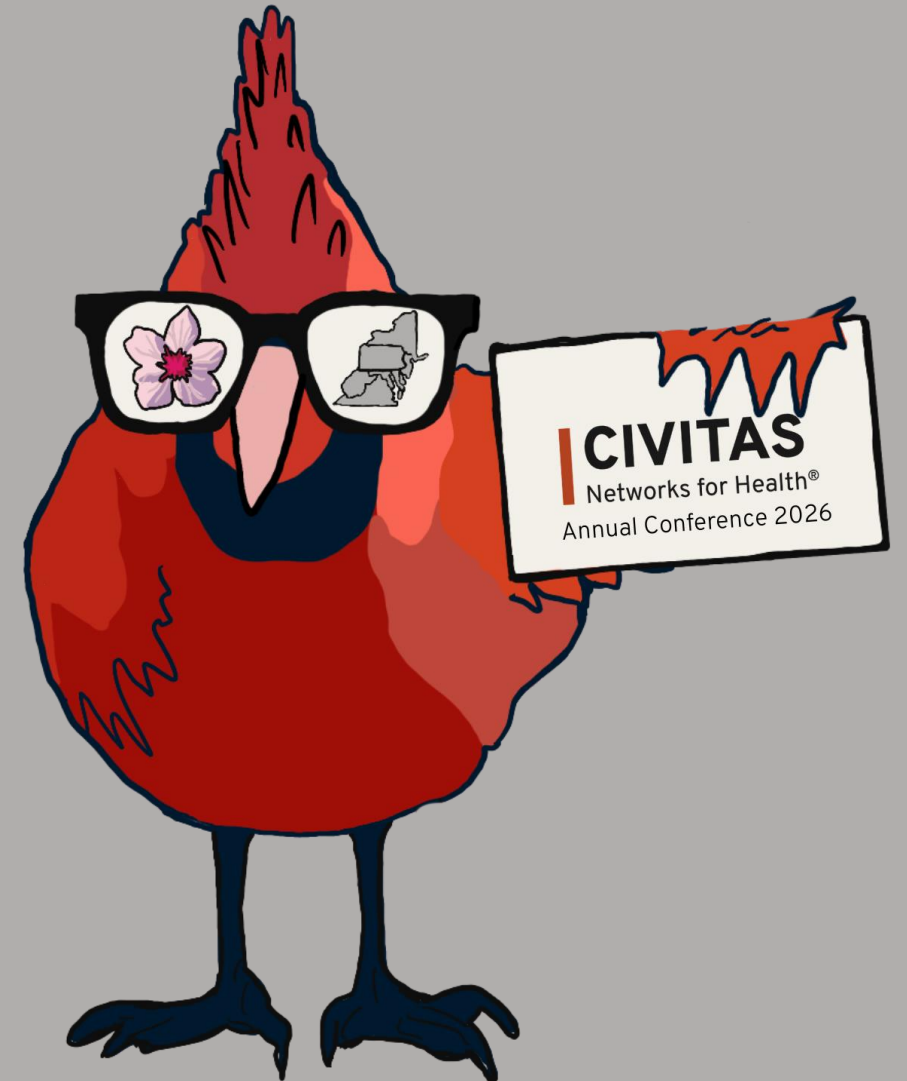


From Data to Impact: Using APCD Analytics to Shape Policy and Improve Population Health

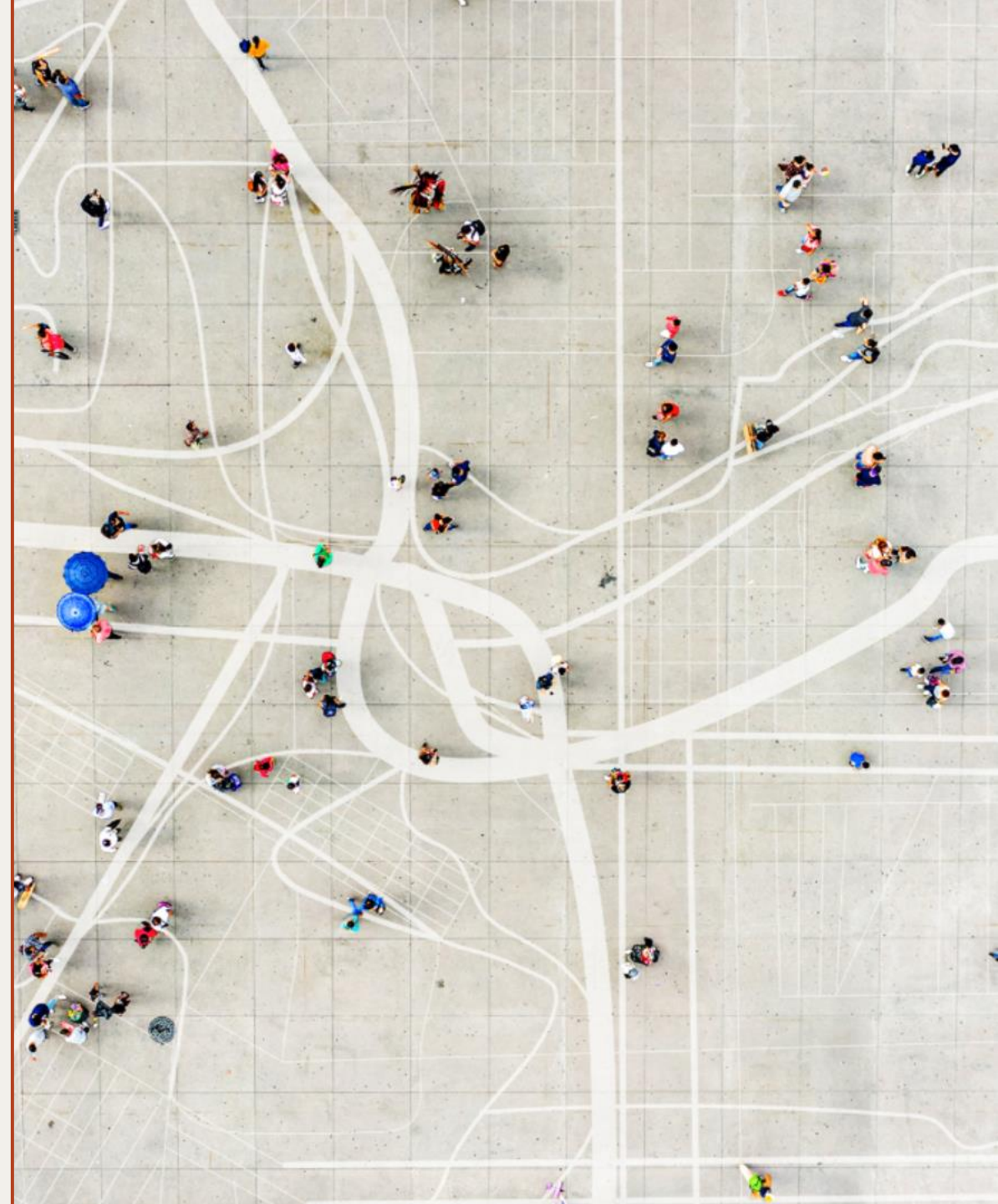
Civitas 2026 Annual Conference: Virtual Preconference Session

Sponsored by:  **JP**
INTERACTIVE



Housekeeping Reminders

- This is a webinar where all participants are automatically muted and your video is not displayed.
- If you would like to ask a question, please use the Q&A function on the right-side taskbar.
- Please note that AI notetakers are not permitted and will be removed.
- This webinar is being recorded, and the recording will be shared after today's event.
- For questions following the webinar, please reach out to contact@civitasforhealth.org.



Agenda

- Welcome
 - Demri Henderson, Grants and Programs Manager, Civitas
- Opening Remarks
 - Nathan Elliott, Director of Professional Services, J2 Interactive
- Today's Virtual Preconference Presentations
 - Longitudinal Claims Data as a Research Infrastructure
 - Martha Meyer, Training & Data Enhancements Manager, Center for Improving Value in Health Care
 - Virginia's RHIC–APCD/HDU Partnership in Action
 - Beth Bortz, CEO, Virginia Center for Health Innovation (VCHI)
 - Kyle Russell, CEO, Virginia Health Information
 - Leveraging Health Data Analytics to Inform Research, Policy, and Population Health
 - Matt Enright, Director of Data Analytics, Delaware Health Information Network
 - Krishna Vasireddy, Healthcare Research Analyst, Delaware Health Information Network
 - Gurpreet Kaur, Researcher, Delaware Health Information Network
- Discussion & Q&A

An aerial photograph of a public square or park. The ground is paved with light-colored tiles. A complex network of thick, white, curved lines is painted on the pavement, resembling a stylized map or a network diagram. These lines intersect and branch out across the square. Numerous people are scattered throughout the square, some walking along the white lines, others standing in groups. The people are wearing various colorful clothing, including blue, red, green, and yellow. The overall scene suggests a vibrant, interconnected community space.

