



# High Utilizer Smart Alert

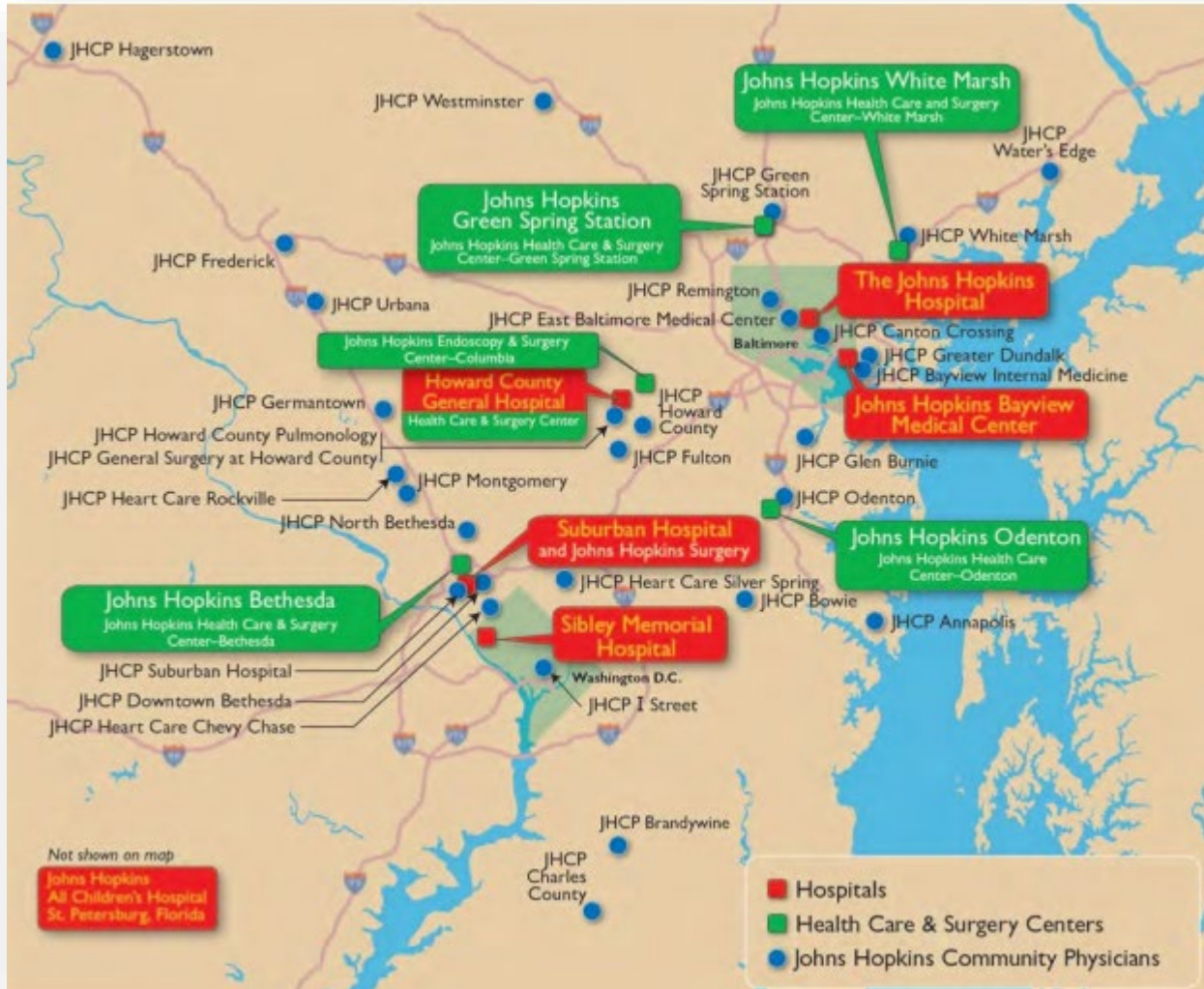
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Johns Hopkins Hospital

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Johns Hopkins Health System

# Johns Hopkins Medicine



**The Johns Hopkins Hospital** 1,162 patient beds • 2,590+ full-time attending physicians

**Johns Hopkins Bayview Medical Center** 463 patient beds • 870+ attending physicians

**Howard County General Hospital** 243 patient beds • 420+ active medical staff

**Suburban Hospital** 228 patient beds • 330+ active medical staff

**Johns Hopkins Community Physicians** 503 active medical staff



# Agenda

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- Describe Use Case
- Review Workflows
- Discuss Impact
- Share Lessons Learned

# Improve early identification of vulnerable populations

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Lack of statewide data to identify high utilizers at point of care

