



HIE
Health Information
Exchange

Maximizing Health Information Exchange in a Podiatric Practice

APRIL 14, 2023

About the Maryland Health Care Commission (MHCC)



WHO WE ARE

- ▶ Independent State regulatory agency

WHAT WE DO

- ▶ Increase the use of data among policymakers, payers, providers, purchasers, and patients to improve the quality, affordability and outcomes of health care delivered in the State

HOW WE HELP

- ▶ Provide timely and accurate information to policymakers, payers, purchasers, providers, and the public on the availability, cost, and quality of health care services



AGENDA

- ▶ Overview of Health Information Technology Landscape
- ▶ A Podiatrist's Perspective
- ▶ CRISP Overview
- ▶ Q&A

Background



- ▶ Health information technology (health IT) consists of:
 - Electronic health record (EHR): electronic version of a patient's health record
 - Health information exchange (HIE): secure exchange of electronic health information
 - Telepodiatry: delivery of podiatry services using telecommunications and related technologies



MHCC's Role in HIE

- ▶ Enabling CRISP to serve as a health data utility (HDU) to support the electronic exchange of clinical, non-clinical, administrative, and public health data to support advanced care delivery, bolster population health, and expand public health reporting
- ▶ As the principal regulator of HIEs in Maryland, MHCC maximizes privacy and security of health care data while promoting the use of electronic health information
- ▶ Harmonizing HIE efforts to ensure that they adhere to privacy and security policies and contribute to the State's health care and public health objectives



Value of Health IT in Podiatry

- ▶ Comprehensive management of health information
- ▶ Increase administrative efficiencies
- ▶ Reduce duplication and waste
- ▶ Streamline practice processes



Drivers for Prioritizing Health IT

- ▶ Value-based care is accelerating and increasing the need for different providers to exchange patient information
- ▶ Health IT is foundational to value-based care
- ▶ Federal and State policies establish programs promoting health IT



Maryland's HDU

- ▶ During the 2022 session, the Maryland General Assembly passed Chapter 296 (House Bill 1127) *Public Health - State Designated Exchange - Health Data Utility* requiring the State-Designated HIE to operate as an HDU for certain purposes
 - Effective October 1, 2022
 - A robust and secure infrastructure for health data that serves as a foundation for knowledge and innovation
 - Requires CRISP to make certain information available to providers and health officials to advance disease control and health equity
 - Tasks MHCC with developing supporting regulations



HDU Importance to Maryland

- ▶ A catalyst to improve health care delivery and public health statewide
 - Reduces current information fragmentation to better serve different patient populations
- ▶ Combines data to enhance data and support inclusive and equitable decision making
 - Aggregating data provides more knowledge and opportunity to better estimate the magnitude of problems, develop appropriate and timely interventions, and better monitor the effectiveness of interventions over time
- ▶ Supports interstate data sharing



Resources

▶ [MHCC Podiatry Learning Network](#)

Podiatry

The Podiatry learning network builds awareness and provides education on a range of topics including health information technology, cybersecurity, and alternative care delivery models for podiatric practices.



Remote Patient Monitoring in a Podiatric Practice

March 2022

The webinar focuses on best practices for selecting remote patient monitoring (RPM) technologies, navigating the payer reimbursement process, and implementing RPM in a podiatric practice.

▶ [Telehealth Virtual Resource Center](#)

THE FUTURE OF WEARABLES IN CARE DELIVERY



More research on the validity and utility of wearables is needed; however, some studies show that wearables help increase patient engagement and give providers more insight into their patients' health and wellness outside of their regularly scheduled visits.^{16,17} Use of wearables can be particularly beneficial for patients with chronic conditions (e.g., diabetes, COPD, cardiovascular disease) who need help cultivating healthy diet, exercise, sleep, and lifestyle habits.^{18,19}

How RPM Benefits Patients

A wide range of patient data, physiological (e.g., vitals, respiration rate, blood glucose levels) and subjective (e.g., well-being, pain level, satisfaction with health, access to healthy food), can be collected using RPM technology. This data can be used to manage a variety of medical conditions, including diabetes, heart disease, dementia, substance abuse, mental health, and weight gain and loss.⁸ Availability and monitoring of physiological and subjective data on a frequent basis provides valuable information about patients' health trends and lifestyles and improves quality of care.⁹ Health trends based on RPM data may provide a more accurate and holistic picture of the patient's health, compared to one-time results administered at a provider's office.¹⁰ Access to real-time data also assists in more timely and effective interventions as providers understand what may be abnormal for a particular patient and quickly decide if clinical support is needed.¹¹

▶ [Health Data Utility](#)



The *Health Data Utility Framework – A Guide to Implementation (Framework)* released in March 2023 is available as a PDF and in an interactive web-based format. The Framework provides guidance on the structure and implementation of HDU models to support multi-stakeholder needs across care and service settings by functioning as a health data resource for treatment, care coordination, quality improvement, and community and public health purposes.



A PODIATRIST'S PERSPECTIVE

CRISP

Chesapeake Regional Information System for our Patients

How I use it and why you should!

Mikel D. Daniels, DPM, MBA, FACFAS, FAPWCA,
FASPS, WCC

As a physician in Maryland, it is important to be aware of the benefits of using CRISP to improve care coordination, reduce medical errors, increase efficiency, and improve patient outcomes. If you are not already using CRISP, I encourage you to learn more about it and consider incorporating it into your practice.



Definitions

CRISP is a non-profit health information exchange (HIE) that connects healthcare providers throughout Maryland and the District of Columbia, allowing them to securely share patient information and improve care coordination.

•An Electronic health information exchange (HIE) allows doctors, nurses, pharmacists, other health care providers and patients to appropriately access and securely share a patient's vital medical information electronically—improving the speed, quality, safety and cost of patient care.

- Avoid readmissions**
- Avoid medication errors**
- Improve diagnoses**
- Decrease duplicate testing**



Benefits of CRISP

- 1. Health Information Exchange (HIE):** CRISP allows us to securely share patient information, including medical history, lab results, and medication lists.
- 2. Patient Record Lookup:** This service allows us to access patient records from other healthcare organizations that participate in CRISP.
- 3. Alerts and Notifications:** CRISP provides real-time notifications when your patients receive care at other organizations.
- 4. Public Health Reporting:** CRISP supports public health reporting, allowing us to report communicable diseases and other public health issues to the appropriate authorities.

Benefits of CRISP

(Continued)

- 1. Improved care coordination:** With CRISP, we have access to a patient's medical history, medication lists, lab results, and more, regardless of where they received care. This allows providers to make more informed decisions and provide better care for their patients.
- 2. Reduced medical errors:** CRISP helps reduce medical errors by ensuring that providers have accurate and up-to-date information about a patient's health status, medications, and allergies.
- 3. Increased efficiency:** With CRISP, we can access patient information quickly and easily, without having to spend time tracking down records from other providers or organizations. This can help save time and improve overall efficiency.
- 4. Improved patient outcomes:** By improving care coordination and reducing medical errors, CRISP can help improve patient outcomes and overall health.



Where do I find CRISP?

Allergies: doxazosin, Lipitor, lisinopril, Nor...

