

Learning Objectives:

- Describe the seven steps of a successful enterprise-level patient flow initiative.
- Identify five electronic health record tools that can be utilized in patient flow quality improvement initiatives.
- Use real-time data to implement patient flow improvements for capacity management.

BACKGROUND

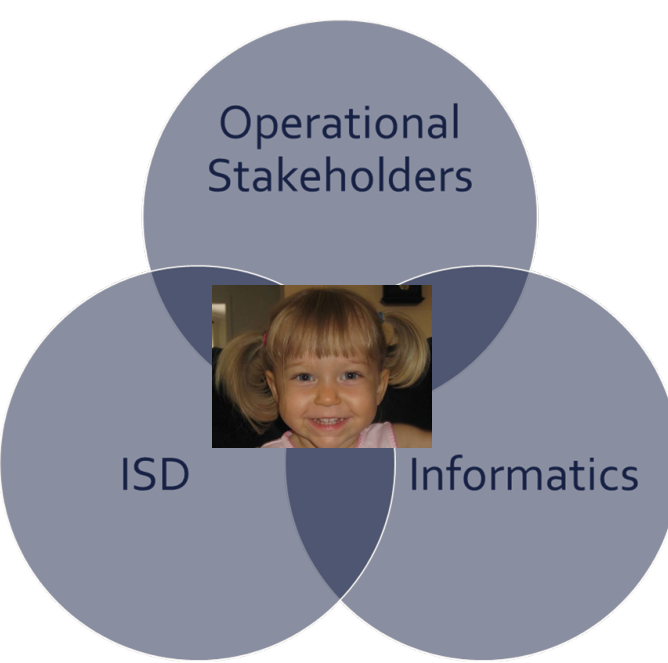
- Due to aging US population in conjunction with COVID-19 pandemic there has been record high utilization of inpatient hospital beds with greater than 100% capacity throughout the UR Medicine healthcare system including a large number of patients awaiting skilled nursing facility (SNF) placement.
- The Institute for Healthcare Improvement (IHI) recommends that all systems have a strategy for shaping demand, matching capacity and redesigning the system.
- UR Medicine created the Better Flow (BF) initiative in August 2021 to leverage electronic health care tools creating more efficient operational workflows while delivering high quality care.

GOALS

- The goals of the initiative were to remove system barriers and improve efficiency by leveraging electronic health record tools to create consistent workflows both at the institutional level and across a 1300-bed enterprise.

OVERVIEW

Better Flow Team



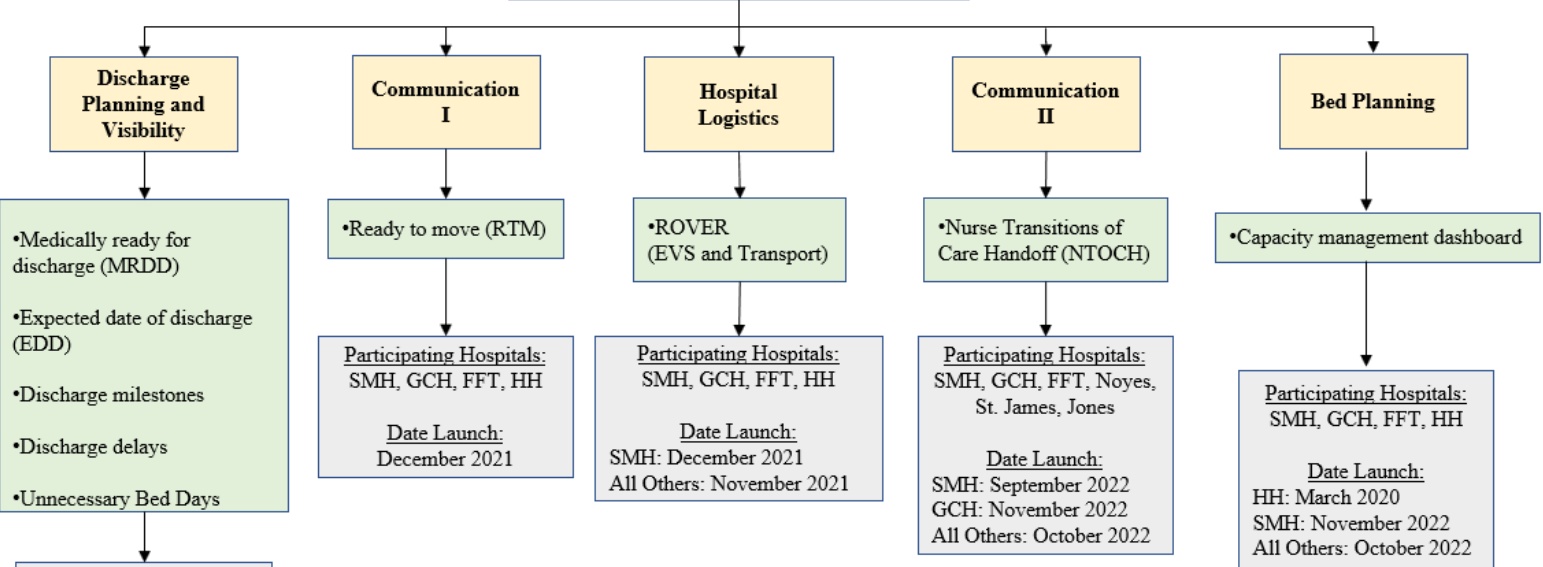
Better Flow Team

Better Flow Team - an interprofessional team comprised of the Information Systems Division (ISD), informatics and operational stakeholders.

Joining forces – building upon flow improvement efforts that were already occurring across the enterprise