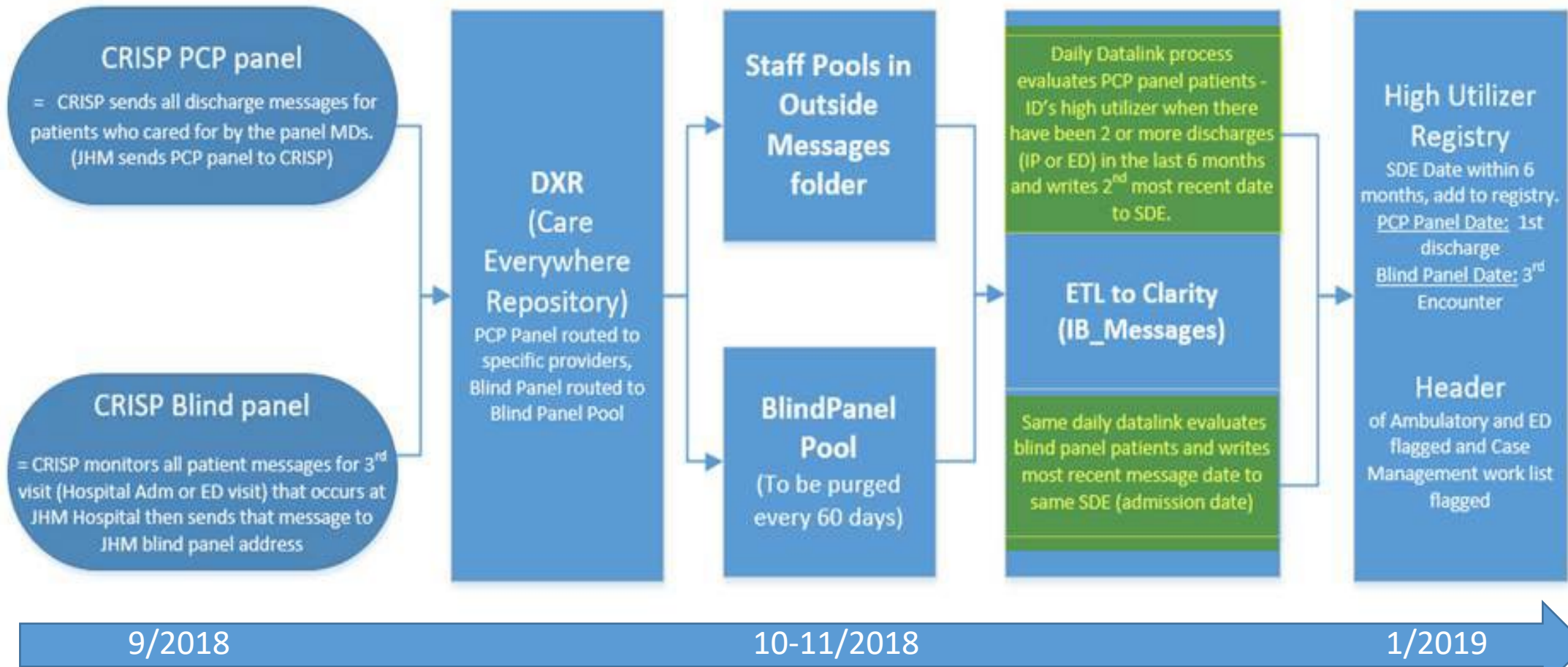


Improve identification of people with complex health and social needs across care settings; reduce avoidable re-hospitalizations

