



**CRISP**

# **HIE Services: Moving From Volume to Value**

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# About CRISP

**Regional Health Information Exchange (HIE)** serving Maryland and the District of Columbia, and collaborating with Delaware, Northern Virginia, Pennsylvania, and West Virginia

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

Data source or attribute	#
Live hospitals	91
Live clinical data feeds	261 (lab, rad, ADT, CCD)
Live ENS practices	+1,000
Long-term and post-acute care facilities	205
Standalone labs and radiology centers	16
Unique patients in index	+16 million
Patient searches	+400,000/mo
Encounter alerts sent	+2,500,000/mo



# Monthly Queries

400,000  
350,000

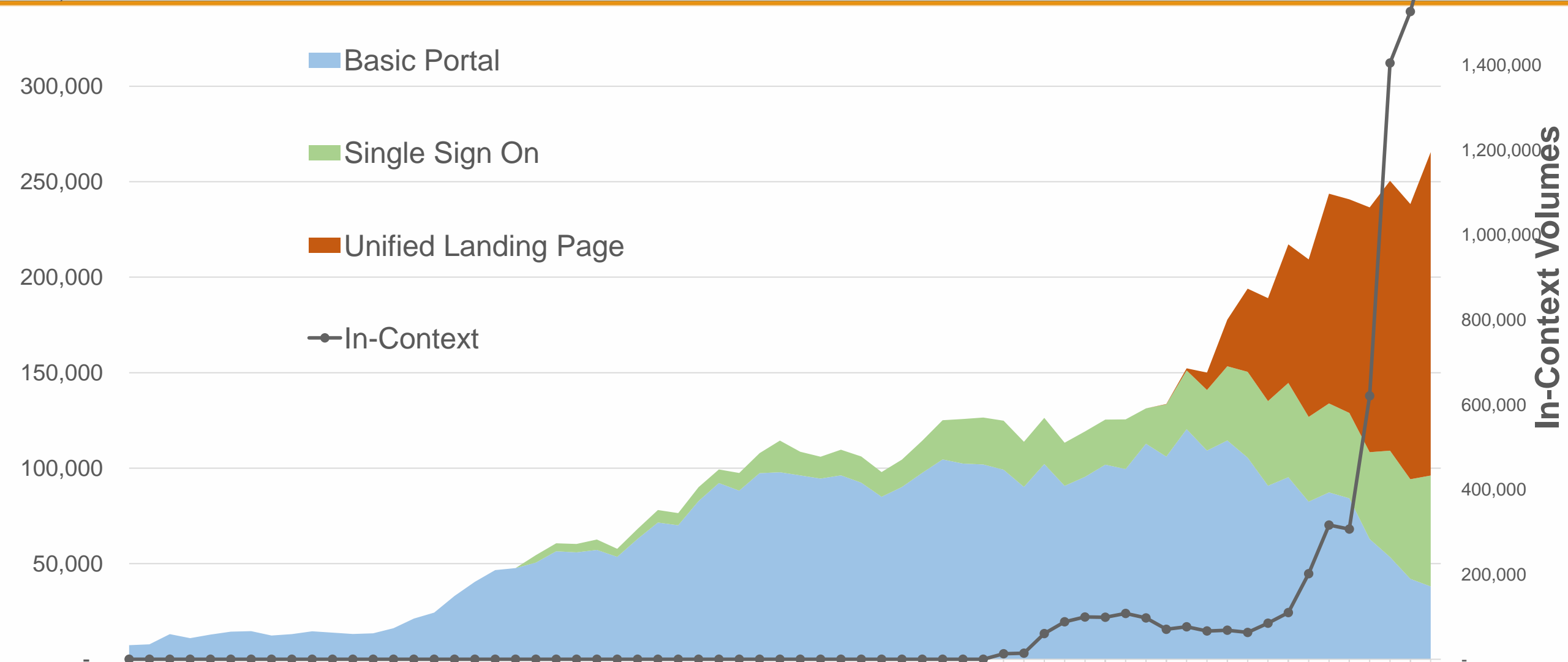
300,000  
250,000  
200,000  
150,000  
100,000  
50,000  
-