Patient Centered – providing the right care in the right place at the right time

Better Flow Program: Enterprise Wide – Launched in 2021

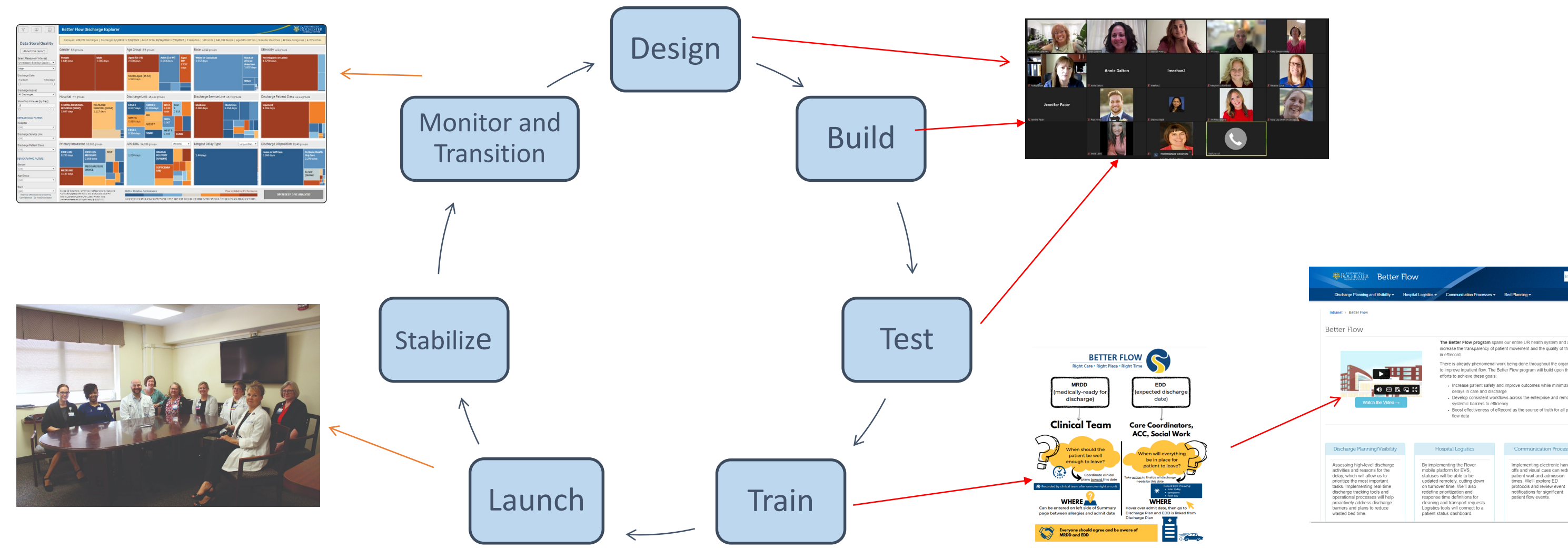


Better Flow Projects

Five Projects were implemented since August 2021 focusing on different aspects of improving efficiency of patient flow throughout the hospital system.

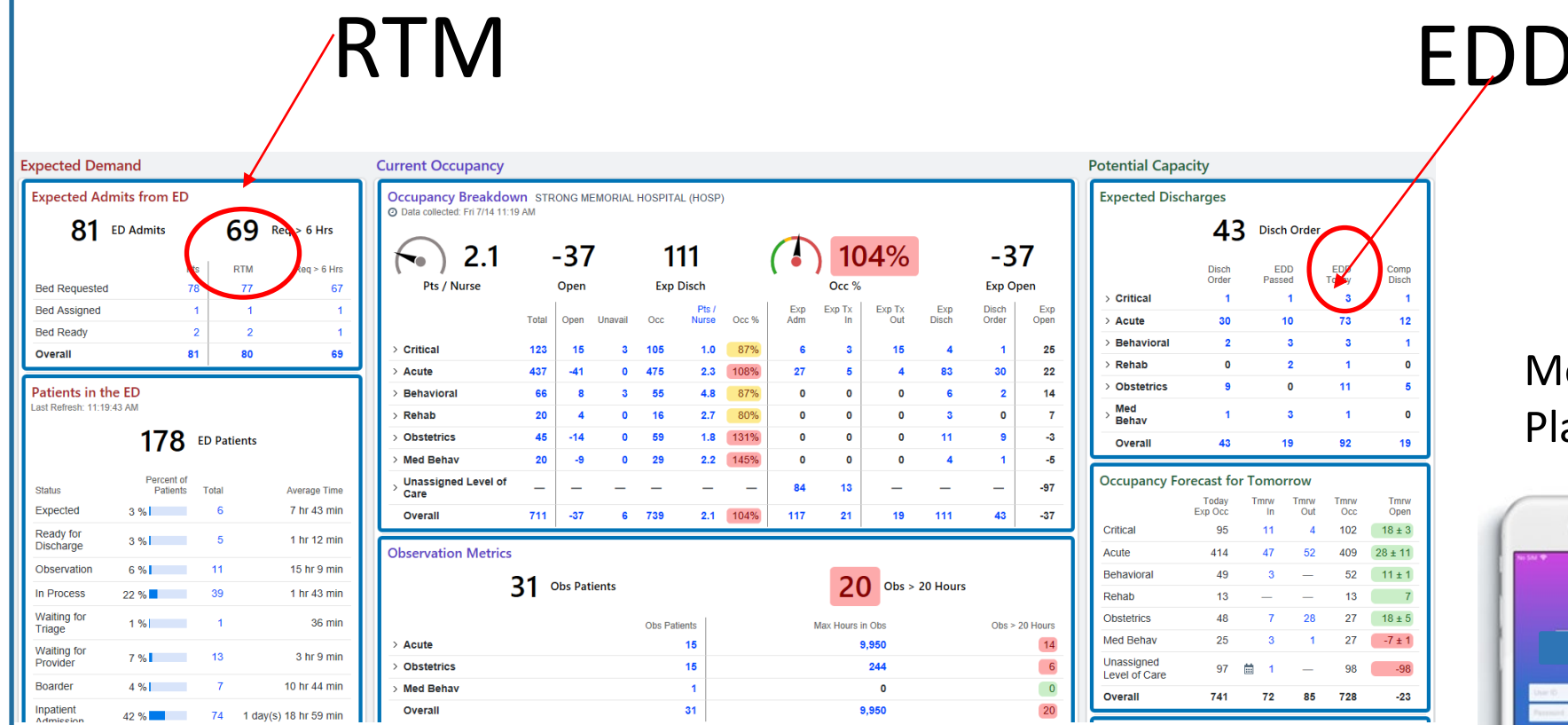
SMH = Strong Memorial Hospital
GCH = Golisano Children's Hospital
HH = Highland Hospital
FFT = Thomson Health