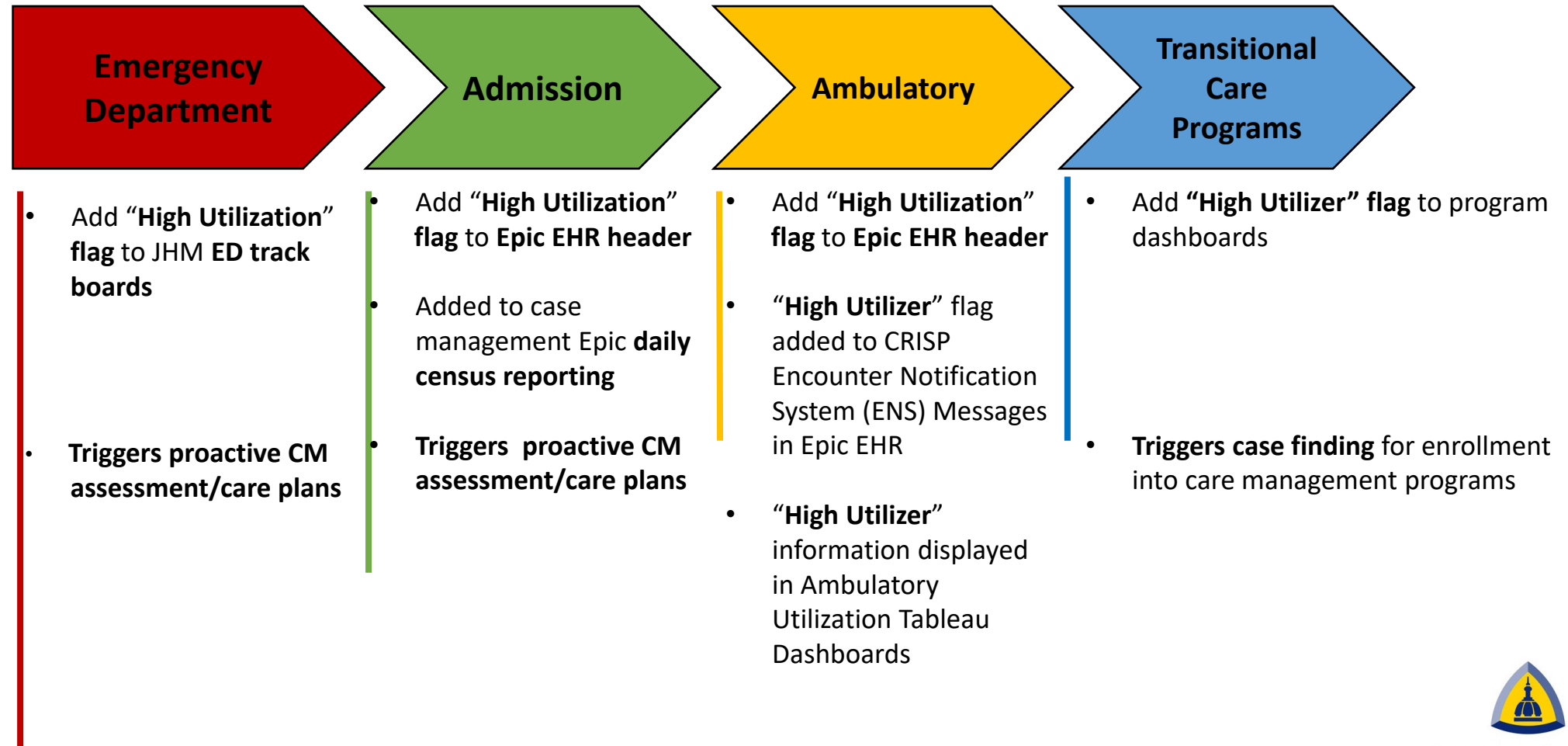


Partner with CRISP to explore Blind Panel/ Smart Alert capabilities

# Technical Workflow

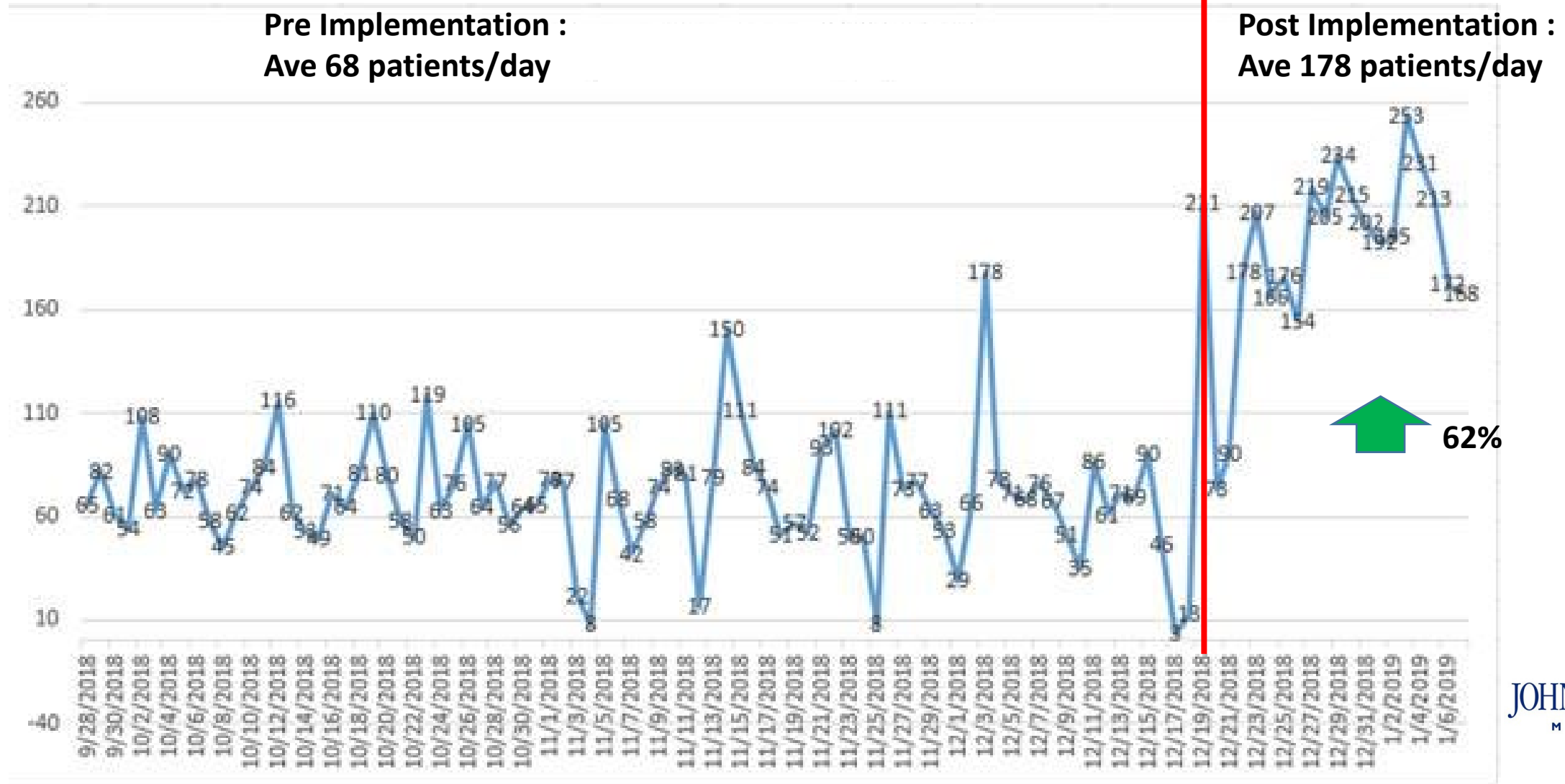


