

# VHCURES-VHIE Integration

September 5, 2023

# Agenda

1. Reset
2. Develop Shared Values and Goals together
3. Use Cases – goal align on use cases
4. Legal Perspective
5. Next Steps

# Shared Values and Goals

1. Patients are at the center of their health data —~~all individuals can make informed decisions about the use of their health data~~
2. Providers to be empowered with more comprehensive data at the point of care, for better integrated, timely, effective and efficient patient-focused delivery of care
3. <public health/research based goal?>
4. <Considering ‘self-paying’/existing health equity issues + Commitment to data literacy >
5. Data governance, privacy, security, and quality are essential
6. ~~Achieve Act 167 request for VHCURES HIE integration plan as part of HIE Strategic Plan~~
7. Use limited funds and resources to benefit Vermonters in cost effective manner

# Use Cases

- Background:
  - 2021 HIE Claims Subcommittee on claims/clinical use cases, identified 26 use cases
    - [Claims Use Cases Summary](#)
  - Broad Stakeholders (shown on following page)
  - List of use cases previously developed (following page)
- Focus on key use cases (examples)
  - Provider and Patient Benefit: Prescription Fill – previously identified
  - Provider and Patient Benefit: Screening Panel – previously identified

# 2021 Use Case Gathering Sessions

#	Interview	Focus of Discussion	Schedule & Status
1	Katie Muir, <i>OneCare VT</i>	<ul style="list-style-type: none"> <li>Evaluation &amp; Reporting of the APM</li> <li>Support of clinical practices and the care model</li> </ul>	3/3/2021 – Completed
2	Pat Jones, <i>DVHA Payment Reform</i> Erin Flynn, <i>DVHA Payment Reform</i>	<ul style="list-style-type: none"> <li>Evaluation &amp; Reporting of the APM</li> <li>Support of clinical practices and the care model</li> </ul>	3/30/2021 – Completed
3	Ben Green, <i>Blue Cross Blue Shield</i> James Mauro, <i>Blue Cross Blue Shield</i>	<ul style="list-style-type: none"> <li>Commercial Claims</li> </ul>	4/19/2021 – Completed
4	Sarah Lindberg, <i>Green Mountain Care Board</i>	<ul style="list-style-type: none"> <li>Analytics for -                             <ul style="list-style-type: none"> <li>evaluating the APM</li> <li>evaluating the Boards regulatory activities</li> </ul> </li> </ul>	5/10/2021 – Completed
5	Thomasena E Coates, <i>Blueprint QI Facilitator</i> Lauri Scharf, <i>BiState Primary Care Assoc.</i>	<ul style="list-style-type: none"> <li>Point of care support</li> </ul>	6/1/2021 – Completed 6/22/2021 – Completed
6	Lisa Schilling, <i>Medicaid Operation</i> Erin Carmichael, <i>Medicaid Quality</i> Shawn Skaflestad, <i>Medicaid Performance</i> <i>Management/Improvement</i> Tim Tremblay, <i>Vermont Blueprint for Health</i>	<ul style="list-style-type: none"> <li>Quality Improvement and Reporting for Medicaid and the Blueprint</li> <li>Overall evaluation of GC1115 waiver</li> </ul>	6/10/2021 – Completed

# Use Cases Summary



	Category	Use Case Name	Stakeholder
1	Clinical - Individual	<b>Prescription Reconciliation, Fulfillment Monitoring</b>	Mary Kate Mohlman
2	Clinical - Individual	Validate the Service Provided	Mary Kate Mohlman
3	QI/Operations - Organization	Panel Management of Individuals with Chronic Conditions– identifying those whose conditions need better management	Mary Kate Mohlman
4	Evaluation - Population	Assessing Quality Improvement Initiatives on Hypertension Control and Outcomes	Mary Kate Mohlman
5	Reporting - Population	Percent of population with Hypertension in control and Diabetes in poor control	Mary Kate Mohlman
6	QI/Operations - Organization	Improving support and Care management for individuals with Hypertension and Diabetes in the State	Katelyn Muir
7	QI/Operations - Organization	Improve Immunization Rate	Katelyn Muir
8	Evaluation - Population	Evaluating the Clinical impact of the Care Coordination Model	Katelyn Muir
9	Evaluation - Population	Evaluation of primary prevention by Health Service Areas (HSA)	Katelyn Muir
10	QI/Operations – Organization	Determine payments made to providers participating in Medicaid value-based payment arrangements.	Pat Jones Erin Flynn
11	Reporting - Population	AHS/DVHA Payment Reform Alternative Payment Model Program Monitoring and Reporting	Pat Jones Erin Flynn

