



CRISP

Health System/Hospital Learning Collaborative

March 30, 2021

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Agenda

1. Introductions / Purpose / Scope of Attendees (Facilitator)
2. Foundation: CRISP Solutions
3. What / Why?: CRISP Priorities
4. What / Why?: Health System/Hospital HIE priorities
5. Next Steps: Based upon feedback from #4, specific solutions to work on.



CRISP

CRISP Solutions



CRISP Solutions: 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:

- Deploy services in partnership with Maryland Department of Health
- Enable practices with Vaccine Tracking services
- Support COVID test scheduling, POC test result reporting to MDH

5. PROGRAM ADMINISTRATION:

- Making policy discussions more transparent and data-driven
- Supporting Care Redesign Programs





CRISP Solutions

Improving	Tools		Users
1. Point of Care (Delivered via <i>In Context App</i> and <i>Unified Landing Page</i>)	<ul style="list-style-type: none">• Patient Snapshot• CRISP Health Records• Emergent Imaging• Immunizations	<ul style="list-style-type: none">• PDMP• Image Worklist• Care Alerts• Advance Directives	<ul style="list-style-type: none">• Hospital Providers (ED, IP)• Ambulatory Providers• Post Acute Providers (SNF, Home Health, Hospice)• Provider support staff
2. Care Coordination	<ul style="list-style-type: none">• Encounter Notification Service (ENS)• ENS PROMPT• SMART Alerts	<ul style="list-style-type: none">• Care Alerts• E-Referral Tools• SDOH Screening• Census View	<ul style="list-style-type: none">• Case Managers• Care Managers• Transitions of Care facilitators• Medical Assistants• Provider support staff



CRISP Solutions

Improving	Tools		Users
3. Population Health	CRISP Reporting Services (CRS) Tools <ul style="list-style-type: none"> HSCRC Case Mix Reports Medicare CCLF Reports (MADE) 	<ul style="list-style-type: none"> MDPCP Reporting Suite Pre-Post Analysis Tool All Payer Reports 	<ul style="list-style-type: none"> Population Health managers Regional Partnerships Program planners
4. Public Health	<ul style="list-style-type: none"> COVID Lab Results Viewing COVID Test Scheduling 	<ul style="list-style-type: none"> COVID Immunization Dashboards Bed Capacity Dashboards 	<ul style="list-style-type: none"> Infection Prevention Quality Improvement
5. MD Program Administration: Total Cost of Care	Care Redesign/ Model Programs <ul style="list-style-type: none"> ECIP HCIP CTIs Regional Partnerships Patient Centered Care – Quality Programs Pop Health - SIHIS	Hospital Population Based Revenue <ul style="list-style-type: none"> MPA Global Budget Revenue Adjustment Ambulatory: <ul style="list-style-type: none"> MDPCP, EQIP 	<ul style="list-style-type: none"> System of Care planners Population health managers CMO CMIO CFO



CRISP Priorities



CRISP Priorities: 2020 - 2022

Timeframe	Accomplishments / Goals	
Last 12 Months	COVID Response <ul style="list-style-type: none">• Test orders and results• Comprehensive Reports• Acute and Post Acute capacity reporting• Vaccination status reporting (summary and patient level)	<ul style="list-style-type: none">• e-Referral Tool• Patient Portal• Prior Hospitalizations Report• Pregnancy/ COVID-19 Surveillance
Next 12 Months	<ul style="list-style-type: none">• COVID Vaccination tools• InContext and ULP Parity• InContext Enhancements: encounter timeline, immunization, CCDA document display, multi-patient select, patient death date, imaging worklist, download to PDF, next of kin• Substance Use Disorder Care Team	<ul style="list-style-type: none">• Consent Registry• Medicare Conditions of Participation compliance• Clinical Decision Support: (CDS) Hooks• Support population health/ health equity/ regional partnership activities



Evolution of CRISP Point of Care Data



CRISP Patient Snapshot interface showing patient demographics, clinical events, and care alerts.