# Clinical Workflow



Enhances patient-centered plans of care and performance evaluation efforts

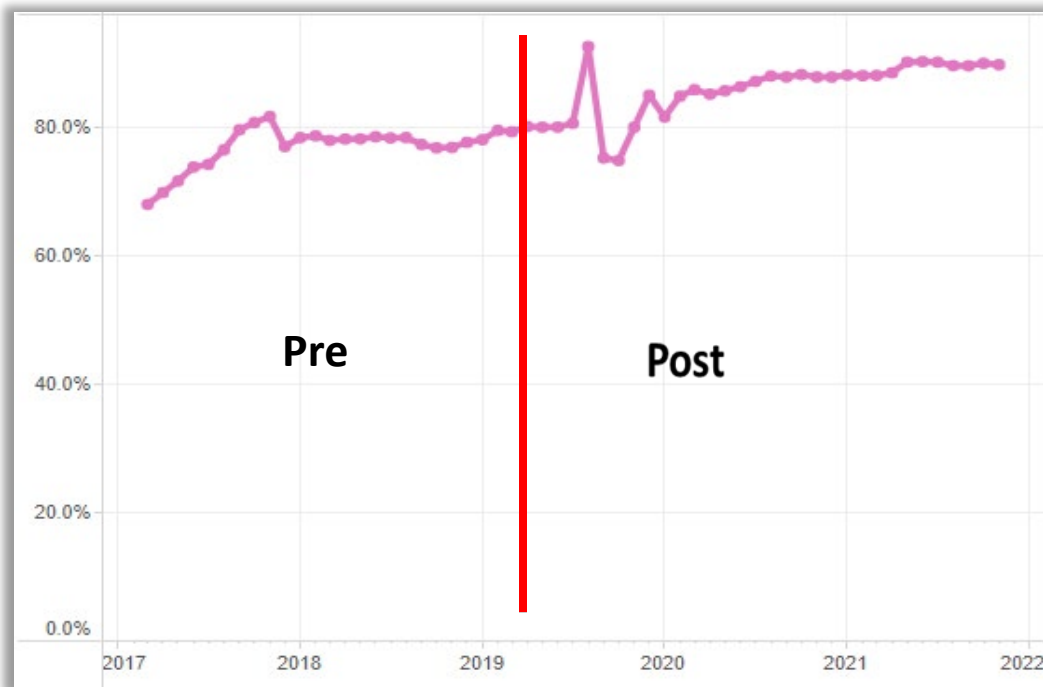
# Identifying populations using hospital services at high frequencies