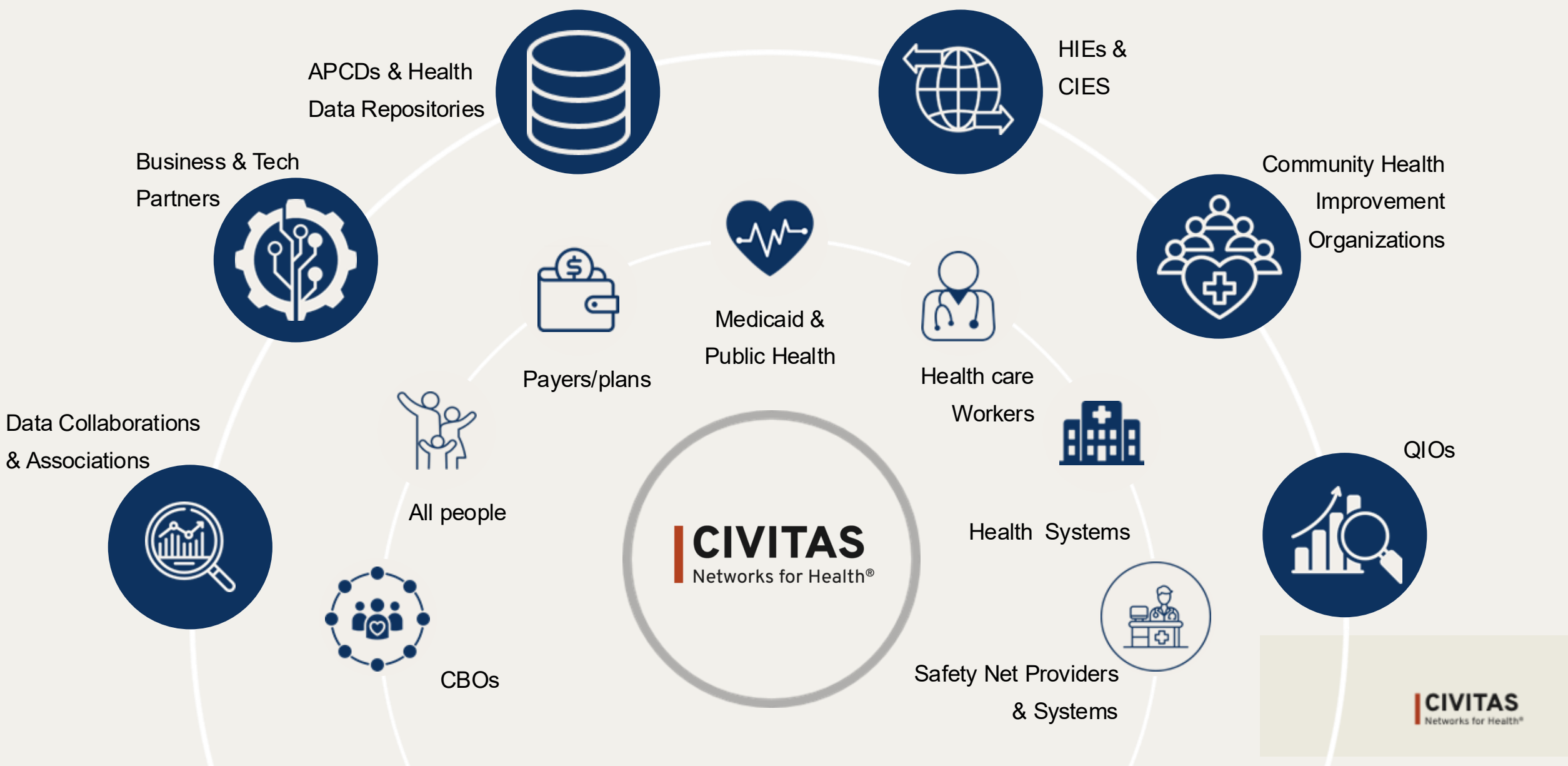
About Civitas Networks for Health®

Who we are, who we serve, and about what we do

Who We Are

- Civitas members include a wide range of organizations:
 - Health Information Exchanges (HIEs)
 - Health Data Utilities (HDUs)
 - Community Information Exchanges (CIEs)
 - Regional Health Improvement Collaboratives (RHICs)
 - All-Payer Claims Databases (APCDs)
 - Quality Improvement Organizations (QIOs)
 - Strategic Business and Technology Partners
 - Affiliated Associations
- We work together at the local, regional, state, and national levels
- Together, we invest in data-driven multistakeholder collaboration to enhance health, addressing cost, equity, quality, and safety

Who We Serve



Expert Convenors

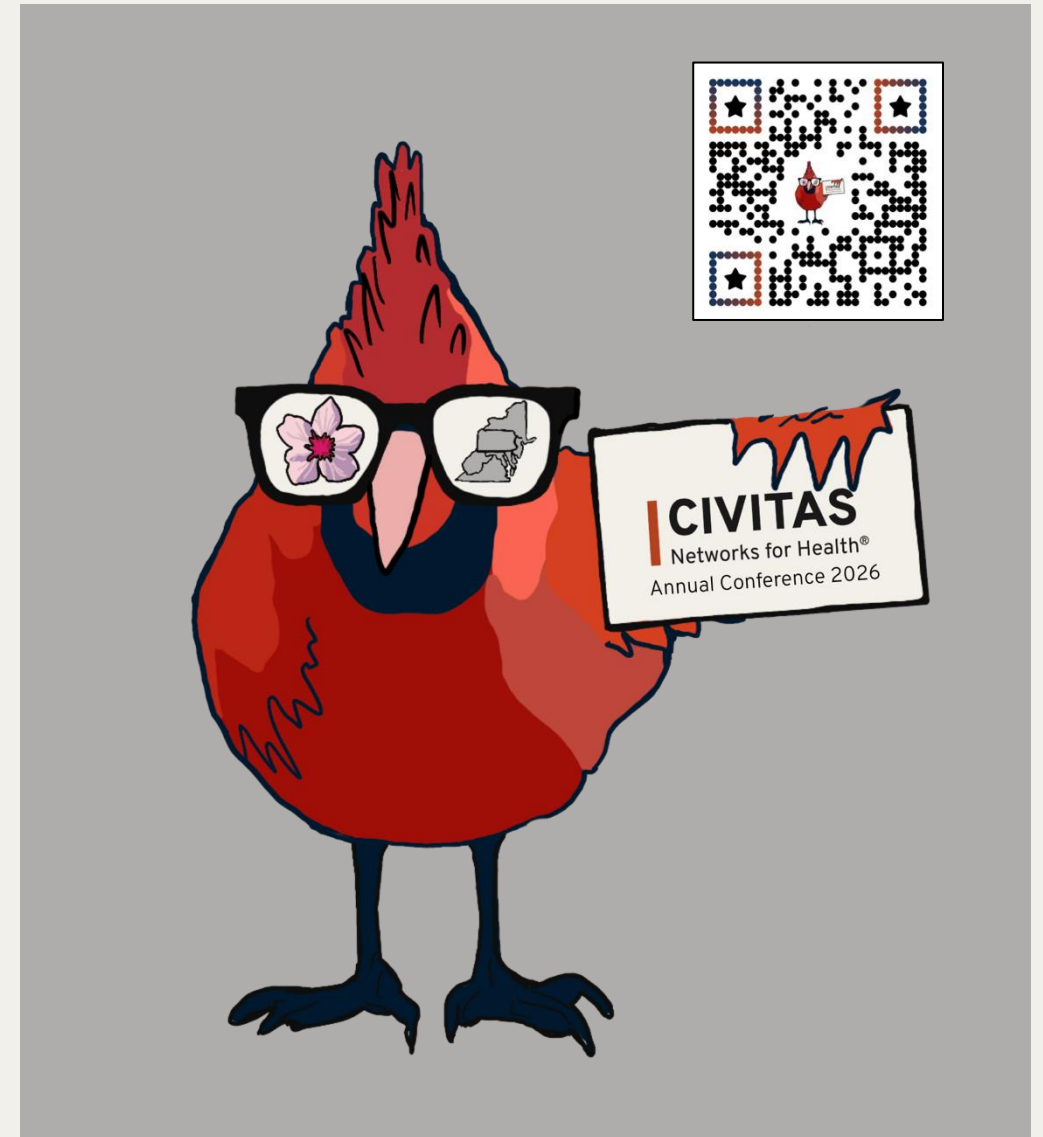
- Civitas provides a unique platform that connects collaborators working on health improvement across the country
- We believe that local communities should lead and influence national progress on health
- We offer forums for shared learning, education, networking, and advocacy, and have proven our strength at helping our members in the ever-changing health landscape



Join Us at the Civitas 2026 Annual Conference!

Join 750+ leaders from across the health data and improvement ecosystem. Hosted in collaboration with our Mid-Atlantic Host Committee, just minutes from Washington, D.C. in Arlington, VA.

- [Registration is open](#) – secure your spot today!
- Plan early and save with [discounted flight options](#).
 - *Please note that our room block is sold out! Visit our [conference hotel & travel page](#) to see other hotel options in the area.*
- [Get your Civitas merchandise](#) before the conference – 100% of proceeds go to Doorways for Women and Families Virginia.
- Interested in sponsoring? We still have a select few opportunities available for you to get in front of a national audience shaping interoperability, data exchange, and health transformation. Review the [Sponsorship Prospectus](#) and email contact@civitasforhealth.org if you're interested in learning more.



Register to Attend the Final Virtual Preconference Session (Open to the Public!)

Join us for the final virtual preconference session designed to deepen learning and spark meaningful discussion ahead of the Civitas Annual Conference. Register to attend:

- **September 16, 2-3:30 p.m. ET – Co-Designing Trusted CIEs: Privacy, Coordination, and Data Systems for Whole Person Health**

Thank you to our returning virtual preconference sponsor, J2 Interactive!



Conference Keynotes: Don't Miss Them!

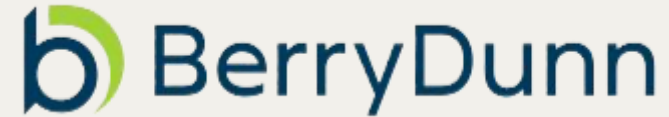
- **Tuesday, September 22 –**
 - *Bridging Federal and State Policy with Local Implementation for Transformation*
 - Dr. Ayanna Bennett (DC Department of Health)
 - Dr. B. Cameron Webb (Virginia Department of Health)
 - Dr. Joseph Kanter (Association for State and Territorial Health Officials; Panel Moderator)
 - *Driving the Next Wave of Value-Based Care Through CMMI*
 - Abe Sutton (CMMI; CMS)
 - Theresa Dreyer (Health Care Transformation Task Force)
- **Wednesday, September 23 –**
 - *Advancing the Future of Rural Health*
 - Carrie Cochran-McClain (National Rural Health Association)
 - *Real World Considerations for Deploying AI in High-Stakes Environments*
 - Dr. S. Craig Watkins (IC² Institute, University of Texas at Austin)
- **Thursday, September 24 –**
 - *Putting Patients at the Heart of Health Care and Health Technology*
 - Anthony Polizzi (CMS)
 - Regina Holliday (Walking Gallery & the Medical Advocacy Mural Project)
 - Sarah DeSilvey (Gravity Project)
 - *Public Policy Briefing* fireside chat
 - Dr. Tom Keane (National Coordinator for Health IT)
 - Craig Behm (CRISP)



Thank You to Our Civitas 2026 Annual Conference Upgrade Sponsors



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Thank You to Our Civitas 2026 Host Committee



J2 & Data Quality: NCQA DAV Spotlight

*Presented by:
Nathan Elliott, Director of Professional
Services, J2 Interactive*



About J2

Since 2007
Building and
advancing HIEs

2,000+
Customer
projects

Facilitating key projects:
NCQA DAV, TEFCA
compliance, RHTP

100M+
Patient lives
covered

Supporting clean data,
strategy, and technical
integrations



Data Quality: The Ongoing Quest

- HIEs receive data from **disparate EMRs** with **nuanced documentation and workflows**
- Some HIEs require strict data quality adherence **prior to onboarding**; others need to onboard quickly
- Tension between whether it is **up to provider organizations or the HIE** to fix data quality issues
- **Data quality issues** affect HIEs' ability to share useful data
- Data quality issues threaten **making the most of analytics and AI**





NCQA Data Aggregator Validation

A program for HIEs and data aggregators to demonstrate data quality and save payers the need to conduct their own Primary Source Verification (PSV) for that data

J2 has **multiple HIE customers** that have successfully completed NCQA DAV since its inception. We continue to support with resourcing:

- **Project Management** (VAT, DSL, Case Submissions, etc.)
- **Specification Conformance Engineering** (CCDA & FHIR)
- **Primary Source Verification Outreach & Documentation**
- **Subject Matter Experts** as “Guide by the Side”

NCQA Data Aggregator Validation

In support of our customers needs, J2 has developed tools to streamline specific DAV processes

- **Case selection** based on NCQA selection criteria
- Incorporate feedback from **years of “Office Hours” Q&A and clarification** with NCQA auditors
- **Primary source process improvements** to speed up time to submission



The J2 Message Analysis Reporting System

J2 MARS

Summarization of Episode Note | OID: 2.16.840.1.113883.3.464.1005.1

CDA VERSION
C-CDA 2.1 CCD - 100%

Test TransformTester
DOB: 1926-05-21 - Male

72

Patient Summary

Conformance Report

NCQA PSV

Compare w/ SDA

Batch Runs

CDA SECTIONS

PROBLEMS

ALLERGIES, ADVER...

SOCIAL HISTORY

MEDICATIONS

IMMUNIZATIONS

VITAL SIGNS

PROCEDURES

ENCOUNTERS

RESULTS

Patient Demographics

Full Name
Test TransformTester

Date of Birth
1926-05-21

Gender
Male

Phone
+1-(111) 222-3333

Address
111 N TEST STREET, #419, LOS ANGELES, CA, 90088

Patient IDs

Patient ID 1: 6a188f3ee9239422e7f1fc4 / Manifest Medex Community and Affinity Domain

Patient ID 2: 11111111111 / MYPA_CA_MYPA_G

Patient ID 3: 11111111111 / MYPA_CA_MYPA_G

Document Details

Header-level metadata parsed from ClinicalDocument.