- Basic Portal
- Single Sign On
- Unified Landing Page
- In-Context

1,800,000  
1,600,000  
1,400,000  
1,200,000  
1,000,000  
800,000  
600,000  
400,000  
200,000  
-

Nov-12 Feb-13 May-13 Aug-13 Nov-13 Feb-14 May-14 Aug-14 Nov-14 Feb-15 May-15 Aug-15 Nov-15 Feb-16 May-16 Aug-16 Nov-16 Feb-17 May-17 Aug-17 Nov-17 Feb-18

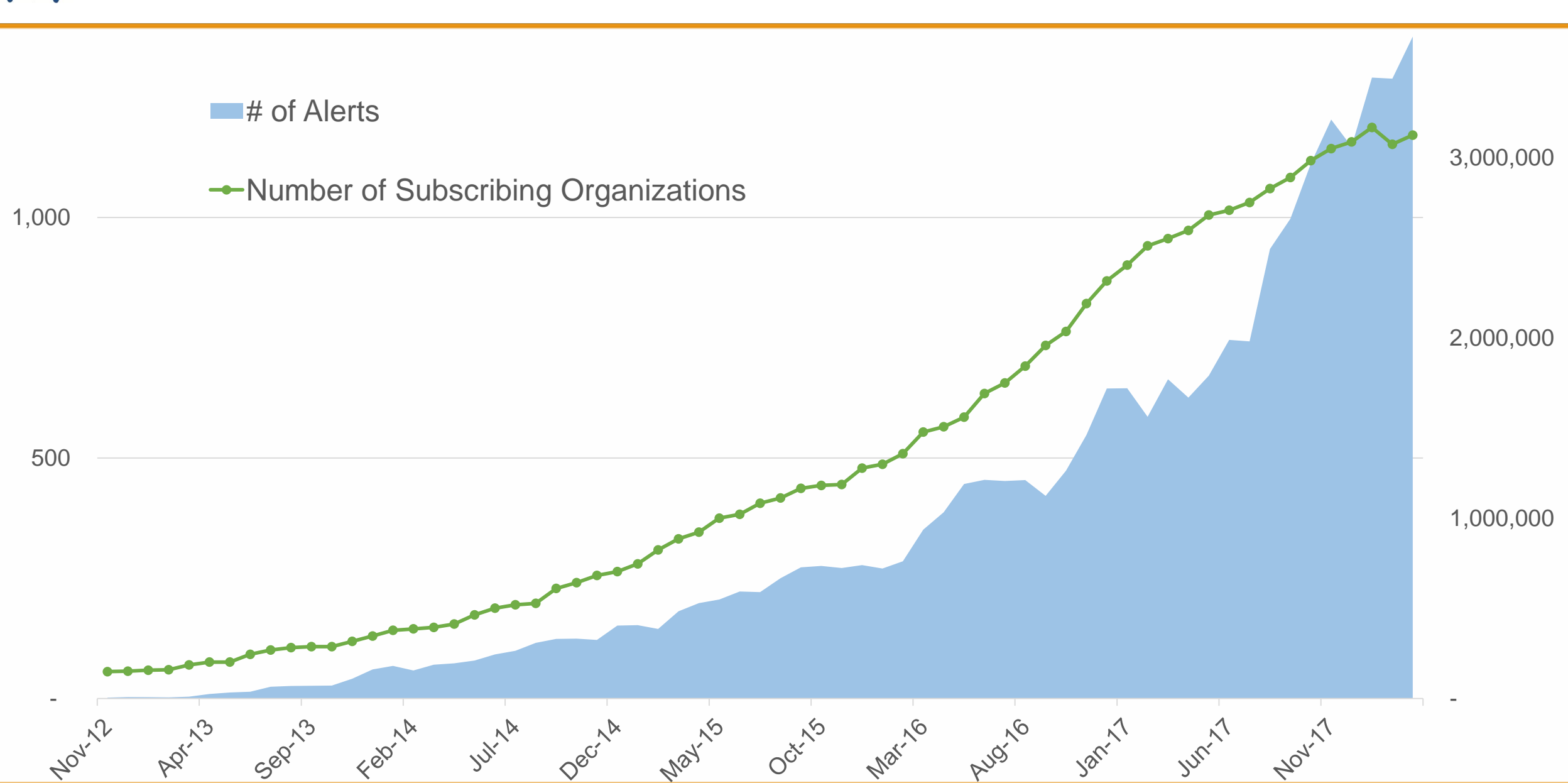
In-Context Volumes





# CRISP - ENS<sup>®</sup> Utilization

4,000,000





# CRISP Core Services

## 1. POINT OF CARE: Clinical Query Portal & In-context Information

- Search for your patients' prior hospital records (e.g., labs, radiology reports, etc.)
- Monitor the prescribing and dispensing of PDMP drugs
- Determine other members of your patient's care team
- Be alerted to important conditions or treatment information

## 2. CARE COORDINATION: Encounter Notification Service (ENS)

- Be notified when your patient is hospitalized in any regional hospital
- Receive special notification about ED visits that are potential readmissions
- Know when your MCO member is in the ED

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

- Use Case Mix data and Medicare claims data to:
  - Identify patients who could benefit from services
  - Measure performance of initiatives for QI and program reporting
  - Coordinate with peers on behalf of patients who see multiple providers

## 4. PUBLIC HEALTH SUPPORT: Partnerships with Maryland MDH, District of Columbia DHCF, and West Virginia through the WVHIN

## 5. PROGRAM ADMINISTRATION: Technical and administrative support for Care Redesign Programs





**CRISP**

# User Stories



## Sample User Story: Post-Acute Collaborative

*“Our community has a partnership consisting of multiple hospitals and skilled nursing facilities. The hospital discharge planners and post-acute providers agreed to communicate at the time of a patient transfer. The SNFs that are able to also agreed to coordinate their short-term rehab patients’ return home.”*