Menu - All

- Provider View
- Results Review
- Orders + Add
- Documentation + Add
- Allergies + Add
- Anesthesia Summary
- Archived Application Data
- Clinical Notes
- Clinical Research
- Copy Auto Text
- CRISP Link**
- Delivery Summary
- Diagnoses and Problems
- Flowsheet and I&O
- Form Browser
- Growth Chart
- Histories
- Interact



HIE InContext

Matched Patients ⓘ

	CRISP ID	Name	Date Of Birth	Gender	Address	
<input checked="" type="checkbox"/>	126058191	[REDACTED]	[REDACTED]	Female	[REDACTED], RANDALLSTOWN, MD 21133	✓
<input type="checkbox"/>	350984082	[REDACTED]	[REDACTED]	Female	[REDACTED], BALTIMORE, MD 21208	✓
<input type="checkbox"/>	353213572	[REDACTED]	[REDACTED]	Female	Unknown	✓

SUBMIT (1)



HIE InContext

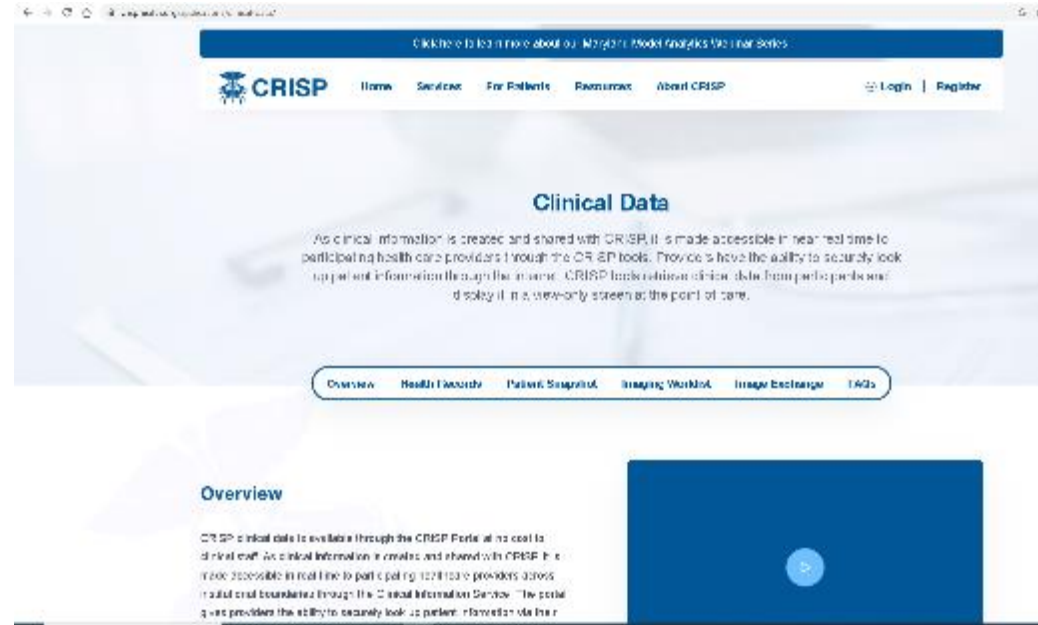
Female | [REDACTED]

HEALTH RECORDS ENCOUNTERS STRUCTURED DOCUMENTS IMMUNIZATIONS

ALL LABORATORY RADIOLOGY CLINICAL NOTES

Health Records

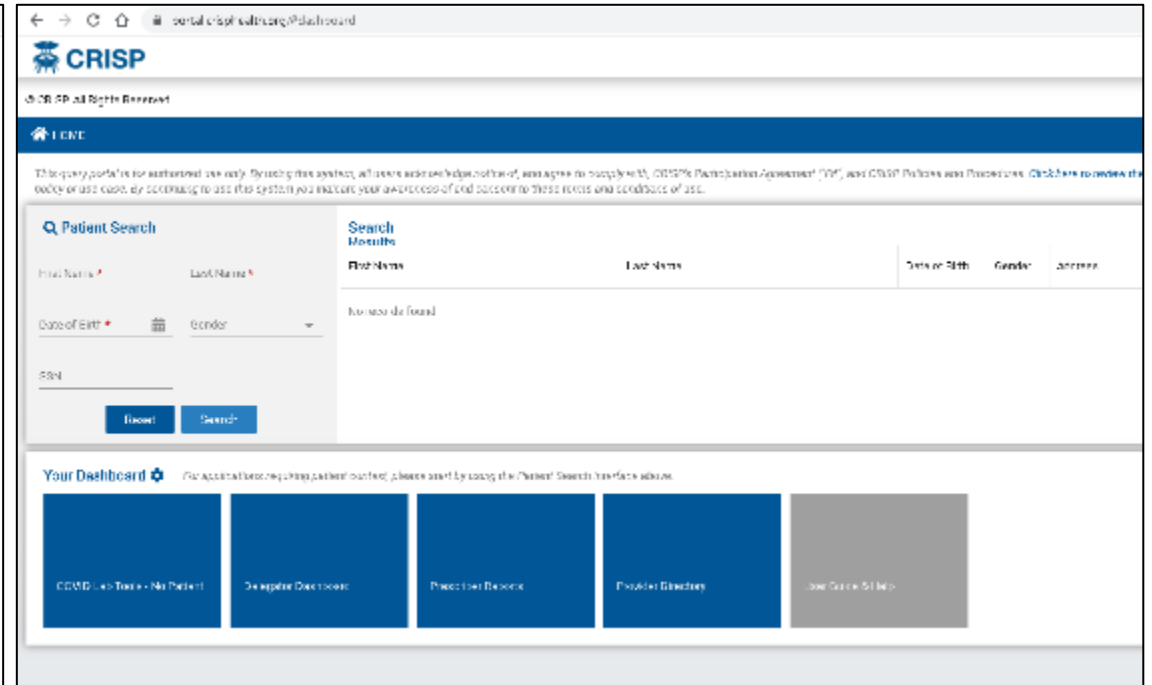
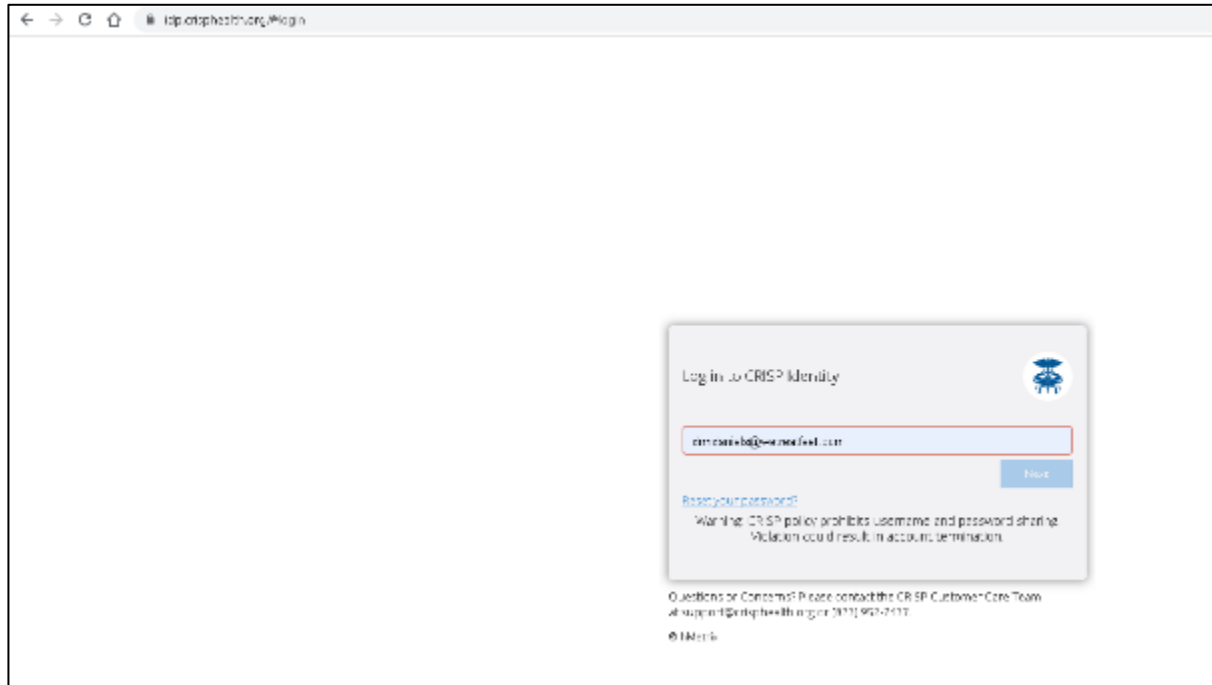
Where do you find CRISP?



www.crisphealth.org/



Where do I find CRISP?



www.crisphealth.org/

Where do I find CRISP?