CLASSIFICATION

CDA Profile
C-CDA V2 / R2.x

Document Kind
Continuity of Care Document

Title
Clinical Summary Document

LOINC Code
34133-9

Confidentiality
No information

Language
en-US

Realm
US

SOURCE & LOCATION

Source
Manifest Medex Community and Affinity Domain

Source Role
Custodian

Source Phone
Unknown

Location
Manifest Medex Community and Affinity Domain

Location Address
Unknown

TIMING & SYSTEM

Created
2026-06-26 17:36:07

Service Period
2026-03-27 16:46:47 - 2026-04-27 18:15:17

Author
Manifest Medex Community and Affinity Domain

Legal Authenticator
Unknown

Product Name / Version
InterSystems HealthShare

Vendor / System
InterSystems

Health System / Org
Manifest Medex Community and Affinity Domain

Internal System IDs
2.16.840.1.113883.3.86.3, 2.16.840.1.113883.3.7732.100, 2.16.840.1.113883.3.7732.100 / MXCOMMUNITY

Vendor
Unknown

System
InterSystems HealthShare

Version
Unknown

Document ID
2.16.840.1.113883.3.464.1005.1 / 11111111111

DOCUMENT TEMPLATES

US Realm Header

US Realm Header (2015-08-01)

Continuity of Care Document

Continuity of Care Document (2015-08-01)

Document Conformance

72

This document scored 72/100 against the HL7 C-CDA 2.1 Schematron and Companion Guide rules.
Check the Conformance Report tab for details.

Available Sections

Problems

Allergies, Adverse Reactions, Alerts

Social History

Medications

Immunizations

Vital Signs

Procedures

Encounters

Results

J2 MARS

 **J2 MARS**
Summarization of Episode Note | OID: 5f593504-442c-48dd-90e1-2a35f5b8e12c

CDA VERSION
C-CDA 2.1 CCD · 100%



Ms. Isabelle Sandoval
DOB: 2001-09-10 · Female **72.25**

 Patient Summary

 **Conformance Report**

 NCQA PSV

 Compare w/ SDA

 Batch Runs

CDA SECTIONS

 ALLERGIES AND INT...

 MEDICATIONS

 PROBLEMS

 PROCEDURES

 RESULTS

 VITAL SIGNS

 IMMUNIZATIONS

 ENCOUNTERS

 SOCIAL HISTORY

 PLAN OF TREATMENT

 PAYERS

 CARE TEAM

Companion Guide Conformance Report

 Score details

 Text

 Save Report

 Print

Combined Score: 72.25 / 100

Schema Validation

 **Schema Validation**

Line 1173: Element '{urn:hl7-org:v3}text': This element is not expected. Expected is one of ({urn:hl7-org:v3}priorityCode, {urn:hl7-org:v3}repeatNumber, {urn:hl7-org:v3}languageCode, {urn:hl7-org:v3}value, {urn:hl7-org:v3}interpretationCode, {urn:hl7-org:v3}methodCode, {urn:hl7-org:v3}targetSiteCode, {urn:hl7-org:v3}subject, {urn:hl7-org:v3}specimen, {urn:hl7-org:v3}performer).

[Click to view in document](#)

CDA Implementation Guide Validation

 **Validation Profile**
C-CDA 2.1 CCD: full profile validation.

 **US Realm Header**
US Realm Header templateId found.

 **CONF-030**
administrativeGenderCode is present.

 **CONF-065**
All displayName have associated codes.

 **BP-066**

Found 4 codes missing displayName.

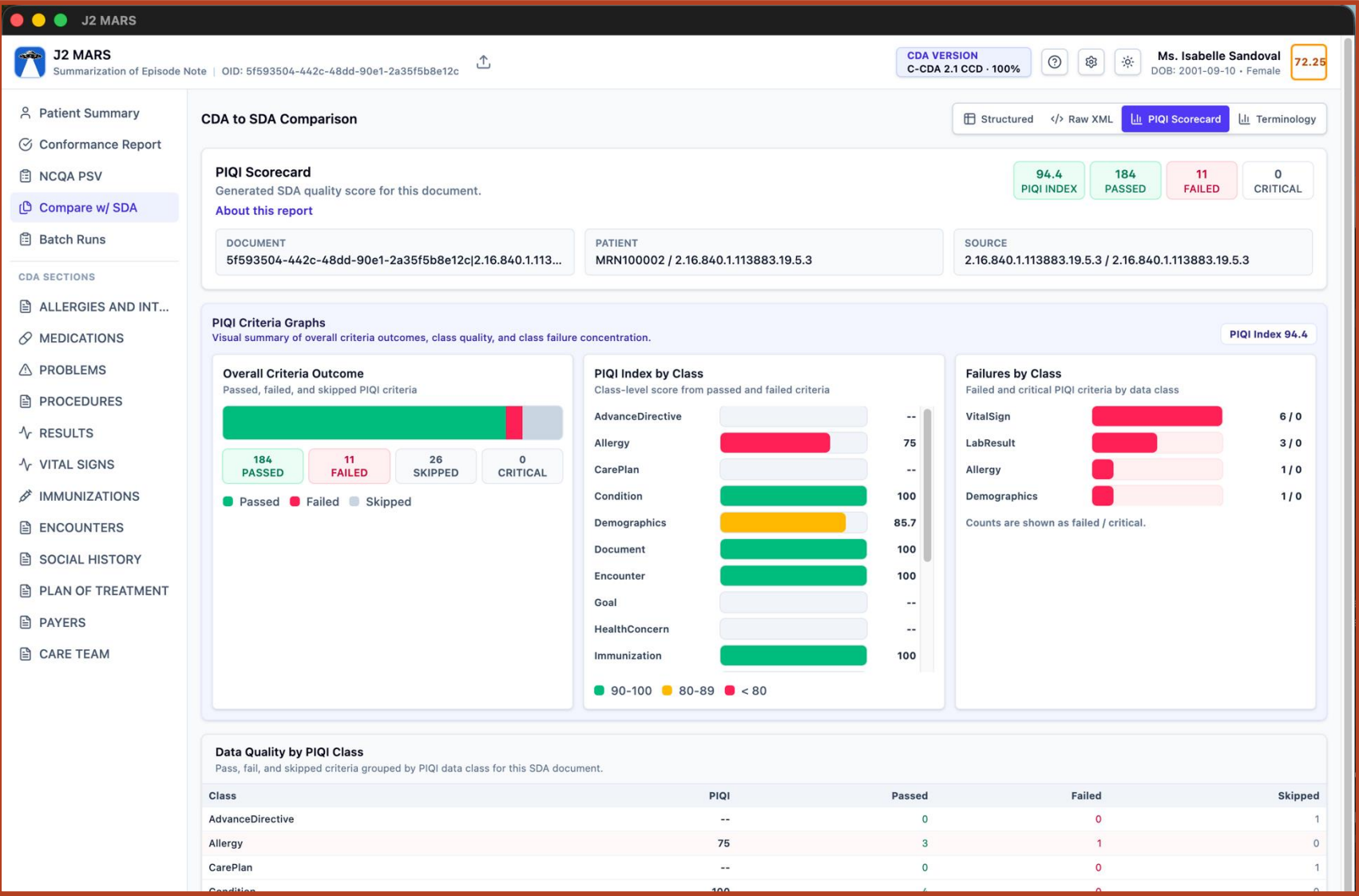
[Click to view in document](#)

 **CONF-092**
All Result Organizers contain Result Observations.

 **CONF-011**

No valid narrative text linking found. Entries should link to section text.

[Click to view in document](#)



J2 MARS

Summarization of Episode Note | OID: 5f593504-442c-48dd-90e1-2a35f5b8e12c

CDA VERSION

C-CDA 2.1 CCD - 100%

Ms. Isabelle Sandoval

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72.25

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CDA SECTIONS

ALLERGIES AND INT...

MEDICATIONS

PROBLEMS

PROCEDURES

RESULTS

VITAL SIGNS

IMMUNIZATIONS

ENCOUNTERS

SOCIAL HISTORY

PLAN OF TREATMENT

PAYERS

CARE TEAM

CDA to SDA Comparison

Structured

Raw XML

PIQI Scorecard

Terminology

70.3

78

33

2

TERMINOLOGY

PASSED

FAILED

CRITICAL

DOCUMENT

5f593504-442c-48dd-90e1-2a35f5b8e12c | 2.16.840.1.113...

PATIENT

MRN100002 / 2.16.840.1.113883.19.5.3

SOURCE

2.16.840.1.113883.19.5.3 / 2.16.840.1.113883.19.5.3

Terminology Scorecard

Generated SDA terminology conformance score for this document.

About this report

Terminology Conformance Graphs

Visual summary of SDA class scores, outcome mix, and value-set failure concentration.

Overall Index 70.3

Class Terminology Scores

Terminology Index by SDA class

AdvanceDirective	--
Allergy	75
Condition	0
Demographics	66.7
Encounter	0
Goal	--
Immunization	50
LabResult	65.3
MedicalDevice	--
Medication	--

90-100

80-89

< 80

Criteria Outcome Mix

Passed, failed, and skipped checks by class

AdvanceDirective	0/0/1
Allergy	3/1/0
Condition	0/4/1
Demographics	2/1/1
Encounter	0/4/0
Goal	0/0/1
Immunization	3/3/0
LabResult	32/17/2
MedicalDevice	0/0/1
Medication	0/0/3

Passed

Failed

Skipped

Value Set Failure Hotspots

Value sets contributing the most failures

Result Status	16
Medication Route	3
Problem Status	2
ProblemAct statusCode	2
Act Encounter Codes	2
HealthcareServiceLocation	2
Social History Type	2
Allergy Clinical Status	

Conformance by SDA Class

Expand a class to see the value set scores that make up its class score.

Expand all value sets

Class / Value Set	Terminology Score	Passed	Failed	Skipped
> AdvanceDirective (1 value sets)	--	0	0	1
> Allergy (4 value sets)	75	3	1	0
> Condition (3 value sets)	0	0	4	1
> Demographics (4 value sets)	66.7	2	1	1

NCQA PSV Patient Summary Report

PSV-focused CDA section summary with traceable structured entries.