# Sample User Story: Post-Acute Collaborative

- Standard process for patients going from the hospital to the SNF
  - Discharge Planner uses **DocHalo** to text the SNF designee (varies by facility) to describe patient, indicate any key complications
  - Discharge planner also enters the key complications into EHR as a **Care Alert**
- If SNF residents have to return to the hospital, the SNF texts the ED physician on-call
  - As a fallback, the care alert, subscribers, and prior visits are available through **CRISP InContext**
- When residents leave the SNF, they are added to a panel for 90-days
  - **ENS alerts** give SNFs have more transparency into utilization post-discharge
  - If a patient goes to the ED, the SNF can text or call and share relevant information that may avoid a readmission





# CRISP In-Context

Critical data available at the point of care through API, FHIR, or CCDA; single-sign-on to patient record

Enterprise Medical Record - Iatricis Development

Testpatient, Chad  
DOB: 2/1/70 47 M  
E00000001373 / E0000812  
Mhe Diagnostic Imaging Dpt REG CLI

Allergy/AdvReac:

CRISP Alerts Registry [NAME: TESTPATIENT,CHAD MRN: E0000812]

• CRE • Test Flag 9 • Test Flag 6 • Test Flag 3

Date	Source	Comment
6/27/2017 4:34 PM	CRISP	Lorem ipsum dolor sit amet, tristique ultrices, sollicitudin pede ante risus, non dolor venenatis od
5/31/2017 4:42 PM	JHHREL	This Text is in Red This Text is Bold This Text

CRISP Patient CRISP ID: 31135561 CRISP Home

News: 1

Record List  
Other Visit  
Special Panels  
24 Hour  
Vital Signs  
I & O  
Notes  
Medications  
Order History  
Laboratory  
Microbiology  
Blood Bank  
Pathology  
Imaging  
Other Reports  
Care Trends  
Care Activity  
History  
Summary  
Encounters  
Referrals  
Problem List  
Discharge  
Orders  
Document  
Reconcile Meds  
Sign  
Refresh

Graph My Data Cancel Save ?