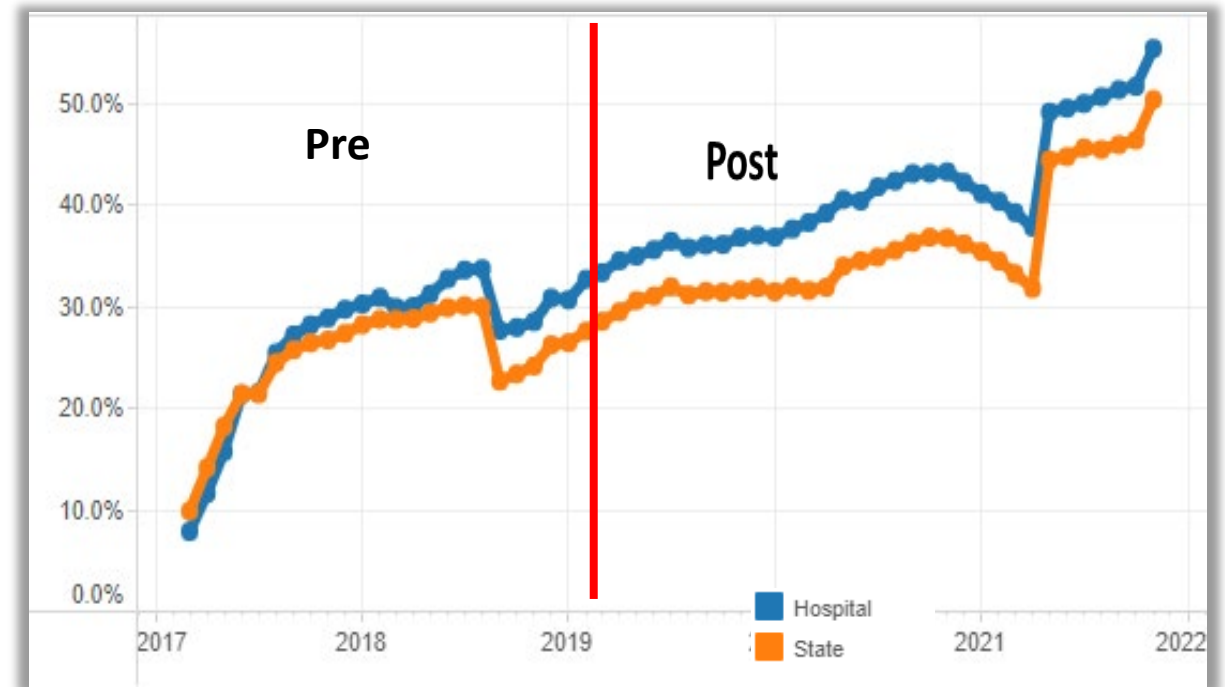


# Blind Panel impact: Acute Care

JHH High Needs: Percentage in Care Coordination



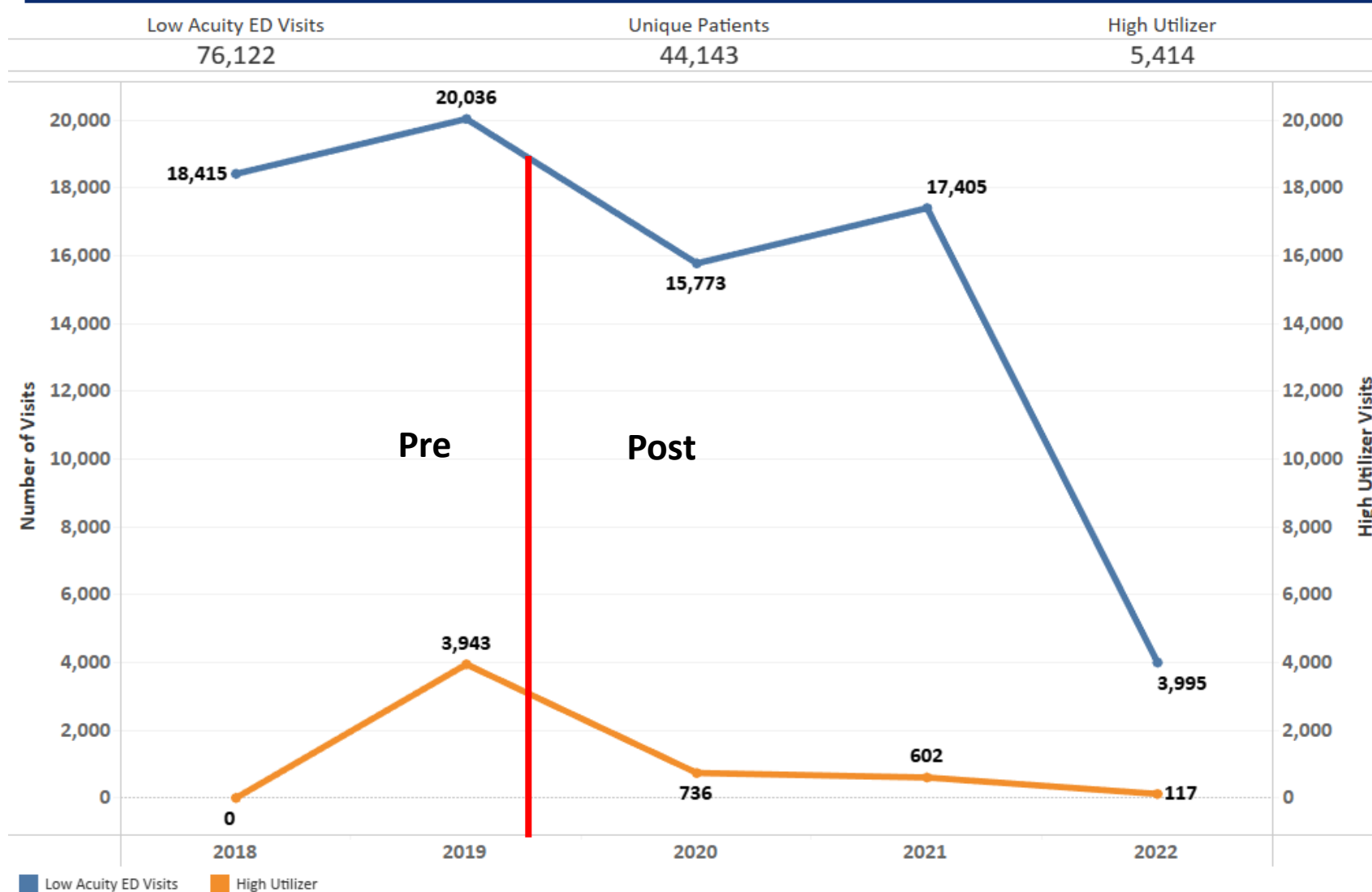
JHH High Needs: Percentage Care Plans/Alerts