# Use Cases Summary

	Category	Use Case Name	Stakeholder
12	Clinical – Individual	Help inform Care Management Functions	James Mauro
13	QI/Operations – Organization	Identify Members for Integrated Health Programming including Risk Stratification	James Mauro
14	Evaluation - Population	Evaluate the performance of a Healthcare Reform/Payment Reform Program	James Mauro
15	QI/Operations – Organization	Development of a Healthcare Reform/Payment Reform Program	James Mauro
16	Reporting - Population	Conduct quality reporting that requires clinical data without relying on manual medical chart extractions	James Mauro
17	QI/Operations – Organization	Clinical data to support Utilization Management Program	James Mauro
18	QI/Operations - Organization	Defining more precise scope of a Health Care Organization (e.g., Provider landscape)	Sarah Lindberg
19	Evaluation – Population	Evaluation of Provider Quality	Sarah Lindberg
20	QI/Operations - Organization	Quality and Equity in Health Centers in Vermont	Thomasena E Coates
★ 21	QI/Operations - Organization	<b>Reporting rates for preventive cancer screening (colorectal, cervical, breast) in support of improving quality of care</b>	Lauri Scharf
22	QI/Operations - Organization	Medicaid Program Integrity	Lisa Schilling

# Use Cases Summary

	Category	Use Case Name	Stakeholder
23	Evaluation - Population	Utilization Management	Lisa Schilling
24	Evaluation - Population	Benefit Design	Lisa Schilling
25	Evaluation - Population	Cost of Care (Moving away from payments based on fee-for-service [FFS] to value-based payments [VBP])	Lisa Schilling
26	Reporting - Population	Hybrid Performance Measure Production - Examples: Controlling High Blood Pressure and Diabetes in Poor Control	Erin Carmichael



# Use Cases

- Focus on key use cases - recommendation
- Provider and Patient Benefit: Prescription Fill
- Provider and Patient Benefit: Screening Panel
- Literature Review supporting above use cases

# Barriers – Legal Perspective

- Discussion item: sharing identified VHCURES data with the HIE
- Statute: <https://legislature.vermont.gov/statutes/section/18/221/09410>
  - Statute (18 V.S.A. § 9410(h)(3)(D)) prohibits public disclosure of any data that contain direct personal identifiers
  - GMCB’s interpretation of its statute is that the statute prevents sharing data that includes personal identifiers (name, address, SSN, etc.) outside of VHCURES
- Green Mountain Care Board Rule and Disclosure Manual
  - Per its Disclosure Rule, the GMCB designates certain VHCURES data as “unavailable” in its Disclosure Manual
  - “Unavailable” data cannot be shared outside of the VHCURES data warehouse under any circumstance per GMCB Rule and Disclosure Manual
- Medicare claims data
  - Medicare data in VHCURES is subject to a DUA between GMCB and CMS. Sharing Medicare claims into HIE would additionally require consent / amendment from CMS.
- Options
  - Change in statute by Legislature and redesignation by GMCB of certain VHCURES data as “restricted” for HIE to receive identified claims data
  - A master patient index and/or other data linkage (GMCB proposed approach)
  - Other options?

“Nonfilling of prescribed medications is a problem of serious concern. Studies of health care costs and utilization associated with medication nonadherence frequently rely on claims data and usually focus on patients with specific conditions. It is estimated that 20%-30% of U.S. prescriptions never get filled and that the lack of filling prescriptions caused about 125,000 deaths and cost the American health care system between \$100 and \$289 billion per year in the 2000s. A more recent study estimates that the annual cost of prescription drug-related morbidity and mortality because of nonoptimized medication therapy, including medication nonadherence, was \$528.4 billion in 2016.”

### Study Takeaway:

“Our study results indicate that having complete medication initiations was associated with lower total and medical costs, concurrently and prospectively. In addition, having complete medication initiations was associated with lower likelihood of health care utilization concurrently and lower likelihood of having any ED visits prospectively. The medication initiation measure, a simple binary marker, can enable population health management programs—especially programs administered by health care providers that have access to both EHR and claims data—to advance targeting their population-level interventions toward subpopulations (e.g., patients with incomplete medication initiations) that can bring the highest savings.”

