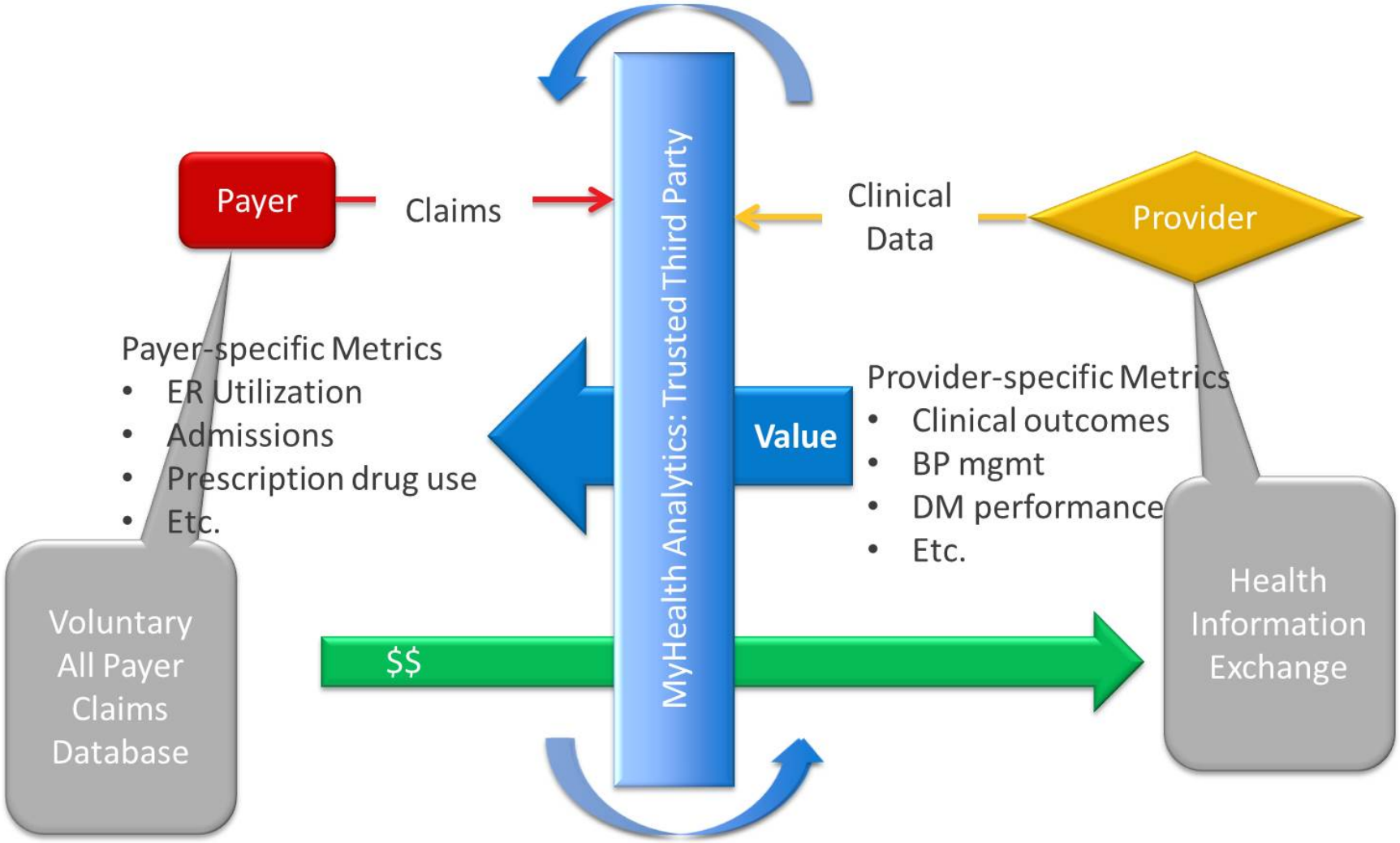


# Patient Centered Data Home™ now includes >30 HIE's serving >150M patients



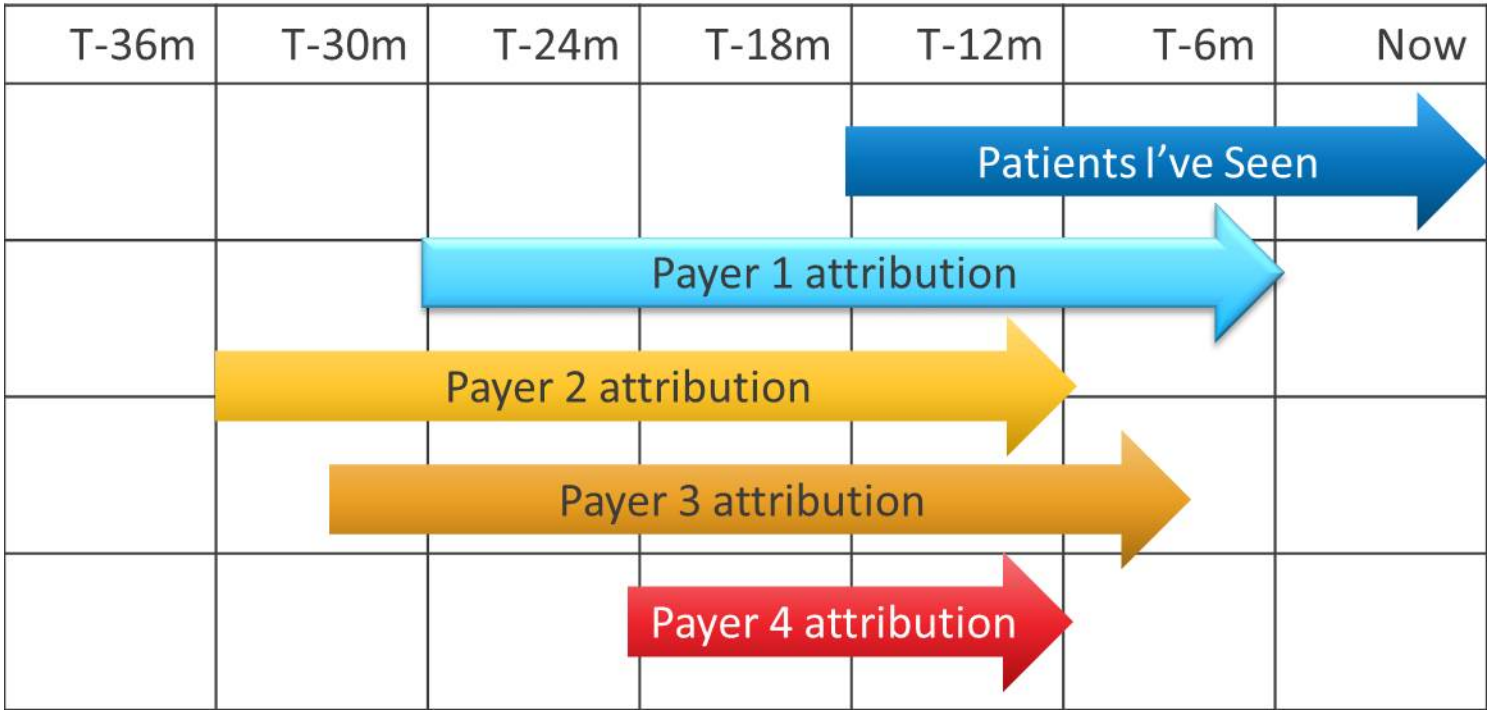

www.StrategicHIE.org

# Pay for Value: Trusted 3rd Party



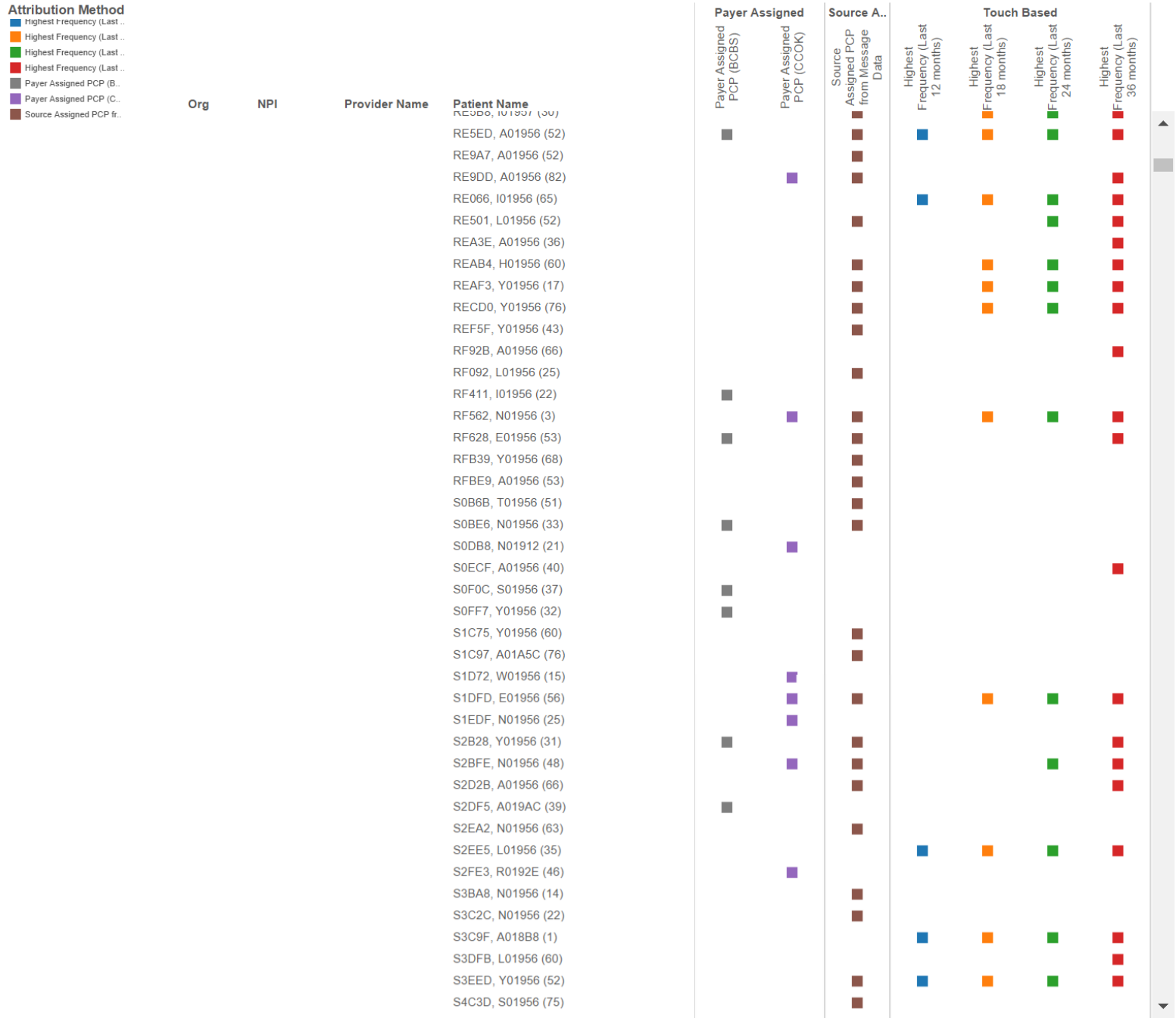
# Who are my patients?

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



