CRISP

Care Coordination Tools and Services
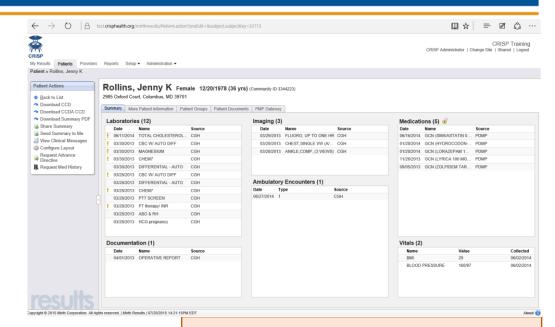## Current and Future Capabilities

September 29th, 2015

Current Tools and Services

Clinical Query Portal

- The 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 110,000 queries per month.

- 10 hospitals have enabled "single sign-on" connectivity to the portal enabling single-click access to data in CRISP.
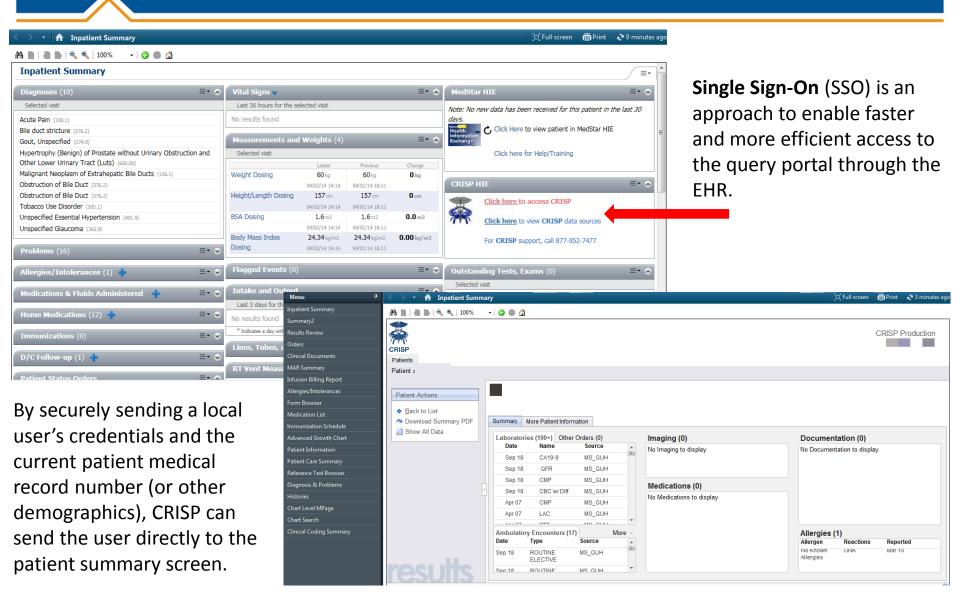

Types of data available:
- Patient demographics
- Lab results
- Radiology reports
- **Maryland PDMP Meds Data**
- Discharge summaries
- History and physicals
- Operative notes
- Consult notes

Clinical Query Portal - Single Sign-on

Single Sign-On (SSO) is an approach to enable faster and more efficient access to the query portal through the EHR.

By securely sending a local user's credentials and the current patient medical record number (or other demographics), CRISP can send the user directly to the patient summary screen.

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

1. 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

2. 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.

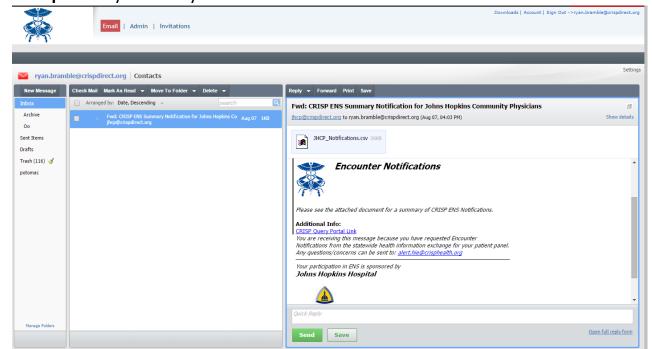   34 hospitals currently auto-subscribe to receive readmission notifications

3. ENS was recently enhanced to include the ER and IP visits for a given patient with the past 6 months.

Methods to Receive Notifications

➢ Currently, ENS recipients can choose to receive real-time or a daily (or twice daily) summaries of the prior 24 hours of hospitalizations.