## Integrating E-Prescribing and Pharmacy Claims Data for Predictive Modeling: Comparing Costs and Utilization of Health Plan Members Who Fill Their Initial Medications with Those Who Do Not

Hsien-Yen Chang, PhD; Hong J. Kan, PhD; Kenneth M. Shermock, PharmD, PhD; G. Caleb Alexander, MD, MSc; Jonathan P. Weiner, DrPH; and Hadi Kharrazi, MD, PhD

### ABSTRACT

**BACKGROUND:** Nonfilling of prescribed medications is a worldwide problem of serious concern. Studies of health care costs and utilization associated with medication nonadherence frequently rely on claims data and usually focus on patients with specific conditions. Past studies also have little agreement on whether higher medication costs associated with higher adherence can reduce downstream health care consumption.

**OBJECTIVES:** To (a) compare the characteristics between people with and without complete medication initiations from a general population and (b) quantify the effect of medication initiation on health care utilization and expenditures with propensity score weighting.

**METHODS:** We conducted a retrospective cohort study using 2012 and 2013 electronic health records (EHR) and insurance claims data from an integrated health care delivery network. We included 43,097 eligible primary care patients in the study. Annual medication fill rates of initial prescriptions in 2012 were defined as the number of filled prescriptions from claims divided by the number of e-prescriptions from EHRs, while excluding all refills. A claim was considered filled if (a) EHR and claims records were from the same drug class; (b) claims occurred between the date of a current EHR order and that of the next EHR order of the same class; and (c) the maximum fill rate was 100%. The 6 annual outcomes included total costs, medical costs, pharmacy costs, being a high-cost “outlier” (in top 5%), having 1 or more hospitalizations, and having 1 or more emergency department (ED) visits. Individuals were classified as either having completed all medication initiations (100% annual filling rate for initiations) or not. We used propensity score weighting to control for baseline differences between complete and incomplete initial fillers. We adopted linear and logistic regressions to model costs and binary utilization indicators for the same year (concurrently) and next year (prospectively).

**RESULTS:** Approximately 42% of the study sample had complete medication initiations (100% filling rate), while the remaining 58% had incomplete initiations. Individuals who fully filled initial prescriptions had lower comorbidity burden and consumed fewer health care resources. After applying propensity score weighting and controlling for variables such as the number of prescription orders, patients with complete medication initiations had lower overall and medical costs, concurrently and prospectively (e.g., \$751 and \$252 less for annual total costs). Complete medication initiation fillers were also less likely to have concurrent health care utilization (OR=0.78, 95% CI=0.68-0.90 for hospitalization; OR=0.77, 95% CI=0.72-0.82 for ED admissions) but no difference in prospective utilization other than for ED visits (OR=0.93, 95% CI=0.87-0.99).

**CONCLUSIONS:** Identifying the subpopulation of patients with incomplete medication initiations (i.e., filling less than 100% of initial prescriptions) is a pragmatic approach for population health management programs to align resources and potentially contain cost and utilization.

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### What is already known about this subject

- Lack of filling prescriptions is a worldwide problem of serious concern and cost the American health care system annually between \$100 and \$289 billion in the 2000s.
- Past studies measuring the cost of nonfilling medications have little agreement on whether higher medication costs associated with higher adherence can reduce downstream health care expenditures.

### What this study adds

- After propensity score weighting and covariate adjustment, complete medication initiations (i.e., filling all initial prescriptions) were associated with lower health care costs concurrently and prospectively.
- After propensity score weighting and covariate adjustment, complete medication initiations were associated with lower likelihood of health care utilization concurrently and lower likelihood of having any emergency department visits prospectively.

Nonfilling of prescribed medications is a worldwide problem of serious concern. The World Health Organization estimates the adherence to long-term therapy for chronic diseases at only 50% in developed countries, including the United States, and even lower rates in developing countries.<sup>1,2</sup> Nonadherence leads to poor health outcomes and increased costs.<sup>1</sup> It is estimated that 20%-30% of U.S. prescriptions never get filled and that the lack of filling prescriptions caused about 125,000 deaths and cost the American health care system between \$100 and \$289 billion per year in the 2000s.<sup>3</sup> A more recent study estimates that the annual cost of prescription drug-related morbidity and mortality because of nonoptimized medication therapy, including medication nonadherence, was \$528.4 billion in 2016.<sup>4</sup>

Past studies have estimated the cost and health care utilization associated with nonfilled medications. One study estimated that among patients with cystic fibrosis, compared with patients with a high composite medication possession ratio (MPR), those with low and moderate MPR were associated with higher concurrent medical costs (\$14,211 and \$8,493)

## The business case for integrating claims and clinical data

By partnering with a smart, secure, and collaborative health data network, providers and health plans can access integrated claims and clinical data and more effectively transition to value-based care

Doctors using advanced health data networks typically see a full list of patients' medications, derived from claims, when they treat them. With this information available, doctors can avoid dangerous drug to-drug interactions when they prescribe new medications. After a visit, they can also follow up and see if a patient actually filled a prescription and is still taking it.