Undo Redo Revert Refresh Pause

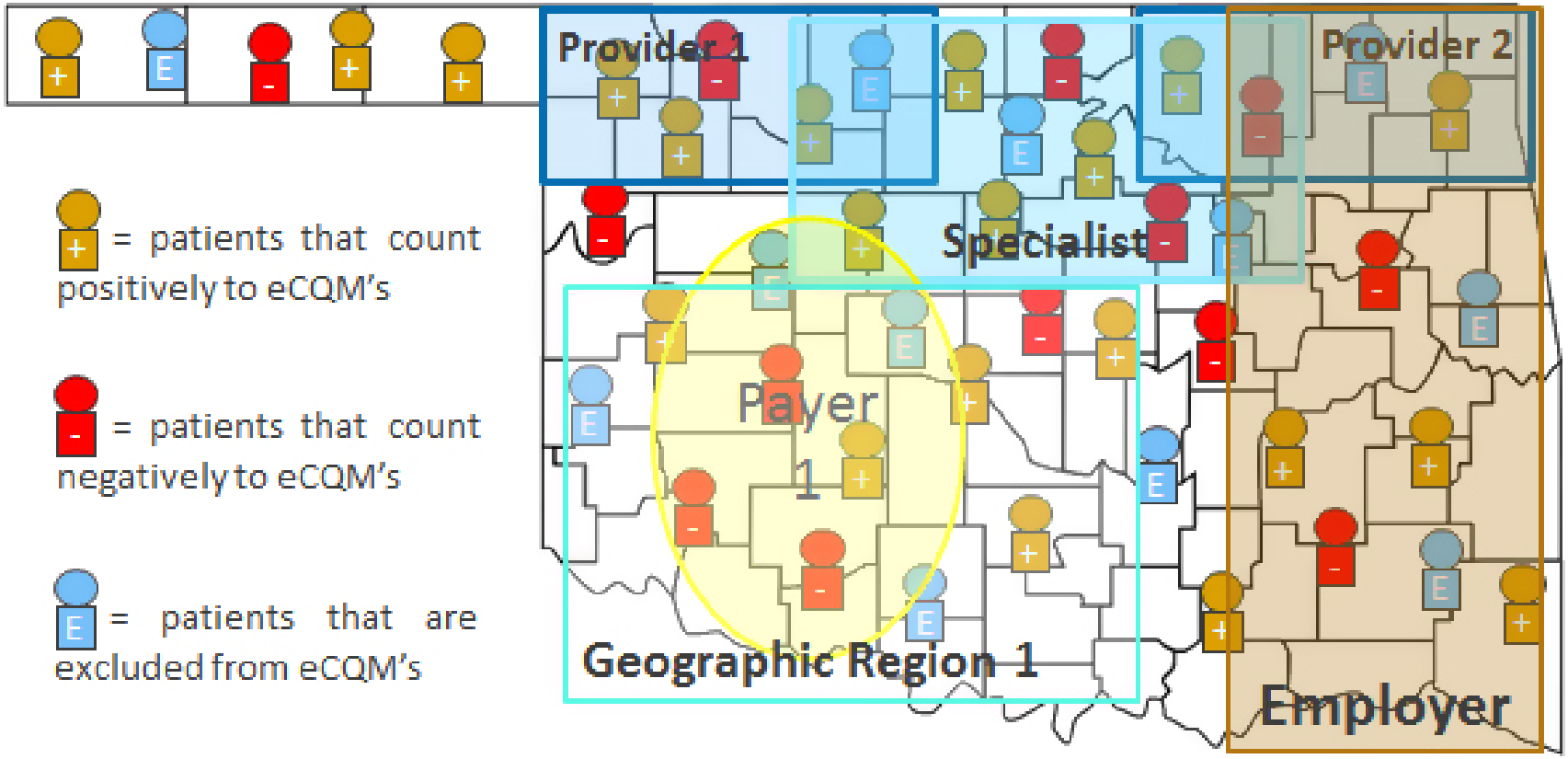
Active Panel Monitoring Dash | ADT Alerting Dash | Attribution Counts by Org | Attribution Counts by Sub Unit | Attribution Counts by Provider | Attributed Patients by Provider | Active Panel Monitoring | ADT Alerting