The screenshot shows the CRISP Home page. At the top, there is a navigation bar with the CRISP logo and the text "CRISP All Rights Reserved". Below this is a "Home" section with a brief introduction. A "Patient Search" section is visible, featuring a search bar and a table of search results. The table has columns for "Patient Name", "Last Name", "DOB", "MID", "DOB", "DOB", "DOB", and "DOB". The first row contains the following data: "C. L. L. L.", "C. L. L. L.", "01/01/1901", "M", "M", "M", "M", "M". Below the search section is a "Your Dashboard" section with five tiles: "COVID Job Tools - for Patients", "Delegate Dashboard", "Provider Dashboard", "Provider Directory", and "View All Settings".

The screenshot shows the CRISP HIE InContext patient profile page for Gilbert Grape. The page is titled "HIE InContext" and includes the patient's name "GILBERT GRAPE" and "Male | Jan 1, 1901". The page is divided into two main sections: "Reports & Applications" and "HIE InContext". The "Reports & Applications" section lists several items: "Clinical Information", "Provider Ratings", "COVID Job Tools", "COVID Job Tools - for Patients", "Provider Directory", and "Delegate Dashboard". The "HIE InContext" section displays medication and provider information. It shows "Average Daily MME" with a value of 83 and a threshold of 14. It also shows "Overlapping Opioid & Benzos" with a value of 5 and a threshold of 10. Other metrics include "Overlapping Opioids" with a value of 46 and a threshold of 3, and "Total Prescribers/Pharmacists" with a value of 2/2 and a threshold of 10. A "Details" button is visible at the bottom right of the HIE InContext section.

How does it help me?

Coding Based on Medical Decision Making

	Straightforward 99202/ 99212	Low 99203/ 99213	Moderate 99204/ 99214	High 99205/ 99215
Problem	1 self-limited or minor problem	<ul style="list-style-type: none"> • 2 or more self-limited or minor problems, OR • 1 stable chronic illness, OR • 1 acute, uncomplicated illness 	<ul style="list-style-type: none"> • 1 or more chronic illness with exacerbation, progression, or side effects for treatment, OR • 2 or more stable chronic illnesses, OR • 1 undiagnosed new problem with uncertain prognosis, OR • 1 acute illness with systemic symptoms 	<ul style="list-style-type: none"> • 1 or more chronic illness with severe exacerbation, progression, or side effects of treatment, OR • 1 acute or chronic illness posing a threat to life or bodily function
Data	Minimal or none	Limited: Must meet the requirement of at least 1 of 2 categories Category 1: Test and documents, any combination of 2 from the following: <ul style="list-style-type: none"> • Review of prior external note(s) from each unique source • Review of the result(s) of each unique test • Ordering of each unique test Category 2: Assessment requiring an independent historian(s)	Must meet at least 1 of 3 categories: Category 1: Any combination 3 of 4 below: <ul style="list-style-type: none"> • Review of prior external note(s) from each unique source • Review of the result(s) of each unique test • Order each unique test • Assessment requiring an independent historian(s) Category 2: Independent interpretation of tests performed by another physician Category 3: Discussion of management or test interpretation with external physician/other qualified health care provider not separately reported	Must meet at least 2 of 3 categories: Category 1: Any combination 3 of 4 below: <ul style="list-style-type: none"> • Review of prior external note(s) from each unique source • Review of the result(s) of each unique test • Order each unique test • Assessment requiring an independent historian(s) Category 2: Independent interpretation of tests performed by another physician Category 3: Discussion of management or test interpretation with external physician/other qualified health care provider not separately reported
Risk	Minimal risk of morbidity from additional diagnostic testing or treatment	Low risk of morbidity from additional diagnostic testing or treatment	Prescription drug management; diagnosis or treatment significantly limited by social determinants of health	Examples only: <ul style="list-style-type: none"> • Drug therapy requiring intensive monitoring for toxicity • Decision regarding not to resuscitate or de-escalate care due to poor prognosis

Final decision based on 2 out of the 3 elements at the same level or higher

2/2



Thank you!



Questions?

Email: drmdaniels@wetreatfeet.com





CRISP OVERVIEW



State-Designated HIE Overview and Services

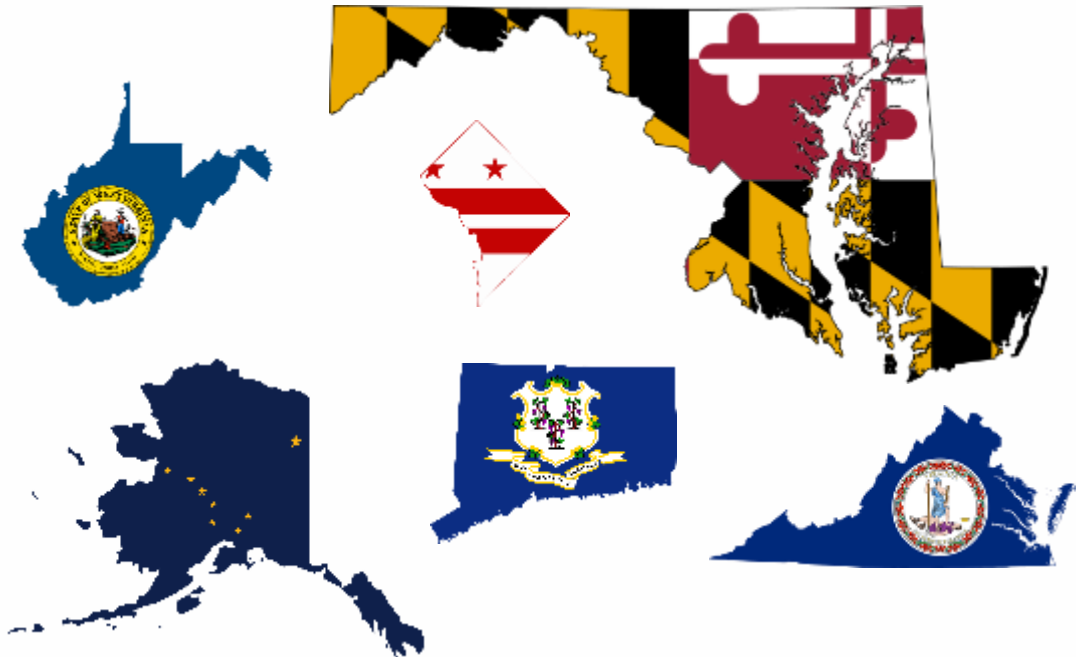
7160 Columbia Gateway Drive, Suite 100
Columbia, MD 21046
877.952.7477 | info@crisphealth.org
www.crisphealth.org



About CRISP

State Designated Health Information Exchange (HIE) serving Maryland, and in affiliation with the HIEs in West Virginia, the District of Columbia, Connecticut, Alaska, and Virginia.

Vision: To advance health and wellness by deploying health information technology solutions adopted through cooperation and collaboration



Guiding Principles

1. Begin with a manageable scope and remain incremental.
2. Create opportunities to cooperate even while participating healthcare organizations still compete in other ways.
3. Affirm that competition and market-mechanisms spur innovation and improvement.
4. Promote and enable consumers' control over their own health information.
5. Use best practices and standards.
6. Serve our region's entire healthcare community.

Implementation Timeline

First Steps

CRISP begins at a meeting between John Erickson and the CIOs of Maryland's three largest hospital systems, asking how to make medical records for seniors available when they visit the hospital.

Utilizing Services

Every hospital in Maryland is connected. Clinicians begin using the Query Portal, and the team develops the Encounter Notification Service.