**10% increase in Care Coordination; 20% increase in Care Plans and Care Alerts**



# Reducing ED high utilizer low acuity ED visits



- **84%** relative reduction in JHH high utilizer ED low acuity visits for 2019 - 2021; **3,943-602/yr.**
- **85%** relative reduction in high utilizer low acuity ED visits at JHH YTD; **20%- 3%.**

# Impact: Ambulatory

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- EHR High Utilizer flag facilitates timely scheduling
- CRISP ENS High Utilizer flag facilitates priority of transitional care management calls and follow up appointments
- Clinical Decision Support alerts providers of high utilizers and prompts Care Management referral
- Data used for routine ED High Utilizer mail outreach

**Call us first.**

We are here for you. Day and night.



# Lessons Learned

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- Engage an **interdisciplinary project team**
- Secure an **EHR project champion**
- Select **common data definitions** across care settings
- Create a robust **communication and onboarding plan**
- **Measure impact** pre/post implementation

# A special thank you to our collaborators

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- Anja Fries
- Mary Pohl
- Keishlyn Rogers



- Sara Evans
- Peggy Neidlinger
- Suzanna Munoz
- Deborah Shoup
- Amy O'Neil

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# Appendix

## CRISP ENS High Utilizer Indicator

My Messages

Rx Request (1)

Rx Response (1)

Patient Calls (12)

My Open Encounters (1)

After Hours Triage (25)

INR Reminder (6)

Outside Messages (81)

Pt Advice Request (10)

Pt Schedule (1)

Outside Messages 81 unread, 96 total

Status	Msg Date	30 Day Re-Admit R	High Util	Patient	Subject	Sent By
? New	12/28/2021 9:16 PM	0.0589007	Yes	William, Adam	Emergency Discharge Notification from Johns Hopkins Hospital	CRISP (CRISP Che
? New	12/28/2021 5:28 PM	0.0693906	Yes	William, Adam	Emergency Discharge Notification from Saint Agnes Hospital	CRISP (CRISP Che
? New	12/28/2021 3:56 PM	0.087348	Yes	William, Adam	Emergency Discharge Notification from Johns Hopkins Hospital	CRISP (CRISP Che
? Read	12/28/2021 4:48 AM	0.0629082	Yes	William, Adam	Emergency Discharge Notification from Greater Baltimore Medical Center	CRISP (CRISP Che
? New	12/27/2021 5:57 PM	0.0647148	Yes	William, Adam	Inpatient Discharge Notification from Suburban Hospital	CRISP (CRISP Che
? New	12/27/2021 12:43 PM	0.4022947	Yes	William, Adam	Inpatient Discharge Notification from Shady Grove Adventist Hospital	CRISP (CRISP Che
? New	12/27/2021 5:46 AM	0.0756484	Yes	William, Adam	Emergency Discharge Notification from Anne Arundel Medical Center	CRISP (CRISP Che
? New	12/27/2021 1:03 AM	0.0716159	Yes	William, Adam	Emergency Discharge Notification from Holy Cross Germantown	CRISP (CRISP Che
? Read	12/26/2021 12:48 PM	0.0629801	Yes	William, Adam	Emergency Discharge Notification from Suburban Hospital	CRISP (CRISP Che
? New	12/25/2021 7:19 PM	0.0674896	Yes	William, Adam	Emergency Discharge Notification from Howard County General Hospi...	CRISP (CRISP Che
? New	12/25/2021 6:33 PM	0.1716834	Yes	William, Adam	Emergency Discharge Notification from Holy Cross Germantown	CRISP (CRISP Che

Female, 61

MRN: 123456789

Phone: 202-123-4567

Code: Update Needed

Advance Directives: No AD On File

Legal Treatment Orders: MOLST on File

Patient Reminders: None +

Search

COVID-19 Vaccine: Overdue for booster dose

COVID-19: Unknown

High Hospitalization Risk

Utilization - High

CRNP MPH

PCP - General

Coverage: Medicare/Medicare...