# Patient-centric measurement

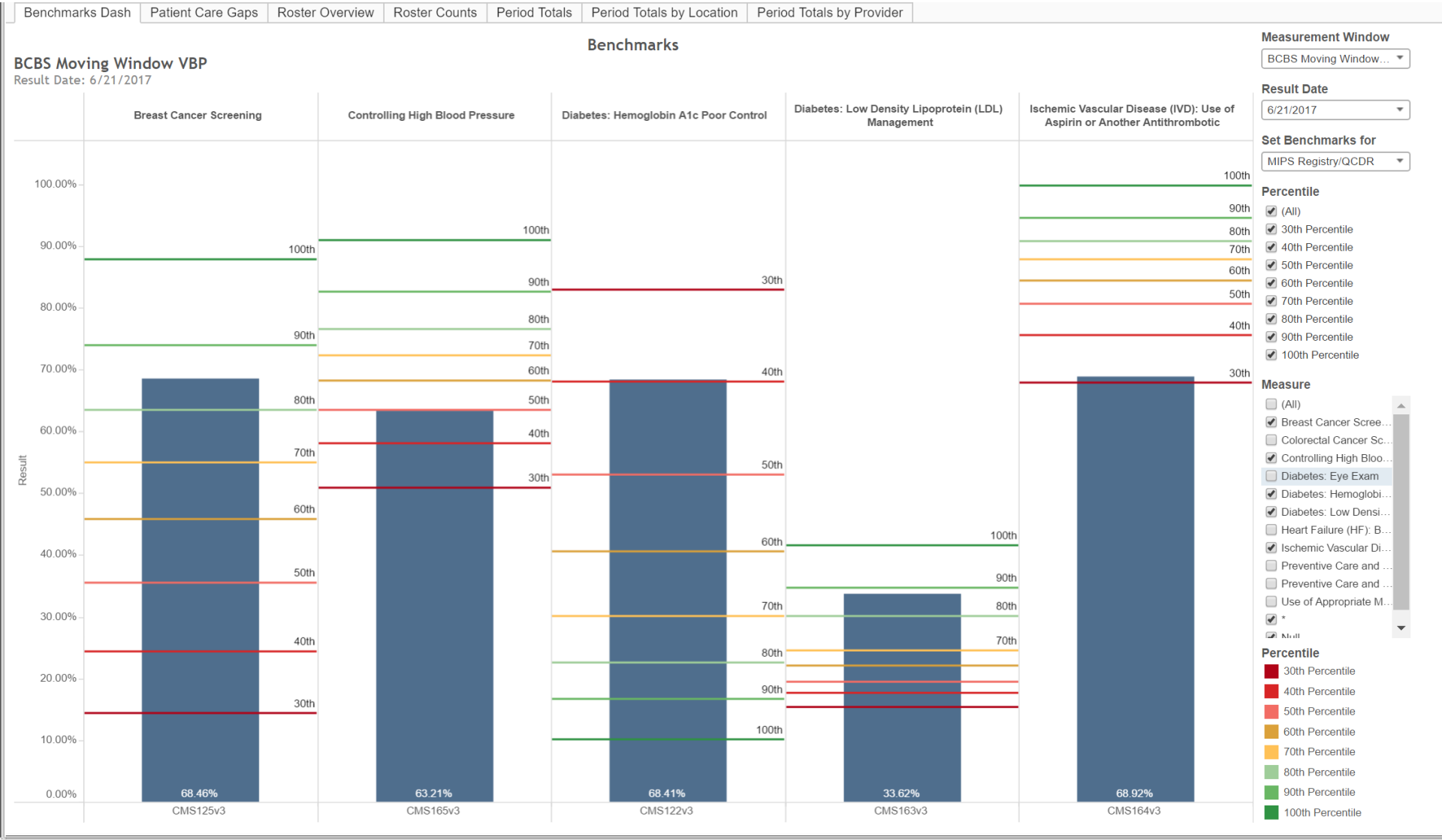
*Measure once, reuse many times for many perspectives . . .*

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

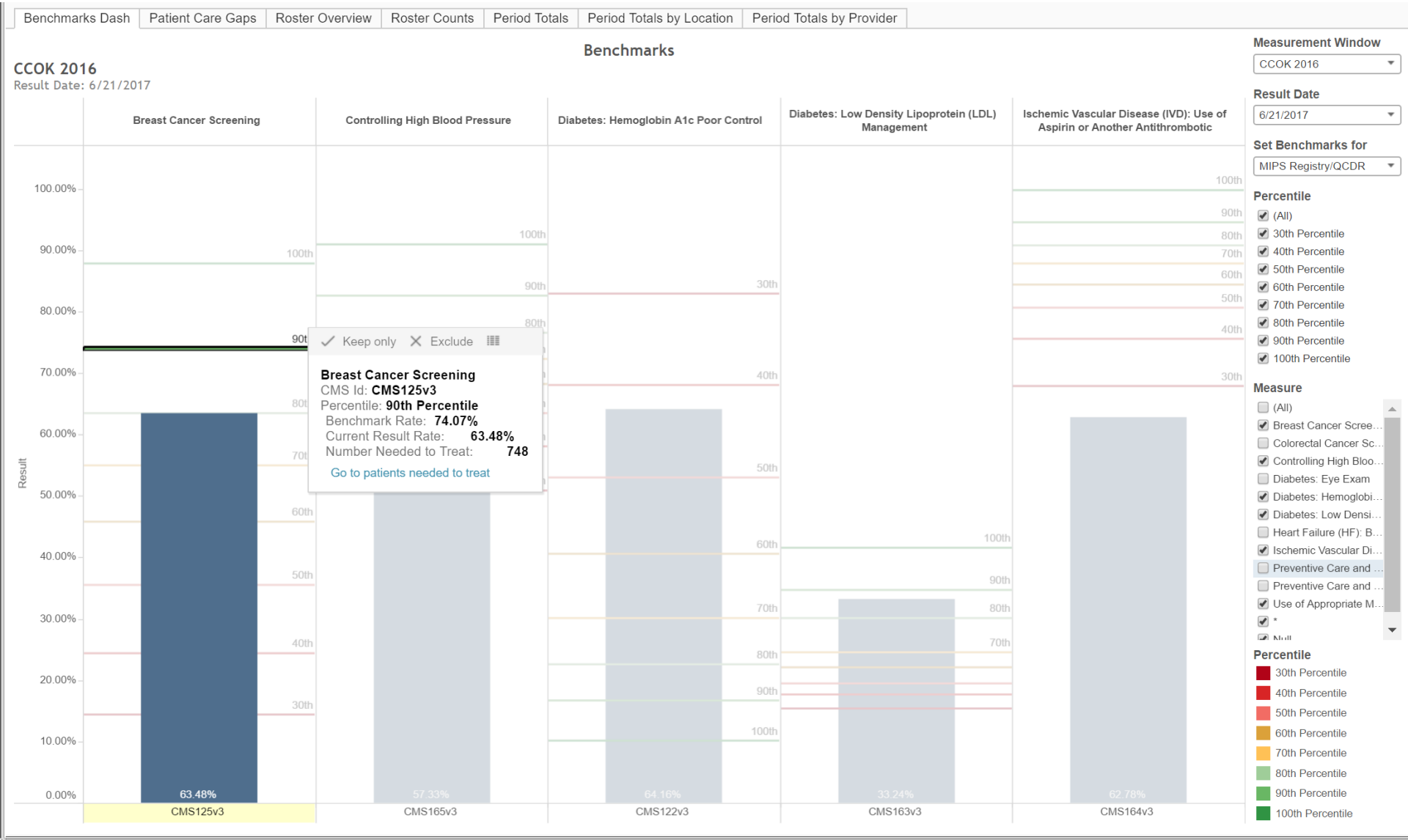



eCQM's calculated in real time based on changes in a patients cross-community data by placing a box around any portion of a population.

