



CHESAPEAKE REGIONAL INFORMATION SYSTEM FOR OUR PATIENTS

Community Health Resources Commission

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Chesapeake Regional Information System
for our Patients (CRISP)

October 8, 2015

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About CRISP

Our Vision

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

Our Mission

We will enable and support the healthcare community of Maryland and our region to appropriately and securely share data in order to facilitate care, reduce costs, and improve health outcomes.

Our 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.*



Clinical Query Portal

- The clinical query portal allows credentialed users to search the HIE for clinical data.
- All 47 acute care hospitals in Maryland and 6 of 8 DC hospitals share clinical data.
- There are currently over 100,000 queries per month.
- 10 hospitals have enabled “single sign-on” connectivity to the portal enabling single-click access to data in CRISP.

The screenshot displays the CRISP Clinical Query Portal interface for a patient named Jenny K Rollins. The patient's information includes her name, gender (Female), date of birth (12/20/1978), age (38 yrs), and address (2985 Oxford Court, Columbus, MD 39701). The interface is divided into several sections:

- Laboratories (12):** A table listing various lab tests such as TOTAL CHOLESTEROL, CBC W/ AUTO DIFF, MAGNESIUM, CHEM7, DIFFERENTIAL - AUTO, and HCG pregnancy.
- Imaging (3):** A table listing imaging studies like FLUORO, LP TO ONE HR, CHEST, SINGLE VYN HW, and ANKLE, COMP, JS VIEWS.
- Medications (5):** A table listing medications such as CRN (SIMVASTATIN) B, CRN (HYUNDOCOUDON...), CRN (LORAZEPAM 1, CRN (LYRICA 100 MG), and CRN (ZOLPIDEM TARL...).
- Ambulatory Encounters (1):** A table listing an encounter on 06/27/2014.
- Documentation (1):** A table listing an OPERATIVE REPORT on 04/01/2013.
- Vitals (2):** A table listing vital signs like BMI (29) and BLOOD PRESSURE (100/67).

The interface also includes a navigation menu on the left with options like 'Back to List', 'Download CCD', and 'Request Med History'. The footer indicates copyright information for 2015 Mith Corporation.

Types of data available:

- Patient demographics
- Lab results
- Radiology reports
- **PDMP Meds Data**
- Discharge summaries
- History and physicals
- Operative notes
- Consult notes



Encounter Notification Service – Current Capabilities

- CRISP currently receives Admission Discharge Transfer messages in real-time from:
 - All Maryland Acute Care Hospitals
 - 6 of 8 D.C. Hospitals
 - All Delaware Hospitals
- Through ENS, CRISP generates **real - time hospitalization notifications** to PCPs, care coordinators, and others responsible for patient care



Important Current Capabilities

- Full Continuity of Care Documents (CCDs) are also routed through ENS to subscribing providers, who elect to receive them to support transitions of care.
 - 10 Hospitals currently send CCDs to CRISP
- Hospitals can “auto-subscribe” so they can be alerted when one of their past discharges is being readmitted within 30 days. This same capability allows the receiving hospital to be notified, when a patient arriving at their facility had been discharged from another facility, within the past 30 days.
 - 34 hospitals currently auto-subscribe to receive readmission notifications
- ENS was recently enhanced to include the ER and IP visits for a given patient with the past 6 months.



Additional Approaches for ENS

Event Date	Diagnosis	Complaint	Location	Admission
7/15/15 11:35 PM	LW B/P	Complaint: HEAD INJ	Aria Frankford Campus	Admit
7/15/15 3:36 PM	Y68 W/AIN ON 3014 SIDES	Complaint: HEAD INJ	Aria Frankford Campus	Registration

- CRISP will also offer an ENS user interface rather than simple spreadsheet via secure email.
- Users will still have the ability to download the spreadsheet.