# Encounter Notification Service

Real-time or batch alerts to appropriate providers based on treatment and care management relationships

The screenshot displays the ENS interface with the following components:

- Header:** ENS Encounter Notification Service and PROMPT Proactive Management of Patient Transitions. User: cbehm.
- Search/Filter:** Filter by Name or MRN, CHF Program, Add Filters.
- Alerts List:**
  - DEBORAH REILLY (018687697):** Mount Sinai Hospital, 7/22/16 7:23 AM, IP Transfer, HIL6 Stomach Pain FES27982 LOW B/P.
  - IRENE KEMP (948752605):** Toronto General Hospital, 7/22/16 1:43 AM, ER, KEM1 Stomach Pain XOJ082LT LEG PAIN/FOOTBALL.
  - JODIE LUTZ (423091650):** Toronto General Hospital, 7/21/16 6:14 AM, IP Transfer, NAR92636 HEAD INJ PEJ4325 LOW B/P.
  - MARTY QUINN (406996551):** Toronto General Hospital, 7/20/16 1:22 PM, IP Discharge, PAP5 Stomach Pain NIB19LT LEG PAIN/FOOTBALL.
  - DARRICK ALVAREZ (321311855):** (Details partially visible).
- Patient Details (MARTY QUINN):**
  - Phone: 003-331-7142
  - DOB: 1/28/68
  - Address: 904 South White Fabien Boulevard
  - City/State: Glendale, WV
  - Race: White
  - Ethnicity: Not Hispanic or Latino
  - PCP: Xavier Newman
  - NPI: 1939129716
  - ACO: CHF Program
- Most Recent Event:**
  - Event Date: 7/20/16 1:22 PM
  - Event Type: IP Discharge
  - Event Location: Toronto General Hospital
  - Practice Location: Chevy Chase
  - Hospital Service: Diagnosis
  - Patient Diagnosis: NIB19 LT LEG PAIN/FOOTBALL
  - Discharge Disposition: Discharged/transferred to an intermediate care facility ICF
  - Discharge to Location: Hospital
  - Patient Complaint: PAP5 Stomach Pain
  - Admit Source: Transfer from a hospital
- Status Log:** (Empty)
- Event History:**
  - 5/29/16 9:50 PM: Diagnosis: DUB348 LOW B/P, Complaint: BAPHEAD INJ, Toronto Western Hospital.
  - 5/20/16 5:01 AM: Diagnosis: BEG19170 LOW B/P, Complaint: TAH2793 Stomach Pain, Shouldice Hospital.





## Sample User Story: Longitudinal Coordination

*“My hospital refers patients to a third-party care coordination entity. When we see patients are potentially eligible for support, we notify our partners. They engage the patients to describe the program and enroll them in services. Patients are typically managed for 90-120 days, depending on their situation.”*





# Sample User Story: Longitudinal Coordination

- CRISP Reporting Services created a panel of patients that would be eligible for the program if they had a hospital visit
  - **ENS alert** triggers for ED care managers to enroll patients
  - Care managers mark patients yellow in **PROMPT**
- Care coordination team reaches out to patients for long-term support
  - Write **care alerts** about specific patient needs
  - Submit new panels with program information
- If any of the newly enrolled patients are readmitted, the hospital sees the relationship
  - **Program** information is available at the point of care
  - Care coordinator reaches out, or can visit patients using **PROMPT Census view**



# Care Programs

- Patient panels submitted manually or automatically in ADT feeds can include care program data such as care teams, contact information, and program enrollment
- Program metadata, without PHI, can be submitted to CRISP to show services available to all patients enrolled in that program, ACO, or payer plan
  - Information can include services offered, 24hr support numbers, regions served, and other similar information
- CRISP matches patients to panels to a program directory in real-time to display comprehensive information



CRISP Unified Landing Page Home PDMP Panel Management Mr.User

PANEL MANAGEMENT TRAINING CENTER JOHNS HOPKINS HOSPITAL

A sample of your panel is available to review in the table below. Please make sure data appears to be in the correct columns.