BETTER FLOW STRATEGY



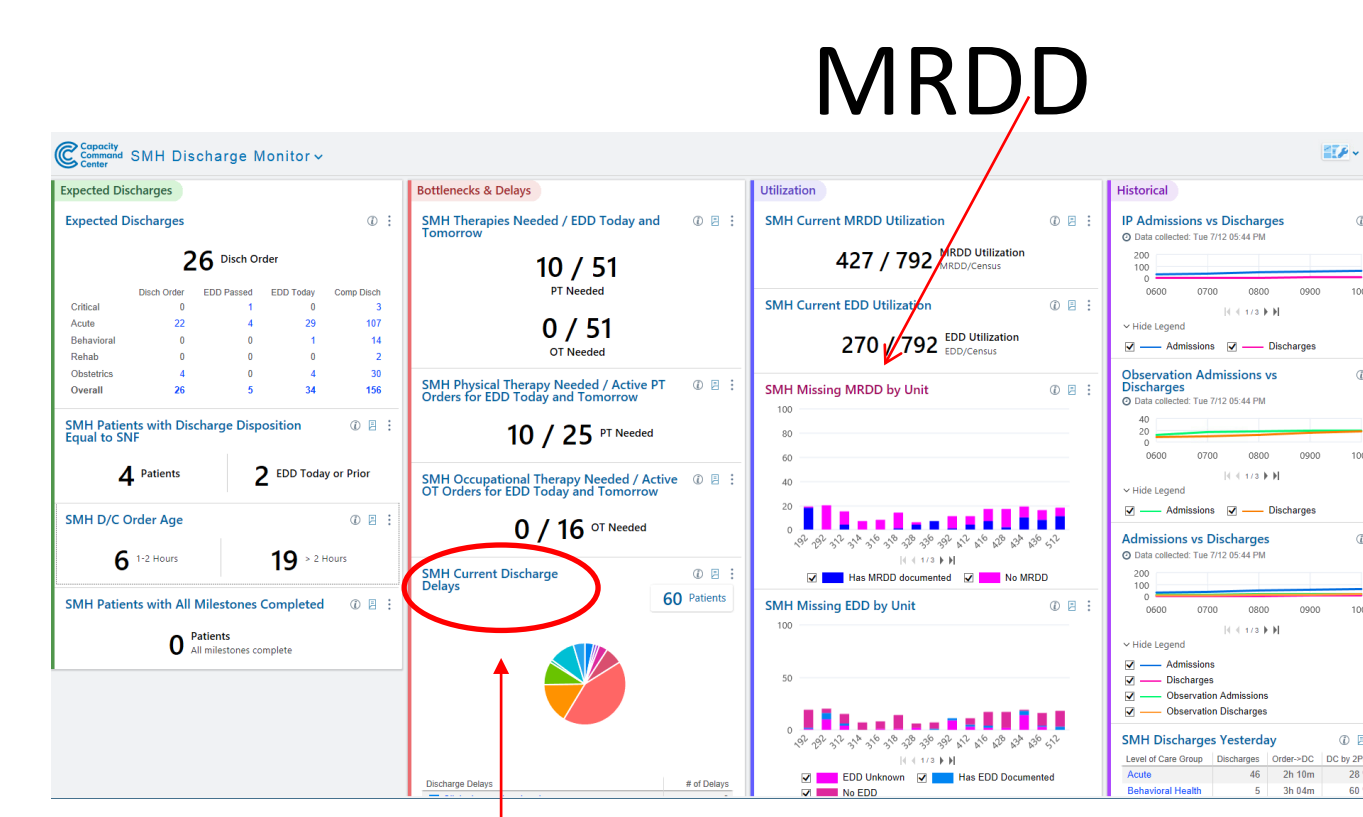
TOOLS AND DASHBOARDS

Capacity Management Dashboard



RTM = Ready to Move
MRDD = Medically Ready for Discharge Date
EDD = Estimated Date of Discharge

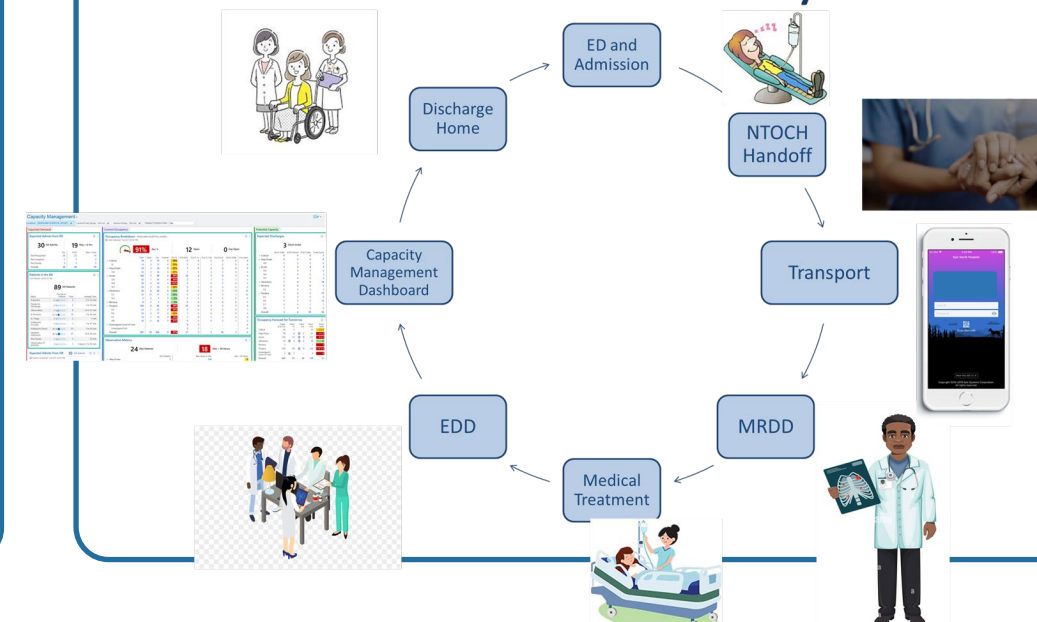
Discharge Monitor Dashboard



Discharge Delays

INTEGRATED & ADAPTIVE WORKFLOWS

Better Flow Life Cycle

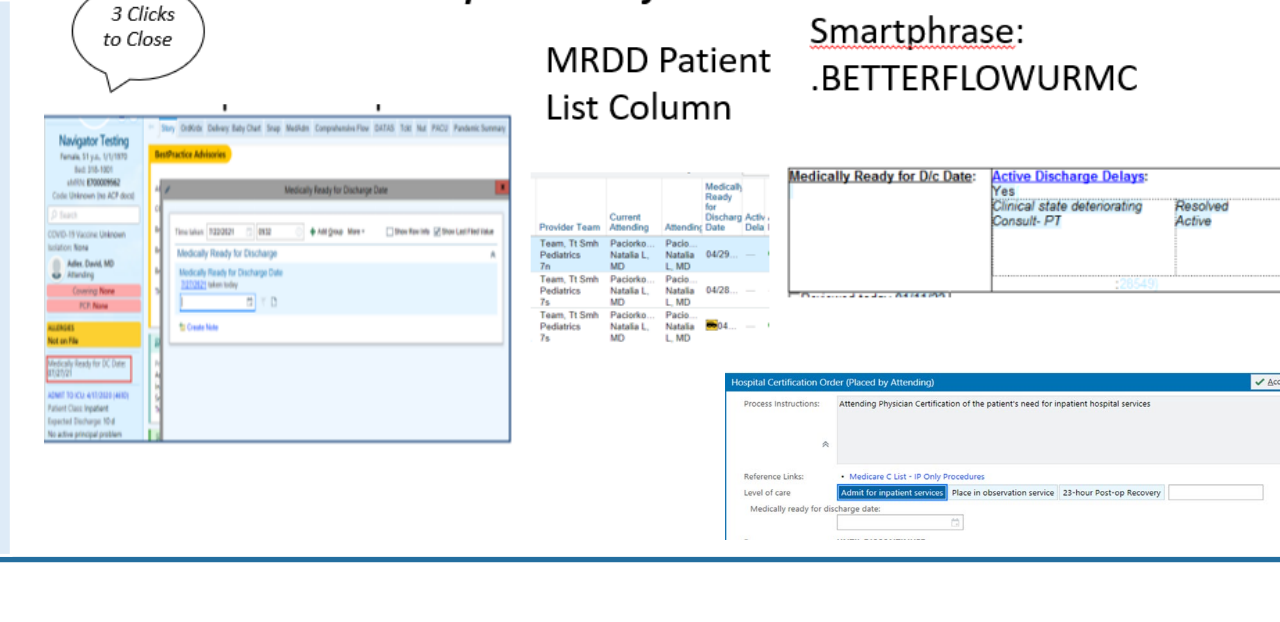


Workflows

The BF tools were integrated into multiple service line's workflows including environmental service, transportation, social work, nursing and providers maximizing efficiency of the patient's journey through the hospital.

Adaptive workflows were created to enhance the tool's convenience and utilization while decreasing clicks. Electronic smartphrases, visibility on patient list columns and integration into inpatient CMS hospital certification were created for transparency to the whole medical team.