Overall PSV Rec Score 69.3 ORANGE

Print

Patient Demographics

Full Name	Date of Birth	Gender	Phone	Patient Unique Identifier	Address
Mr. Victor Wheeler	1978-04-21	Male	503-555-9507	MRN100005 / 2.16.840.1.113883.19.5.3	7786 Massachusetts Avenue, Eugene, OR, 97401, US

Document Details

Document ID	CDA Profile	Document Kind	Title	LOINC Code	Source UID
e805be78-8570-4982-9b6f-7b146a9f0445	C-CDA V2 / R2.x	Continuity of Care Document	Continuity of Care Document	34133-9	Riverside Internal Medicine Associates
Source	Author	Created	Service Period		
Riverside Internal Medicine Associates	Dr. Hunter Richardson	2026-03-19 15:37:52	2023-02-05 00:00:00 - 2023-11-06 00:00:00		

PSV CDA Section Coverage

Encounters Section 4 PSV-relevant for encounter diagnoses, dates/times, diagnosis code/description, and facility context. Data present PSV Rec: 4 4 green / 0 yellow / 0 orange / 0 red entries	Vital Signs Section 36 PSV-relevant for blood pressure, height, weight, BMI, BMI percentile, and pain assessment. Data present PSV Rec: 36 36 green / 0 yellow / 0 orange / 0 red entries	Immunizations Section 3 PSV-relevant for immunization code/description and date. Data present PSV Rec: 3 3 green / 0 yellow / 0 orange / 0 red entries	Allergies and Intolerances Section 2 PSV-relevant when allergies/intolerances are present in the conformed outbound file and within case scope. Data present PSV Rec: 2 2 green / 0 yellow / 0 orange / 0 red entries
Procedures Section 2 PSV-relevant for procedure codes/descriptions, procedure dates, and EBM/visit procedure codes. Data present PSV Rec: 2 2 green / 0 yellow / 0 orange / 0 red entries	Problems Section 2 PSV-relevant for problem list, especially chronic and recurrent diagnosis codes/descriptions. Data present PSV Rec: 2 2 green / 0 yellow / 0 orange / 0 red entries	Lab / Clinical Results Section 14 PSV-relevant for lab tests/results, procedure interpretation, and eye-care test results. Excludes imaging studies (see Imaging Results), which are routed here by the section's own LOINC code. Data present PSV Rec: 6 6 green / 0 yellow / 8 orange / 0 red entries	Imaging Results Section 0 PSV-relevant for imaging tests/results. A Results-family section is routed here when its own section-level code is LOINC 81220-6 or 18748-4 (Diagnostic Imaging Report). No structured entries found
Medications Section 2 PSV-relevant for medication descriptions and supporting dates/scope. Data present PSV Rec: 2 2 green / 0 yellow / 0 orange / 0 red entries	Social History Section 2 PSV-relevant for social history elements when present and in scope. Data present PSV Rec: 2 2 green / 0 yellow / 0 orange / 0 red entries	Advance Directives Section 0 PSV-relevant when advance directives are present in the conformed outbound file and within case scope. No structured entries found	Functional Status Section 0 PSV-relevant when functional status data are present in the conformed outbound file and within case scope. No structured entries found
Questionnaire / Assessment Entries 0 PSV-relevant for questionnaire and questionnaire response data whenever they appear in the CDA. No structured entries found			

Encounters Section

4 entries

PSV Rec: 4

Expand

Vital Signs Section

36 entries

PSV Rec: 36

Expand

Immunizations Section

3 entries

PSV Rec: 3

Expand

Benefits of Working With J2

- **25 years** supporting HIEs with **mission-critical data and integration projects**
- **Direct experience** supporting multiple HIEs with NCQA DAV since program began
- Years of experience **working directly with NCQA auditors**
- We bring **lessons learned** and **efficiency opportunities**
- **Experience developing custom tools** to save time and optimize pass rate





Ways J2 Can Help

- **NCQA DAV** (Project Management, SME Guidance/Prep, Conformance, PSV)
- **Data Quality assessments**
- Long-term **data quality staffing**
- Strategic consultation about **data governance, management, and software selection**
- Use of the **J2 MARS tool** for new participant onboarding or NCQA DAV
- **Custom data quality tool development**

Learn more and schedule a consultation at J2Interactive.com/NCQA-DAV

Or visit us at booth 105 at the Civitas conference!

Longitudinal Claims Data as a Research Infrastructure

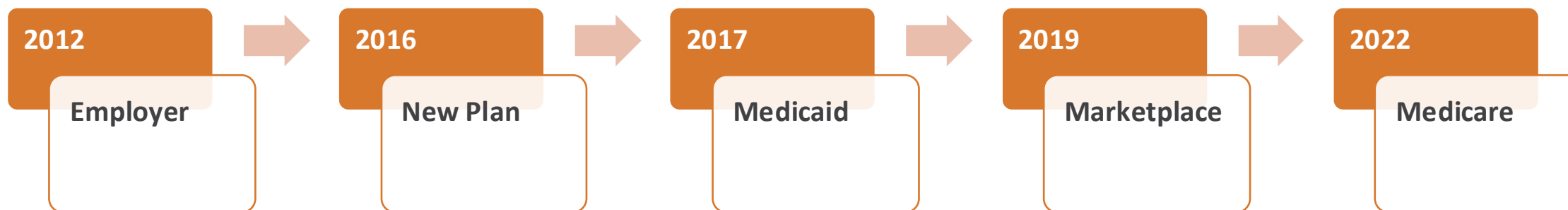
Civitas Preconference 2026

Martha Meyer | Center for Improving Value in Health Care (CIVHC)



Why Longitudinal Data Matters

How early researcher engagement shaped data quality



Maria is one person.

Five coverage transitions. One continuous health journey.

The Challenge: Fragmented Healthcare Data

Most data sources answer only part of the story.

1

Commercial

Large population
Coverage ends
when people move

2

Medicaid

Strong population
detail Cannot follow
coverage changes

3

Medicare

Excellent for older
adults Limited pre-
65 history

4

EHR

Rich clinical detail
Usually limited to
one system

The APCD difference

Cross-payer + longitudinal—but only with sustained infrastructure.



What Makes APCDs Different?

Six capabilities turn a database into research infrastructure.

Multi-payer data

Research-ready capability

Multiple years of history

Research-ready capability

Consistent submission

Research-ready capability

Standardized data model

Research-ready capability

Stable patient linkage

Research-ready capability

Population-level coverage

Research-ready capability



Colorado APCD

10.6M Covered Lives

53 Payers

Data Since 2012

Up to 14 Years of History



Example 1: Chronic Disease Surveillance

Longitudinal claims turn fragmented diagnoses into a patient journey.

What becomes visible

Prevalence | Disease progression | Comorbidities | Utilization | Cost

Scale

30 chronic diseases and conditions | Eight years of longitudinal data

Why it matters

A diagnosis does not disappear when coverage changes.

Example

Long COVID utilization research using longitudinal claims.

Example 2: Rare & Boutique Disease Research

Rare conditions need population scale and time.

Single Payer

To few cases

Cross Payer

More cases

Longitudinal APCD

Study-ready cohort

Illustration

Stiff Person Syndrome

A rare, progressive neurological disorder—an example of the kind of condition that benefits from population-scale longitudinal data.



Example 3: Academic Research Partnerships

Longitudinal claims make temporal research questions answerable.

**What happens
before diagnosis?**

Follow people forward
and backward in time.

**What happens
after treatment?**

Follow people forward
and backward in time.

**What are the long-
term outcomes?**

Follow people forward
and backward in time.

**Are disparities
widening over time?**

Follow people forward
and backward in time.



Example 4: Supporting Public Policy

Longitudinal claims make temporal research questions answerable.

Legislative analyses

Longitudinal evidence

Regulatory requests

Longitudinal evidence

Program evaluation

Longitudinal evidence

Payment reform

Longitudinal evidence

Population health

Longitudinal evidence

Examples

- Cost impact of proposed legislation
- Prosthetic device utilization and cost



Behind Every Successful Research Project

Research quality depends on operational quality.

Payer partnerships

Ongoing infrastructure work

Data quality monitoring

Ongoing infrastructure work

Version control & standardization

Ongoing infrastructure work

Documentation

Ongoing infrastructure work

Business rules

Ongoing infrastructure work

Governance & research support

Ongoing infrastructure work

Good research begins long before analysis starts.



Governance Creates Trust

Governance is part of the scientific infrastructure.

Complete & consistent

Submission standards
and quality monitoring

Documented & reproducible

Version control, business
rules, decision points

Secure & interpretable

Secure storage, controlled
access, aggregated public data

Trusted access

Formal review through the Data
Release Review Committee

Lessons Learned

Infrastructure compounds in value over time.

Long-term investment

Not a one-time effort

Strong payer relationships

Not a one-time effort

Stable technical architecture

Not a one-time effort

Continuous quality improvement

Not a one-time effort

Research partnerships

Not a one-time effort

Transparent documentation

Not a one-time effort

The payoff from year twelve looks nothing like the payoff from year one.

Infrastructure compounds.

Key Takeaways

Four ideas to carry forward.



- 1 APCDs follow people—not insurance products**
- 2 Stable infrastructure creates durable research capacity**
- 3 Operational excellence enables scientific excellence**
- 4 Population-scale longitudinal data supports research no single payer can accomplish alone**

Maria

14-year journey | coverage changes | 1 continuous health record

Discussion

How is your organization using longitudinal claims data?

What infrastructure investments have produced the greatest research value for you?

Thank you | Martha Meyer | CIVHC



Virginia's RHIC–APCD/HDU Partnership in Action

Beth Bortz, VCHI and Kyle Russell, VHI

Goals for Today

01

Demonstrate the partnership

How VCHI (convener/RHIC) and VHI (HDU/data organization) succeed together.

02

Highlight shared-impact projects

Where each organization's strengths combined to deliver results.

03

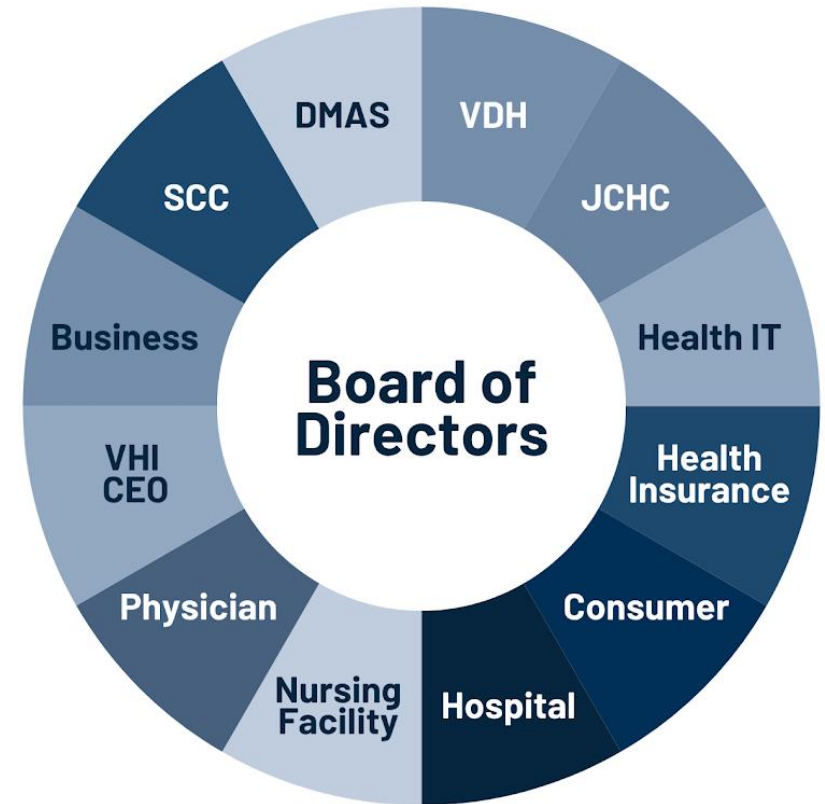
Reflect on what made it work

The practical conditions and behaviors behind the partnership.

Virginia Health Information (VHI)



- Independent 501(c)(3) non-profit established in 1993. Governed as a public-private partnership to ensure data is accessible and fairly reported.
- One of just a few organizations that serve as a designated statewide Health Information Exchange (HIE) and health data organization (APCD, hospital discharge etc)



Mission

VHI improves Virginia's healthcare by collecting, connecting and reporting meaningful data.

Vision

VHI leads the nation in ensuring decision makers have meaningful data to enhance the value and delivery of healthcare.



Independent, nonprofit **public-private partnership** advancing better health, better care, and better value for Virginians.

Serves as a **trusted, nonpartisan convener**, bringing together clinicians, health plans, employers, government, researchers, and community organizations to solve complex healthcare challenges.

Leads statewide initiatives in:

- Primary care advancement and sustainability
- Value-based payment
- Data-driven research and policy

<https://www.vahealthinnovation.org/>

2025 VCHI Strategic Vision *The Pathway to Success*

MISSION:

To facilitate innovation by convening key stakeholders and securing the resources to **accelerate value-driven models of wellness and healthcare** throughout Virginia.

