

Call Me Beep Me If You Want To Reach Me: A Freestanding Rapid Response Team helps improve outcomes hospital wide

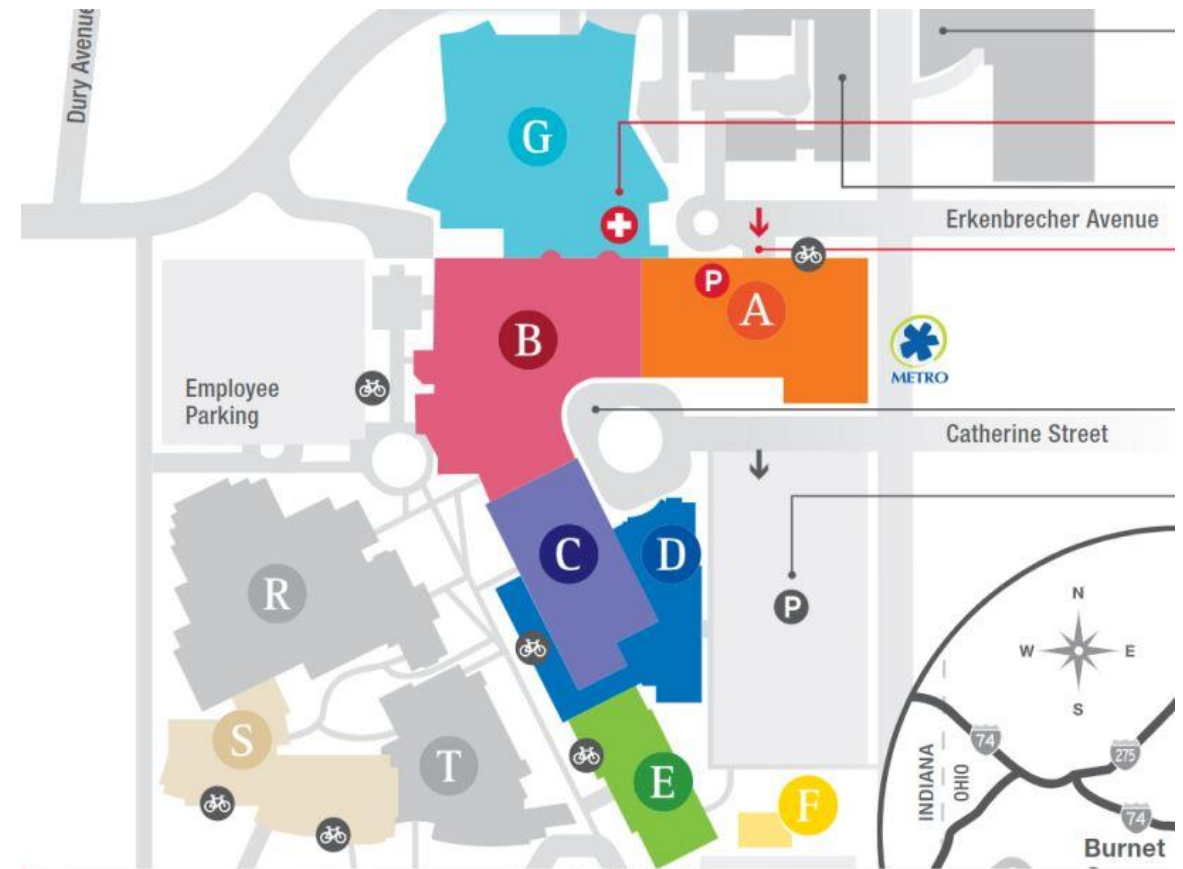
Critical Care Outreach Team

Angela Emanuel, BSN, RN, CCRN

Heidi Salyer, MSN, RN, CNRN, NEA-BC

Cincinnati Children's Hospital Medical Center

- 599 inpatient beds
- 137 mental health beds
- 12 inpatient acute care units
- 3 Critical Care units
 - PICU, NICU, CICU
- 7 Mental Health units
- 10 different buildings