➢ Most notifications are sent via CRISP secure direct messaging tool (shown below).

➢ Some ENS subscribers choose to integrate notifications into their EHR by receiving the notifications in the form of an ADT.
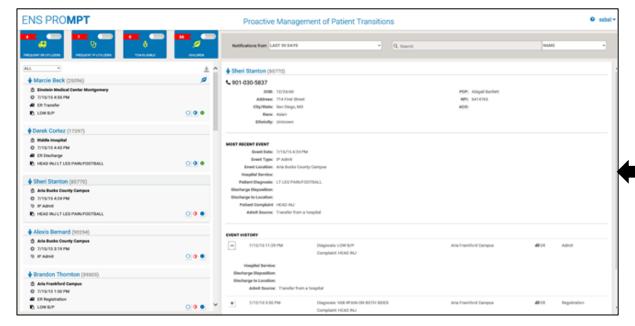
Example: Daily summary notification sent as an attachment to CRISP's secure inbox

Near-term Additional Approaches for ENS

ENS is in final testing to deliver notifications directly into Epic. Notifications are also currently flowing into other recipient systems in production.
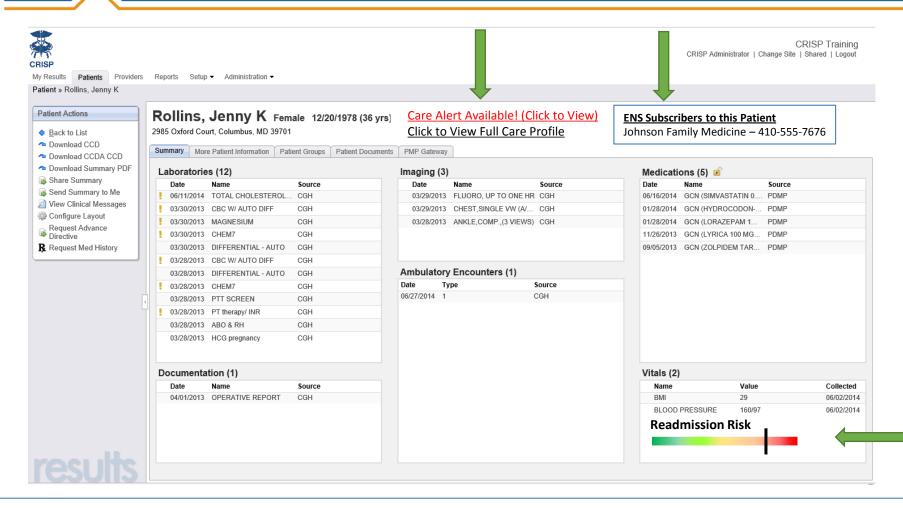
CRISP will also offer an ENS user interface beginning in early October rather than simple spreadsheet via secure email. Users will still have the ability to download the spreadsheet.

ICN Infrastructure Tools and Services

Clinical Portal Enhancements
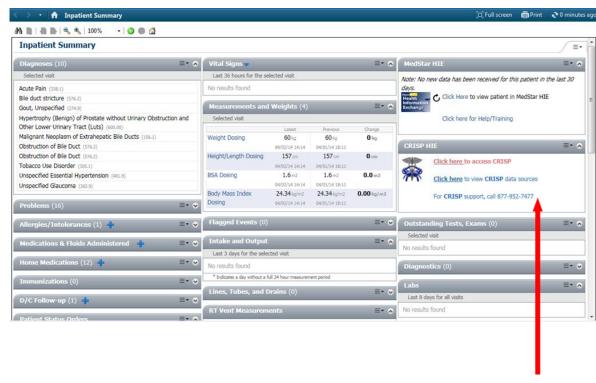

Clinical Query Portal Enhancements – Improvements to the existing clinical query portal including approaches to simplify access, incorporating new content such as access to care profiles, and displaying the patient's providers.