Discharge Summary - CareEverywhere, Jackie (50 y.o. Female) As of Jul. 17, 2015

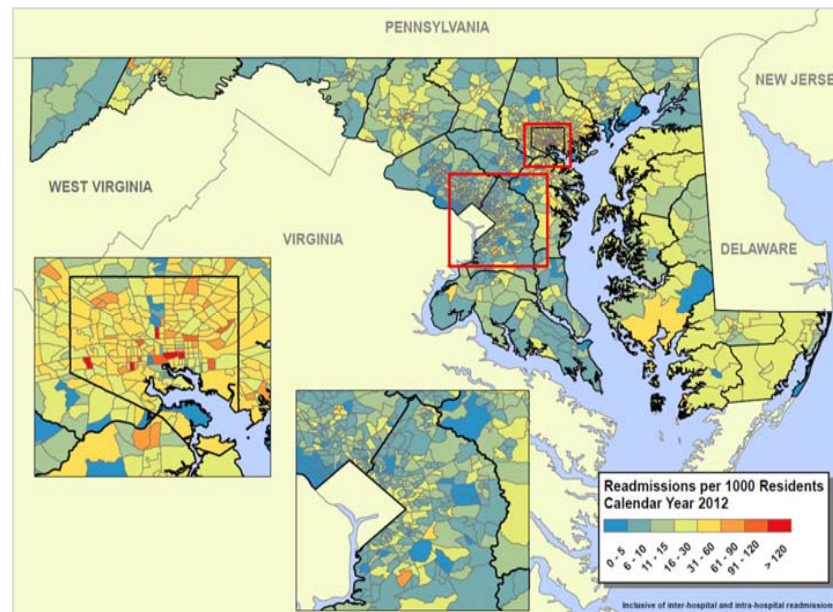
Section	Value
Patient Demographics	
Patient Address	111 Main St, Baltimore, MD 21222
Communication	Unknown
Language	Unknown
Race / Ethnicity	Unknown / Unknown
Hospital Discharge Diagnosis	
Diagnosis Code	X0020
Diagnosis Description	personnel bx of venous thrombosis and
Chief Complaint and Reason for Visit	
AdmReasonCode-Dizziness	

- ENS is in final testing to deliver notifications directly into Epic.
- Notifications are also currently flowing into other recipient systems in production.



CRISP Reporting Services (CRS)

- Reports generated from a collection of data sources to support quality improvement, strategic planning, financial modeling, and other activities.
- Primarily focused on hospitals, but expanding to public health departments, regional partnerships, and ambulatory providers.
- Allowable data use varies based on the amount of detail included; for example, patient-level detail in new Patient Hospital Utilization Dashboard (PaTH) is only permitted to be used for care coordination activities.

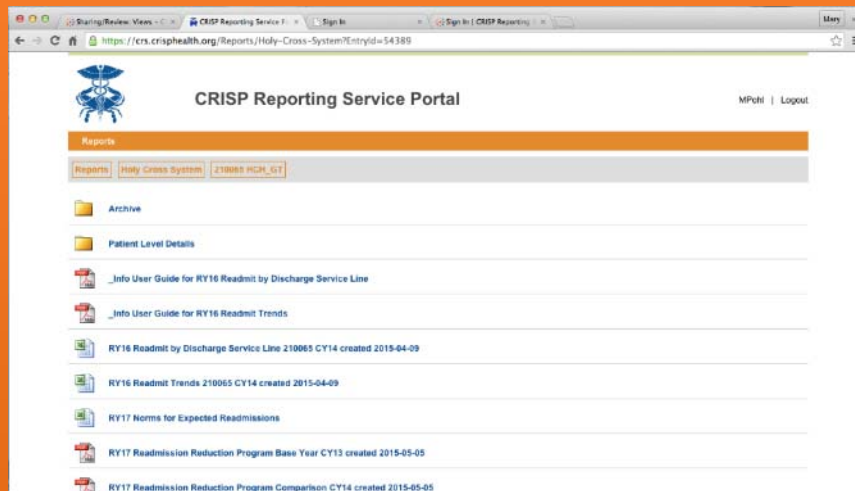




CRISP Methods for Deploying CRS Reporting: CRS Portal and Tableau

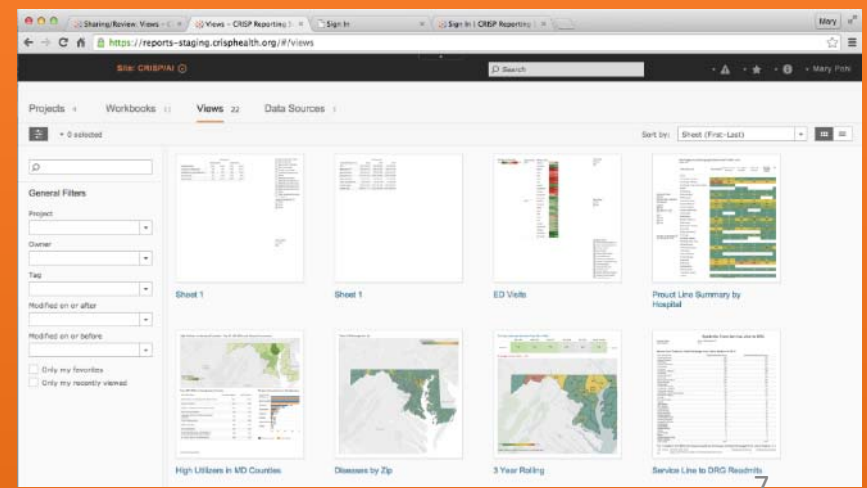
CRS Portal

- Internet-based, credentialed
- Distributes static reports, includes archived reports
- Evolved from emailing users
- In use for ~2 years
- Patient-level data
- Target audience: Hospitals