Previewing 3 out of 11,200 rows containing patient information:

Standard Field (Your Field)	Group (Group)	Member_Status (Member_Status)	Patient_ID (Patient_ID)	First_Name (First_Name)	Middle_Name (Middle_Name)	Last_Name (Last_Name)	Name_Suffix (Name_Suffix)	Address_1 (Address_1)	Address_2 (Address_2)	City (City)	State (State)	Zip (Zip)
		ADD	ENSPART1072_1	Harold	Tucker	Franklin	S	25 Artisan Park		Birmingham	Alabama	24549
		ADD	ENSPART1072_2	Michelle	Diaz	Thompson	W	65 Dexter Trail		Shreveport	Louisiana	35774
		ADD	ENSPART1072_4	Jesse	Stephens	Cooper	V	3115 Lien Junction		Bakersfield	California	26292

CHOOSE ANOTHER FILE PROCEED WITH FILE

CRISP Program Directory

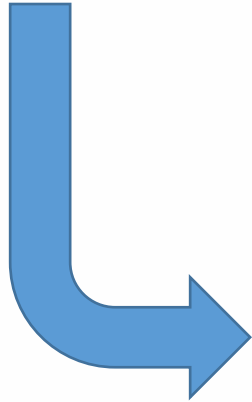
Home Add New Bulk Import

Filter:

ERSD Transitions WMH\_TC

follows up on all admissions and evaluates the cause of their admission and assists with helping them become ready for appropriate discharge. These are patients are established dialysis patients that have been cared for in WMHS Hemodialysis unit or any other facility. Once the patient is discharged, the Transitions Coordinator follows up with these patients for one month post discharge. This is accomplished through phone conversations, 1 on 1 meetings and working with outside agencies. Each case individual case is reviewed for compliance, resources, appointments etc.

(111) 222-3333 fakemail@email.com



PWM.MWP (8/TEST.5.67.MIS/288) - IATRICS,TEST \*\*\* TEST \*\*\*

Clinical Review

TESTPATIENT,NOBODY - 47/M ADM IN 2ND-R P2-207/A  
20 cm 9.072 kg U/A M000111/F0002259

CRISP Alerts Registry [NAME: TESTPATIENT,NOBODY MRN: M000111]  
- CRE - Test Flag 3 - Test Flag 2 - Test Flag 1

Care Management (CM)

Date	Source	Comment
9/1	CVMH	Patient is enrolled in: Calvert Memorial Project Phoenix. Program provides mental health and substance abuse coaching...

CRISP Patient CRISP ID: 31817062 CRISP Home

News: 1

- Pt Summary
- Problem List
- Special Panel
- Daily Review
- Order History
- Vital Signs
- I + O
- LAB
- Microbiology
- Blood Bank
- Pathology
- Medications
- Imaging
- Other Reports
- Notes History
- Assessments
- Other Menu
- Reconcile Meds
- More Less
- Other Visits
- Patient List

PCI Order Document Discharge Sign





# PROMPT Census View

**CRISP** Unified Landing Page™

HOME PDMP QUERY PORTAL WIDGET QUERY PORTAL PATIENT CARE OVERVIEW CRS-DC **PROMPT**

HELP SAMIT DESAI (SIGN OUT)