Supporting Partnerships

The initial research use case goes live. Program Administration to support care redesign programs begins and patient-level Medicare claims become available. The InContext app goes live in Epic. CRISP partners with the West Virginia Health Information Exchange (WVHIN) to share infrastructure.

Health Data Utility

Real-time hospital utilization reports are launched, COVID testing reports and notifications are introduced, immunization tools go live, and new data types are shared through the HIE. The Insights data lake and analytics are leveraged extensively.

2006

2008

2010

2012

2014

2016

2018

2020

2022

Getting Connected

CRISP is named Maryland's designated statewide HIE through a competitive process and the first provider organizations connect. The HSCRC awards a grant and CRISP wins federal Regional Extension Center funding.

Expansion

Claims-based reports are produced, the Prescription Drug Monitoring Program and Health Benefits Exchange provider directory go live, the first Washington D.C. hospital connects, and health plans begin accessing records through a specialized portal, and CRISP begins routing CCDAs at hospital discharge.

Essential Infrastructure

DC Medicaid claims data is made available. New open source HIE stack is implemented (June) first county EMS are connected (Oct) CRISP begins responding to national network queries. Connecticut's HIE, Connie, partners with CRISP.



CRISP Services

1. POINT OF CARE: Clinical Portal & InContext Information

- Search for your patients' prior health records (e.g. labs, radiology reports, etc.)
- Determine other members of your patient's care team
- View external records in a SMART on FHIR app inside your EHR

2. CARE COORDINATION: Encounter Notifications

- Be notified when your patient is hospitalized in any regional hospital
- Enhance workflows across multiple care settings and teams

3. POPULATION HEALTH REPORTS: CRISP Reporting Services (CRS)

- Use administrative and clinical data to design and measure interventions

4. PROGRAM ADMINISTRATION:

- Making policy discussions more transparent and informed
- Disseminating evidence-based best practices and technology

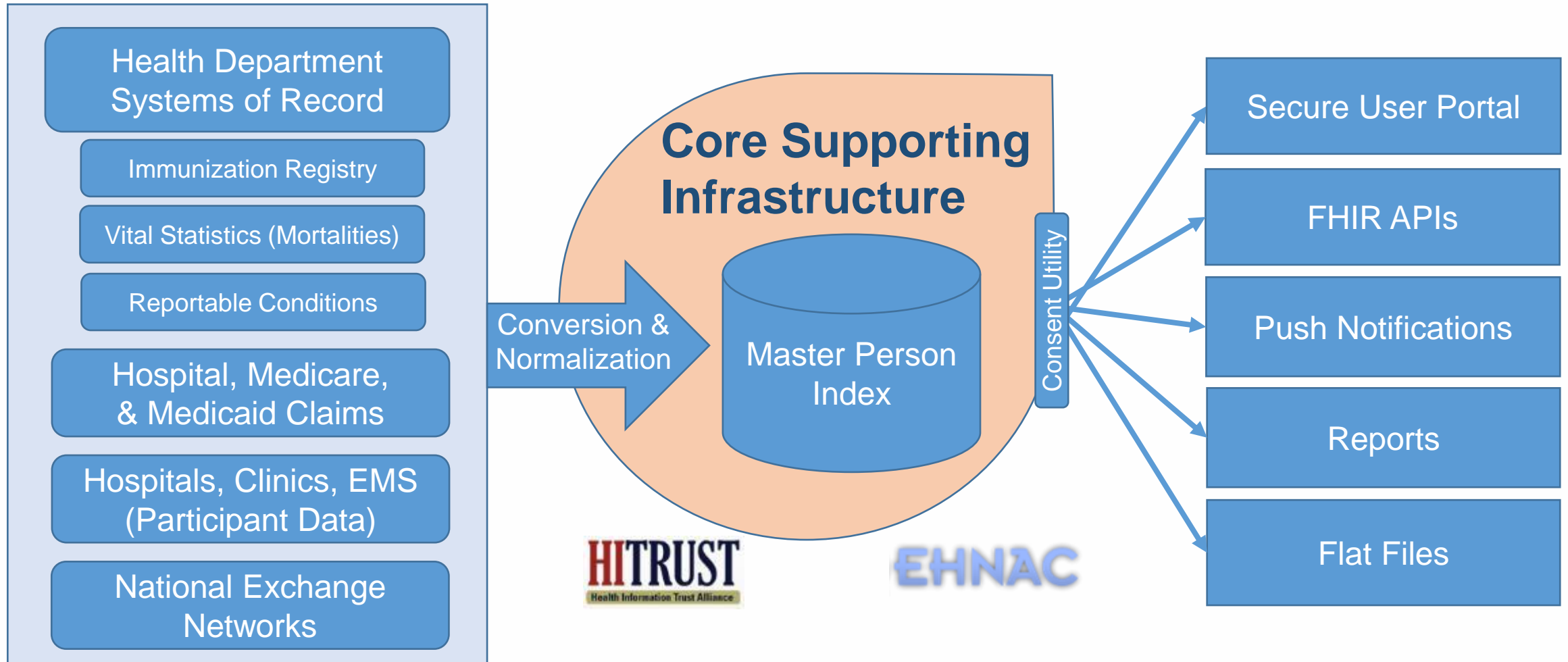
5. PUBLIC HEALTH DATA UTILITY:

- Deploying services in partnership with health officials
- Providing information and services to state and local health departments
- Supporting COVID-19 response efforts

Service	Typical Week
Data Delivered into EMRs	1,500,000
Patients Manually Searched	205,000
ENS Messages Sent	3.5 mil
Clinical Documents Processed	675,000
Portal Users	107,000
Live ENS Practices	1,580
Reports Accessed	2,750
Report Users	2,000



Technology Components





Privacy & Security

- Opt-out model gives patients the right to block electronic access to their information shared through the HIE
 - All participating providers must update Notice of Privacy Practices and make patient education materials available
 - If a patient opts out, no information will be available through the portal and notifications about hospitalizations for this patient will be blocked
 - EXCEPTION: By Maryland law, opt-outs do not apply to PDMP and select Public Health information, and this data will still be visible in a patient's record
- Annual audits and reports as required by State Designation Agreement, regulations, and best practices
 - SOC 2 Type 2
 - HIPAA & COMAR Compliance
 - Cybersecurity & Social Engineering Testing
- Adhering to industry best security standards
 - EHNAC HIE accredited since Feb. 2017
 - HITRUST certificated since Nov. 2017
- Continuous privacy monitoring
 - Protenus software monitors query activity to identify potentially suspicious activity outside of a permitted use case





CRISP

Prescription Drug Monitoring
Program (PDMP)

&

Clinical Information



Point of Care: Prescription Drug Monitoring Program

Mission (not formally adopted):

The Maryland PDMP collects controlled dangerous substance (CDS) prescription dispensing information and enables authorized users' access to these data for the purpose of improving the health and safety of Maryland patients and the public.