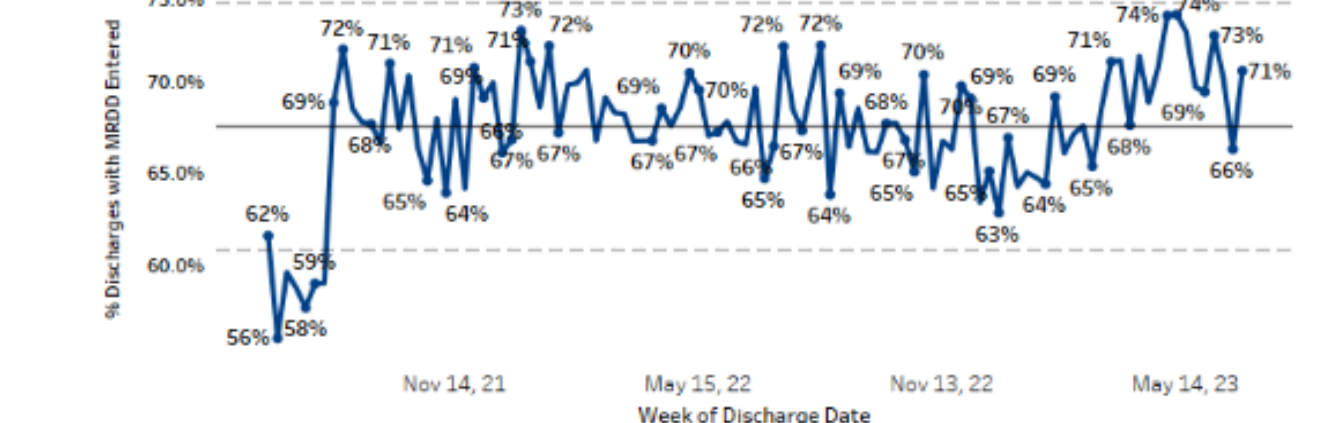
Adaptive Workflows



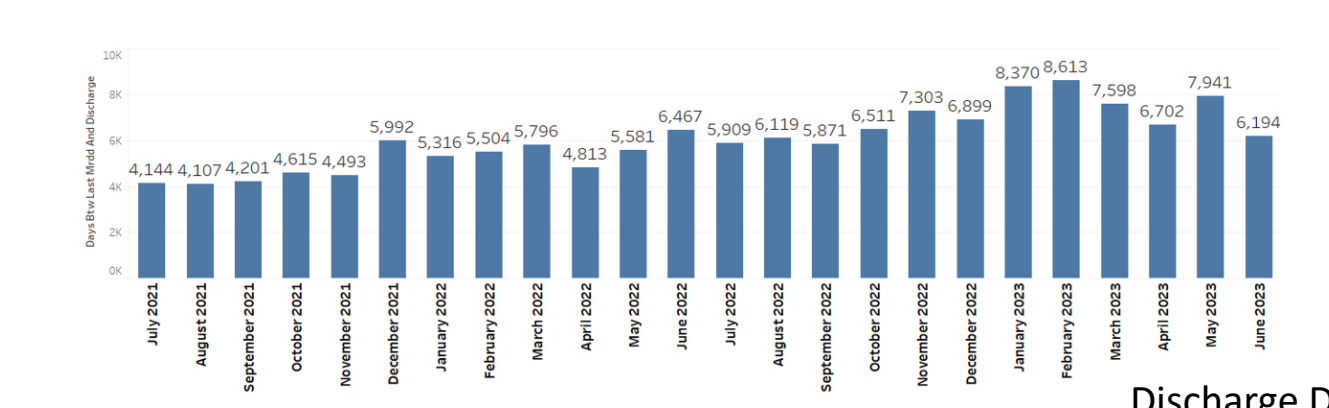
PROCESS AND OUTCOME MEASURES

UR Medicine Enterprise July 2021- June 2023

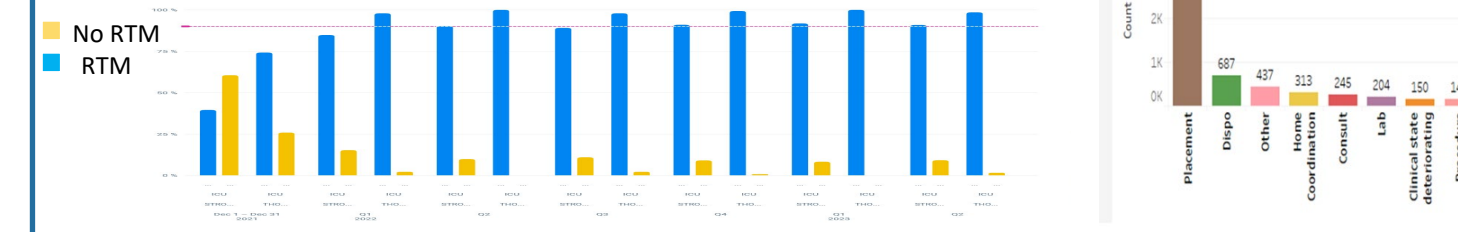
Hospital Discharge MRDD Utilization MRDD During Stay: Average Control Chart



Medically Unnecessary Bed Days



RTM ICU Call Out Order Utilization



PROCESS MEASURES

- 21% increase in MRDD utilization across the system (77% increase at HH and 18% increase at FFT)
- Over 90% utilization of RTM ICU call out order
- Over 5600 individual discharge delays captured in ten discrete categories

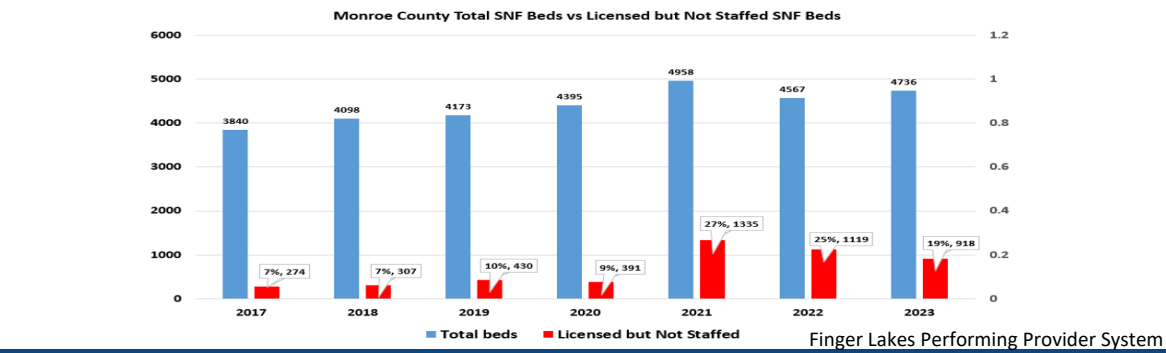
OUTCOME MEASURES

- Captured over 145,000 unnecessary bed days in enterprise hospitals.
- Up to 9000 phone calls reduced by ICU RTM Call Out order
- No decrease in length of stay (LOS) associated with Medically Ready for Discharge Utilization

COMMUNITY IMPACT

- Unnecessary bed days data was utilized to secure an 11 million-dollar American Rescue Plan Act grant to increase the community SNF nurses and create funds to accept more complex care hospital patients awaiting SNF beds.

Monroe County Total SNF Beds vs Licensed Not Staffed Beds



Finger Lakes Performing Provider System

CONCLUSIONS

- LOS was not decreased by MRDD utilization, although there were many other interdisciplinary team benefits from MRDD Utilization.
- 90% utilization of RTM ICU call out order target was met and significantly decreased the number of phone calls from ICU to admitting.
- Leveraging of electronic health record tools optimized patient flow at the institutional, enterprise and community level.
- Consistent program strategy was critical to successful implementation.
- Operational stakeholder engagement was the foundation of successful adoption.
- Utilization of real time data to drive and reinforce change was critical to achieving targets.
- A robust sustainability plan was required for continued success.