STAKEHOLDERS:

- Health plans
- Health systems
- Health providers
- Employers
- Medical professionals
- Life sciences companies
- State agency leadership
- Consumer advocates

CORE SERVICES:

- Convene and educate stakeholders to accelerate collective impact
- Offer a disciplined approach to advancing new innovations
- Oversee and facilitate demonstration research to evaluate new models
- Leverage data and analytical resources to make more informed decisions
- Prepare workforce and public for a value-driven healthcare marketplace

VISION TARGETS:

- Expand VCHI's impact and influence through new innovations and initiatives
- Leverage public-private investment and maintain strong support from all parties
- Use the Virginia Health Value Dashboard to provide focus and share it with targeted audiences to further impact
- Make Virginia health data actionable and ensure it is well-communicated to policy leaders
- Ensure VCHI is recognized as a national expert and implementation lead on value-based health care initiatives

VISION:

Virginia delivers the best value in health care.



VIRGINIA HEALTH
VALUE DASHBOARD

AIMS

- I. Reducing Low-Value Care
- II. Increasing High-Value Care
- III. Improving the Infrastructure for Value-Based Care

STRATEGIC PRIORITY AREAS + GOALS

FINANCIAL
DIVERSIFICATION
+ PERFORMANCE

IDENTITY
+ IMPACT

SUSTAINABILITY
+ RESILIENCE

POLICY +
ADVOCACY

ENGAGED
LEADERSHIP

VCHI Board & Advisory Leadership Council

- Aetna
- Aledade
- Anthem Blue Cross Blue Shield
- Arcadia
- Async Health
- Bay Aging VAAACares
- Ballad Health
- Bon Secours Mercy
- CarMax
- Carilion Clinic
- Epic
- Equality Health
- Eudemonia Concepts
- Family Insight, P.C.
- Federation of VA Foodbanks
- FGS Global
- Fortify Children's Health
- GSK
- HCA Virginia Care Partners
- Health Management Associates
- Humana
- Inova Primary Care
- LabCorp
- Mercer
- Merck
- Milliman MedInsight
- Molina
- MSV Foundation
- Novo Nordisk
- Patient First
- Pfizer
- PhRMA
- Privia
- Riverside Health
- Sanofi
- Sellers Dorsey
- Sentara Health Plans
- Sentara Quality Care Network
- Social Innovation Ventures
- UVA Health
- UVA Synergy Center
- VCU Health System
- Veeva Systems
- Virginia Academy of Family Physicians
- Virginia Association of Health Plans
- Virginia Bio
- Virginia Council of Nurse Practitioners
- Virginia Health Care Foundation
- Virginia Health Catalyst
- Virginia Health Information
- Virginia Hospital and Healthcare Association
- Virginia Public Health Association
- Virginia Health Workforce Development Authority



The VCHI & VHI Partnership Foundation

Aligned missions
with clear
delegation of roles

Regular meetings to
discuss
collaboration
opportunities

Shared board
leadership and
crossover committee
service by staff



Example Partnership Products

The Virginia Health Value Dashboard

Aim I: Reducing Low Value Care

- A. Utilization and cost of potentially avoidable emergency room visits (3 measures)
- B. Low value services as captured by the MedInsight Health Waste Calculator (7 measures)
- C. Inappropriate preventable hospital stays (1 measure)

Aim II: Increasing High Value Care

- A. Virginians who are current with appropriate vaccination schedules (1 measure with multiple elements)
- B. Comprehensive diabetes care (2 measures)
- C. Clinically appropriate cancer screening rates (3 measures)
- D. Mental health care (2 measures)

Aim III: Improving the Infrastructure for Value-Based Care

- A. Commercial in-network payments that are value-based (1 measure)
- B. Claims in Virginia's All-Payer Claims Database (2 measures)



■ = Better than statewide rate
■ = Same as statewide rate
■ = Worse than statewide rate

		STATEWIDE	NORTHWEST	NORTHERN	SOUTHWEST	CENTRAL	EASTERN
REDUCING LOW VALUE CARE							
Utilization and Cost of Avoidable Emergency Room Visits							
Potentially Avoidable ED Visits - As a Percentage of Total ED Visits	12%	■	■	■	■	■	■
Potentially Avoidable ED Visits - Per 1,000 Member Months	3.0	■	■	■	■	■	■
Potentially Avoidable ED Visits - Per Member Per Year	0.04	■	■	■	■	■	■
Low Value Services as Captured by the MedInsight Health Waste Calculator							
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal	82%	■	■	■	■	■	■
Don't obtain EKG, chest X-rays or pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	6%	■	■	■	■	■	■
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery	49%	■	■	■	■	■	■
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present	9%	■	■	■	■	■	■
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms	11%	■	■	■	■	■	■
Don't routinely order imaging tests for patients without symptoms or signs of significant eye disease	16%	■	■	■	■	■	■
Don't place peripherally inserted central catheters (PICC) in stage III–V CKD patients without consulting nephrology	86%	■	■	■	■	■	■
Inappropriate Preventable Hospital Stays							
Prevention Quality Indicator #90: Prevention Quality Overall Composite Rate (per 100,000 population)	1,196	■	■	■	■	■	■
INCREASING HIGH VALUE CARE							
Virginians Who Are Current with Appropriate Vaccination Schedules							
Childhood Immunization Status: DTaP	46%	■	■	■	■	■	■
Childhood Immunization Status: Influenza	51%	■	■	■	■	■	■
Childhood Immunization Status: Hepatitis A	75%	■	■	■	■	■	■
Childhood Immunization Status: Hepatitis B	30%	■	■	■	■	■	■
Childhood Immunization Status: HiB	61%	■	■	■	■	■	■
Childhood Immunization Status: IPV	56%	■	■	■	■	■	■
Childhood Immunization Status: MMR	76%	■	■	■	■	■	■
Childhood Immunization Status: Pneumococcal Conjugate	47%	■	■	■	■	■	■
Childhood Immunization Status: Rotavirus	49%	■	■	■	■	■	■
Childhood Immunization Status: VZV	76%	■	■	■	■	■	■
Immunizations for Adolescents: HPV Vaccine*	25%	■	■	■	■	■	■
Immunizations for Adolescents: Meningococcal Conjugate or Meningococcal Polysaccharide Vaccine	55%	■	■	■	■	■	■
Immunizations for Adolescents: Tdap Vaccine	66%	■	■	■	■	■	■
Comprehensive Diabetes Care							
Hemoglobin A1c (HbA1c) Testing	85%	■	■	■	■	■	■
Medical Attention for Nephropathy**	87%	■	■	■	■	■	■
Clinically Appropriate Cancer Screening Rates							
Breast Cancer Screening***	73%	■	■	■	■	■	■
Cervical Cancer Screening	64%	■	■	■	■	■	■
Colorectal Cancer Screening	51%	■	■	■	■	■	■
Mental Health Care							
Follow-up after hospitalization for mental illness (7 days post-discharge)	49%	■	■	■	■	■	■
Follow-up after hospitalization for mental illness (30 days post-discharge)	74%	■	■	■	■	■	■

*EBM version 7 rates were used for 2018 benchmark

**2019 rates could not be generated for this measure due to the current inavailability of Medicare Part D prescription claims for the corresponding period

***Medicare FFS rates, which comprise the majority of the volume for this measure, were not available for 2018 due to the lookback period required by the methodology

Dashboard Overview

			Comparisons			
REDUCING LOW VALUE CARE	2019	2018	Regional Variation	Top Region	Trend	
Utilization and Cost of Avoidable Emergency Room Visits						
Potentially Avoidable ED Visits - As a Percentage of Total ED Visits	12%	12%	Mod	N	■	
Potentially Avoidable ED Visits - Per 1,000 Member Months	3	3	—	N	■	
Potentially Avoidable ED Visits - Per Member Per Year	0.04	0.04	—	N	■	
Low Value Services as Captured by the MedInsight Health Waste Calculator						
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal.	82%	82%	Low	C	■	
Don't obtain EKG, chest X-rays or pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	6%	7%	High	SW	■	
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	49%	58%	Mod	SW	■	
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	9%	11%	High	SW	■	
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	11%	15%	High	SW	■	
Don't routinely order imaging tests for patients without symptoms or signs of significant eye disease.	16%	17%	Mod	N	■	
Don't place peripherally inserted central catheters (PICC) in stage III–V CKD patients without consulting nephrology.	86%	86%	Low	E	■	
Inappropriate Preventable Hospital Stays						
Prevention Quality Indicator #90: Prevention Quality Overall Composite Rate (per 100,000 pop.)	1,196	1,181	High	N	■	
INCREASING HIGH VALUE CARE	2019	2018	Regional Variation	Top Region	Trend	
Virginians Who Are Current with Appropriate Vaccination Schedules						
Childhood Immunization Status: D TaP	46%	50%	Mod	SW	■	
Childhood Immunization Status: Influenza	51%	55%	Mod	N	■	
Childhood Immunization Status: Hepatitis A	75%	81%	Low	N	■	
Childhood Immunization Status: Hepatitis B	30%	35%	High	SW	■	
Childhood Immunization Status: Hib	61%	66%	Low	SW	■	
Childhood Immunization Status: IPV	56%	60%	Mod	SW	■	
Childhood Immunization Status: MMR	76%	83%	Low	N	■	
Childhood Immunization Status: Pneumococcal Conjugate	47%	51%	Mod	SW	■	
Childhood Immunization Status: Rotavirus	49%	52%	Mod	SW	■	
Childhood Immunization Status: VZV	76%	83%	Low	N	■	
Immunizations for Adolescents: HPV Vaccine	25%	26%	Mod	N	■	
Immunizations for Adolescents: Meningococcal Conjugate or Mening. Polysacchande Vaccine	55%	58%	Mod	N	■	
Immunizations for Adolescents: Tdap Vaccine	66%	70%	Low	SW	■	
Comprehensive Diabetes Care						
Hemoglobin A1c (HbA1c) Testing	85%	88%	Low	N	■	
Medical Attention for Nephropathy	87%	89%	Low	N	■	
Clinically Appropriate Cancer Screening Rates						
Breast Cancer Screening	73%	75%	Low	N	■	
Cervical Cancer Screening	64%	69%	Mod	N	■	
Colorectal Cancer Screening	51%	50%	Mod	N	■	
Mental Health Care						
Follow-up after hospitalization for mental illness (7 days post-discharge)	49%	—	Mod	N	—	
Follow-up after hospitalization for mental illness (30 days post-discharge)	74%	—	Low	N	—	
IMPROVING THE INFRASTRUCTURE FOR VALUE BASED CARE	2019	2018	Reg Var	Top Region	Trend	
Claims in Virginia's All Payer Claims Database						
Percent of VA Total Covered Lives with Claims Included in the VA All Payer Claims Database	61%	57%	—	—	■	
Percent of VA Commercially Insured Lives with Claims included in the VA All Payer Claims Database	50%	40%	—	—	■	

*EBM version 7 rates were used for 2018 benchmark

**2019 rates could not be generated for this measure due to the current unavailability of Medicare Part D prescription claims for the corresponding period

***Medicare FFS rates, which comprise the majority of the volume for this measure, were not available for 2018 due to the lookback period required by the methodology
C = Central Virginia, E = Eastern Virginia, N = Northern Virginia, SW = Southwest Virginia, and Top Region = Top Performing Region.