Tableau

- Internet-based
- Separate entry point from Portal, shared credentialing
- Mostly aggregated data; patient level data piloting
- Portals for Hospitals, Ambulatory Providers, and Populations





Integrated Care Network Infrastructure

- HSCRC/DHMH Care Coordination Workgroup called on CRISP to provide IT infrastructure to support provider care coordination efforts.
- CRISP received funding to support planning and initial implementation efforts.



Integrated Care Network Infrastructure - Workstreams

1. Connecting Providers: This workstream aims to connect more practices, physicians, long-term-care facilities, and other health providers to the CRISP network. A larger network will connect more providers to more data and inform more decisions to support better outcomes.

2. Routing Data: A key component of the ICN infrastructure is the "data router" -- a suite of back-end tools and services that support the collection and delivery of patient-level data to the healthcare providers who can put it to best use for care management and care coordination. Once fully implemented, the data router will perform a number of essential services to make the ICN possible, including data normalization, determining and documenting patient-provider relationships, and forwarding data according to appropriate data sharing and context-specific rules. At the core of the data router concept is an advanced patient consent management system that provides patients and caregivers greater control over which data goes where.

3. Clinical Portal Enhancements: CRISP will enhance the existing Clinical Query Portal with new elements including: a care profile; a link to a provider directory; information on other known patient-provider relationships; and risk scores.



Integrated Care Network Infrastructure - Workstreams

4. Notification & Alerting: CRISP will create new alerting tools so that notifications happen within the context of a provider's existing workflow. As an example, when a patient who is part of a specific care management initiative shows up at the ER, an in-context alert could inform clinicians of an available care management profile and connect that clinician with a care manager involved with the patient.

5. Reporting & Analytics: We will expand existing CRISP reporting services and make them available to a wider audience of care managers. In time, ambulatory practices and local health departments could benefit from these reports.

6. Basic Care Management Software: CRISP will support care management efforts throughout the state and region -- both through data feeds and reports that support existing care management platforms and, for those entities without an existing platform, we will provide access to one or more basic care management software programs through the CRISP network.

7. Practice Transformation: Change is hard. CRISP will work with providers throughout the state and region to assist them in moving toward a more interconnected way of delivering care that takes advantage of data flowing from multiple sources. This support will include training and demonstrations of best practices, meaningful use, and collaborative partnerships.



Pre and Post Intervention Analysis

Cohort Utilization

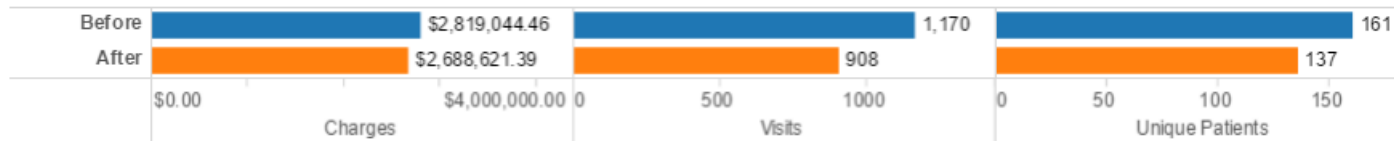
- Pre/post analysis based on enrollment date of specific patient cohort
- Workflows being developed/automated to allow for regular data updates
- Current data is preliminary and not indicative of program results



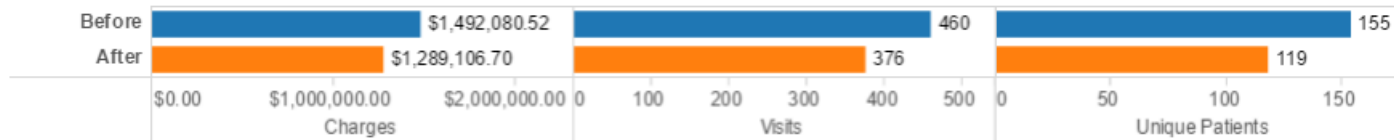
HCAM/Sinai Analysis Analysis of Pre and Post Metrics Based on Enrollment Date

The analysis is based on discharges before and after the enrollment date. Please select the number of months, the types of visit to include in the analysis and sorting order for other hospitals. Depending on the number of months selected, some participants might not be included in the analysis if they do not have data for the entire period before and after the analysis. Total Number of Members in the Analysis shows the number of members are included in the report for a given selection.