In-Context Alerting

> In-context alerting is intended to provide key information to clinical decision makers at the most effective point in their clinical workflows.

> An example of an in-context alert is pushing information to a hospital ER when a patient is registered indicating if a care plan is available in CRISP.

> In this In-context alert use case, a pre-defined method to access the care plan(or just key sections such as the care alert) would be established between CRISP and the receiving organization.

In-Context Alerting – inclusive of a range of alert types sent to the point of care or to a care manager that pertains to critical information about a patient, identifies care gaps, indicates post-discharge follow-up care has not occurred, etc

Care Profile View

Content Type / Source

Patient Demographics

Clinical Alert Information

ENS Subscriber Information

ADT Data

CRS Case Mix Data

Care Plan Availability Indicator

⬛ = to be developed

Update Frequency

Daily

Daily

Daily

Daily

Monthly

Daily

Care Profile Repository and Access Point

Care Profile

CRISP Care Profile Repository

A P I

Access Methods

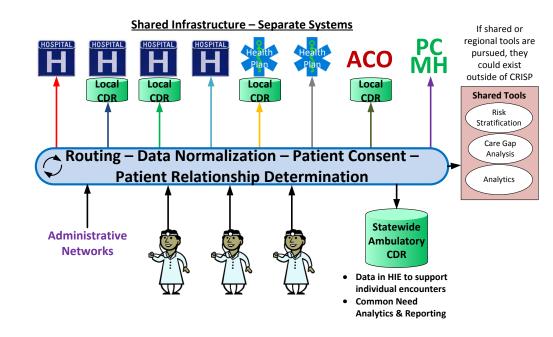### SSO Access through Query Portal

API call from EHR

Link from ENS User Interface

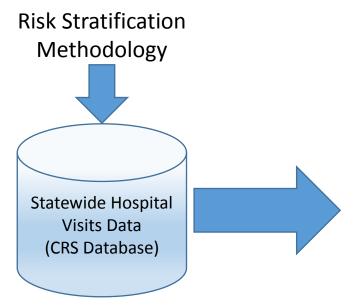# Data Router and Non-Hospital Connectivity

Key Functions include:

- ➢ Consent management
- ➢ Data normalization
- ➢ Data routing
- ➢ Patient-provider relationships determination and management

Shared Infrastructure – Separate Systems

Routing – Data Normalization – Patient Consent – Patient Relationship Determination

Administrative Networks

Statewide Ambulatory CDR

- Data in HIE to support individual encounters
- Common Need Analytics & Reporting

If shared or regional tools are pursued, they could exist outside of CRISP

Shared Tools
- Risk Stratification
- Care Gap Analysis
- Analytics

Data Router - The router is a service that includes key functionality to support connectivity, consent management, data routing to other services or data consumers, and determine patient-provider relationships.   These approaches may rely on connectivity through a health system, through a hosted EHR, directly to the practice, or via an administrative network.

Standardized Risk Stratification Tools

Risk Stratification Methodology

↓

Statewide Hospital Visits Data (CRS Database)

→

- Standardized and shared risk stratification and predictive modeling tools
- Supporting common understanding high risk patients
- Data feeds to provider care management systems
- Risk scores available through broader set of CRISP tools

Note: Over time, additional data, such as Medicare claims data, can supplement the currently available hospital case mix data.

Standardized Risk Stratification Tools - deployment of one or more centralized risk stratification methodologies to support stratification of patients initially using HSCRC case mix data housed in CRS but expanding to include broader data sets. Predictive risk score will be shared through a range of tools, including the query portal and ENS.