Dashboard

Trends & Variation



Smarter Care
VIRGINIA

Smarter Care Virginia Data Creates a National Stir

COSTS & SPENDING

By John N. Mafi, Kyle Russell, Beth A. Bortz, Marcos Dachary, William A. Hazel Jr., and A. Mark Fendrick

DATAWATCH

Low-Cost, High-Volume Health Services Contribute The Most To Unnecessary Health Spending

An analysis of data for 2014 about forty-four low-value health services in the Virginia All Payer Claims Database revealed more than \$586 million in unnecessary costs. Among these low-value services, those that were low and very low cost (\$538 or less per service) were delivered far more frequently than services that were high and very high cost (\$539 or more). The combined costs of the former group were nearly twice those of the latter (65 percent versus 35 percent).

DOI: 10.1377/hlthaff.2017.0385
HEALTH AFFAIRS 36,
NO. 10 (2017): 1701-1704
©2017 Project HOPE—
The People-to-People Health
Foundation, Inc.

Health Affairs article, “*Low-Cost, High Volume Services Contribute The Most To Unnecessary Health Spending*”, was the 3rd most read *Health Affairs* Article in 2017.



Summary of Results

Produced: January 2020

Health Waste Calculator Version 7.1

REPORTING PERIOD

2018

NUMBER OF MEASURES

48

CMS DATA INCLUDED?

YES

DOLLARS SPENT ON UNNECESSARY
SERVICES

\$539M
/YEAR

UNNECESSARY SERVICES IDENTIFIED

1.72M /
YEAR



Virginia Overall Results 2018

36%

OF MEMBERS EXPOSED TO 1+
LOW VALUE SERVICE

31%

OF SERVICES MEASURED WERE
LOW VALUE

\$8.11

PMPM IN CLAIMS WERE
UNNECESSARY



Top 4 Measures by Percent of Low Value Dollars for Virginia - 2018

Measure	Risk of Harm	% Low-Value Dollars	Avg. Proxy Cost/Service	Low Value Index
Don't obtain baseline laboratory studies in patients without significant systemic disease undergoing low-risk surgery.	L	23%	\$439	82%
Don't place peripherally inserted central catheters (PICC) in stage III-V CKD patients without consulting nephrology	H	15%	\$13,992	86%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	M	13%	\$280	15%
Don't routinely order imaging tests for patients without symptoms or signs of significant eye disease	L	13%	\$622	17%



- Supports Aim I of the Value Dashboard
- Funded by a \$2.2M grant from Arnold Ventures



CLINICAL LEARNING COMMUNITY

Six health systems and 3 clinically integrated networks working together to reduce seven provider-driven measures.



EMPLOYER TASK FORCE

16 Virginia employers working together to increase their knowledge of low-value care and identify consumer-driven measures to drive change through benefit design and employee education.



PLAN TO IMPROVE HEALTH VALUE

Developed at a joint conference of the clinical learning community and employer task force members.

Clinical Learning Community



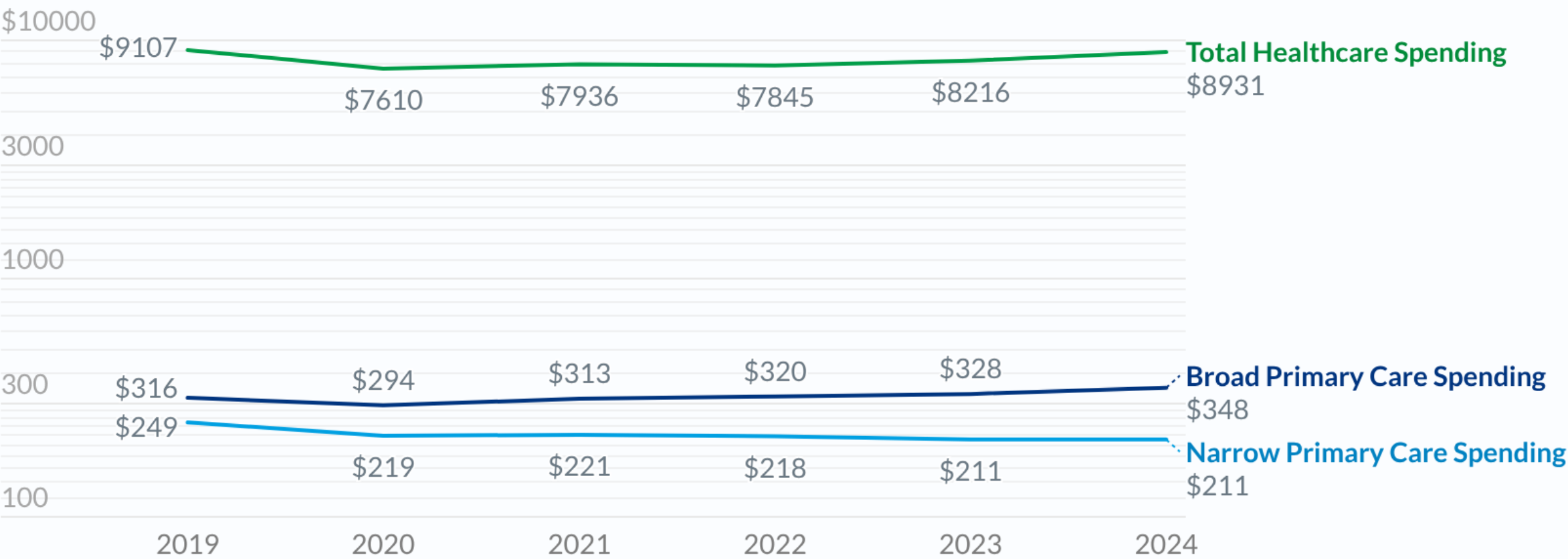


Comprehensive statewide assessment
Analyzes Virginia APCD data (2019–2024) to examine trends in primary care spending, utilization, continuity of care, workforce composition, and geographic variation.

Actionable insights for policymakers
Explores who receives and delivers primary care, where care is provided, and how patterns differ across payers, localities, and across the lifespan to better understand how primary care is financed, utilized, and delivered across Virginia.

First Up: Total Cost of Care and Primary Care Spending

Inflation-Adjusted Healthcare and Primary Care Spending Per Average Member Per Year, Virginia, 2019–2024

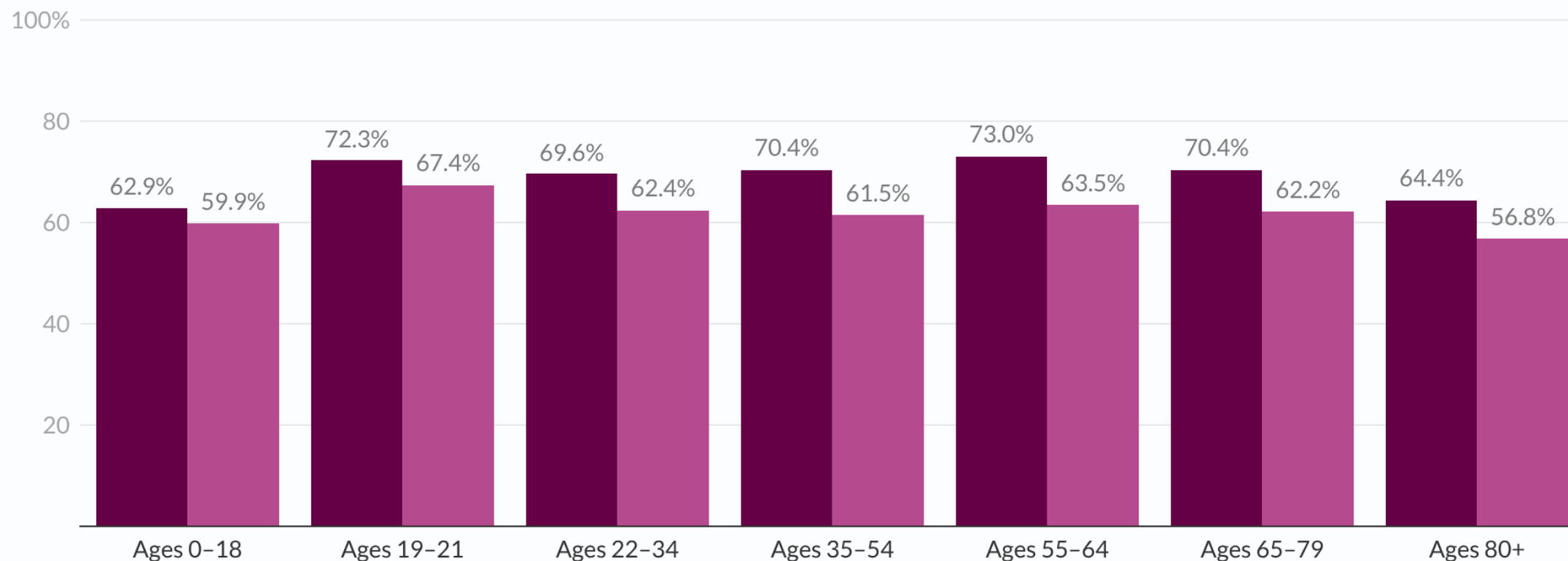


Broad primary care spending per member increased modestly, while narrowly defined physician-led spending declined.



Broad Primary Care Continuity by Age Group, Virginia, 2019–2024

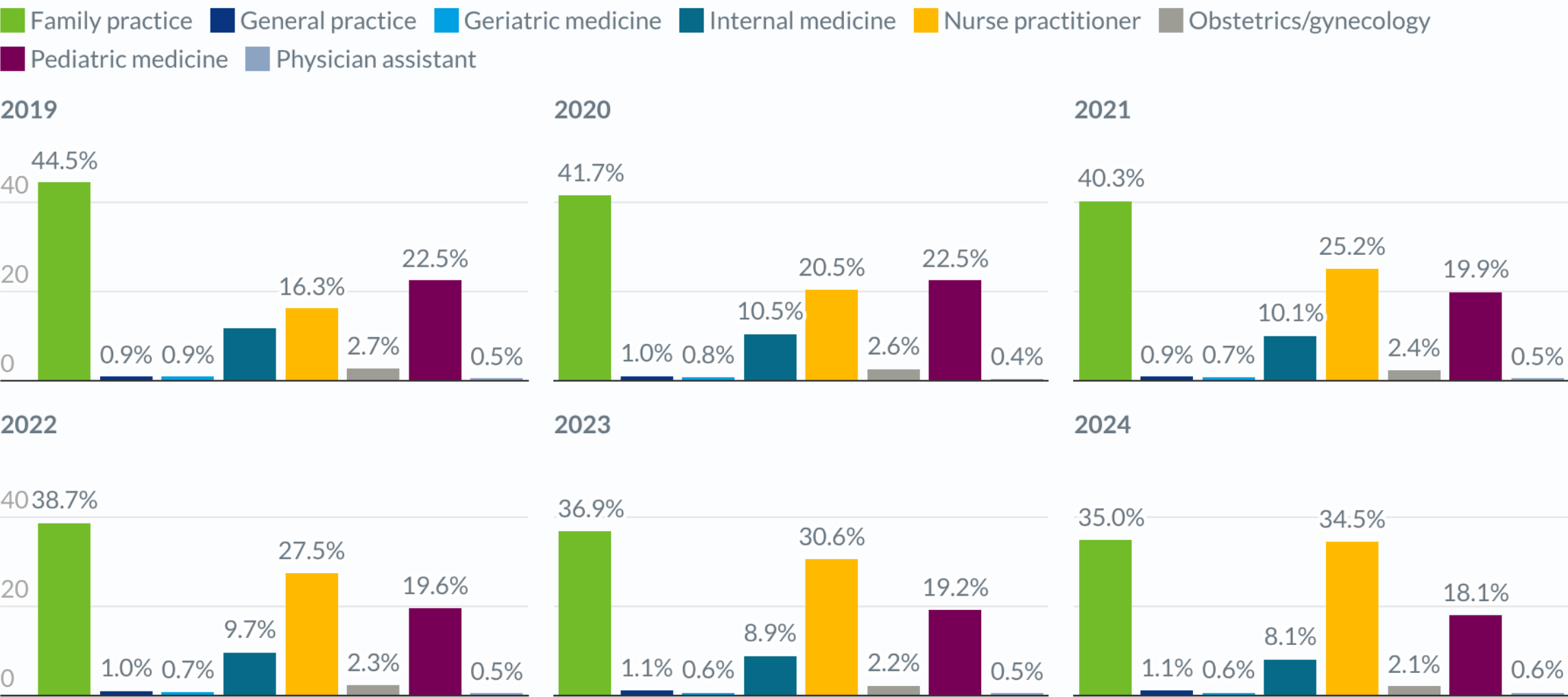
■ 2019 ■ 2024



- **Primary care continuity declined statewide**, with the share of patients receiving $\geq 75\%$ of their primary care from the same clinician falling from **67.7% in 2019** to **60.8% in 2024** and not returning to pre-pandemic levels.
- **Continuity declined across every age group**, with the largest decreases among adults **55–64 years (73.0% to 63.5%)** and **35–54 years (70.4% to 61.5%)**.