COVID-19: Unknown

High Hospitalization Risk

Utilization - High

## Epic EHR High Utilizer Indicator

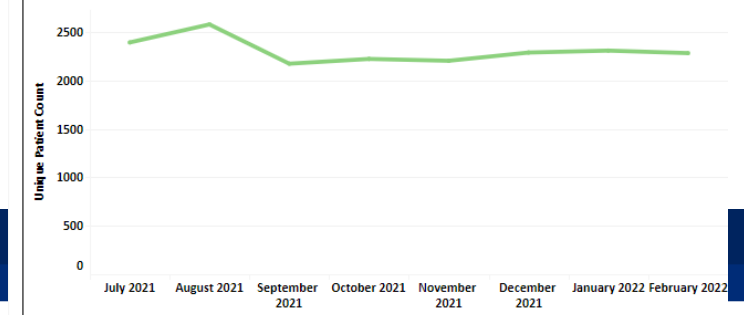
## Ambulatory Utilization Dashboards

JOHNS HOPKINS MEDICINE

Value | Patient Risk Summary | JHM

Date: February 2022

### Patient Risk Trend



JOHNS HOPKINS MEDICINE

Value | Risk Patient Detail | JHM

Date: November 2021

Privacy Notice (PHI): You are about to view private patient data. This data should only be used for internal operational needs and no

Patient Risk Status: High Utilizing Only

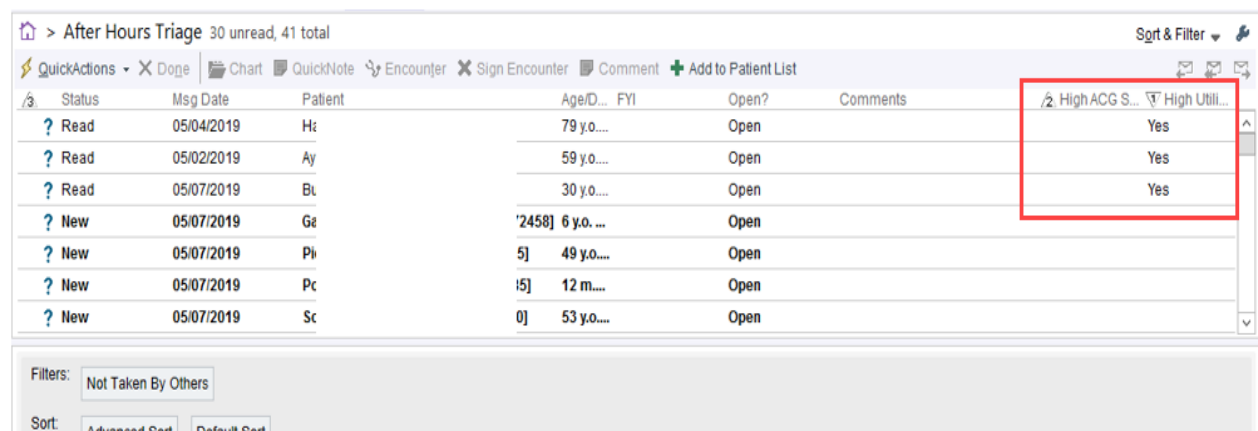
### At Risk Patient Detail

Emrn	Patient	Month, Day, Year of DOB	Payer Name	Provider	Department	High Utilizer	Very High Risk	High Risk	ACG Risk Score	Risk for Unplanned Readmission	ACG Risk Score for Unplanned Readmissions	Number of Hosp Visits	Month, Day, Year of Last Hosp Enc	Last Hosp Facility	Number of ED Visits	Month, Day, Year of Last ED Enc	Care Management Case Status
						Yes	No	No	0.52%	No	5.34%	3	November 16, 2021	Shady Grove Adventist Hospital	3	October 10, 2021	Not in Care Management
						Yes	No	No	8.97%	No	5.87%	0	Null	Null	3	November 8, 2021	Not in Care Management
						Yes	No	No	0.97%	No	9.40%	0	Null	Null	3	October 2, 2021	Not in Care Management
						Yes	No	No	4.49%	No	8.81%	0	Null	Null	3	November 1, 2021	Not in Care Management
						Yes	No	No	6.55%	No	6.85%	0	Null	Null	3	November 10, 2021	Not in Care Management
						Yes	No	No	2.41%	No	8.10%	0	Null	Null	4	October 31, 2021	Not in Care Management
						Yes	No	No	9.09%	No	5.76%	0	Null	Null	3	October 8, 2021	Not in Care Management
						Yes	No	No	4.02%	No	10.27%	2	November 2, 2021	Frederick Memorial Hospital Internal	1	November 11, 2021	Not in Care Management

# Appendix

## CRISP High Utilizer Indicator: patient advice/triage

Two new columns have been created to indicate if a patient has a high risk of hospitalization and if the patient is a high user. The High ACG Score and High Utilizer Column: will be found in the in the Patient Calls, Pt Advice Request and After Hours Triage folders.