BETTER FLOW: DISCHARGE PLANNING AND BED PLANNING

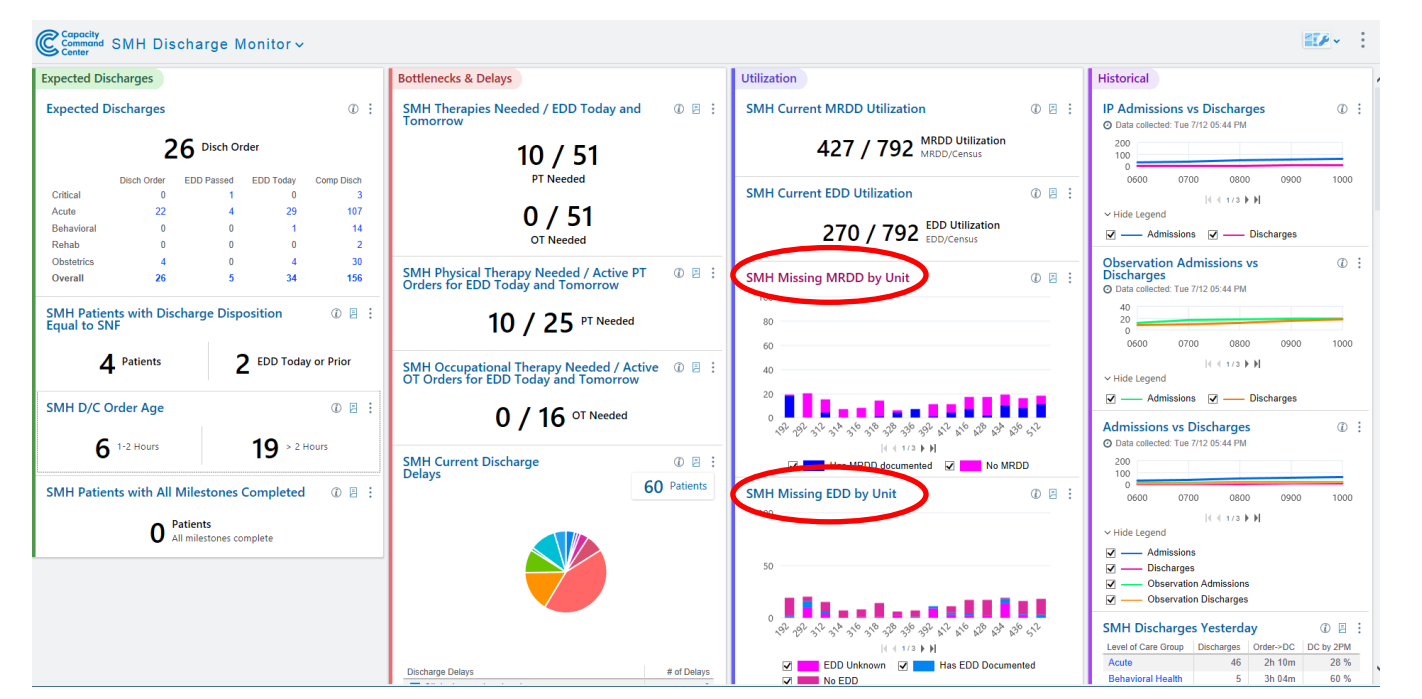
MEDICALLY READY FOR DISCHARGE DATE, DISCHARGE DELAYS, UNNECESSARY BED DAYS & CAPACITY MANAGEMENT DASHBOARD

Sarah Carpino, RN, MSBA; Libby Jewsbury; John Bramley, MS; Winifred Foster, MBA and Keely Dwyer-Matzky, MD, MSBA

DISCHARGE PLANNING

Redesign the System

- Medically Ready for Discharge Date and Estimated Date of Discharge
 - Provider driven medical stability date
 - Action date for bed planning



Shaping Demand

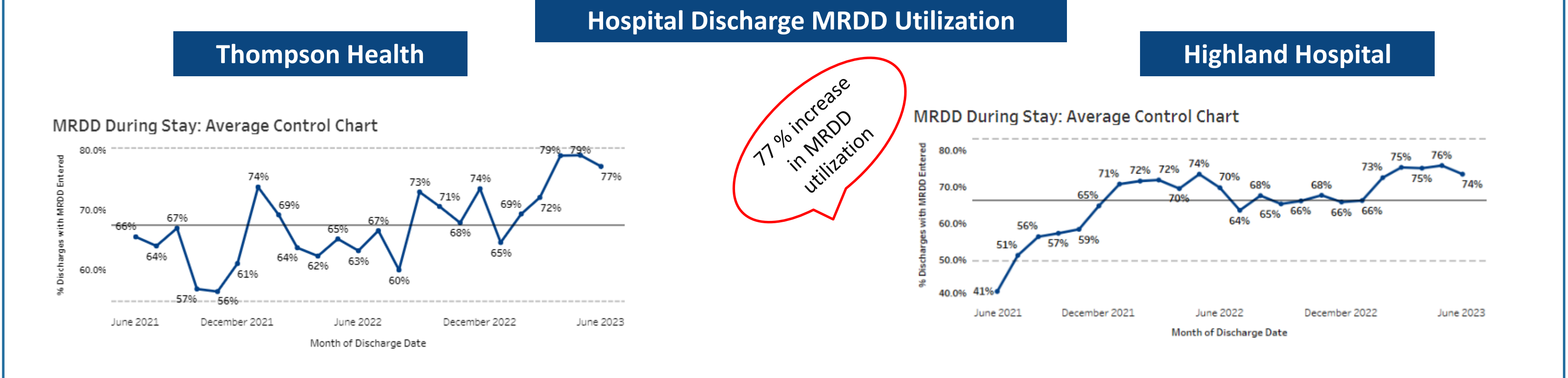
- Discharge Delays
- Increase data and transparency and identify patient flow bottlenecks.

Bed #	Patient Name	Age/Gender	Problem	Active Orders	Med New	One Day	New	Signed/Field
C.	Grandcentral Lucy	4 y F	AKI (acute kidney injury)	Y	Y	Y	Y	Y
S.	Smith Leah	42 y F	Chest pain	Y	Y	Y	Y	Y
E.	Est. Wamboldt	72 y M	Always tired	Y	Y	Y	Y	Y
U.	U. Yelbire	23 y M	Serumitis	Y	Y	Y	Y	Y
M.	Maple May	35 y F	Chest pain, unspecified type	Y	Y	Y	Y	Y