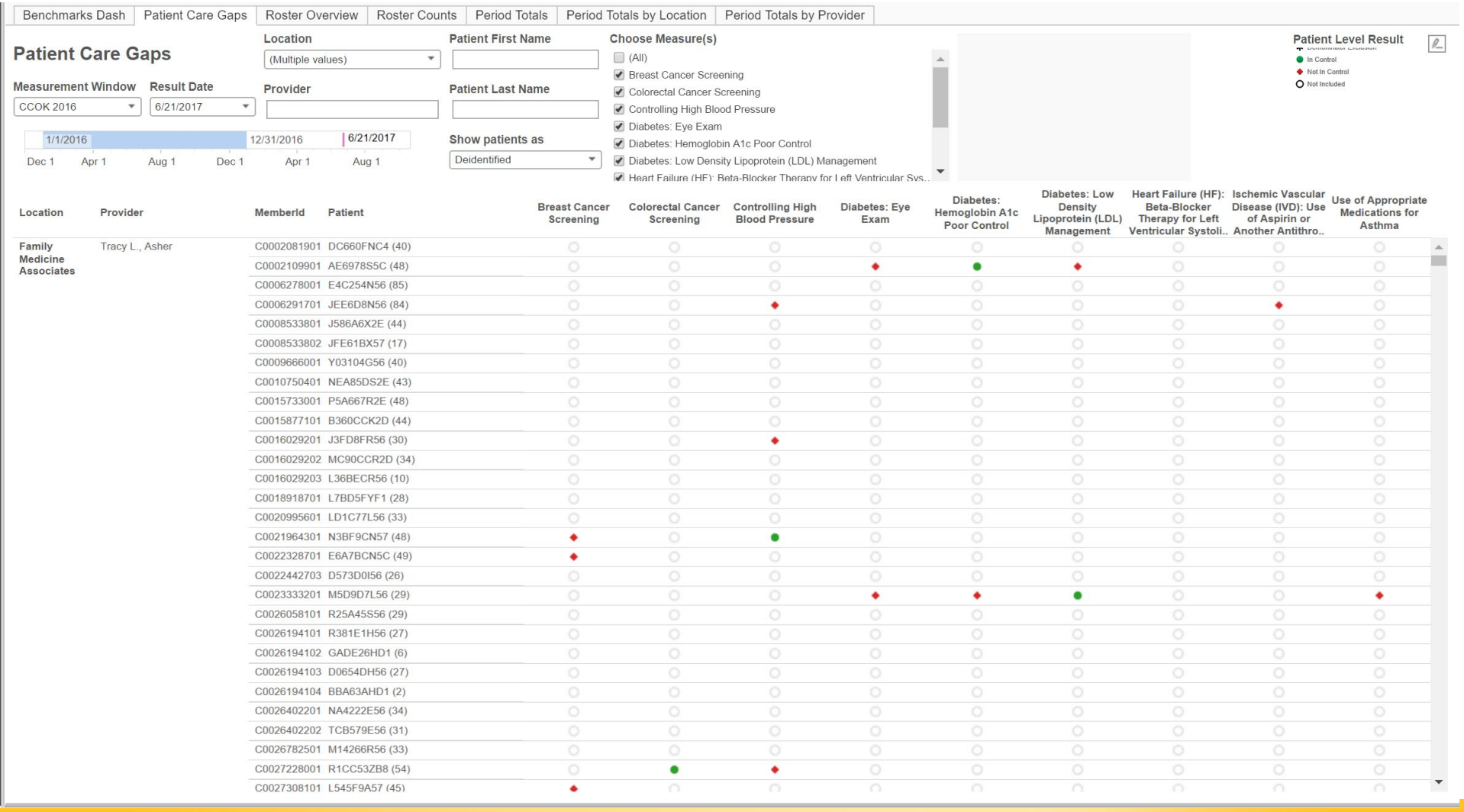
# MIPS View of Quality Measures



# Actionable: Number needed to treat



# Care Gap Closure = Better Performance



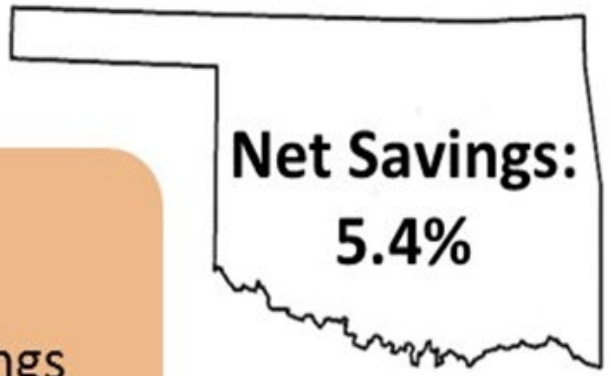
# Predicting Performance focuses effort

# 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?

# Oklahoma Results

Comprehensive Primary Care




**$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**

## Overall Quality Performance

**92% of practices** successfully reported eCQMs
**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

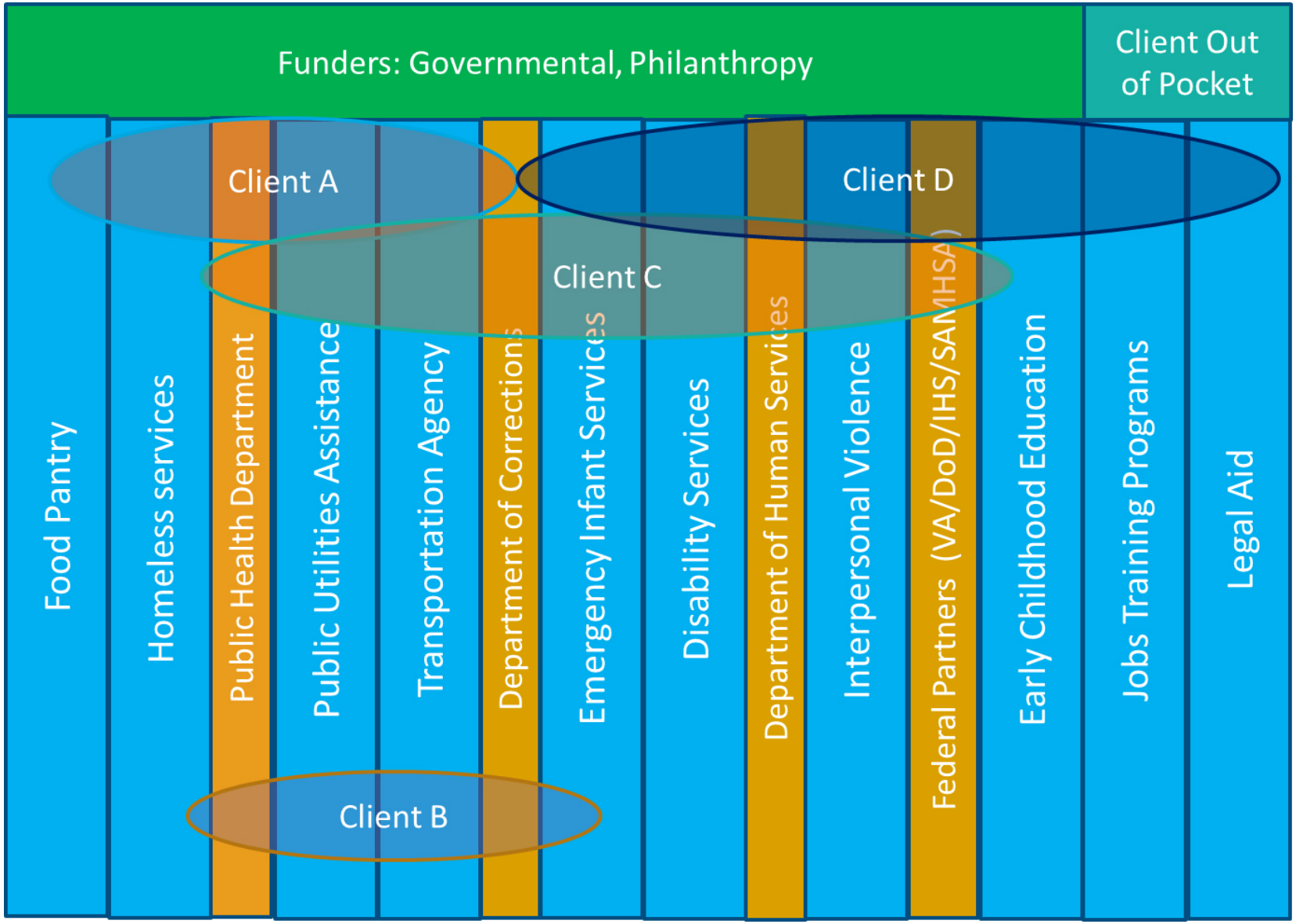
- Patients receiving an online consult had a significant reduction in PMPM cost of care when compared with themselves as historical controls:
  - » *$140.53 Pre Consult vs. $78.16 Post Consult*
  - » *Net savings of **$62.37, p=0.021***
- Compared with patients who received a referral but NOT a consult:

| 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

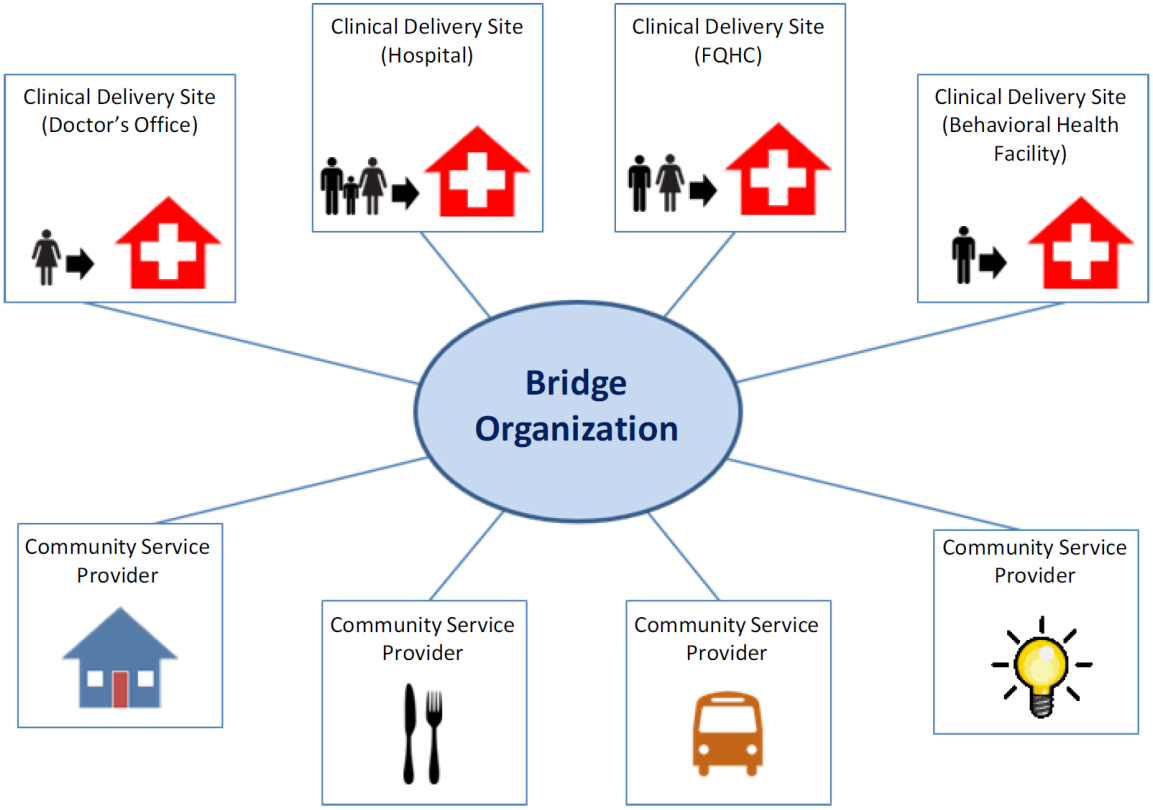



Figure 3. AHC Model Structure[17]

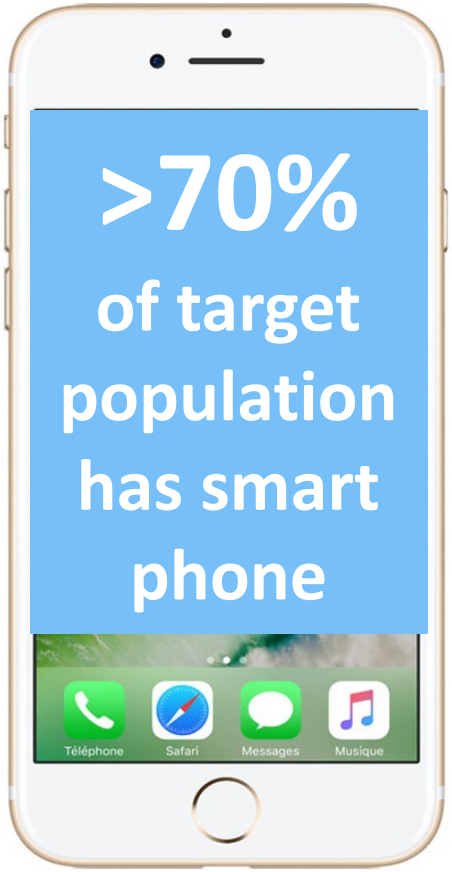
# AHC: Prevalence of Smart Phones

## Who owns cellphones and smartphones

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

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

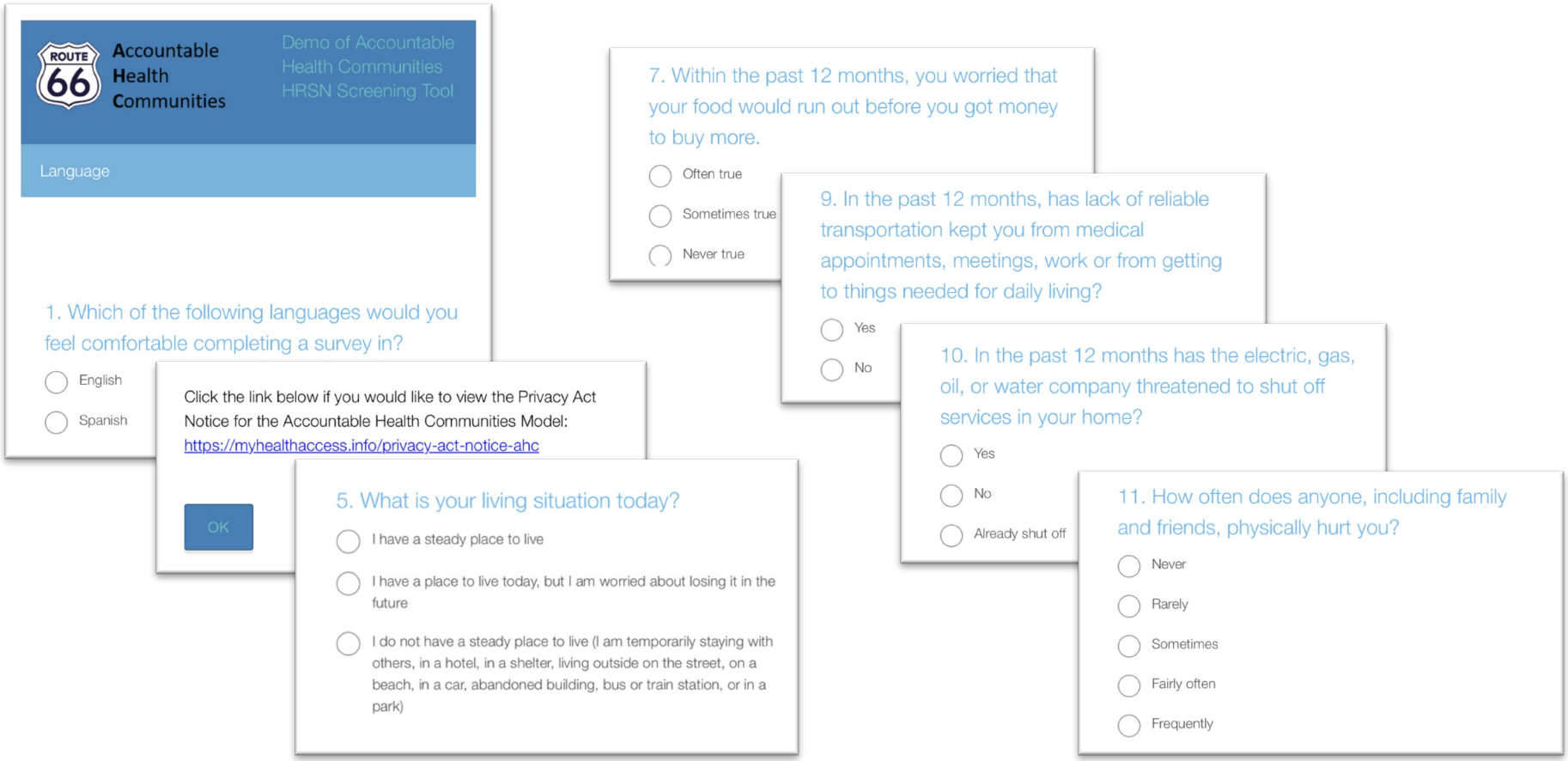
| | Any cellphone | Smartphone | Cellphone, |
|---|---|---|---|
| Total | 95% | 77% | |
| Men | 95% | 80% | |
| Women | 94% | 75% | |
| Ages 18-29 | 100% | 94% | |
| 30-49 | 98% | 89% | |
| 50-64 | 94% | 73% | |
| 65+ | 85% | 46% | |
| White | 94% | 77% | |
| Black | 98% | 75% | |
| Hispanic | 97% | 77% | |