CRISP Patient Snapshot
Patient Name: GLEBERT GRAPE Gender: Male Date of Birth: 05-01-1984

Patient Demographics

ID	10000010000	10000010000
Gender	Male	B.S.B. 10-01-1984
Age	30	05-01-1984

Clinical Events

Date	Description	Status
05/01/2018	Summary of Care	Monitor
05/01/2018	Summary of Care	Monitor
05/01/2018	Summary of Care	Monitor
05/01/2018	Summary of Care	Monitor
05/01/2018	Summary of Care	Monitor
05/01/2018	Summary of Care	Monitor
05/01/2018	Summary of Care	Monitor
05/01/2018	Summary of Care	Monitor
05/01/2018	Summary of Care	Monitor

Care Alerts

Date	Description
05/01/2018	Summary of Care
05/01/2018	Summary of Care
05/01/2018	Summary of Care
05/01/2018	Summary of Care
05/01/2018	Summary of Care
05/01/2018	Summary of Care
05/01/2018	Summary of Care
05/01/2018	Summary of Care
05/01/2018	Summary of Care

HIE InContext interface showing patient information and medication list.

HIE InContext
Anna Cadence
Female, Born 16, 1981, Probable

1001 Main St., Columbia, MD 21049
Medication Control Authority

Medications

Medication	Date Filed	Quantity
INCODONE HD 10 MG TABS	2018-01-16	50
INCODONE HD 6 MG TABS	2018-07-08	50

BestPractice Advisory - Cadence, Anna

ⓘ Patient may have experienced a controlled substance related event on 2018-12-01 at University of MD UMMC. Discharge Diagnosis: T40.0X (Poisoning by Opium).

CRISP OVERDOSE NOTIFICATION

Note from the Behavioral Health Administration: For further assistance, providers can contact the Maryland Addiction Consultation Service at: www.marylandmaccs.org

Remove the following orders?

<input type="button" value="Remove"/>	<input type="button" value="Keep"/>	ALPRAZolam (XANAX) 1 MG tablet Take 1 Tablet (1 mg total) by mouth nightly, at bedtime as needed for Anxiety Max Daily Amount: 1 mg, R-0, Normal
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Apply the following?

<input type="button" value="Order"/>	<input type="button" value="Do Not Order"/>	naloxone (NARCAN) intranasal solution 4 mg/0.1 mL
<input type="button" value="Order"/>	<input type="button" value="Do Not Order"/>	Intranasal Narcan Teaching



Data Available to Deliver within the Workflow

Data Type	Data Definition	Jurisdiction Availability	Returned As
Advance Directives	End of life care documents	MD, WV	FHIR Document Reference or custom JSON
Care Alerts	Short pieces of information one provider identifies as valuable to communicate to other providers treating the patient	DC, MD, WV	FHIR Flag or custom JSON
Care Team	Information on a patient's care team, including care manager, primary care provider, and care program information.	DC, MD, WV	FHIR CareTeam or custom JSON
Clinical Documents	From hospital and ambulatory providers	DC, MD, WV	CCDA
Diagnostic Report, Observation, Specimen, and Imaging Study	Provides access to transcribed documents, radiology reports, and laboratory reports sent to CRISP via HL7 v2 documents.	DC, MD, WV	FHIR DiagnosticReport, Observation, Specimen and ImagingStudy
Events	Inpatients, emergency and outpatient encounters from hospitals and ambulatory providers with an ADT interface with CRISP	DC, MD, WV	FHIR Encounters or custom JSON
Immunizations	Immunization information from Maryland Immunet https://phpa.health.maryland.gov/OIDEOR/IMMUN/Pages/immune.t.aspx	MD	FHIR Immunizations or HL7v2

Data Type	Data Definition	Jurisdiction Availability	Returned As
Medicaid Claims	Medications, Procedures, Encounters, and Diagnosis	DC, MD, WV	FHIR Medication Dispense, Procedure, Encounter, or Condition
Medicare Claims	Medications, Procedures, Encounters, and Diagnosis	DC, MD, WV	FHIR Medication Dispense, Procedure, Encounter, or Condition
Overdoses	Overdose notification discerned from ADT diagnosis codes; include the diagnosis code, diagnosing facility, and timestamp the notification was sent to CRISP	DC, MD, WV	FHIR Flag or custom JSON
Patient Match	Demographic information from patient's most recent encounter	DC, MD, WV	FHIR Patient or custom JSON
PDMP	Schedule II-V dispensed drugs to patients. Available for Maryland residents only.	MD	FHIR MedicationDispense or custom JSON
Program Directory	Information on various programs operating in CRISP jurisdictions including a description of the program, contact information for the program, and the regions served.	DC, MD	custom JSON
Public Health Alerts	Flags for patients with reportable conditions such as COVID19, CRE, Zika.	DC, MD	FHIR Flags
SNF Directory	Information on whether a SNF facility is accepting patients, and what services are provided by that facility.	DC, MD, WV	TBD