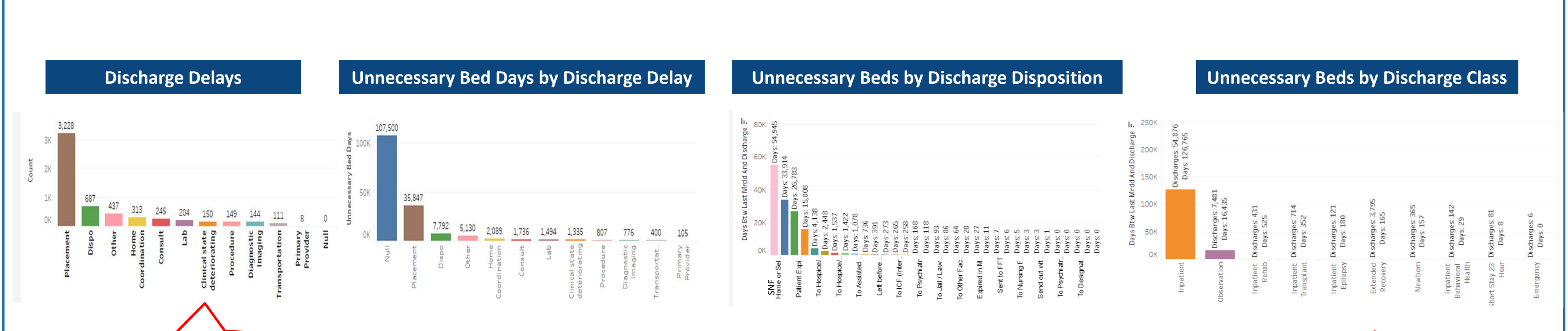
- DISPO**
 - Unsafe discharge plan
 - Patient/family appearing discharge
 - Other (comment)
- PLACEMENT**
 - Obtaining facility choices
 - Complex care
 - Facility discharge appeal
 - Financial
 - Bed availability
 - Insurance authorization
 - Special needs
 - Other (comment)
- HOME COORDINATION**
 - DME
 - Home care training
 - Insurance authorization
 - Home care arrangement
 - DC follow up appointment scheduling
 - IV home antibiotic
 - Other
- TRANSPORTATION**
 - External
 - Hospital
- LAB**
 - Covid
 - Other
- CONSULT**
 - PT
 - OT
 - SLP
 - Social Work
 - Wound Care
 - Pulmonology
 - Medicine
 - Surgery
 - Cardiology
 - Orthopedics
 - Other (comment)
- PROCEDURE**
 - Cardiology (not ECHO)
 - GI
 - IR
 - Other (comment)
 - Surgery
- DIAGNOSTIC IMAGING**
 - MRI
 - Nuc Med
 - ECHO
 - Other (comment)
- PRIMARY PROVIDER TEAM**
 - Attending evaluation
 - Other
- CLINICAL STATE**
 - Clinical state deteriorating
- DETERIORATING**
 - Clinical state deteriorating