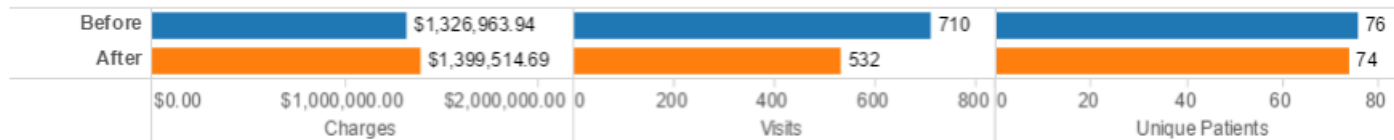
All Hospitals



Sinai Hospital



Other Hospitals



Total Number of Members in the Analysis

180

Before or After Enrollment

■ Before

■ After

Months of Analysis

3 Months

Visit Type

- (All)
- Emergency Department
- Inpatient
- Outpatient (No ED Visit)

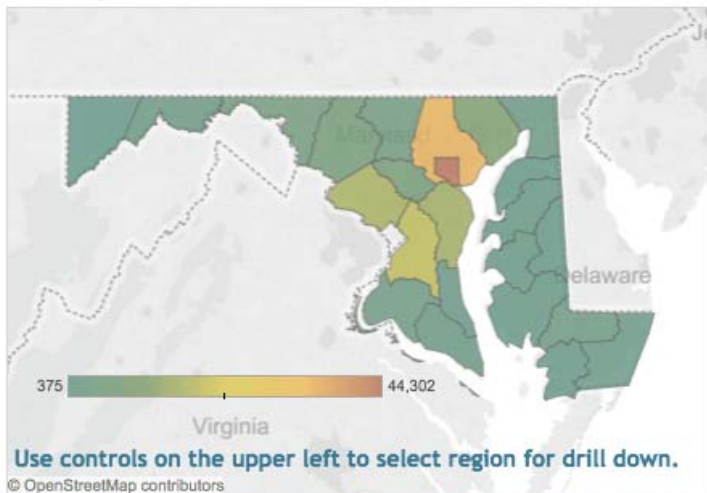


Other New Content Dashboards Are New Conceptual Designs

Disease View Disease Map Medical Area by Zip Notes

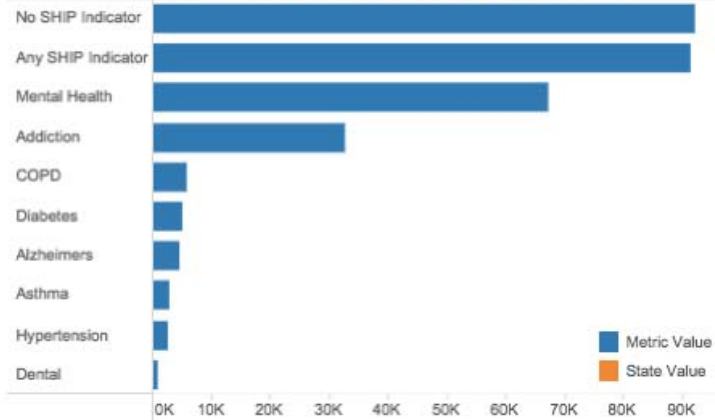


Hospitalizations by County with SHIP Disease Indicators - High Utilizers: 3 or More Visits Total Hospitalizations for All Population Payer: All Payer

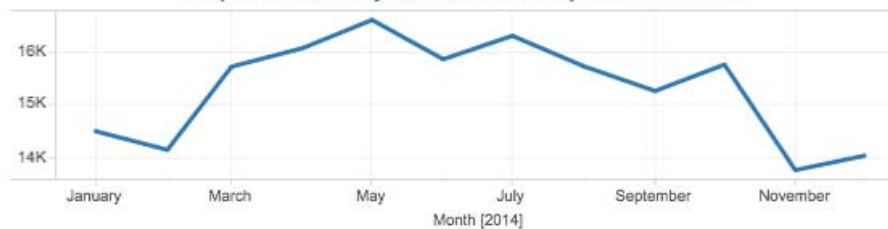


Patients with Comparison to State
Select County or Regional Partnership to Display

SHIP Disease Indicators with Comparison to State



Hospitalizations by Month with Comparison to State



Measure Type
Hospitalizations

Patient Measure Type
Patients

Population Selection
High Utilizers: 3 or More Visits

Zip or County
County

Regional Partnership

- Bay Area
- Howard County
- Johns Hopkins
- NexusMontgomery
- Southern MD
- Trivergent
- University of MD Medical Center
- Upper Chesapeake & Union Hospitals
- None

Primary Payer Selection
All Payer

Calendar Year
2014

SHIP Disease Selection (Map On...)