CENSUS PATIENT TASK

Recently Admitted Patients			Patients Recently in ED			Recently Discharged Patients		
8/28/2016	Darla Stark	○ ⓘ ●	8/28/2016	Terry Burke	○ ⓘ ●	8/28/2016	Stephan Wells	○ ⓘ ●
8/28/2016	Serena Schroeder	○ ⓘ ●	8/27/2016	Kurt Nixon	○ ⓘ ●	8/28/2016	Shane Guerrero	○ ⓘ ●
8/28/2016	Sylvia Carson	○ ⓘ ●	8/27/2016	Melody French	○ ⓘ ●	8/27/2016	Bonnie Pham	○ ⓘ ●
8/28/2016	Micheal Arnold	○ ⓘ ●	8/27/2016	Shawn Cobb	○ ⓘ ●	8/27/2016	Clifton Atkinson	○ ⓘ ●
8/28/2016	Martin Mahoney	○ ⓘ ●	8/27/2016	Dante Schaefer	○ ⓘ ●	8/27/2016	Jerrod Barrera	○ ⓘ ●
8/27/2016	Andrew Conley	○ ⓘ ●	8/27/2016	Nathaniel Cisneros	○ ⓘ ●	8/26/2016	Stephan Valentine	○ ⓘ ●
8/27/2016	Angelo Mitchell	○ ⓘ ●	8/27/2016	Gabrielle Archer	○ ⓘ ●	8/26/2016	Jocelyn Francis	○ ⓘ ●
8/27/2016	Lamont Gibbs	○ ⓘ ●	8/27/2016	Leon Andrade	○ ⓘ ●	8/26/2016	Cedric Brown	○ ⓘ ●
8/26/2016	Sandy Ayala	○ ⓘ ●	8/26/2016	Diana Ali	○ ⓘ ●	8/25/2016	Dean Stein	○ ⓘ ●
8/26/2016	Marci Montes	○ ⓘ ●	8/26/2016	Rodney Phelps	○ ⓘ ●	8/23/2016	Billy Ponce	○ ⓘ ●
8/25/2016	Telly Hardy	○ ⓘ ●	8/26/2016	Yesenia Olsen	○ ⓘ ●	8/22/2016	Jessie Abbott	○ ⓘ ●
8/23/2016	Zachary Bartlett	○ ⓘ ●	8/26/2016	Cristina Thornton	○ ⓘ ●	8/21/2016	Rodolfo Rogers	○ ⓘ ●
8/23/2016	Leroy Summers	○ ⓘ ●	8/26/2016	Rosa Stevenson	○ ⓘ ●	8/20/2016	Austin Carey	○ ⓘ ●
8/23/2016	Andy Lozano	○ ⓘ ●	8/26/2016	Hector Patton	○ ⓘ ●	8/20/2016	Marty Quinn	○ ⓘ ●
8/21/2016	Jamison Harvey	○ ⓘ ●	8/26/2016	Brady Ewing	○ ⓘ ●	8/20/2016	Jaime Mercado	○ ⓘ ●
8/18/2016	Joanne Paul	○ ⓘ ●	8/26/2016	Julie Mathis	○ ⓘ ●	8/20/2016	Sandy Palmer	○ ⓘ ●
8/18/2016	Stephanie James	○ ⓘ ●	8/25/2016	Yvette Miller	○ ⓘ ●	8/18/2016	Gabriela Conrad	○ ⓘ ●

https://ulptrain.crisphealth.org/web/guest/prompt



## Sample User Story: High-Needs Beneficiaries

*“I work for a Managed Care Organization. We have a program to support high-needs individuals by connecting them to their assigned primary care providers. It is frequently difficult to contact these beneficiaries and, when we do, they often need support navigating the health care system.”*







# Sample User Story: High-Needs Beneficiaries

- The Payer submits 2 panels:
  - Panel 1 is beneficiaries who are assigned but unseen by primary care provider
  - Panel 2 is beneficiaries above a specific risk score
- **ENS** messages come in for all patients
  - Panel 1 goes to PCP to trigger a transitional care visit
  - Panel 2 goes to Care Manager who will visit the ED
- Practice and care manager both go into **CRISP Unified Landing Page** to view discharge summaries, lab results, and other information



# Clinical Query Portal

Manual patient search to view Prescription Drug Monitoring Program, labs, radiology results, recent encounters, and documents

**CRISP** Unified Landing Page | HOME PDMP MIRTH WIDGET **MIRTH RESULTS** CRS-DC

Actions: Download Configure Layout More Actions Filters: Sources: 4 selected Date Range: All Dates

**Skywalker, Luke** Male 03/06/1989 (28 yrs) (Community ID:1785538)  
555 RIDING HIGH LANE, BALTIMORE, MD 22334

Summary More Patient Information Patient Groups eHT HIE Worklist PDMP Patient Care Overview