| | Any cellphone | Smartphone | Cellphone, but not smartphone |
|---|---|---|---|
| duate | 90% | 57% | 33% |
| | 92% | 69% | 24% |
| | 96% | 80% | 16% |
| | 97% | 91% | 6% |
| | 92% | 67% | 25% |
| | 98% | 82% | 15% |
| | 98% | 83% | 15% |
| | 98% | 93% | 5% |
| | 96% | 83% | 13% |
| | 94% | 78% | 16% |
| | 91% | 65% | 26% |

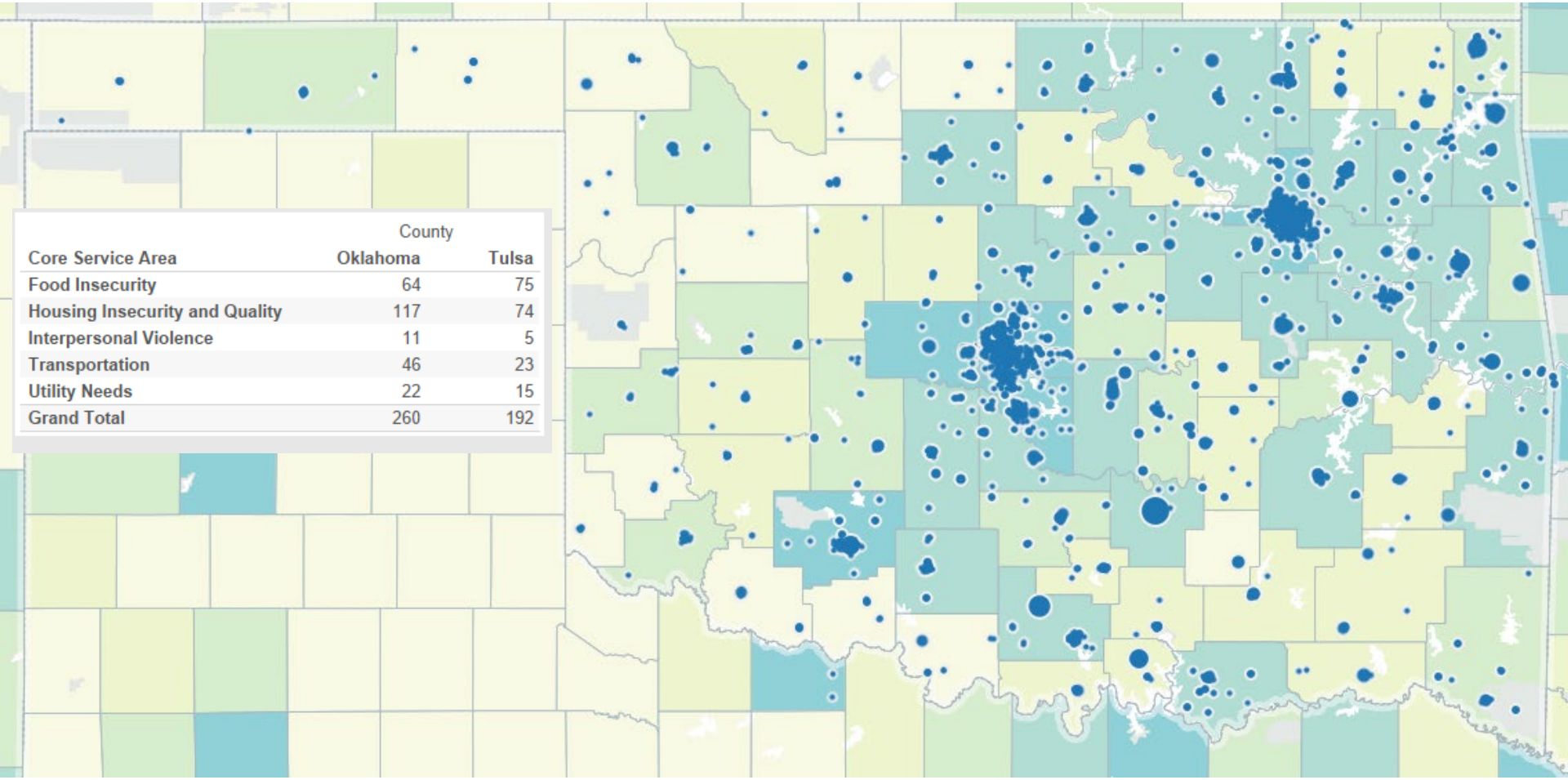
3-10, 2018.

# Route 66 AHC: Screening Approach



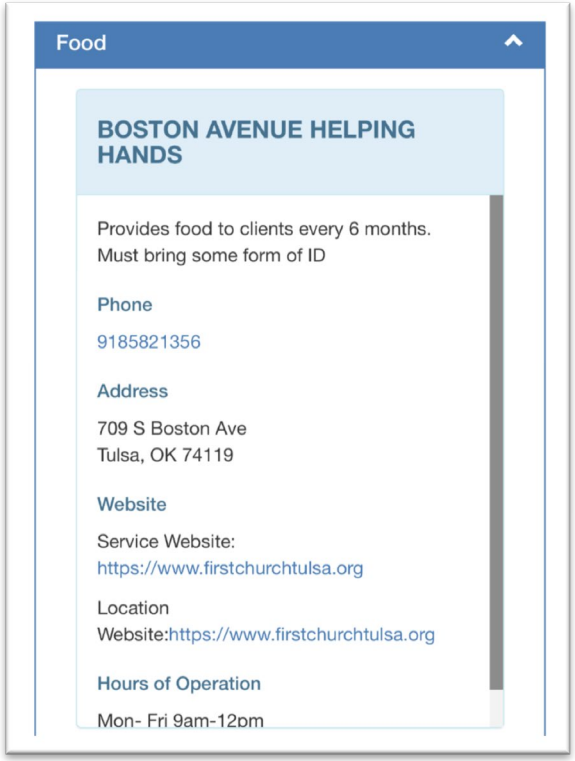
# Route 66 AHC Social Services Resource Directory

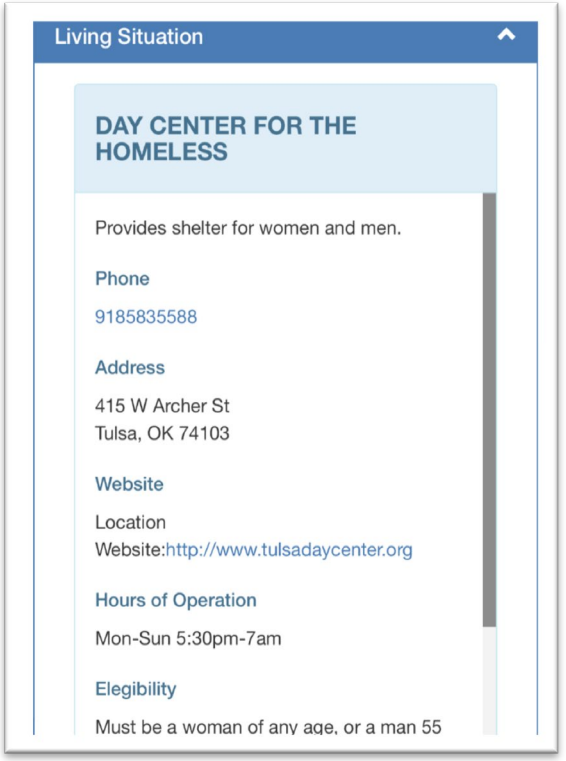
## 4,857 Resources in CRS Database, All 77 Counties in OK Covered by CRS Database