Basic Description of the Maryland PDMP:

- Secure, state-wide, electronic database
- Contains Schedule II-V pharmaceutical controlled dangerous substance (CDS) Rx dispensed in Maryland
- Rx data can be disclosed for clinical, investigative and research/pub education purposes as allowed by law





Point of Care: Prescription Drug Monitoring Program

← HIE InContext Anna Cadence
Female | Nov 16, 1981

ADVISORIES PDMP

No Clinical Alerts

Medications

Medication	State	Date Filled ↓	Date Written	Days Supply	Quantity Dispensed	MME/Day	Prescriber	Pharmacy Name	Payment Method
oxyCODONE HCl 5 MG TABS	MD	2022-07-15	2022-07-15	30	60	15	HOSE PHARMACIES, INC.	WAL-MART PHARMACY 10-2279	—
Zubsolv 8.6-2.1 MG SUBL	MD	2022-07-11	2022-07-11	15	45	—	DUNDALK PHARMACY	WAL-MART PHARMACY 10-2279	—
Nucynta ER 150 MG TB12	MD	2022-07-01	2022-07-01	30	90	180	WALGREEN CO.	WAL-MART PHARMACY 10-2279	—
oxyCODONE HCl 5 MG TABS	MD	2022-06-15	2022-06-15	30	60	15	MARYLAND CVS PHARMACY, L.L.C.	WAL-MART PHARMACY 10-2279	—
ALPRAZolam 0.5 MG TABS	MD	2022-04-08	2022-04-08	30	60	—	MARYLAND CVS PHARMACY, L.L.C.	WAL-MART PHARMACY 10-2279	—
oxyCODONE HCl 5 MG TABS	MD	2022-02-26	2022-02-25	30	60	15	MARYLAND CVS PHARMACY, L.L.C.	WAL-MART PHARMACY 10-2279	—
Zubsolv 8.6-2.1 MG SUBL	MD	2022-02-17	2022-02-17	15	45	—	—	WAL-MART PHARMACY 10-2279	—
ALPRAZolam 0.5 MG TABS	MD	2022-02-07	2022-02-05	30	60	—	DUNDALK PHARMACY	WAL-MART PHARMACY 10-2279	—
oxyCODONE HCl 5 MG TABS	MD	2022-02-03	2022-02-03	30	60	15	—	WAL-MART PHARMACY 10-2279	—
Zubsolv 8.6-2.1 MG SUBL	MD	2022-02-01	2022-02-01	15	45	—	WAL-MART PHARMACY 10-2279	DUNDALK PHARMACY	—
HYDRomorphine HCl 4 MG TABS	MD	2022-01-28	2022-01-28	20	120	96	WALGREEN CO.	DUNDALK PHARMACY	—
Zubsolv 8.6-2.1 MG SUBL	MD	2022-01-14	2022-01-14	15	45	—	WAL-MART PHARMACY 10-2279	DUNDALK PHARMACY	—

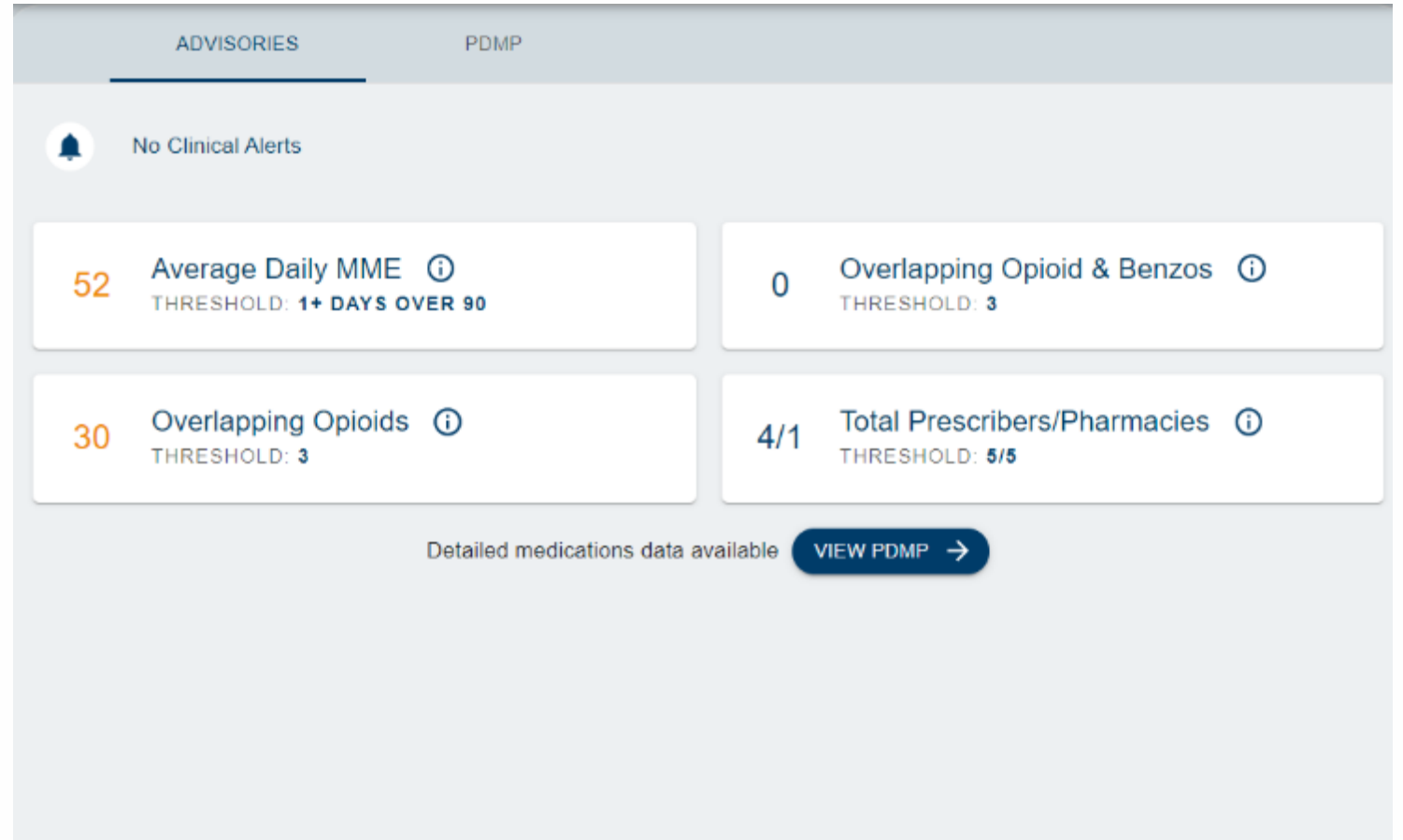
Powered by CRISP



PDMP: Advisories

In addition to the PDMP data, common PDMP advisories are available to support providers:

- Average Daily MMEs
- Overlapping Opioids and Benzodiazepines
- Overlapping Opioids
- Total Prescribers & Pharmacies





PDMP: Overdose Data

HIE InContext

GILBERT GRAPE

Male | Jan 1, 1984 | Probable

4145 Earl C Adkins Dr. River, WESTMINSTER, WV 26000 | No Infection Control Alerts | Next of Kin | VIEW

ADVISORIES | PDMP

93 Average Daily MME ⓘ THRESHOLD: 1+ DAYS OVER 90	5 Overlapping Opioid & Benzos ⓘ THRESHOLD: 3
14 Overlapping Opioids ⓘ THRESHOLD: 3	2/2 Total Prescribers/Pharmacies ⓘ THRESHOLD: 5/5

Detailed medications data available | [VIEW PDMP →](#)

Clinical Alerts ⓘ

MMC (2020-02-17)
Patient may have experienced a controlled substance related event

Clinical Alerts ⓘ

BSB (2019-07-25)
Patient may have experienced a controlled substance related event on 2019-07-25 at Bon Secours Hospital. Discharge Diagnosis: T40.2X1A (Poisoning by opium, intentional, initial) (Patient may have experienced an overdose even on 2019-01-20 20:30 at BSB.). Admit Reason: Overdose on Controlled Dangerous Substance. There is no longer a training requirement to obtain a waiver to prescribe buprenorphine for treatment of OUD; please visit Maryland Addiction Consultation Services (<https://www.marylandmacs.org/New-HHS-Practice-Guidelines/>) for more information.

Powered by CRISP



Clinical Information



Clinical Information

Patient data includes:

- Labs
- Radiology Reports+Image (where available)
- Clinical Notes
- Immunizations
- Structured Documents (CCDAs)
- **All data can be printed/downloaded**

The screenshot shows the HIE InContext interface for patient Gilbert Grape, born Jan 1, 1984. The interface includes a navigation bar with tabs for HEALTH RECORDS, ENCOUNTERS, STRUCTURED DOCUMENTS, and IMMUNIZATIONS. Below this, there are filters for LABORATORY, RADIOLOGY, and CLINICAL NOTES. The main content area displays a table of Health Records with columns for Date Collected, Source, Description, and Provider. A 'Hide Home Facility Data' toggle is present above the table.