**Laboratories (12) Other Orders (0)**

Date	Name	Source
06/11/2014	TOTAL CHOLESTEROL, A1C	CGH
03/30/2013	DIFFERENTIAL - AUTO	CGH
03/30/2013	CHEM7	CGH
03/30/2013	CBC W/ AUTO DIFF	CGH
03/30/2013	MAGNESIUM	CGH
03/28/2013	PT therapy/ INR	CGH
03/28/2013	ABO & RH	CGH
03/28/2013	PTT SCREEN	CGH
03/28/2013	DIFFERENTIAL - AUTO	CGH
03/28/2013	CBC W/ AUTO DIFF	CGH
03/28/2013	CHEM7	CGH
03/28/2013	HCG pregnancy	CGH

**Imaging (4)**

Date	Name	Source
09/04/2016	XR PORTABLE CHEST	EDGLB2
03/29/2013	FLUORO, UP TO ONE HR	CGH
03/29/2013	CHEST,SINGLE VV (A/P-P/A)	CGH
03/28/2013	ANKLE,COMP.,(3 VIEWS)	CGH

**Documentation (2)**

Date	Name	Source
08/18/2016	Care Alert	UM_UMM
04/01/2013	OPERATIVE REPORT	CGH

**Ambulatory Encounters (2) Inpatient Encounters (4) Conditions (0)**

Date	Admission Type	Source
09/19/2016	Care Management Enrollment	HLTHEC
06/27/2014	1	CGH

**Medications (5)**

Date	Name	Source
11/03/2015	LORAZEPAM 1 MG TABLET (37...	PDMP
11/03/2015	HYDROMORPHONE 8 MG TAB...	PDMP
10/30/2015	ALPRAZOLAM 1 MG TABLET (...)	PDMP
10/25/2015	AMPHETAMINE SALTS 20 MG ...	PDMP
10/25/2015	DEXTRAMP-AMPHET ER 20 ...	PDMP

**Care Management (0)**

No Care Management to display

**Immunizations (0)**

No Immunizations to display

**Allergies (0)**

No Allergies to display



**CRISP**

## **Additional Information**



# Prescription Drug Monitoring Program

PDMP data is available in the portal as well as the Unified Landing Page for Pharmacy users; additional features include sorting and multiple patient selection

CRISP Unified Landing Page HOME PDMP

LINDSEY FERRIS (SIGN OUT) HELP

New Search > Modify Search > Patient Results

Prescription Drug Monitoring Program Maryland InterState (AR, CT, PA, WV, VA, DC, MN) New Search

CRISP ID	LAST NAME	FIRST NAME	DATE OF BIRTH	DRUGS DISPENSED	DATE FILLED	QUANTITY DISPENSED	DAYS SUPPLY	PRESCRIBERS (5)	DATE WRITTEN	PHARMACIES (2)	REFILLS REMAINING	PAYMENT METHOD	PDMP STATE
16176853	SKYWALKER	LUKE	01/12/1977	ZOLPIDEM TARTRATE 10 MG TABLET	2017	10	10	HID PRESCRIBER, <span>i</span>	04/19/2017	PRESCRIBER, HID TEST <span>i</span>	0	OTHER	MD
79293844	SKYWALKER	LUKE	01/12/1977	PROMETHAZINE-CODEINE SYRUP HYDROCODON-ACETAMINOPHEN 5-500	2017	30	30	INC ACME <span>i</span>	04/15/2017	PRESCRIBER, HID TEST <span>i</span>	0	OTHER	MD
79293844	SKYWALKER	LUKE	01/12/1977	TRAMADOL HCL 50 MG TABLET	2017	30	30	INC ACME <span>i</span>	04/01/2017	PRESCRIBER, HID TEST <span>i</span>	0	OTHER	MD
79293844	SKYWALKER	LUKE	01/12/1977	TABLET	2017	30	30	INC ACME <span>i</span>	03/22/2017	PRESCRIBER, HID TEST <span>i</span>	0	OTHER	MD
16176853	SKYWALKER	LUKE	01/12/1977	ZOLPIDEM TARTRATE 10 MG TABLET	03/01/2017	10	10	NULL PRESCRIBER <span>i</span>	03/01/2017	PRESCRIBER, HID TEST <span>i</span>	0	COMMERCIAL INSURANCE	MD
16176853	SKYWALKER	LUKE	01/12/1977	ZOLPIDEM TARTRATE 10 MG TABLET	01/15/2017	15	15	HID PRESCRIBER, <span>i</span>	01/15/2017	PRESCRIBER, HID TEST <span>i</span>	0	PRIVATE PAY	MD
79293844	SKYWALKER	LUKE	01/12/1977	ZOLPIDEM TARTRATE 10 MG TABLET	01/12/2017	30	30	HID PRESCRIBER, <span>i</span>	01/12/2017	PRESCRIBER, HID TEST <span>i</span>	0	OTHER	MD