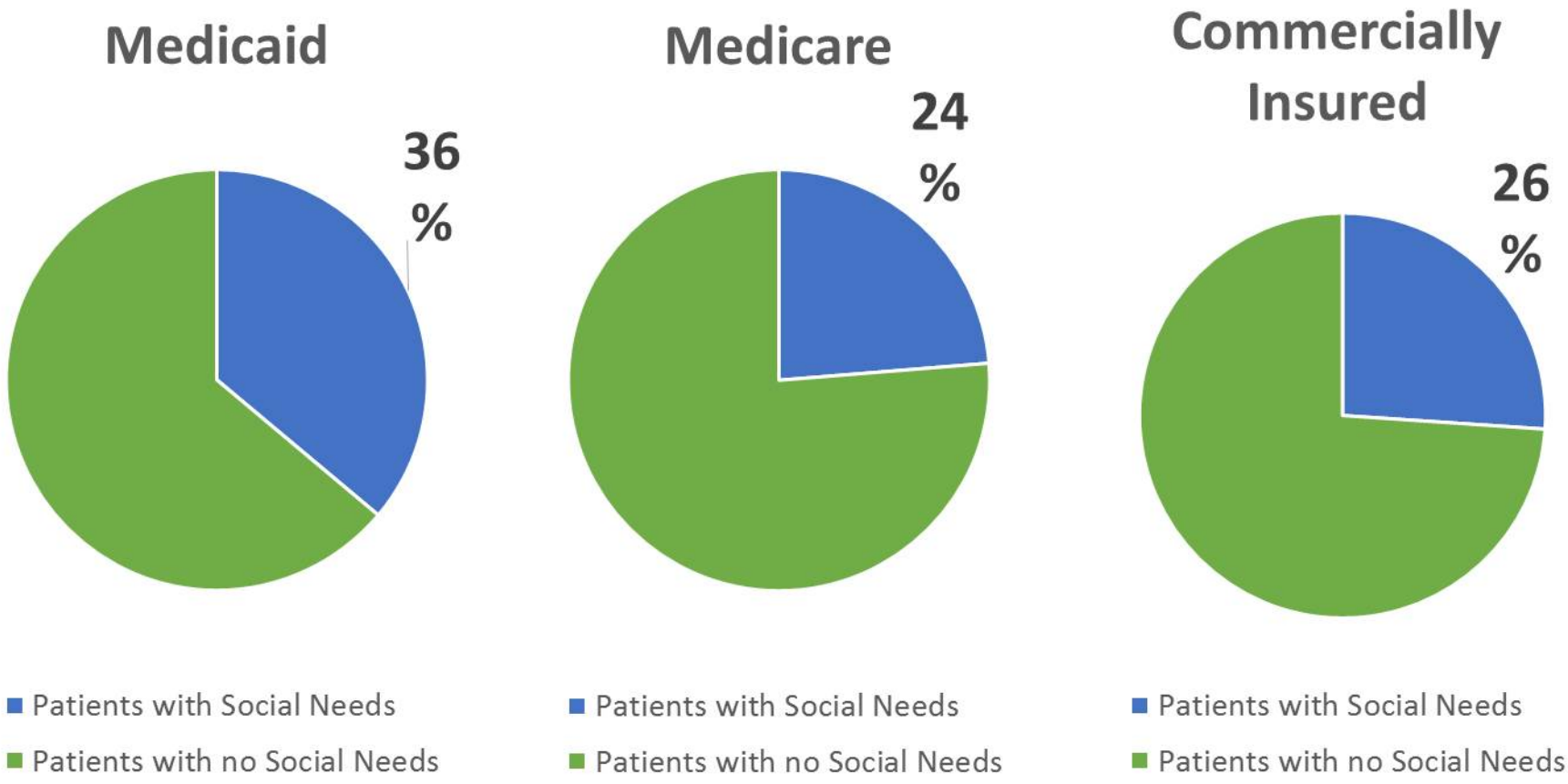
| | County | |
|---|---|---|
| Core Service Area | Oklahoma | Tulsa |
| Food Insecurity | 64 | 75 |
| Housing Insecurity and Quality | 117 | 74 |
| Interpersonal Violence | 11 | 5 |
| Transportation | 46 | 23 |
| Utility Needs | 22 | 15 |
| Grand Total | 260 | 192 |

# Immediate response with tailored, local services “prescription”



# Route 66 AHC: Early Social Needs Screening Results



# 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.

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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

# 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

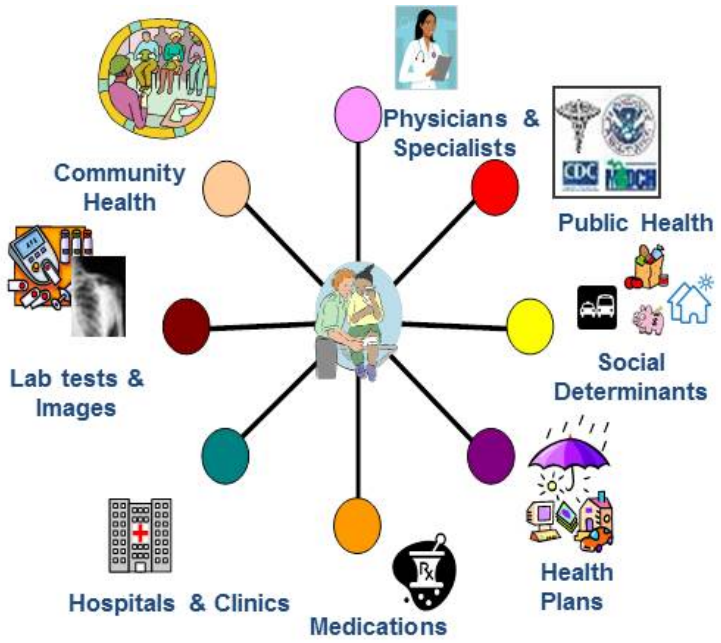
- ***Promote payment models that reward improved quality, care experience, health equity and lower cost:***
  - Objective: eCQM's and health equity quality measures to payers' value-based payment scorecards
  - Desired outcome: achieve multi-payer quality measure alignment, health equity, and reduced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