The issue of medication non-compliance – patients not picking up their prescription and taking as directed by their clinician – negatively impacts patients and costs our healthcare system millions of dollars. It's [a leading cause](#) for an estimated 125,000 avoidable deaths each year and \$100 billion annually in preventable healthcare costs. By using integrated claims and clinical data to shine a light on medication patterns, provider organizations are benefiting patients and helping make healthcare more affordable.

The business case for integrating clinical and claims data is clear. Providers, health plans, and patients all benefit from uniting these data sets. By partnering with a smart, secure, and collaborative health data network, providers and health plans can now access integrated claims and clinical data and more effectively transition to value-based care.

### **Claudia Williams**

Claudia Williams is CEO of [Manifest MedEx](#), a California nonprofit health data network. She was previously Senior Advisor, Health Innovation and Technology at the White House where she led data sharing, care transformation and precision medicine efforts.

# Next Steps - Discussion

- Act 167 – recommendation - a plan for a plan
- GMCB Policy – how would we like to proceed?
- Governance discussion – how would we like to proceed?
- VHCURES Quality concerns – how would we like to proceed?

# Literature Review to support the Use Cases

- Direction of Federal Partners
  - [“Clinical and Claims Data Integration” Required for Total Cost of Care/Efficiency Measurement](#)
  - [CMS Advances MyHealthEData with New Pilot to Support Clinicians | CMS](#)



## Options for Consideration

- **Policy:** parameters for attribution; identity management; privacy; an initial model that is a “hub” model – no individual payer to individual provider; financing that includes a CMS funding strategy, state strategy, and private sector strategy; governance, including where it resides & rules for sharing
- **Technology:** technology specifications; hardware and/or software availability (vendors available) for development/operation; provider directory ability to evolve with attribution of patient to provider, provider to clinic, clinic to plan, plan to payer technology specifications; provider/individual identity management/patient matching; connectivity (interfaces) between claims data and clinical data, including APCD and MMIS; data “repository/warehouse”; & analytic tools.
- **Business Processes:** Define/operationalize critical/priority use cases (what data is needed from provider/state/individual, what is the data source, and how is data standardized/validated) and Define within context of what the current state capacities (is there a QE, APCD, or HIE that already performs some of these functions)

### Presentation Takeaway:

Integrated clinical & claims data is required for total cost of care & efficiency measures.

The Office of the National Coordinator for  
Health Information Technology



## “Clinical and Claims Data Integration” Required for Total Cost of Care/Efficiency Measurement

February 24, 2015

Putting the **I** in Health**IT**  
www.HealthIT.gov

Context for Claims & Clinical Aggregation Discussion



- **Current Data Infrastructure for Multi-Payer Value-Based Payment Reform is Inefficient**
- **Providers Need Simplified View of Performance**
- **Centralized Approach Would Improve Business Efficiency & Scalability**
- **Roadmap Needed**
  - Major gap for States: lack of Health IT infrastructure for measuring cross-payer performance
  - Move from an “every payer to every provider” interface approach for claims and clinical data to a “hub/connector”
- **Terminology and Use Cases Must Be Defined**
- **Barriers must be Identified and Overcome**