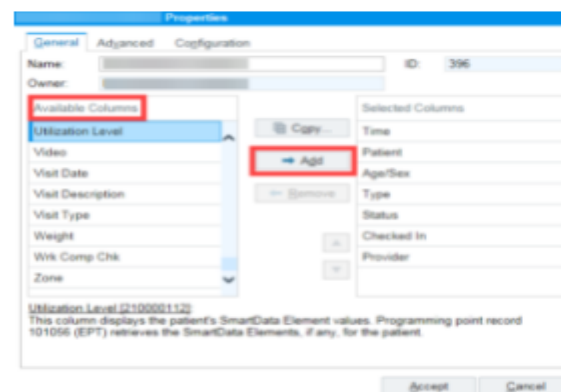


Status	Msg Date	Patient	Age/D... FYI	Open?	Comments	High ACG S...	High Util...
? Read	05/04/2019	Ht	79 y.o....	Open		Yes	Yes
? Read	05/02/2019	Ay	59 y.o....	Open		Yes	Yes
? Read	05/07/2019	Bl	30 y.o....	Open		Yes	Yes
? New	05/07/2019	Ge	'2458] 6 y.o. ...	Open			
? New	05/07/2019	Ph	5] 49 y.o....	Open			
? New	05/07/2019	Pc	15] 12 m....	Open			
? New	05/07/2019	Sc	0] 53 y.o....	Open			

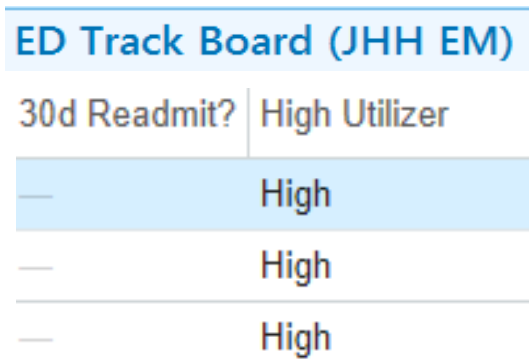
## CRISP High Utilizer Indicator: provider scheduling

New Utilization Level Column Added to Schedule

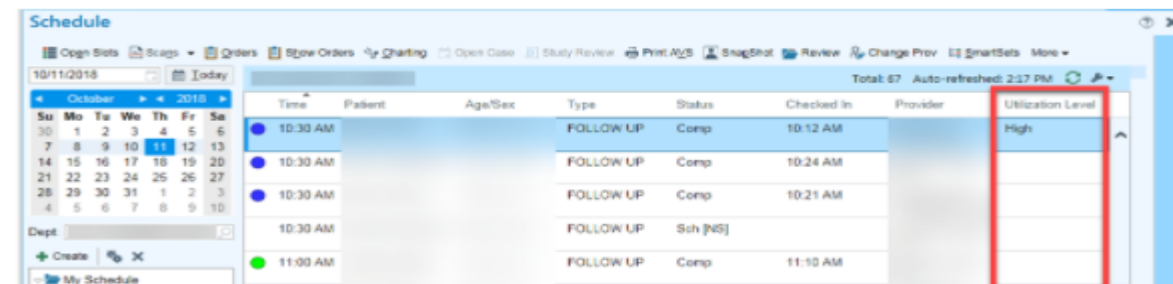
**[All Ambulatory Locations – All]** A column for Utilization Level has been added to the multi-provider schedule. Previously this information was only available from the patient header, which meant that the provider had to be in the chart to see it. Now providers can add this column to their schedule and see those patients who are identified as high utilizers. This change is already in Production.



## CRISP High Utilizer Indicator: JHM Emergency Departments



30d Readmit?	High Utilizer
—	High
—	High
—	High



Time	Patient	Age/Sex	Type	Status	Checked In	Provider	Utilization Level
10:30 AM			FOLLOW UP	Comp	10:12 AM		High
10:30 AM			FOLLOW UP	Comp	10:24 AM		
10:30 AM			FOLLOW UP	Comp	10:21 AM		
10:30 AM			FOLLOW UP	Sch [NS]			
11:00 AM			FOLLOW UP	Comp	11:10 AM		