DISCHARGE PLANNING & BED PLANNING OUTCOMES

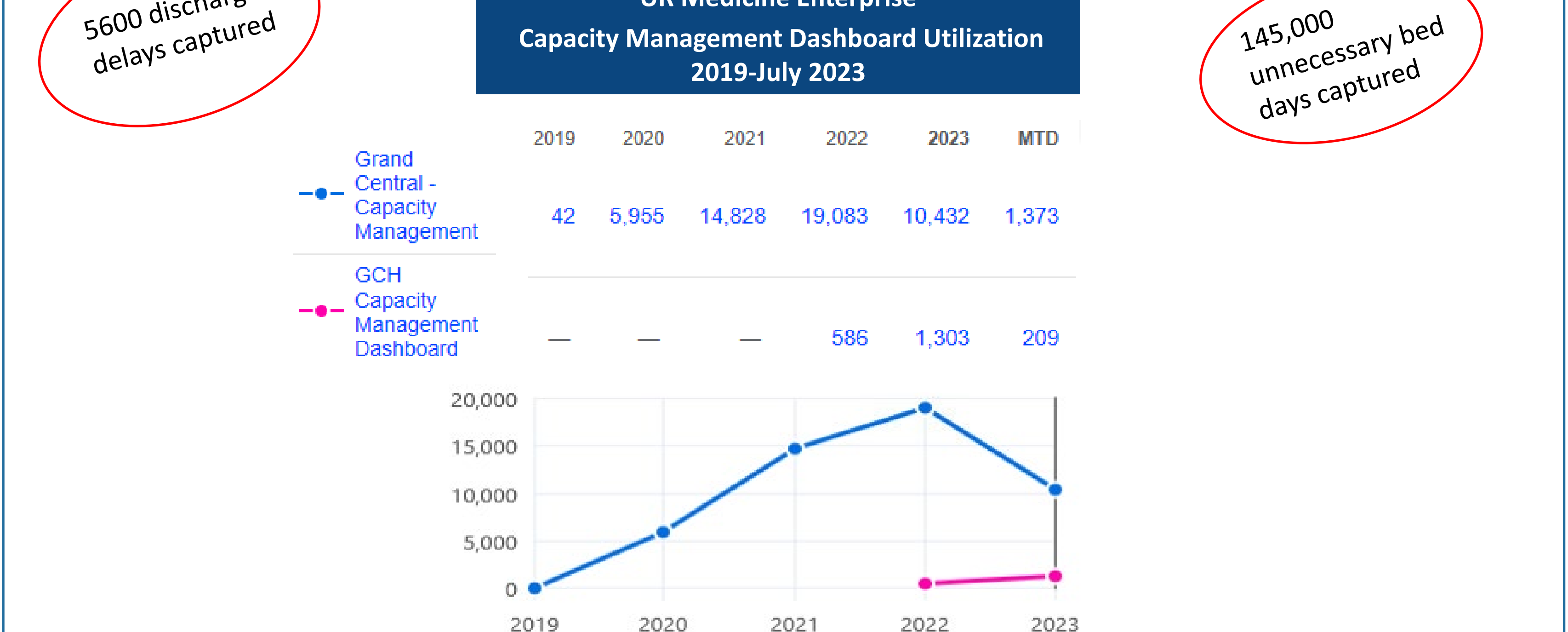
July 2021-June 2023



UR Medicine Enterprise



UR Medicine Enterprise Capacity Management Dashboard Utilization 2019-July 2023



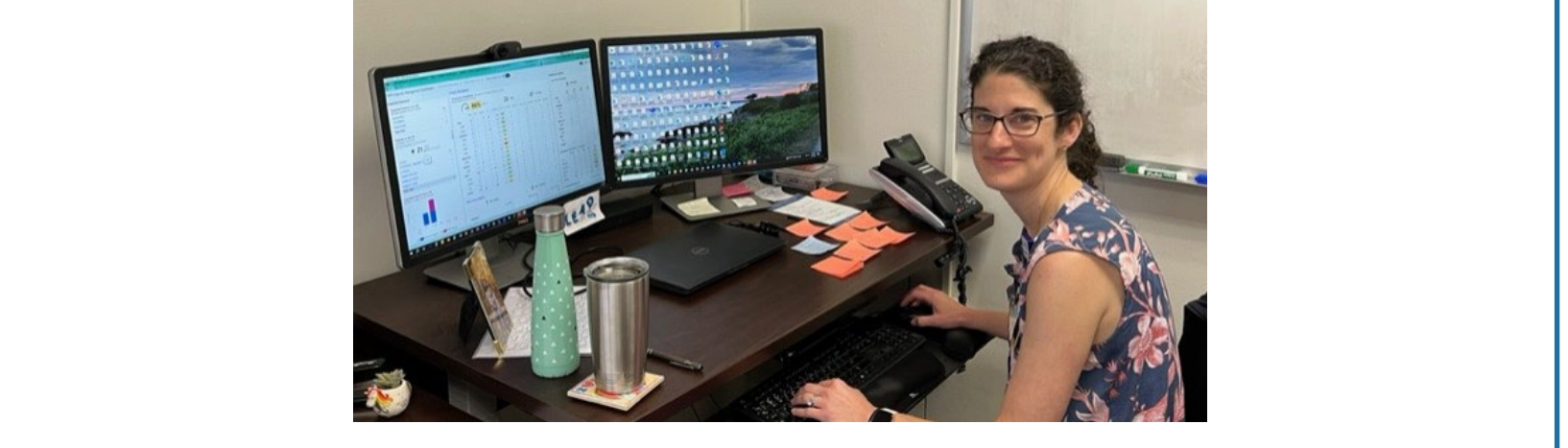
DISCHARGE AND BED PLANNING

Matching Capacity and Demand

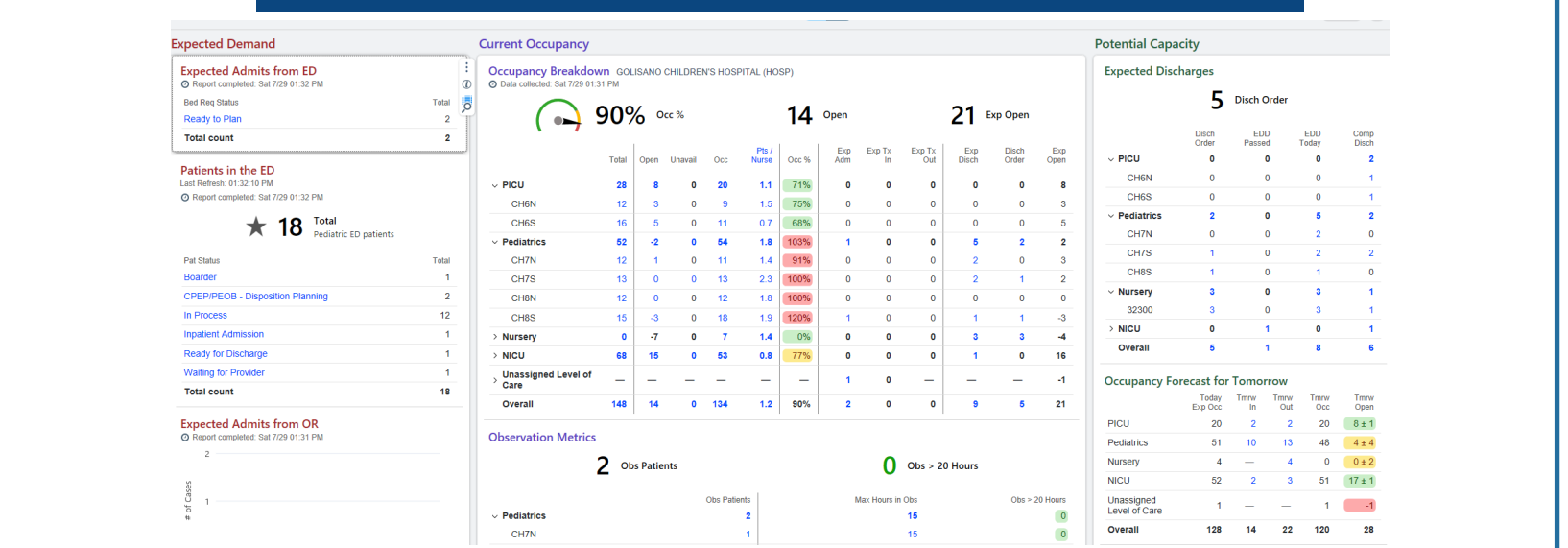
- Discharge Monitor Dashboard
- See how unit or hospital is doing with discharge all in one place
- Capacity Management Dashboard
- Evaluate expected demand, current occupancy and potential capacity in one place



Golisano Children's Hospital staff urge caution as capacity drops back below 100%



GCH Capacity Management Dashboard



References

Micallef et al Defining Delayed Discharges of Inpatients and Their Impact in Acute Hospital Care: A Scoping Review. Int J Health Policy Manag 2020, x(x), 1-9

Rutherford PA, Anderson A, Kotagal UR, Luther K, Provost LP, Ryckman FC, Taylor J. Achieving Hospital-wide Patient Flow (Second Edition). IHI White Paper. Boston, Massachusetts: Institute for Healthcare Improvement; 2020.

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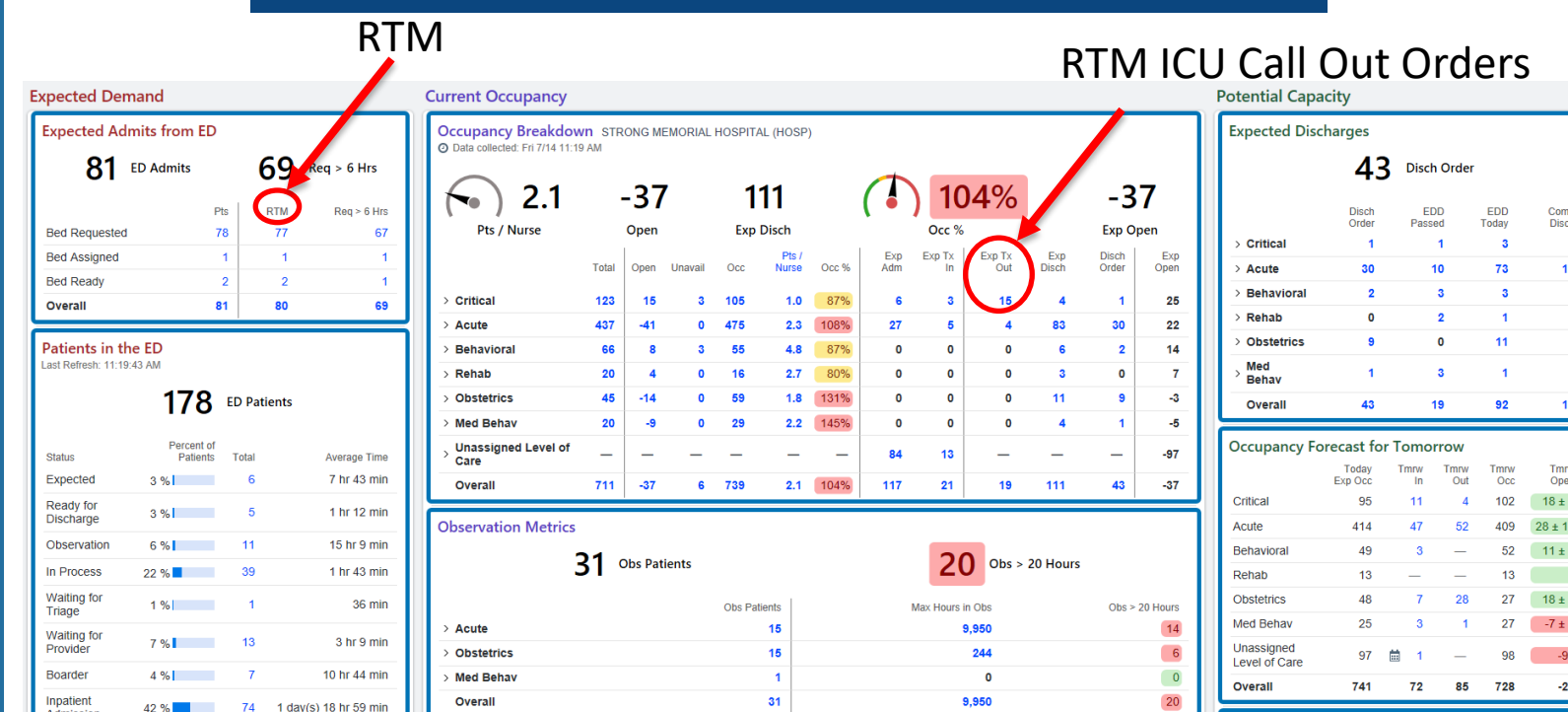
READY TO MOVE