Patient Total Hospitalization (PaTH) Dashboard

Patient Total Hospitalization (PaTH)

➢ Dashboard incorporating all patient data (formerly called 'All-Patient Report')

  ➢ Visualization of all casemix data with ability to view individual patient utilization data

  ➢ Allows care managers to identify high-risk patients in conjunction with planned or existing coordination programs

➢ Filters enable a user to focus on a specific population

  ➢ Filter on dates, visits, readmissions, charges, zip codes, MRN, primary payer and age

  ➢ Filter on other hospital used to find patients going to multiple facilities

Summary Tab: Filters

Hospital Name filter is limited to the user's hospital or hospitals in the user's system

Time Period: Select last 3, 6, or 12 months of data. Data is on a 1-2 months lag from current date

Utilization filters: Apply filters to limit the population to patients with selected utilization criteria at the user's hospital in the selected time period

MRN: Type in an MRN number or paste a list of MRNs of interest

Zip is the zip code of patient residence on the most recent visit. Type in a zip code or paste a list of predefined codes

Primary Payer: filter of the primary payer on the most recent patient visit

Secondary Payer: filter of the secondary payer on the most recent patient visit. Use with Primary Payer to filter for Dual-Eligibles

Hospital Name

Time Period
Last 3 Months

Total Charges
$75 $417,602

Total Visits
1   14

Readmissions
0   5

Ambulatory ER Visits
0   14

Bedded Care (IP + Obv>=24 hrs)
0   7

MRN

Zip on Recent Visit

Primary Payer
(All)

Secondary Payer
(All)

Age Group
(All)

**High Utilizers
Across All Hospitals**
All Population

Conditions

Chronic

Asthma
(All)

COPD
(All)

Chronic Kidney Disease
(All)

Diabetes
(All)

Heart Failure
(All)

Hyperlipidemia
(All)

Hypertension
(All)

Mental Health

Alzheimers/Other Dementia
(All)

Depression
(All)

Oncology

Colorectal Cancer
(All)

Endometrial Cancer
(All)

Female Breast Cancer
(All)

Lung Cancer
(All)

Prostate Cancer
(All)

Anemia

Condition filters limit the population to patients with a selected condition. Each filter has 3 options:
- All: All patients are presented whether or not they have this condition
- Condition Present: only patient with this condition are shown. If multiple filters have this selection, only patient with all selected conditions are presented (e.g. patient with both asthma and diabetes)
- Condition Not Present: only patient who do not have this condition are presented (e.g. patients who have never had diabetes)

Age Group: based on age of the patient at the last visit

High Utilizers: This filter selects patients with 3 or more visits across all hospitals and at least one visits at the user's hospital. Unlike the Utilization filters above that only focus on the user's hospital, this filter looks across all hospitals. Choose between:
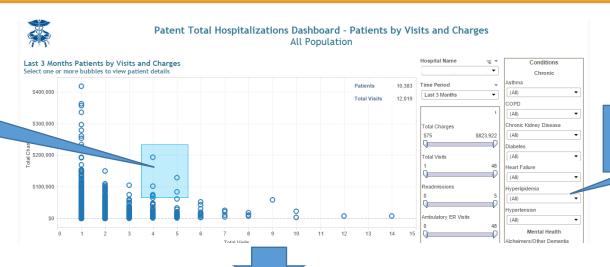- 3 or more Inpatient/Observation>=24 hrs
- 3 or more ER visits

PaTH Tab: Navigation

Select bubbles to get more detail on patients

Use filters to select population of interest

Visit totals are displayed for selected patients

Visits timeline shows progressions of care for selected patients

Click on EID row to navigate to the Patient Detail tab to see visit level detail for each patient

Hover over each shape to see the detail for each visit, such as primary diagnosis and DRG

Patient Detail Tab: Components

Main table displays a list of visits for selected patient with detailed information for each visit