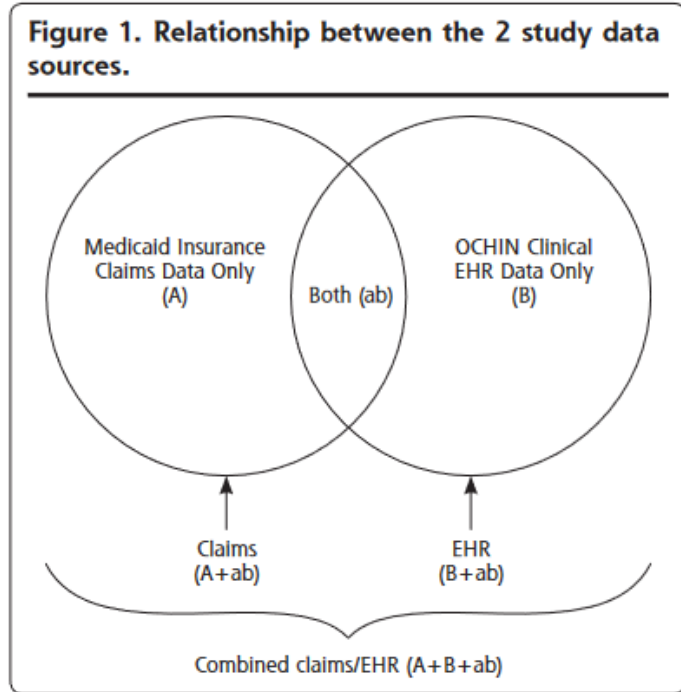
## CMS Advances MyHealthEData with New Pilot to Support Clinicians

The **Data at the Point of Care (DPC)** pilot program will transform healthcare delivery by leveraging Medicare's Blue Button data to **provide clinicians with access to claims data**. The claims data will fill in information gaps for clinicians, giving them a more structured and complete patient history with information like previous diagnoses, past procedures, and medication lists.

Currently, patient information often becomes trapped within health system siloes, preventing patients from accessing their complete health information aggregated into one usable health record. This creates a problem for patients during visits with providers who are looking to obtain the most complete medical history possible for the person they are treating. Doctors are left offering treatment solutions with incomplete patient histories, putting patients at risk and potentially duplicating tests and treatments that can be costly or unnecessary.



# Electronic Health Records vs Medicaid Claims: Completeness of Diabetes Preventive Care Data in Community Health Centers



... the optimal service reporting was obtained when **combining the EHR and claims data** [Figure 1 (A+B+ab)]. When comparing service receipt rates in claims vs EHR data, the rates in EHR data (Figure 1, B+ab) were consistently closer to the combined total than were those from the claims data (Figure 1, A+ab).

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## ABSTRACT

**PURPOSE** Electronic Health Record (EHR) databases in community health centers (CHCs) present new opportunities for quality improvement, comparative effectiveness, and health policy research. We aimed (1) to create individual-level linkages between EHR data from a network of CHCs and Medicaid claims from 2005 through 2007; (2) to examine congruence between these data sources; and (3) to identify sociodemographic characteristics associated with documentation of services in one data set vs the other.

**METHODS** We studied receipt of preventive services among established diabetic patients in 50 Oregon CHCs who had ever been enrolled in Medicaid (N = 2,103). We determined which services were documented in EHR data vs in Medicaid claims data, and we described the sociodemographic characteristics associated with these documentation patterns.

**RESULTS** In 2007, the following services were documented in Medicaid claims but not the EHR: 11.6% of total cholesterol screenings received, 7.0% of total influenza vaccinations, 10.5% of nephropathy screenings, and 8.8% of tests for glycated hemoglobin (HbA<sub>1c</sub>). In contrast, the following services were documented in the EHR but not in Medicaid claims: 49.3% of cholesterol screenings, 50.4% of influenza vaccinations, 50.1% of nephropathy screenings, and 48.4% of HbA<sub>1c</sub> tests. Patients who were older, male, Spanish-speaking, above the federal poverty level, or who had discontinuous insurance were more likely to have services documented in the EHR but not in the Medicaid claims data.

**CONCLUSIONS** Networked EHRs provide new opportunities for obtaining more comprehensive data regarding health services received, especially among populations who are discontinuously insured. Relying solely on Medicaid claims data is likely to substantially underestimate the quality of care.

*Ann Fam Med* 2011;9:351-358. doi:10.1370/afm.1279.

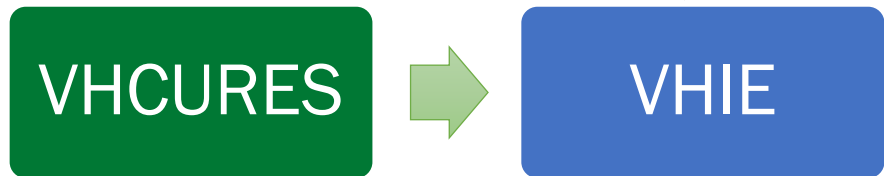
## Study Takeaway:

“The **combined EHR and Medicaid claims data** provided the most complete picture of diabetes services received.”