Filter

- ZOLPIDEM TARTRATE 10 MG TABLET
- PROMETHAZINE-CODEINE SYRUP HYDROCODON-ACETAMINOPHEN 5-500
- TRAMADOL HCL 50 MG TABLET

Select All Apply



# CRISP In-Context

TESTPATIENT, CHAD MRN: S00020679165 Age: 47 years Location: EC - Ambo; A... Primary Contact: No Primary Contact

Emergency [04/20/17 12:56 <No - Discharge da... Fin#: 206791657110] DOB: 02/01/1970 Fall Risk: Isolation: Not Ordered | MDRO: No Patient Portal: No

Allergies: Allergies Not Recorded Gender: Male Weight: Code Status:

Menu - All Provider View Full screen Print 36 minutes ago

**PDMP** Exit

Drug Name	Strength	Date Filled	Date Issued	Refills	Source of Payment	Quantity Dispensed	Days' Supply	Prescriber Name	Dispenser Name
ACETAMINOP-CODEINE 120-12 MG/5	strength?	2017-02-05	2017-02-05	0	Commercial Insurance	70	7	ABBOTT, ERIC	null
HYDROCODON-ACETAMINOPH 7.5-325	strength?	2017-02-03	2017-02-02	0	Commercial Insurance	40	20	ZAMFIROV, ZVEZDOMIR	null

CRISP Crisp ID 123

Last 500 days TF9 TF8 TF6 TF5 TF3 TF2

Medication	Written	Filled	Days Supply	Prescribing Provider
ACETAMINOP-CODEINE 120-12 MG/5	2017-02-05	2017-02-05	7	ABBOTT, ERIC
HYDROCODON-ACETAMINOPH 7.5-325	2017-02-02	2017-02-03	20	ZAMFIROV, ZVEZDOMIR

Show [Patient Name] in portal

Show debug information



# Epic App Orchard



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## CRISP InContext

Functional Areas

♥ Patient Care

Epic Versions

✓ Epic 2015 ✓ Epic 2017 ✓ Epic 2018

Login

The CRISP InContext app provides information from the CRISP HIE within the context of a clinician's workflow, including Maryland Prescription Drug Monitoring Program information.



About this App



# CRISP Reporting Services

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

CRISP

Connecting **Providers with Technology** to Improve Patient Care

CRISP REPORTING SERVICES Behm, Craig Logout

Your Dashboard

Care Coordination Casemix Executive Dashboard

Key Metrics Maryland Hospital Acquired Conditions (MHAC) Medicare LDS Data

Notifications Panels Patient Total Hospitalization (PaTH)

Populations Potentially Avoidable Utilization (PAU) Quality Based Reimbursement (QBR)

Care Coordination

Care Coordination Program Enrollment Report  
Rolling Percentages for the Last 12 Months from Last Date in Casemix

High-Risk Mid-Risk Low-Risk

% PCP with Comparison to Statewide Rate

Health Plans

Medicaid Categories

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**CRISP**

# Questions and Discussion

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