- All Population
- Any SHIP Indicator

Top 10 Medical Areas - Select for Diagnoses (APR-DRG) Detail

Pulmonology

Top 10 Diagnoses (APR-DRG)

HEART FAILURE

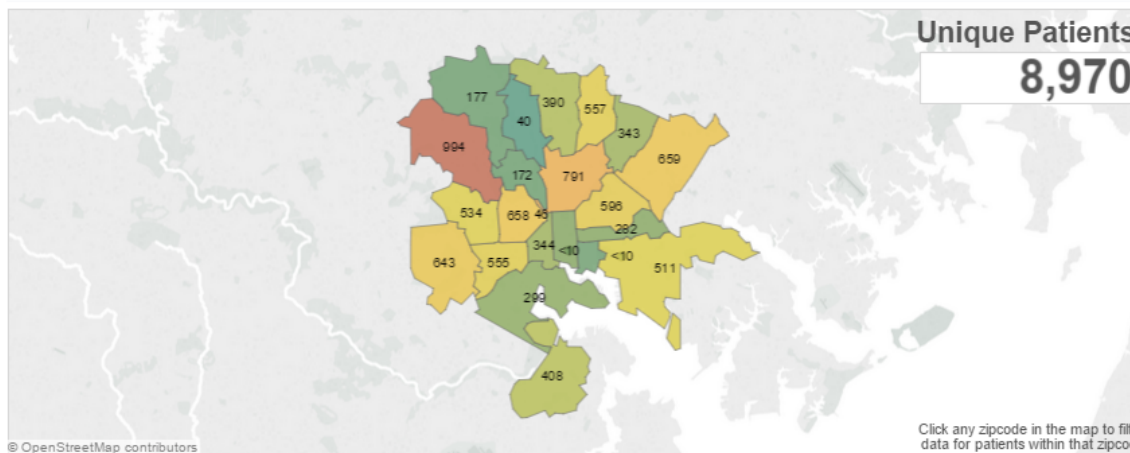


Other New Content Dashboards Are New Conceptual Designs

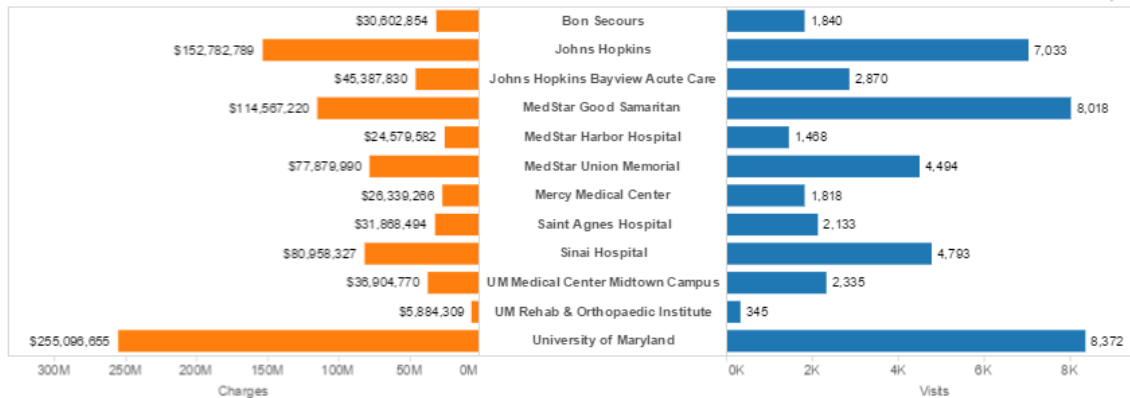


Cross Hospital Use

Number of Visits across Hospitals Year Visited West Side Hospital Visited East Side Hospital



Total Charges
\$882.9M



Footnotes
- Report currently contains all IP casemix data updated until June 2015



Strategies to Support Safety Net Providers

Practice Readiness:

- Fully engaging and using CRISP tools and report requires practice readiness
- Ability to develop patient panels and share data in secure way increasingly important to CRISP reporting and analytics

Practice Support:

- All providers need support in using CRISP tools, understanding what they are and integrating them into workflows

CRISP challenged to scale some of pilot efforts and provide necessary on-going support