Percent of Broad Primary Care Spending by Clinician Type, Virginia, 2019-2024



Virginia’s primary care workforce is becoming increasingly multidisciplinary, with nurse practitioners playing a rapidly expanding role in delivering care.



What's Next?



A public-private partnership to drive timely and actionable research to inform state decision-makers and promote evidence-based health policy.

LAUNCHED IN OCTOBER 2025

Established by the Virginia Center for Health Innovation (VCHI) after a **consensus recommendation of the Virginia Task Force on Primary Care.**

Leverages VCHI's **collaborative relationships with entities across health sectors, academic partners, and data providers.**

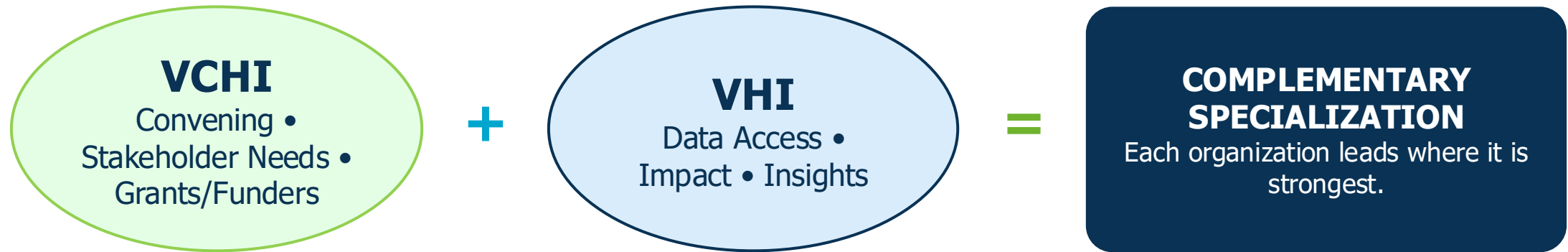
Secured \$500K in start up funding, and ongoing contracts with DMAS and VDH.



Selected to serve as the Lead Evaluator for Virginia's Rural Health Transformation (RHT) Program and developing an RHT Scorecard



Reasons for Success



EXTERNAL ADVOCACY

Each organization can champion the other with greater credibility than self-promotion.



OUTSIDE PERSPECTIVE

Both organizations gain fresh thinking, challenge, and creativity.

Keys to Partnership

LEADERSHIP ALIGNMENT

Flexible terms when needed

MUTUAL ACCOUNTABILITY

Each side delivers the contribution
it brings to the partnership.

+

STRONG TOGETHER + APART

The "Genesis" effect: both
organizations thrive independently
and collectively.

ROLE CLARITY • RHIC is the public-facing convener • HDU is the data "spine"

Thank you!

kyle@vhi.org

bbortz@vahealthinnovation.org





LEVERAGING HEALTH DATA ANALYTICS TO INFORM RESEARCH, POLICY AND POPULATION HEALTH

SEPTEMBER 10, 2026

PRESENTED BY DHIN



TODAY'S LEARNING OBJECTIVES



Understand the utility of health data — how clinical and claims data are combined and enhanced to create high-value analytic assets.



Review analytic case studies leveraging health data that generate actionable insights supporting the Triple Aim.



Explore how claims and clinical data are used to support clinical trial recruitment.

INTRODUCTIONS

DHIN Analytics



Matt Enright, FACHE



Krishna Vasireddy, PharmD



Gurpreet Kaur, MD

BY THE NUMBERS

Regional footprint includes patient data from Delaware, three other states and Washington, D.C.



~4M

unique patients with associated clinical and/or claims data



~98K

Unique clinicians with clinical data



~1.2B

lab results



~372M

clinical documents and messages

WHAT DHIN DOES

As a health data services organization, DHIN...



Aggregate

Health data from many sources — clinical (HIE), claims (APCD), and enhancements (e.g., census tract). Data is more valuable in the presence of other data.



Curate

Resolve identities and group data by unique individual; map proprietary codes to a standard code set; enrich data from one source with data from another.



Disseminate

Make data available at the right time, right format, and right workflow to generate actionable insights.



THE UTILITY OF HEALTH DATA

HIE — CLINICAL DATA

- Near real-time
- Describes clinical results
- Tracks patient movement in healthcare

KNOWN LIMITATION

Not as well structured

APCD — CLAIMS DATA

- Highly structured
- Describes “what happened”
- Tracks cost of care at the claim level

KNOWN LIMITATION

Lag time can be 3 – 6 months

Linked by a master patient index (MPI), clinical + claims data become one rich asset built for advanced analytics.

NEXT UP...

Case Studies

OVERVIEW OF DHIN'S HCCD

Delaware's Healthcare Claims Database (HCCD) Population: 1,669,832 (2013 – 2025 Q4)



1,314,949

Members with Claims



249,576,874

Total Claims



12

Total Payers

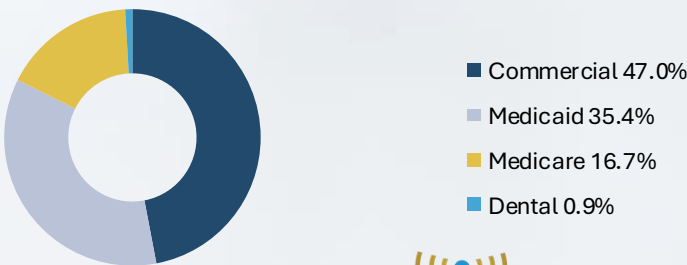
HCCD Population by Year



% of Members by Age Group (2025)



% of Members by Insurance Type



CASE STUDY: PHARMACY SPENDING IN DELAWARE



Study Objectives

To support the importance of pharmacy (Rx) in the overall healthcare landscape, DHIN published a dashboard to support questions around Rx spend.



Study Methodology

- Study Period: 2020 – 2024
- Population: NDC codes
- Data enhancement used: First Data Bank
- Data Source: Delaware's Healthcare Claims Database (HCCD)



Study Results

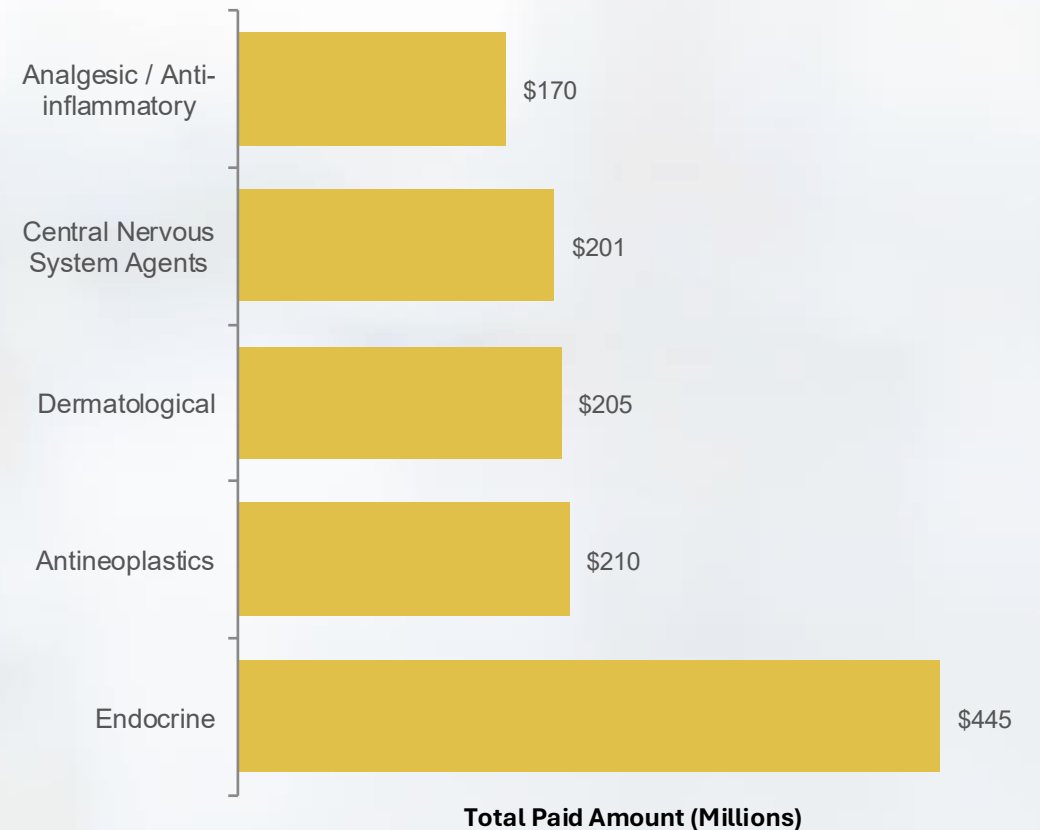
- Top 5 drug classes represent 51.8% (~\$2.12B) of total pharmacy spending
- Brand drugs represent ~80% of total Rx spending
- Spending increased substantially (about 31%) in the last two years



Conclusion

With the top 5 drug classes accounting for over half of spend and brand drugs dominating 80% of expenditure, Rx expenses have a substantial influence on overall healthcare costs — insights stakeholders can use to prioritize interventions.

Top 5 Drug Classes by Relative Spend (2024)



CASE STUDY: TRAUMATIC BRAIN INJURY PHASE I



Study Objectives

To identify the prevalence of traumatic brain injury (TBI) by age group, gender, year, insurance type, and severity in Delaware.