Date Collected	Source	Description	Provider
2023-02-14	Washington Adventist Hospital	XR Chest 1 View	1234567890 Naicisyhp6 Znaicisyhp6
2023-02-14	Washington Adventist Hospital	CBC	99996 PHYSICIAN TEST
2023-02-14	Washington Adventist Hospital	ED Note-Physician	G0163 Naicisyhp6 Znaicisyhp6
2023-02-14	Washington Adventist Hospital	Progress Note-Physician	G0163 Naicisyhp6 Znaicisyhp6
2023-02-14	Washington Adventist Hospital	History and Physical	G0163 Naicisyhp6 Znaicisyhp6
2023-02-01	Shady Grove Adventist Hospital	ED Note-Physician	G0163 Naicisyhp6 Znaicisyhp6
2023-02-01	Shady Grove Adventist Hospital	XR Chest 1 View	1234567890 Naicisyhp6 Znaicisyhp6
2023-02-01	Shady Grove Adventist Hospital	Progress Note-Physician	G0163 Naicisyhp6 Znaicisyhp6
2023-02-01	Shady Grove Adventist Hospital	History and Physical	G0163 Naicisyhp6 Znaicisyhp6



Clinical Information – Labs

Available Information:

- Lab Results, including cultures

Benefits:

- Historical data
- More complete patient history

The screenshot displays the HIE InContext interface for a patient named GILBERT GRAPE. The main window shows a list of health records with a date filter set to 2023-02-14. A modal window is open, displaying the results for a CBC (Complete Blood Count) test performed on 2023-02-14. The test name is 99986 PHYSICIAN TEST. The results table shows various hematology parameters with their respective values, ranges, and statuses. Two results are highlighted with orange flags, indicating abnormal values: RBC NO. BLD AUTO (4.55 x10(6)/mCL) and HCT VFR BLD AUTO (40.00 %).

Reported (ET)	Name	Result	Range	Status
2023-02-14 13:03	HGB BLD-MCNC	15.00 g/dL	13.70 - 17.50	final
2023-02-14 13:03	Platelets.reticulated NFr Bld Auto	1.00 %	0.00 - 3.00	final
2023-02-14 13:03	MCH RBC QN AUTO	28.20 pg	25.70 - 32.20	final
2023-02-14 13:03	WBC NRBC COR NO. BLD AUTO	6.20 x10(3)/mCL	4.20 - 9.10	final
2023-02-14 13:03	RBC NO. BLD AUTO	4.55 x10(6)/mCL	4.63 - 6.08	final
2023-02-14 13:03	HCT VFR BLD AUTO	40.00 %	40.10 - 51.00	final
2023-02-14 13:03	MCV RBC AUTO	90.00 fL	79.00 - 92.20	final



Clinical Information – Radiology

Available Information:

- Radiology Reports
- Diagnostic Quality Images from all MD hospitals and over a dozen outpatient radiology centers

Benefits:

- Comparison images
- Reduce duplicative imaging

The screenshot displays the HIE InContext interface. The main window is titled "GILBERT GRAPE". The left sidebar shows "HEALTH RECORDS" with tabs for "ALL" and "LABORATORY". A "Health Records" section is visible with a "Hide Home Facility Data" button and a "Date Collected" dropdown menu. The main content area shows a list of records with dates: 2023-02-14, 2023-02-01, 2022-05-10, 2022-05-18, and 2022-05-18. A modal window titled "XR Chest 1 View" is open, showing patient information: "1234567890 Naicisyhp6 Znaicisyhp6" and "Date Collected: 2023-02-14". The report text includes: "Test results for Josh", "CLINICAL HISTORY: .", "COMPARISON: None.", "TECHNIQUE: Portable 1 view Chest X-Ray.", "FINDINGS: Lungs/Pleura: The lungs are clear and expanded. There is no demonstrated pleural abnormality. Heart/Mediastinum: Normal size heart. . . Bones: Normal. Lines/tubes: None. Other: Normal.", "IMPRESSION: Normal examination of the chest.", "***** Final *****", "Dictated: 02/14/2023 1:00 pm", "Signed By: Lester , Elizabeth", and "Signed (Electronic Signature): 02/14/2023 1:00 pm".



Clinical Information – Clinical Notes

Available Information:

- Clinical Notes
 - D/C Notes
 - Progress Notes
 - H&Ps
 - Consult Notes
 - And more!

Benefits:

- Improved medical history
- Enhanced care coordination

The screenshot displays the HIE InContext interface. On the left, a sidebar contains navigation icons. The main area shows a list of 'HEALTH RECORDS' with columns for 'Date Collected' and a list of dates from 2023-03-16 to 2022-05-05. A modal window titled 'GILBERT GRAPE' is open, displaying a 'Progress Note-Physician' for patient 'G0163 Naicisyhp6 Znaicisyhp6' collected on 2023-02-14. The note content includes: '*** Image not supported for this White Oak Medical Center output type ***', address '11890 Healing Way Silver Spring, MD 20904', patient name 'Patien GRAPE, GILBERT TESTPATIENT', MRN '(wa)08247059', location 'Test WO; 9970; 01', FIN '47349267', admit/disc '2/14/2023', and attending physician 'Znaicisyhp6, Naicisyhp6'. The document is titled 'Progress Note-Physician', status is 'Auth (Verified)', performed by 'Abebe, Meskerem (2/14/2023 12:18 EST)', and authenticated by 'Abebe, Meskerem (2/14/2023 12:18 EST)'. It also shows 'Readmission Risk: LOW (02/11/2023 22:30)', 'History/Review of Systems: test', 'Objective: Vitals & Measurements & Measurements: T: 36.5C(Oral) HR: 78(Apical) BP 130 /81', and 'Antibiotics: No Active Anti-Infectives Inpatient Medication Orders: No qualifying data available'.



Clinical Information: Care Coordination

HIE InContext Gilbert Grape
Other | Jan 1, 1984

CARE TEAM CARE ALERTS REFERRAL HISTORY ADVANCE DIRECTIVES

Care Team

Source	Care Program ↓	Provider	Role	Start Date	Last Updated
YMCA of Metro Washington	ENS_YMCAMWSH	Dr. Smith	Primary Care Physician	2021-10-04	—
YMCA of Metro Washington	ENS_YMCAMWSH	Cash	Care Manager	2021-10-04	—
WIC	ENS_WICORG	Cash	Care Manager	2021-07-15	2021-07-15
WIC	ENS_WICORG	Dr. Smith	Primary Care Physician	2021-07-15	2021-07-15
St. Agnes Referrals	ENS_STAGREF	Dr. Smith	Primary Care Physician	2021-10-04	—
St. Agnes Referrals	ENS_STAGREF	Cash	Care Manager	2021-10-04	—
Medstar Family Choice Referrals	ENS_MSFCREF	Dr. Smith	Primary Care Physician	2021-10-04	—
Medstar Family Choice Referrals	ENS_MSFCREF	Mouse	Care Manager	2021-10-04	—
LifeBridge Health Referrals	ENS_LIMOCL	Cash	Care Manager	2021-07-29	2021-07-29
LifeBridge Health Referrals	ENS_LIMOCL	Dr. Smith	Primary Care Physician	2021-07-29	2021-07-29
Lifebridge Food Project	ENS_LBFOODPR	Dr. Smith	Primary Care Physician	2021-10-04	—
Lifebridge Food Project	ENS_LBFOODPR	Cash	Care Manager	2021-10-04	—

Patient data includes:

- **Care Team** – Who else has a treatment relationship with the patient?
- **Care Alerts** – Is there critical information I should know about the patient?
- **Referral History** – Has the patient been referred to any CBOs or other programs (ex. DPP)?
- **Advance Directives** – Does the patient have advance care planning documents completed via AD Vault?