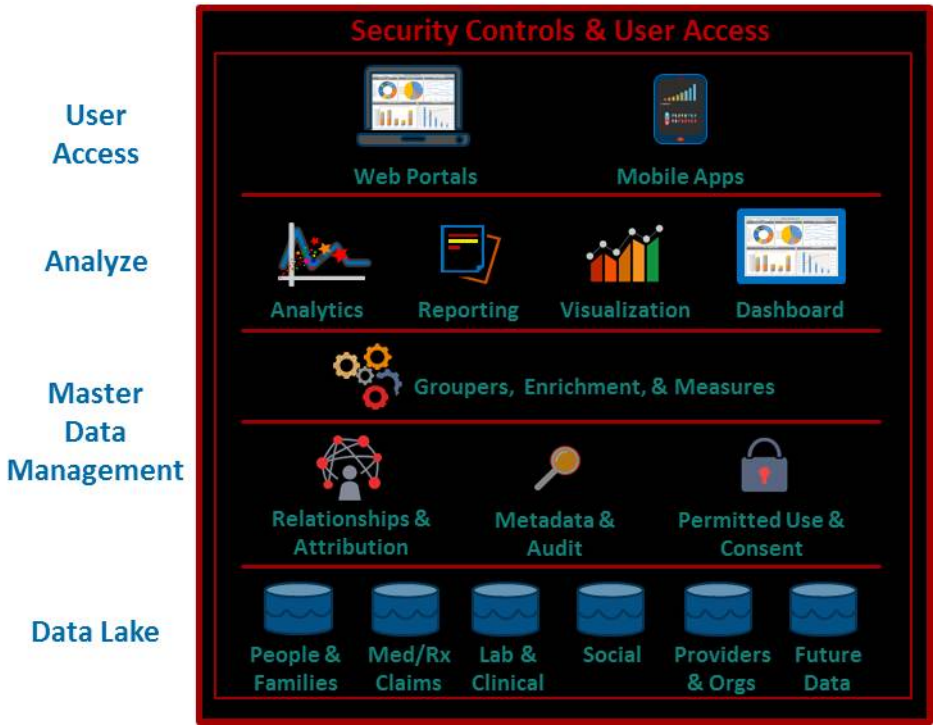

Adapted from MiHIN Shared Services

**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 eCQMs 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

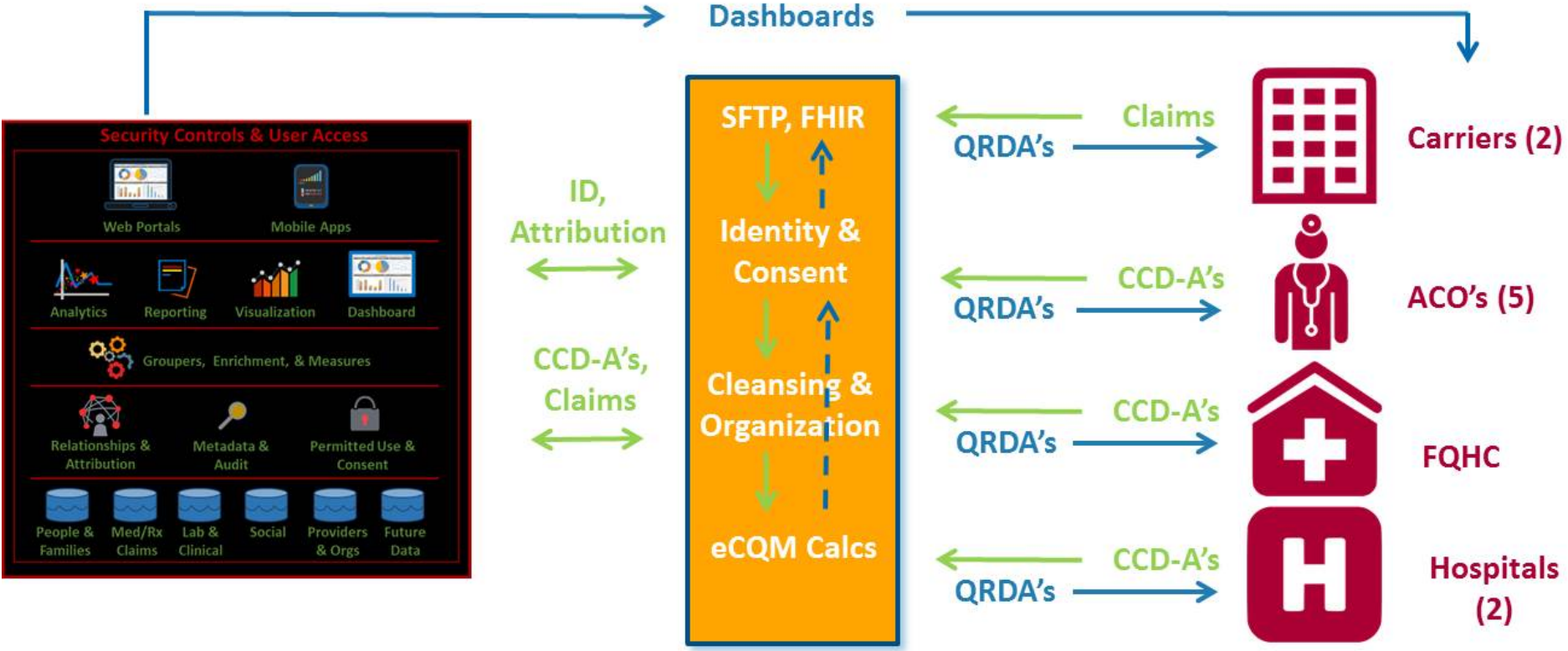
Care Continuum and Consent Map (CCCM) implemented via Master Data Management (MDM – technical mechanism)

# Moving from Concept to Execution

**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

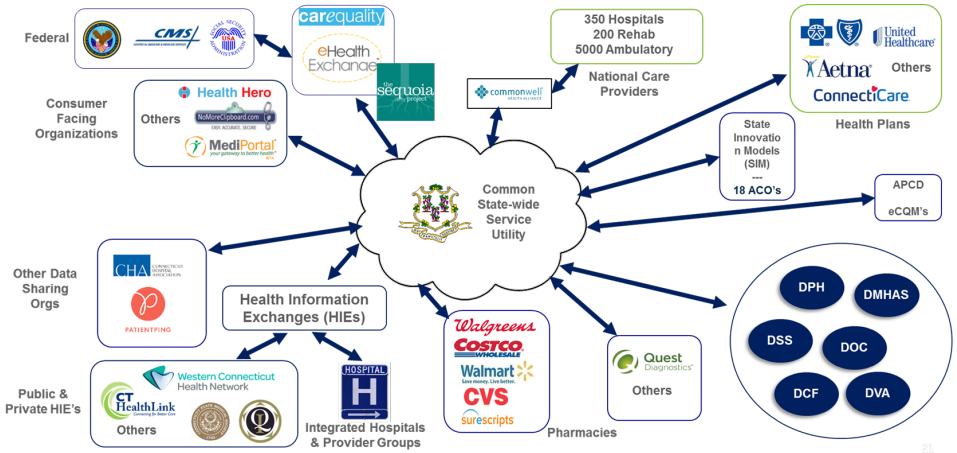
# CDAS Prototype



# Scaling Post-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?



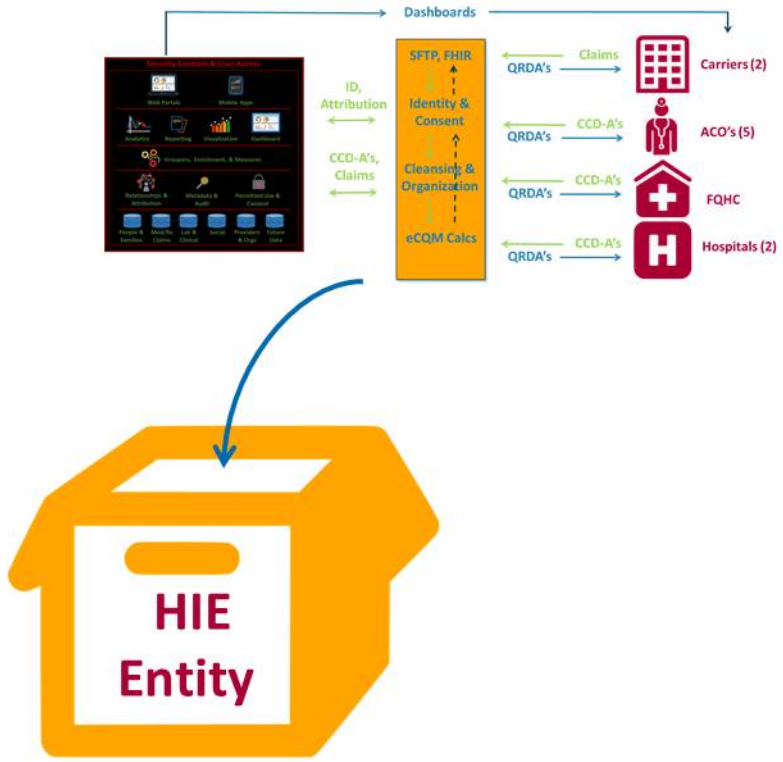

Adapted from MiHIN Shared Services

***Speed is of the Essence!***

# "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



# HIT Status

## 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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