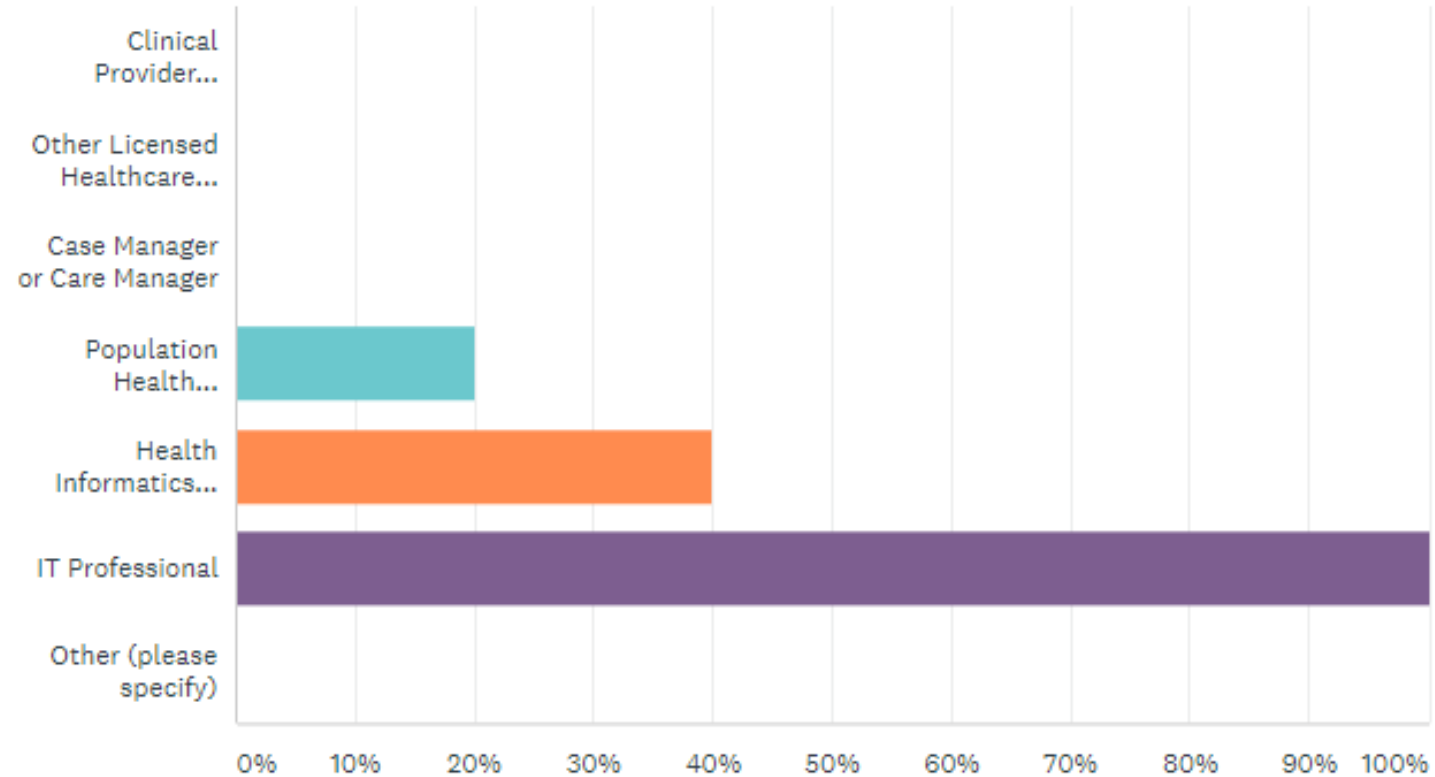


Your Needs



Health System / Hospital HIE Priorities Survey

- Respondents





Most Significant Health IT Data Challenge

- “Data assimilation from different sources”
- “Integration and reporting capability in real-time.”
- “Getting timely updates on COVID tests and immunizations into our system”
- “Lack of reliable, easily accessible and able to manipulate data.”



Gaps in Your EMR Vendor's Strategy That CRISP Can Address?