Clinical Information: Social Needs

Patient data includes:

- Social Needs Assessments
- Conditions (z-codes)

HIE InContext Gilbert Grape

ASSESSMENTS

Assessments

Use Home Facility Data

Date ↓

2023-03-06

2022-06-20

2022-06-20

2022-06-13

2022-01-03

2022-01-03

2021-06-23

2021-06-22

2021-06-21

2021-06-21

2021-06-17

2021-06-16

Assessments

Priority Partners Referrals

2023-03-06

Living Situation

What is your living situation today?

I have a steady place to live

Think about the place you live. Do you have problems with any of the following? CHOOSE ALL THAT APPLY

Mold

Food

Transportation

Utilities

Safety

HIE InContext Gilbert Grape

Other | Jan 1, 1984

ASSESSMENTS CONDITIONS

Conditions

Date ↓	Source	Z-Code	Description
2022-01-27	ARS	Z59.1	Inadequate housing
2022-01-25	ARS	Z56.0	Unemployment, unspecified
2021-09-30	ARS	Z60.2	Problems related to living alone
2021-07-01	ARS	Z63.4	Disappearance and death of family member



Care Coordination



Care Coordination: Encounter Notifications

- Real-time or batch alerts to appropriate providers based on treatment and care management relationships
- Interactive user interface within CRISP Portal or messages delivered into EHRs
- ENS subscription information (a patient's Care Team) is displayed at the point of care through Portal or In-Context

Notifications

Received Time ▾ Newest ▾ Last 180 Days ▾ All Filters

CRISP DEMO ▾ Status: All ▾ 1 - 43 ▾ of 43 << < > >> ↻ ⬇

Name	MRN	Event Time	Facility	Patient Class	Event Type	Alert Type	Status
Demo2, Panera Male, 69 years	789098762	04/25/2023 08:12 AM	MedStar Good Samaritan hospital	Inpatient	Discharge	ENS PROMPT	Not Started ▾
Demo3, Solar Male, 68 years	678456341	04/29/2023 12:00 PM	Labcorp	Outpatient	Test Result	COVID-19 Rule	Not Started ▾
Demo2, Panera Male, 69 years	789098762	04/02/2023 10:00 AM	Cabell Huntington Hospital	Outpatient	Registration	ENS PROMPT	Not Started ▾
Demo, Gail Female, 70 years	210404861	04/15/2023 04:00 PM	WV MedExpress	Outpatient	Registration	ENS PROMPT	Not Started ▾
Demo2, Panera Male, 69 years	789098762	04/19/2023 09:05 PM	MD NEDSS	Outpatient	Test Result	COVID-19 Rule	Not Started ▾
Demo1, Coconut Female, 66 years	180034567	04/12/2023 09:05 AM	MD NEDSS	Outpatient	Test Result	COVID-19 Rule	Not Started ▾



Care Coordination: ENS Smart Alerts

- CRISP can now provide real-time ENS alerts that notify a patient's care team when their high-risk patients have hospital encounters for specific conditions (e.g. COVID-19, CHF, Asthma), procedures (e.g. Mammography, Joint Replacement) or key lab tests resulted (e.g. COVID-19, Pregnancy, Pre-Diabetes).
- The alerts leverage CPT, ICD10 and LOINC coding standards to identify specific healthcare events and alert the patient's care team for improved care coordination, reduced readmissions, and a better patient experience.
- CRISP alerts are delivered within a provider's workflow and are highly configurable, so users receive actionable data.

Alert Category	Alert Type	Description
Condition Specific	End Stage Renal Disease (ESRD)	Notification that a patient is diagnosed with End Stage Renal Disease.
Care Coordination	Readmission	Notification that a patient has a hospital readmission.
Condition Specific	Diabetic Ketoacidosis (DKA)	Notification that a patient with Diabetes has a Diabetic Ketoacidosis event.
Condition Specific	COVID-19+	Notification that a patient is diagnosed with COVID-19.
Care Coordination	Immunization Alert	Notification that a patient misses a routine immunization.
Care Coordination	Pregnancy Lab Alert	Notification that a patient has a positive pregnancy test.
Care Coordination	LANE Diagnosis Alert	Notification that a patient has an Emergency Room visit for a low-acuity condition.
Care Coordination	Death Notice	Notification that a patient has expired.
Care Coordination	Timely Follow-up	Notification that a patient with a chronic condition has had a hospital encounter.



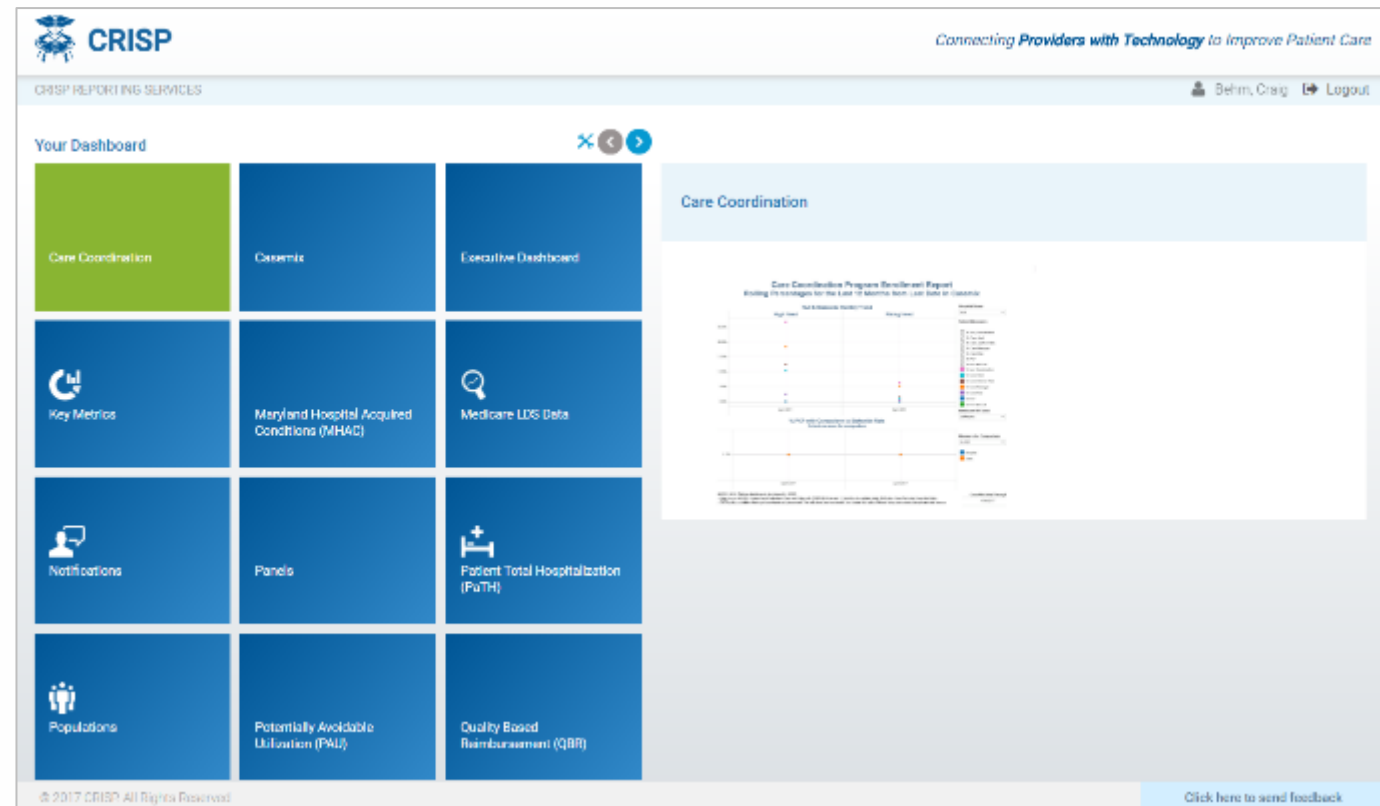
Program Administration

CRISP Reporting Services (CRS)