Best Option

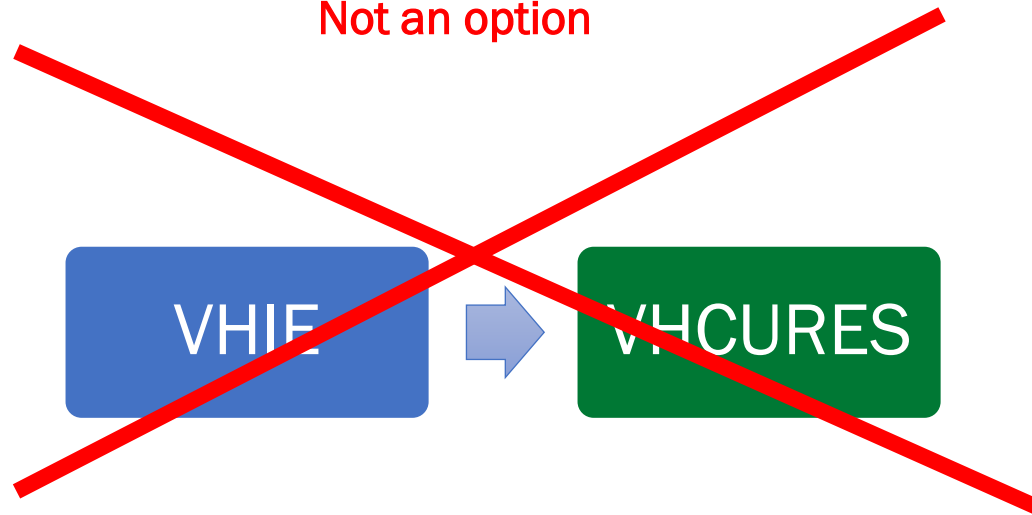


1. PII is transferred (for MPI function)

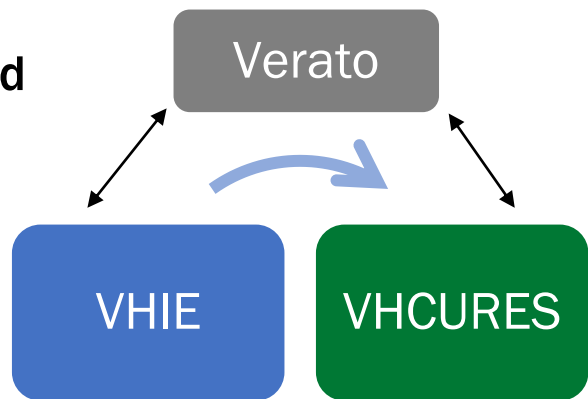


Not an option

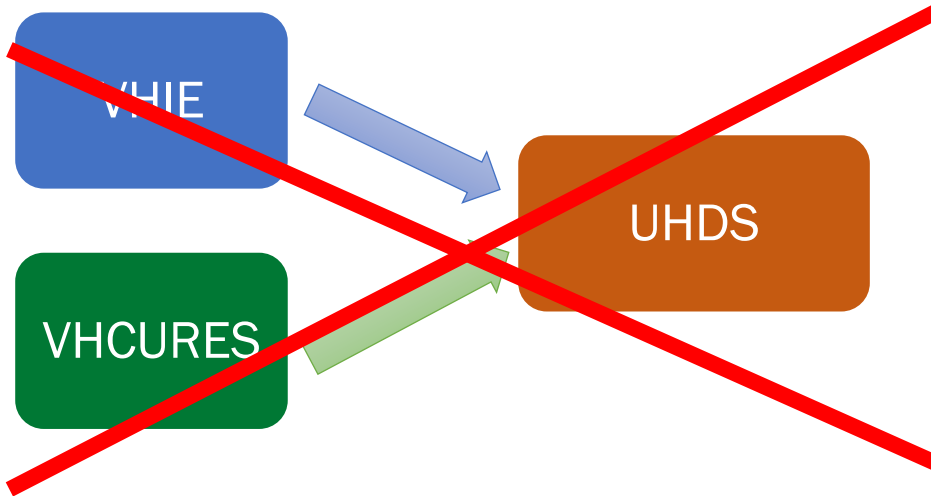
2.



3. No PII is transferred (for MPI function)



4.



Not an option for Point of Care Use cases



Re-identification on demand

May require additional design + development than option #1

Alternative Option