- "Data harmonization / making data compatible / trusted ingestion process"
- "State requirements for data (esp. related to COVID and Vaccination) are slow to happen in EHR vendor."
- "Statewide Data"

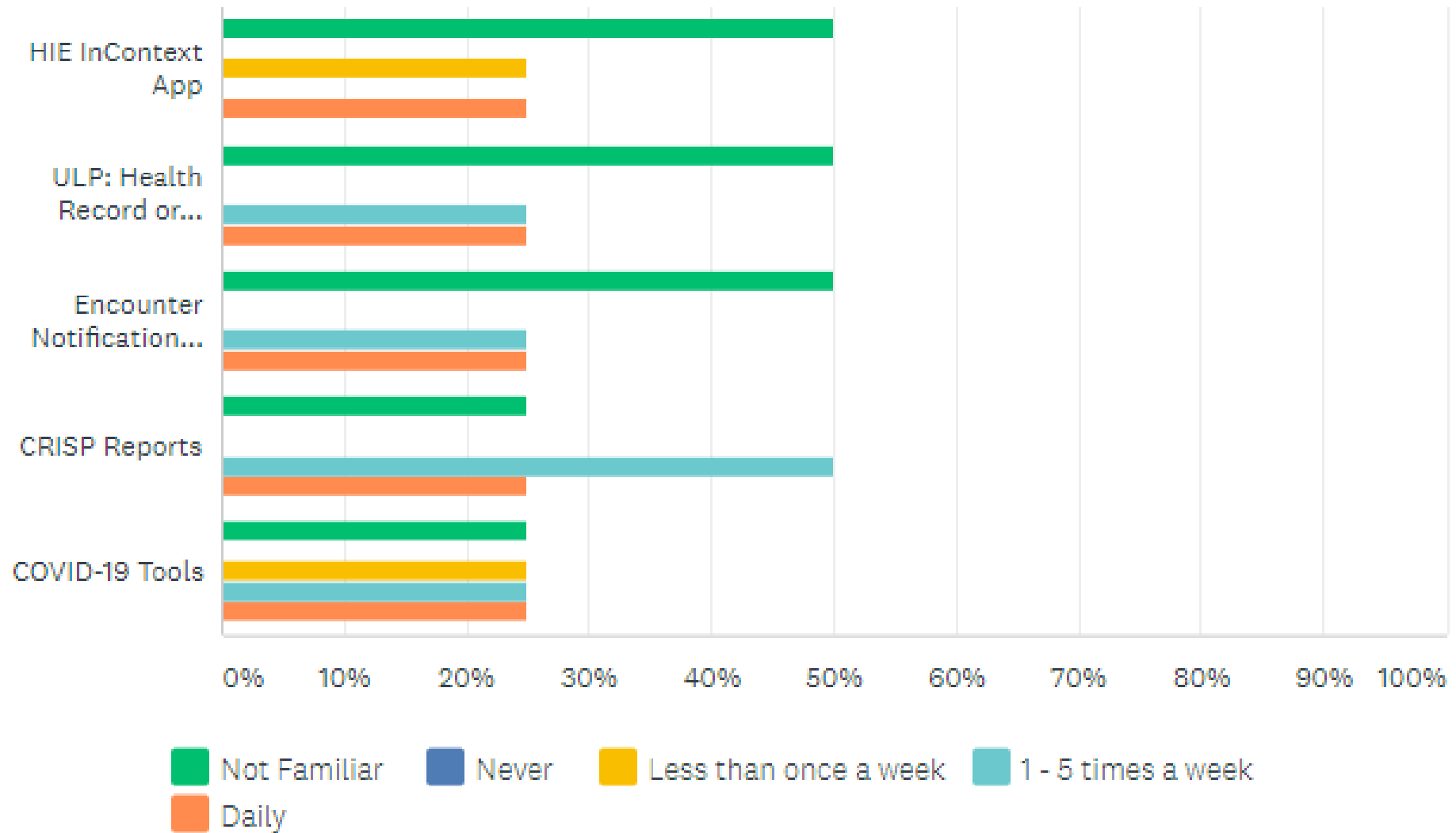


Your EMR's Best Feature to Promote Data Outside Its Platform

- "The way that database can allow access to external databases as needed."
- "APIs / HL7 compliance"
- "Sharing data with other Epic hospitals and CRISP"
- "Analytical platform and ability to send data to other platforms is improving."



How Frequently Have You Used CRISP Tools in Last 30 Days?





Discussion Questions

- What are your Health IT Data exchange priorities?
- How would you like to use this learning collaborative going forward?
- Are there common priorities that you would like to discuss in this forum?
- How Does Clinical Decision Support fit into your priorities?
- What can we work on collectively?