Population Health: CRISP Reporting Services

- Dashboards from administrative data to support high-needs patient identification, care coordination, and progress reporting
- Primary data sets are hospital casemix and Medicare claims and claim line feed (CCLF)
- Different levels of patient data available for hospitals based on HSCRC payment requirements and Total Cost of Care Model participation
- There are over **600 active users** viewing **85 reports** over **2,000 times per month**

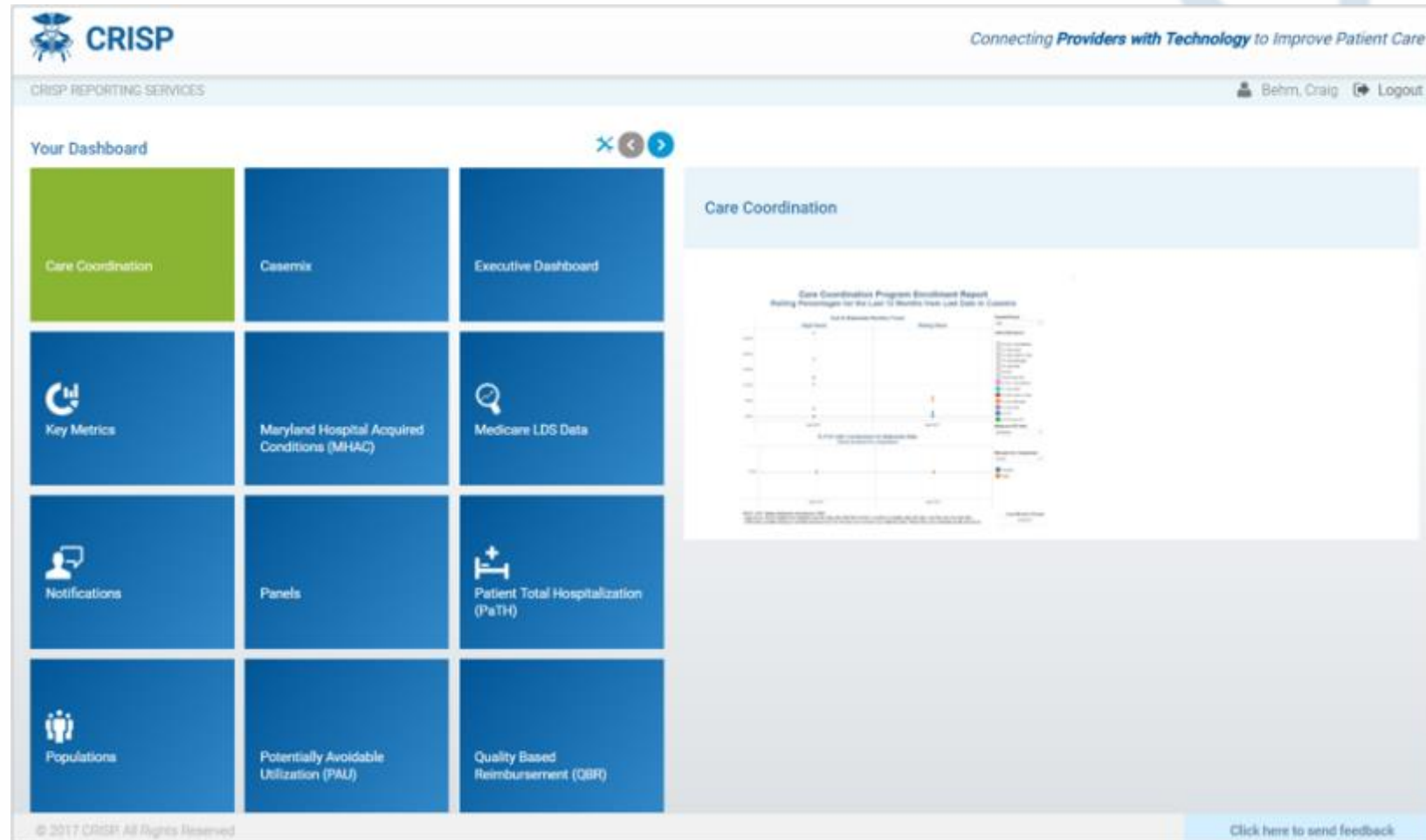




CRISP Reporting Services

Dashboards from casemix and Medicare data to support high-needs patient identification, care coordination, and progress reporting

Access via
reports.crisphealth.org





Available Reports

Hospital Panel Enrollment Dashboards

- Enables users with an ENS panel to monitor cost & utilization of their entire panel

Pre/Post Analysis

- Allows users to monitor utilization prior to and after an intervention
- Visit Level Pre/Post Analysis
 - Provides visit level details regarding patient hospital events



Public Health Data Utility



Public Health: Health Data Utility

HB1127 requires the State-Designated HIE (CRISP) to operate as a Health Data Utility (HDU) for the State. Purposes include:

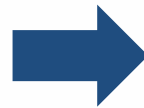
1. The collection, aggregation, and analysis of clinical information, public health data, and health administrative and operations data to assist the Department, local health departments, the Commission, and the Health Services Cost Review Commission in the evaluation of public health interventions and health equity;
2. The communication of data between public health officials and health care providers to advance disease control and health equity; and
3. The enhancement and acceleration of the interoperability of health information throughout the State.



Key Pillars of a Health Data Utility

Services

- Enrich Data
 - Link disparate data sets
 - Use multiple sources to fill gaps
 - Improve data feeds
 - Surface key insights
- Distribute Information
 - Create visualizations
 - Control access levels
 - Push individual clinical records
 - Share analytic files
- Enable Interventions
 - Flag patients at the point of care
 - Notify appropriate end users
 - Share relationships between organizations

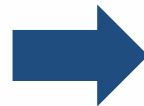


Value

All data becomes more useful when it is linked, normalized, deduplicated, and cleansed within a single analytics engine



User experience is enhanced and usage increases when a single entity is responsible for governance and distribution



Alignment between population level reports and actionable individual experiences is more likely to result in positive change



Public Health Infrastructure

CRISP helps state and local systems coordinate with each other within the states, enhance the data with up-to-date demographic information, add clinical data, help communicate between states, and distribute data to downstream users.

Selected recent successes

- Secure shared COVID reporting portal for analytics
- Scalable contact tracing workflow for COVID and MPOX
- Centralized surge response through bed occupancy
- COVID state reporting
- Vaccination data to providers and downstream users (such as Baltimore City Schools for school readiness)
- Interoperability between health and other sectors
- EMS data at the point of care



Health Equity/Social Determinants of Health

CRISP is enhancing the focus on health equity through enhancing data with race/ethnicity, and building an interoperable SDOH suite of tools to help providers support their patients with social needs and connect with community providers.

Selected Recent Successes

- Race/Ethnicity enrichment for COVID testing, immunizations, etc.
- SDOH referrals between clinicians and community organizations
- Interoperability with third-party social needs vendors
- Social needs clearly visible in portal (assessments, z-codes)



Near-term HDU Activities

- Leverage existing data feeds for **multiple use cases**
 - Hospital HL7 can be aggregated for public health dashboards
 - Medicaid claims can be shared at the point of care
 - Medicaid redetermination support
- Support collaborative governing bodies to **share ideas**, best practices, and recommendations
 - Groups that don't routinely interact get the opportunity
 - Diverse stakeholders can make the case to share – or withhold! – information
- Launch pilots by leveraging existing infrastructure and staff; expand or stop based on **real-world results**
 - Push suspected overdose events to a local health department to try new outreach programs
 - Try sending referrals from primary care practices to community-based organizations



CRISP

Resources

Training materials, recorded webinars, and patient education flyers can be found at: <https://crisphealth.org/>



CRISP

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QUESTIONS