Filter and sort options show visits by Admit Date, Visit Type or Hospital

More link provides diagnoses descriptions

Conditions view lists all conditions for the patient

Patient Total at This Hospital summarizes patient visits at the user's hospital

Patient Total at All Hospitals summarizes patient visits at all the hospitals

Primary and secondary payers on the most recent visit

Link to additional notes

Patient Total Hospitalizations - Patient Detail Sorted by Admit Date
Inpatient, Observation, and Emergency Department Services at All Hospitals

Hover over More link on the right to view diagnoses descriptions

Admit Date	Discharge Date	Hospital Name	MRN	Visit Type	IP Re admit	Pqi	DRG	DRG Description	SOI	Dx1Description	Dx1	Dx2	Dx3	Dx4	
2014				IP		Yes	141	ASTHMA	2	"ASTHMA W/ ACUTE EXACERBATION (Begin 2000)"	49392	V462	24900	V8542	More
2014				OBV		Yes				"ASTHMA W/ ACUTE EXACERBATION (Begin 2000)"	49392	V146	V141	V1507	More
2014				IP		Yes	140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	3	"CH OB ASTHMA W/ACUTE EXACERBATION (Begin 2000)"	49322	40291	V85..	4280	More
/2014				ED						"ASTHMA W/O STATUS ASTHM"	49390	42731	7224	40291	More
2014				IP	Yes	Yes	141	ASTHMA	2	"ASTHMA W/ ACUTE EXACERBATION (Begin 2000)"	49392	4280	V85..	25000	More
/2014				ED						"CH OB ASTH W/O STAT ASTH (Begin 1989)"	49320	3384	V12..	42731	More
/2014				IP	Yes		720	SEPTICEMIA & DISSEMINATED INFECTIONS	2	"STAPH SEPTICEMIA-UNSPEC (Begin 1997)"	03810	486	49320	79902	More
2015				IP	Yes	Yes	140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	4	"CH OB ASTHMA W STAT ASTH (Begin 1989)"	49321	5849	4821	9341	More
2015				ED						"PAIN IN LIMB"	7295	4280	496	4019	More
2015				ED						"SCIATICA"	7243	27800	4280	496	More
2015				IP	Yes		347	OTHER BACK & NECK DISORDERS, FRACTURES & INJURIES	2	"PATH FX-VERTEBRAE (Begin 1993)"	73313	4280	V85..	2768	More
)15				IP	Yes		721	POST-OPERATIVE, POST-TRAUMATIC, OTHER DEVICE INFECTIONS	4	"INFECT D/T CENT VEN CATH (Begin 2007)"	99931	51881	5845	2762	More
2015				IP	Yes		249	NON-BACTERIAL GASTROENTERITIS, NAUSEA & VOMITING	3	"INFECTIOUS ENTERITIS NOS"	0090	4280	V85..	73313	More
)15				OBV						"NONINF GASTROENTERIT NEC"	5589	4280	5990	49320	More
2015				IP	Yes	Yes	140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	3	"CH OB ASTHMA W/ACUTE EXACERBATION (Begin 2000)"	49322	4280	V462	8054	More
2015				IP		Yes	140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	3	"CH OB ASTHMA W/ACUTE EXACERBATION (Begin 2000)"	49322	51881	4280	27801	More

Time Period
Last 12 Months

Sort By
Admit Date

Hospital Name
Multiple Values

Visit Type
All

Conditions
- Chronic Obstructive Pulmona
- Chronic: Asthma
- Chronic: Chronic Kidney Dise
- Chronic: Diabetes
- Chronic: Heart Failure
- Chronic: Hyperlipidemia
- Chronic: Hypertension
- Mental Health: Depression
- Other: Anemia

Patient Total at This Hospital

Total Charges	$86,705
Visits IP	6
Visits OBV	1
Visits ER	1
Bedded Care	7
Total Visits	8
Readmissions	5
Age	53

Patient Total at All Hospitals

Total Charges	$147,757
Total Visits	16
Total Hospitals	3
Zip on Last Visit	20747

Primary Payer
Medicare fee for service

Secondary Payer
Medicaid fee for service

Click here for extended notes

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Questions / Discussion