Next Steps: EMR Specific User Groups

- What: Derive solution visions based on Problem Identification/Definition.
- How: Technical considerations
- When: Align CRISP and Hospital/System work queues



For More Information: Hospital/Health System Account Execs

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Cindy Gingrich, cindy.Gingrich@crisphealth.org



Recent Initiatives



SNF to Acute Transfer Form

- **Problem:** Communicating accurate clinical and demographic information to ease transfer trauma and increase positive patient outcomes when a patient transferred from Post-Acute Care facility to a Hospital Emergency Department (ED).
- **Solution:** It is believed Lorien Health Services collaborated with Howard County General Hospital (HCGH) to create the first edition of the Transfer Form (Form).
- **Evolution:**
 - The Form (paper version) was presented to Maryland Hospital Association which has promoted widespread use of the Form throughout Maryland.
 - Hospitals and post acute partners have adopted and adapted Form to meet their particular needs.
 - Lorien and HCGH studied utilization and found the Form reached ED direct care gives a minority of the time. Paper form would “disappear” at any of several touch points during the transfer (i.e. ambulance companies, ED registrars, etc.)
- **Transfer Form v.2.0:** Electronic Form accessible in CRISP Unified Landing Page



SNF to Acute Transfer Form

SNF TO HOSPITAL TRANSFER FORM

SNF: _____

Nursing Supervisor Phone #: _____ Main Line #: _____

Patient Name: _____ DOB: _____

Patient Emergency contact name and number: _____

Transfer Date: _____ Primary Language: English Other: _____

Referring Clinical Provider: _____ Telephone: _____

- What prompted transfer?**
- | | | |
|--|--|--|
| <input type="checkbox"/> Cardiac/Respiratory Arrest | <input type="checkbox"/> IV/PEG/Drain | <input type="checkbox"/> Fall with Injury Evaluation |
| <input type="checkbox"/> Chest Pain | <input type="checkbox"/> Stroke-like Symptoms | <input type="checkbox"/> Abdominal Pain |
| <input type="checkbox"/> Shortness of Breath | <input type="checkbox"/> Syncope/Near Syncope | <input type="checkbox"/> Pain (other): _____ |
| <input type="checkbox"/> Patient/Family Request: _____ | <input type="checkbox"/> Altered Mental Status | <input type="checkbox"/> Lab/Imaging: _____ |
| | | <input type="checkbox"/> Other: _____ |

Interventions prior to sending to ED: _____

Vital Signs: BP _____ HR _____ RR _____ Temp _____ O2 Sat _____ Time Taken _____ (AM/PM)

- Co-morbidities:** CHF COPD CKD DM Cancer (active treatment) Dementia
 Psychiatric Condition Other: _____

Allergies: None Yes, please list: _____

History of COVID-19 RT-PCR Testing: Positive, _____ (Test Date) Negative, _____ (Last Test Date)

Is the Patient on Palliative/Hospice care? _____

Isolation Precautions:	Baseline Mental Status:	Baseline Functional Status:
<input type="checkbox"/> MRSA	<input type="checkbox"/> Alert/Oriented	<input type="checkbox"/> Ambulates independently
<input type="checkbox"/> VRE	<input type="checkbox"/> Mild confusion	<input type="checkbox"/> Ambulates with assistive device
<input type="checkbox"/> C. diff	<input type="checkbox"/> Moderate/severe confusion	<input type="checkbox"/> Ambulates only with human assistance
<input type="checkbox"/> Other	<input type="checkbox"/> Minimally responsive/Unresponsive	<input type="checkbox"/> Not ambulatory

What do you want the ED to do? _____

SNF to ED TRANSFER CHECKLIST: Print the following documents and include with this Transfer Form in the order listed. Send entire packet with the patient to the hospital. MOLST Facesheet
 X-Rays Medication List Lab Results Care Plan Goals SBAR Other Info.