3 "NEW" TOOLS
for patients moving to a new phase of care

- Ready to Move (RTM)** NEW
Assigned when a patient is medically ready to move to the next phase of care. This status will be applied automatically for some areas. Applies to patients that have a bed request for an IP bed
- ICU Call Out Order** NEW
A new order that triggers a bed request, to be placed by the ICU provider team in place of a phone call to admitting
- Bed Planning Views** NEW
Current Bed planning tools will have visibility to when procedural patients have recovered and will no longer need a phone call to create a bed request for all ICU patients [SMH and FFT]

- Definition:** Applies to patients that have a bed request for an inpatient bed. A patient is 'Ready to Move' NEW when they are medically ready for their next phase of care and the receiving and sending providers are aware of this patient.
- Automation:** The Ready to Move (RTM) status will automatically apply to a bed request for ED, ICU and PACU patients
- Value:** increased visibility for bed planning and receiving units
 - eliminating the need for phone calls, building block to future automation
 - consistent reporting across the enterprise

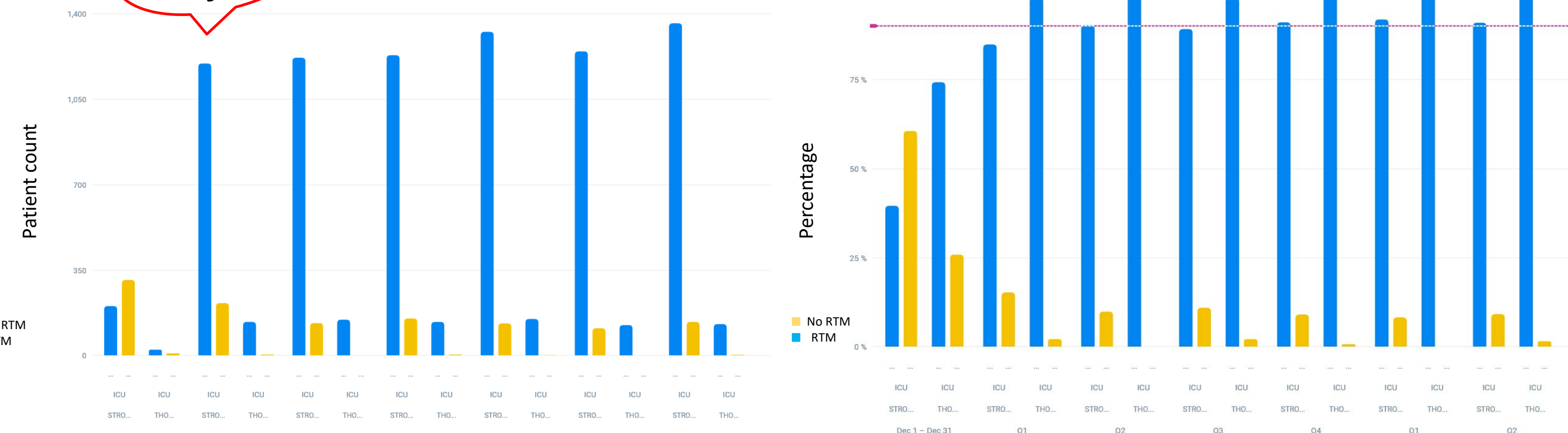
SMH Capacity Management Dashboard



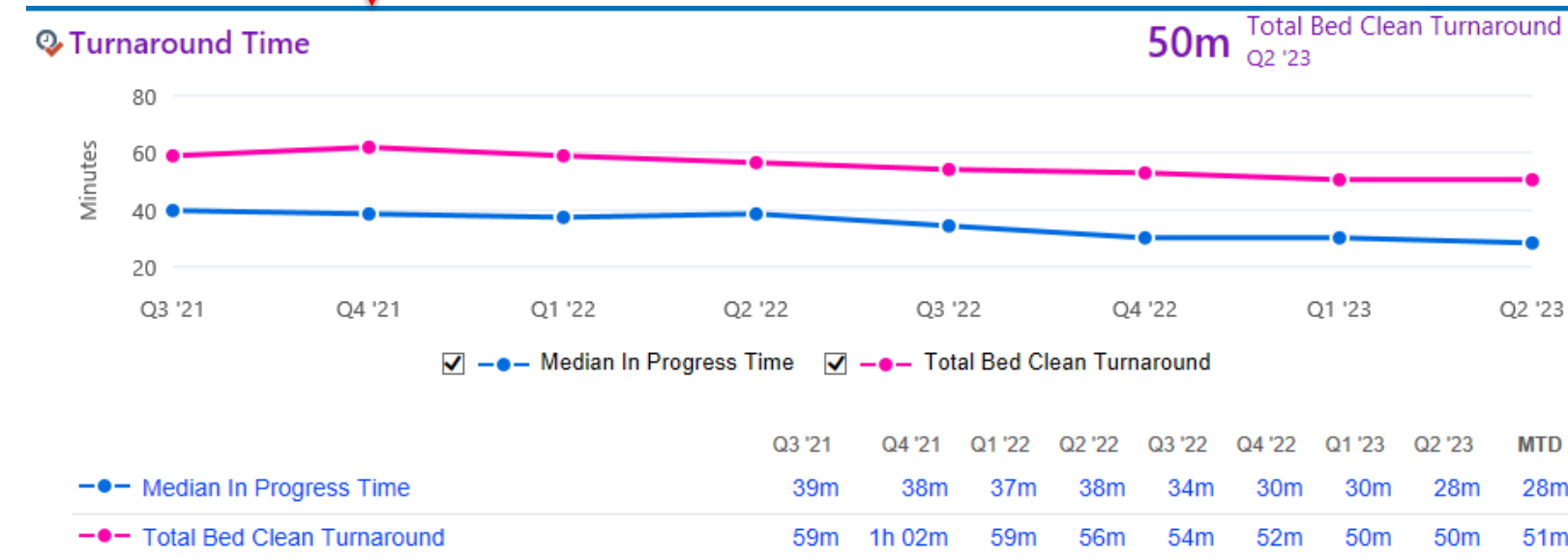
READY TO MOVE AND HOSPITAL LOGISTICS OUTCOMES

READY TO MOVE ICU CALL OUT ORDER Dec 21-June 2023

Up to 9000 phone calls saved!



SMH Environmental Trends June 2021--June 2023



Up to 24 hours saved per day!

System

- 24 hrs/day saved = 1.5 less ED boarders/day

Staff/Faculty

- 3 shifts gained/day of EVS Staff
- Allows 6 additional ED patients to be evaluated/day, 2190 additional ED patients/year

Patients

- Improves Patient Safety, decreasing risk of adverse events
- Patient satisfaction increased

10 minutes total bed clean turnaround saved * 145 discharges per day = 1450 minutes saving = 24 hours saved per day

HOSPITAL LOGISTICS



- 391 Mobile Devices
- 250 Transport Staff
- 850 EVS Staff
- 4 Hospitals

Hospital Logistics

- Mobile devices and assignment platform
- Assign, delay, escalate or complete requests
- Starting and ending breaks
- Patient identification-scanning
- Real Time Monitoring Dashboards