Study Methodology

- Study Period: 2013 – 2019
- TBI Population: ICD codes
- Severity Type: Mild, Moderate, Severe
- Data Source: Delaware's Healthcare Claims Database (HCCD)



Study Results

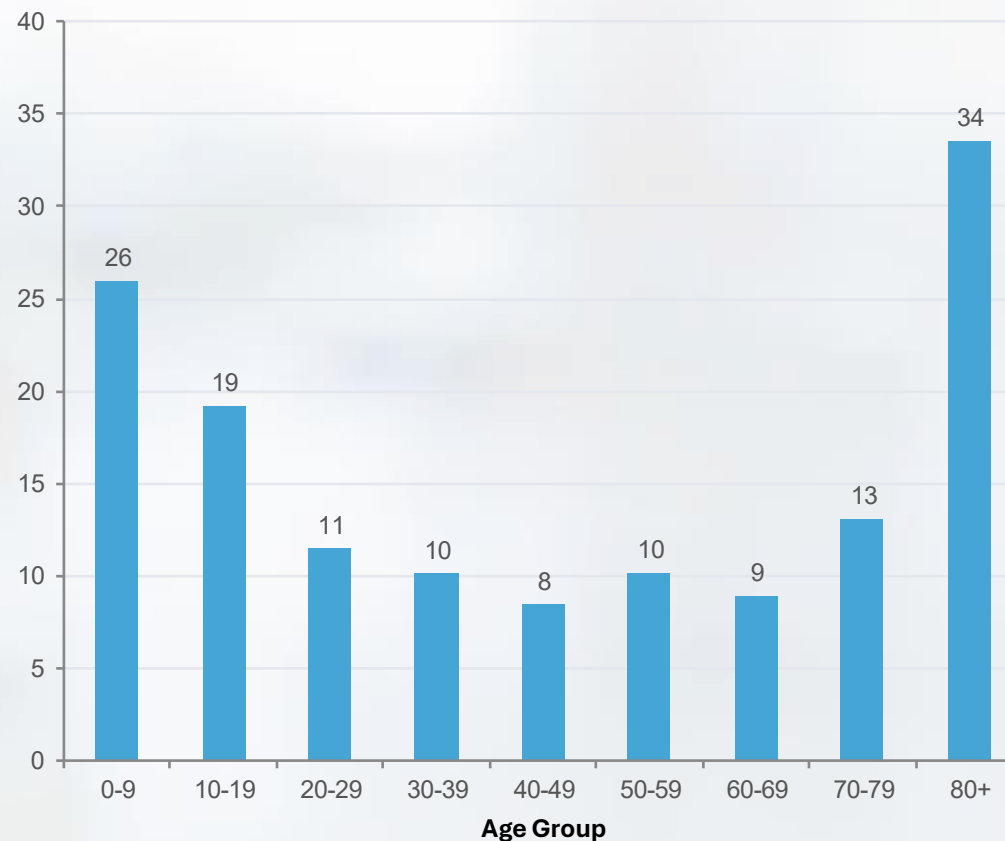
- 80+ age group incurred the most severe and highest rate of TBIs, at 33.53 per 1,000 population
- TBIs were at 3.61 per 1,000 in 2015 and increased to 5.92 per 1,000 in 2017



Conclusion

Prevention programs and healthcare delivery need to be tailored to changing epidemiological patterns of TBI, and specifically address fall prevention in the elderly.

TBI Prevalence by Age Group (per 1,000)



CASE STUDY: ENVIRONMENTAL HEALTH STUDY



Study Objectives

Assessing the utility of healthcare claims data to determine potential health impacts of per- and polyfluoroalkyl substances (PFAS) exposure associated with public drinking water.

Study Methodology

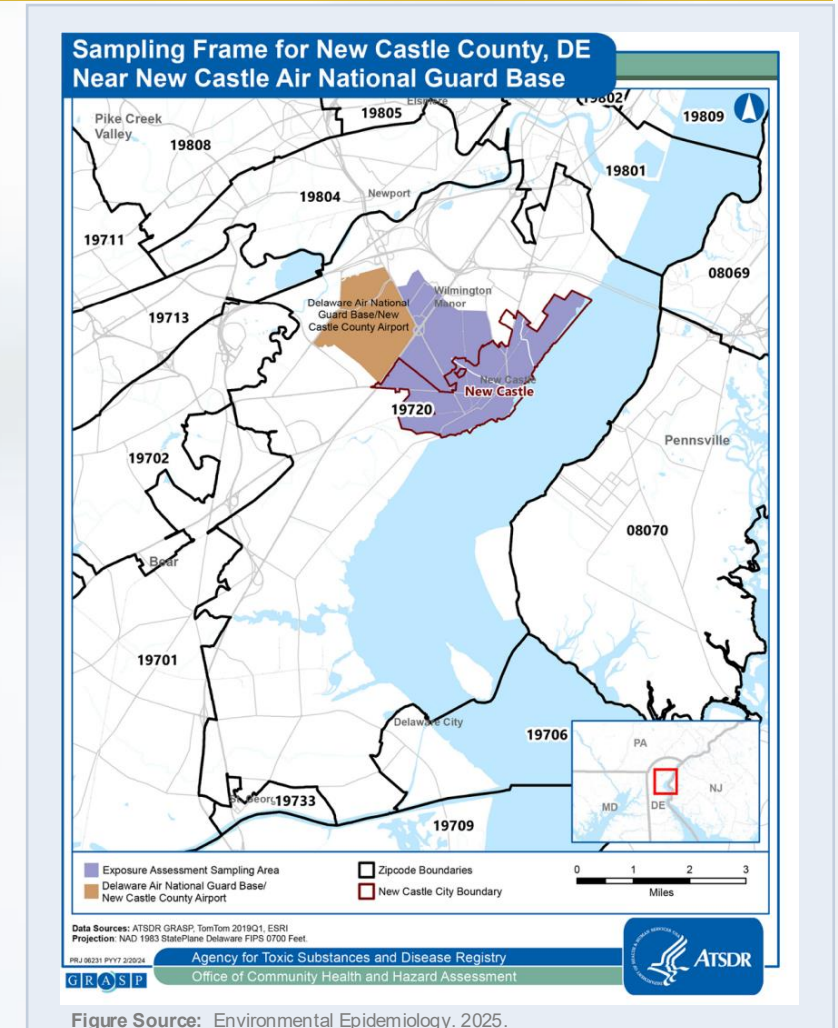
- Study Period: 2013 – 2019
- Population: Chronic Conditions ICD codes
- Data Source: Delaware's Healthcare Claims Database (HCCD)

Study Results

Members living in ZIP code 19720 (New Castle, New Castle County) from 2014–2019 were at higher risk of six chronic conditions versus members living elsewhere in the county, after controlling for age, sex, and year.

Conclusion

Healthcare claims are a useful source of timely, geographically refined data that can identify health outcomes in communities with exposure to emerging and established environmental contaminants.



NEXT UP...

Clinical Trial Recruitment Services

DHIN'S LIFE SCIENCES CAPABILITIES

DHIN is well positioned to attract life science initiatives to support clinical trial recruitment services in Delaware.



Study Design
Consulting



Biospecimen &
Data Procurement



Protocol
Matching



Patient Identification
for Recruitment



Data Analytics
& Reporting



Data Visualization
& Reporting



Longitudinal Data
Collection & Analysis

CASE STUDY: BIO-89



Study Objectives

A Phase 3, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of pegozafermin in subjects with severe hypertriglyceridemia.



Study Results

Practices with primary care, endocrinology, cardiology, and rehabilitation services had higher qualifying-patient counts across the network.

1,411 qualifying, unique patients identified — study required only 360



Study Methodology

Combined multiple data elements and designed algorithms to optimize identification of distinct qualifying member counts based on inclusion/exclusion criteria.



Conclusion

This approach helps streamline the process of identifying qualified organizations (e.g., practices/health systems) and participants for studies — expediting clinical trials and reducing the risk of false starts.

Service Provider	Qualifying Patients
Provider A	272
Provider B	265
Provider C	152
Provider D	80
Provider E	68
Provider F	54

Key Takeaways: From connected data to measurable impact

The value is not the volume of data. It is the ability to turn trusted, linked information into decisions that improve health. Health data creates value when insight becomes action.

01

RESEARCH

Combining clinical and claims data creates a uniquely powerful asset — a master patient index links near real-time HIE results with structured APCD cost data across ~4M patients.

02

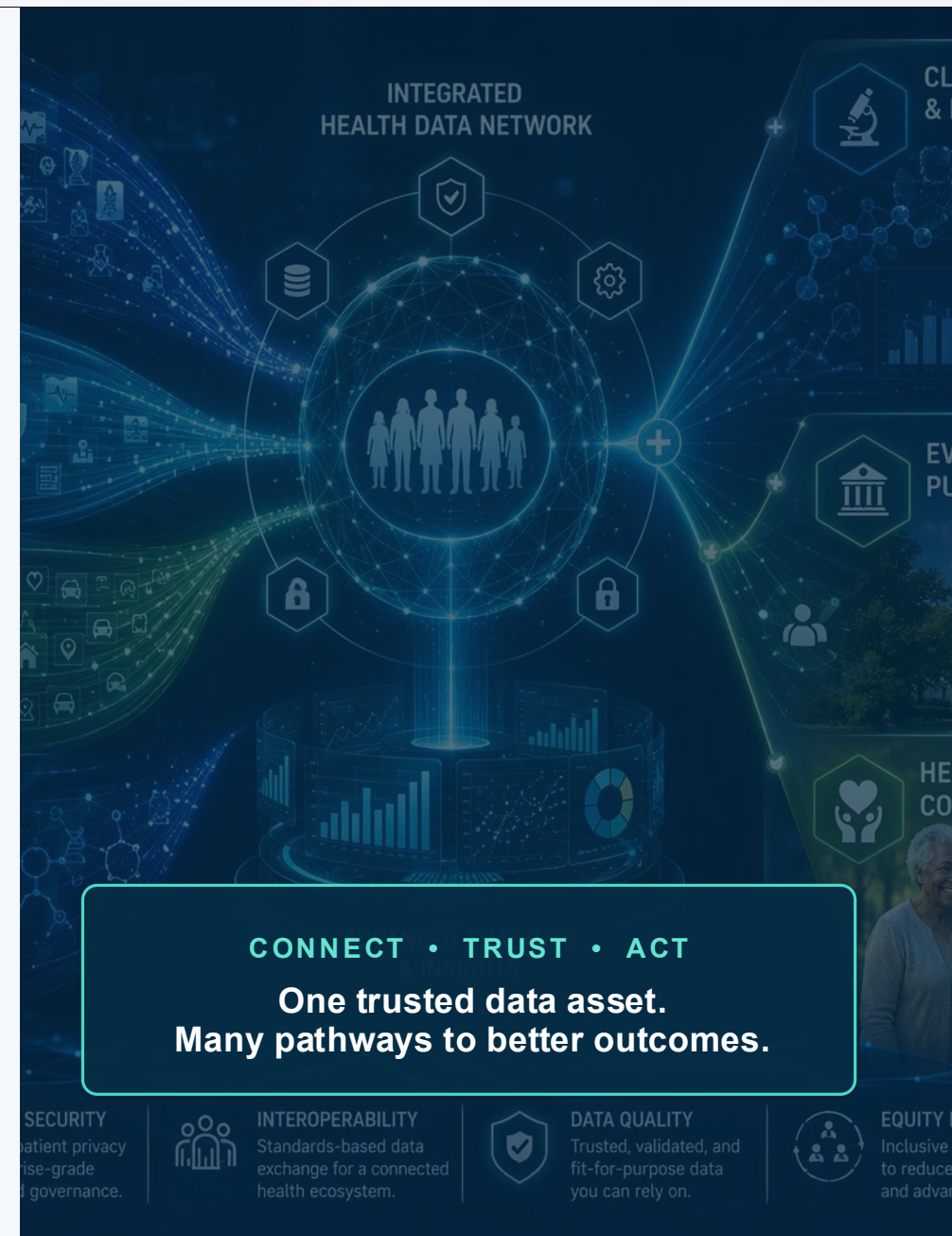
POLICY

Translate real-world evidence into clearer priorities and accountable action. Case studies — pharmacy spend, traumatic brain injury, and PFAS exposure — give stakeholders evidence to target policy.

03

POPULATION HEALTH

Identify needs, target interventions, and measure progress across patients, providers, and communities.



THANK YOU

VISIT DHIN.ORG FOR MORE INFORMATION



Audience Q&A

Please enter any questions you have for today's speakers in the Q&A section of the right-side taskbar.



Thank You!