Please note, our SNF facility can do: IV ABT/Fluids EKGs Blood Transfusion Wound Care
 Wound Vac X-Ray Inotropes

ED DOCUMENTATION Date: _____ Time: _____ (AM/PM)

ED Contact: _____ Telephone: _____

Interventions completed in the ED (brief progress note): _____

ED to SNF TRANSFER CHECKLIST: Call SNF and/or SNF clinical provider for handoff
 Complete ED Documentation section and make a copy of completed form for hospital records. Print the following documents, if applicable, and send to SNF with the original Transfer Form.
 Patient Instructions/AVS Physician Notes Labs Radiology Results



Transfer Form: ULP Version

12113020 Transfer Form - BNF Transfer Form

Transfer to Hospital

Transfer Date 12/11/2020
Patient Name GRAPE, GILBERT
Patient DOB 01/01/1964
Origin Facility Anne Arundel Medical Center
[Change Facility](#)

Patient Primary Language
English

Contact Details

Nursing Supervisor Phone
10-digit phone

Patient Emergency Contact Name
full name

Referring Provider Name
full name

Facility Main Phone
10-digit phone

Patient Emergency Contact Phone
10-digit phone

Referring Provider Phone
10-digit phone

Reasons for Transfer
Select or complete all that apply. Leave blank if not applicable.

<input type="checkbox"/> Cardiac/respiratory arrest	<input type="checkbox"/> IV/PEG/Drain	<input type="checkbox"/> Altered mental status
<input type="checkbox"/> Chest pain	<input type="checkbox"/> Syncope/near syncope	<input type="checkbox"/> Fall with injury
<input type="checkbox"/> Shortness of breath	<input type="checkbox"/> Abdominal pain	<input type="checkbox"/> Lab/imaging
<input type="checkbox"/> Stroke-like symptoms	<input type="checkbox"/> Other pain	<input type="checkbox"/> Patient/family request
		<input type="checkbox"/> Other

Details

Pre-Transfer Information

Interventions Prior to Transfer

Vitals

BP	O2 Sat	Temperature
<input type="text" value="130/80"/> <small>mmHg</small>	<input type="text" value="99"/> <small>%</small>	<input type="text" value="97.5"/> <small>Degrees Fahrenheit</small>
HR	Respiratory Rate	Time Taken

https://patrian.arp.health.org/web/guest/transfer-form

12113020 Transfer Form - BNF Transfer Form

lpm breaths per minute

Co-morbidities
Select or complete all that apply. Leave blank if not applicable.

<input type="checkbox"/> CHF	<input type="checkbox"/> DM	<input type="checkbox"/> Psychiatric condition
<input type="checkbox"/> COPD	<input type="checkbox"/> Cancer (active treatment)	<input type="checkbox"/> Other
<input type="checkbox"/> CKD	<input type="checkbox"/> Dementia	

Other History

COVID-19 RT-PCR Test Result **Last Test Date**

Is the patient in palliative/hospice care? **If yes, give the agency providing palliative/hospice care**

Allergies

No known allergies

Isolation Precautions

<input type="checkbox"/> MRSA	<input checked="" type="checkbox"/> Alert/oriented	<input checked="" type="checkbox"/> Ambulates independently
<input type="checkbox"/> VRE	<input type="checkbox"/> Mild confusion	<input type="checkbox"/> Ambulates with assistive device
<input type="checkbox"/> C. Diff	<input type="checkbox"/> Moderate/severe confusion	<input type="checkbox"/> Ambulates only with human assistance
<input type="checkbox"/> COVID-19	<input type="checkbox"/> Minimally responsive/unresponsive	<input type="checkbox"/> Not ambulatory
<input type="checkbox"/> Other		

Baseline Mental Status

Baseline Functional State

What do you want the ED to do?

Specify any information that will be printed and sent with the patient.

<input type="checkbox"/> MDLST/POLST	<input type="checkbox"/> X-rays	<input type="checkbox"/> SBAR
<input type="checkbox"/> Facsheet	<input type="checkbox"/> Lab results	<input type="checkbox"/> Other
<input type="checkbox"/> Medication list	<input type="checkbox"/> Care plan	

Specify procedures your facility is able to perform.

<input type="checkbox"/> IV ABT/Fluids	<input type="checkbox"/> Wound care	<input type="checkbox"/> X-ray
<input type="checkbox"/> EKGs	<input type="checkbox"/> Wound vac	<input type="checkbox"/> Inotropes
<input type="checkbox"/> Blood transfusion		

[Submit](#)



Utilization of SNF to ED Transfer Form

Would your ED team be interested in encouraging SNFs that regularly transfer patients to your hospital to use the ULP version of this form to improve transitions of care?



2) CRISP Services Aligned with COVID Response Needs

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



Core HIE services are incorporating COVID-19 data for existing use cases with minor enhancements

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



Reports are deployed with new data sources including real-time ADTs and labs

4. PUBLIC HEALTH SUPPORT:

- Deploying services in partnership with Maryland Department of Health, DC Department of health, and West Virginia Bureau of Public health
- Enabling researchers to appropriately access aggregated data and manage cohort studies
- Housing the Prescription Drug Monitoring Program (PDMP) for Maryland



MDH relies on CRISP as a data source and technology integrator

5. PROGRAM ADMINISTRATION:

- Making policy discussions more transparent and informed
- Supporting Care Redesign Programs



Use Case 1: Integrating and Sharing Case Data

MDH sends to CRISP:

- Daily confirmed case files
- Automated Electronic Lab Reporting (ELR) feed

CRISP combines cases with clinical and claims data for:

- Case investigations by local and state health officials
- Protecting EMS first responders who interacted with positive patients
- De-identified research activities by academic medical centers
- **Contact tracing to prevent community spread**



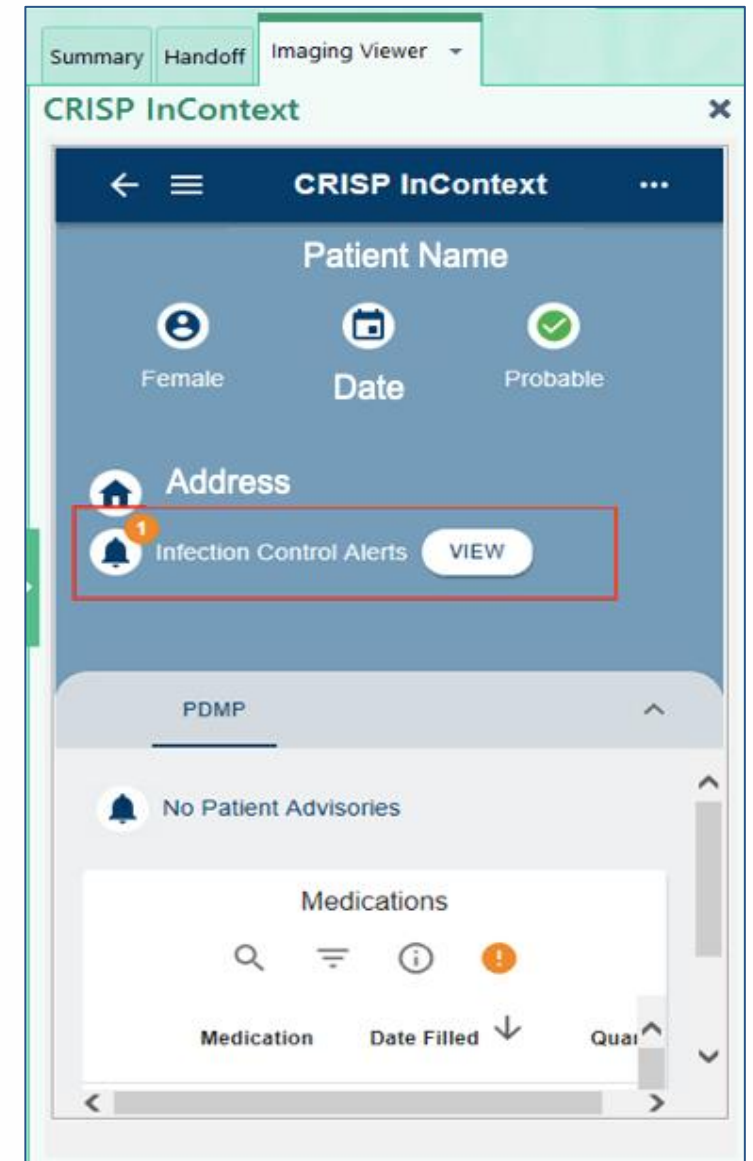
Use Case 2: Provider and Patient Communication

Data at the point of care:

- Positive results are turned into Care Alerts and Public Health Flags for use in InContext App and Unified Landing Page
- All labs are posted in Health Records
- Push notifications are sent for positive results
- New Results View created to show consolidated list to ordering providers

Patient outreach and support:

- Texting pilots to encourage self-isolation while awaiting results
- Customer care team call center re-purposed for patient scheduling support





Use Case 3: COVID Vax “Washing Machine”

- CRISP can receive lists of patients **registered** at vaccine administration sites, compare those populations with ImmuNet data, and return only those patients who were **not already vaccinated at another site**.
- Providers can focus outreach on un-vaccinated patients.