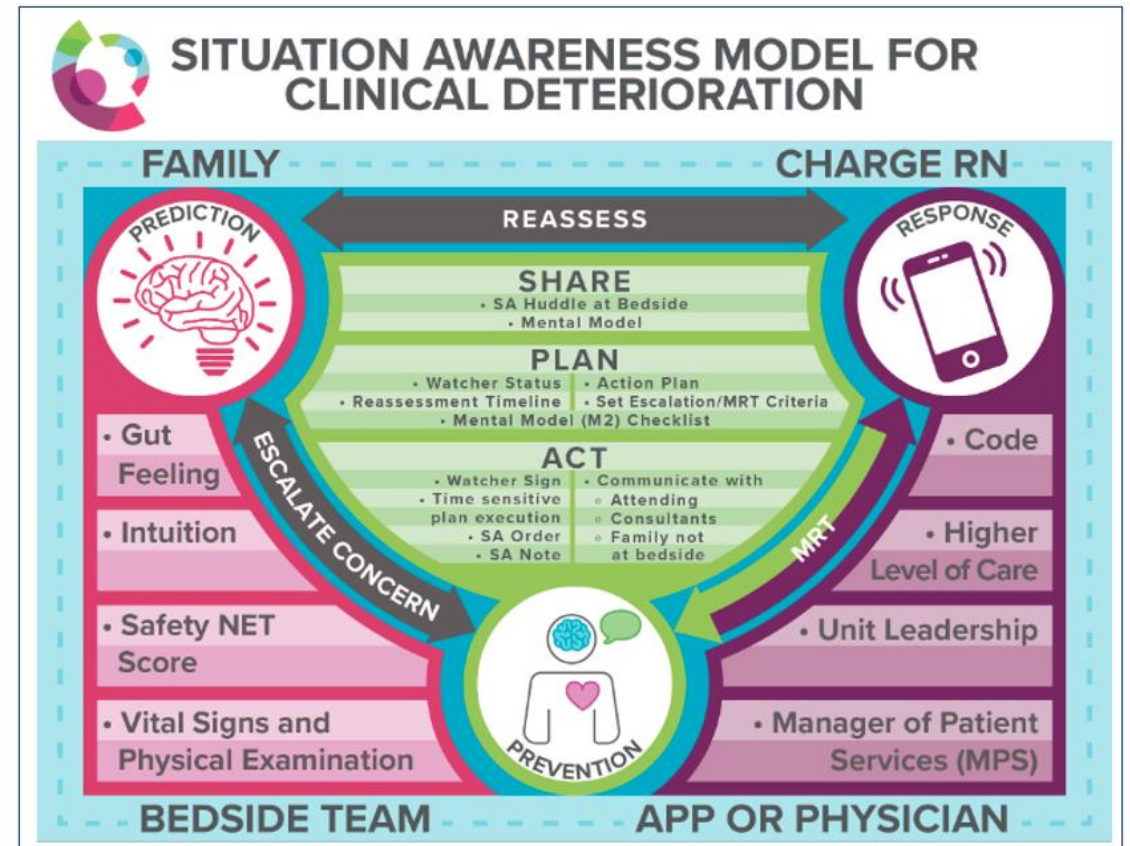


Background of Medical Response Team

- Where did Medical Response Teams/Rapid Response Teams begin?
 - First discussed in 2004 with the 100,000 lives campaign
- Why implement MRT/RRTs?
 - Improve the quality of care
 - Proactively provide support for patient's experiencing or at risk for decompensation

Medical Response Team Process

- Anyone can call if
 - Concern for patient's condition
 - Needs exceed environment
 - Transfer to higher level of care
- Evaluation within 15 minutes
 - Can't wait, activate a code



Who's coming?



- PICU
- Hospital-wide Nursing Supervisor
- Acute Care Team
- Patient and family

Medical Response Team Responsibilities

- PICU Provider – Covers MRTs, ED responses, transport calls, and covers patients
- PICU Resource RN & PICU Resource RT

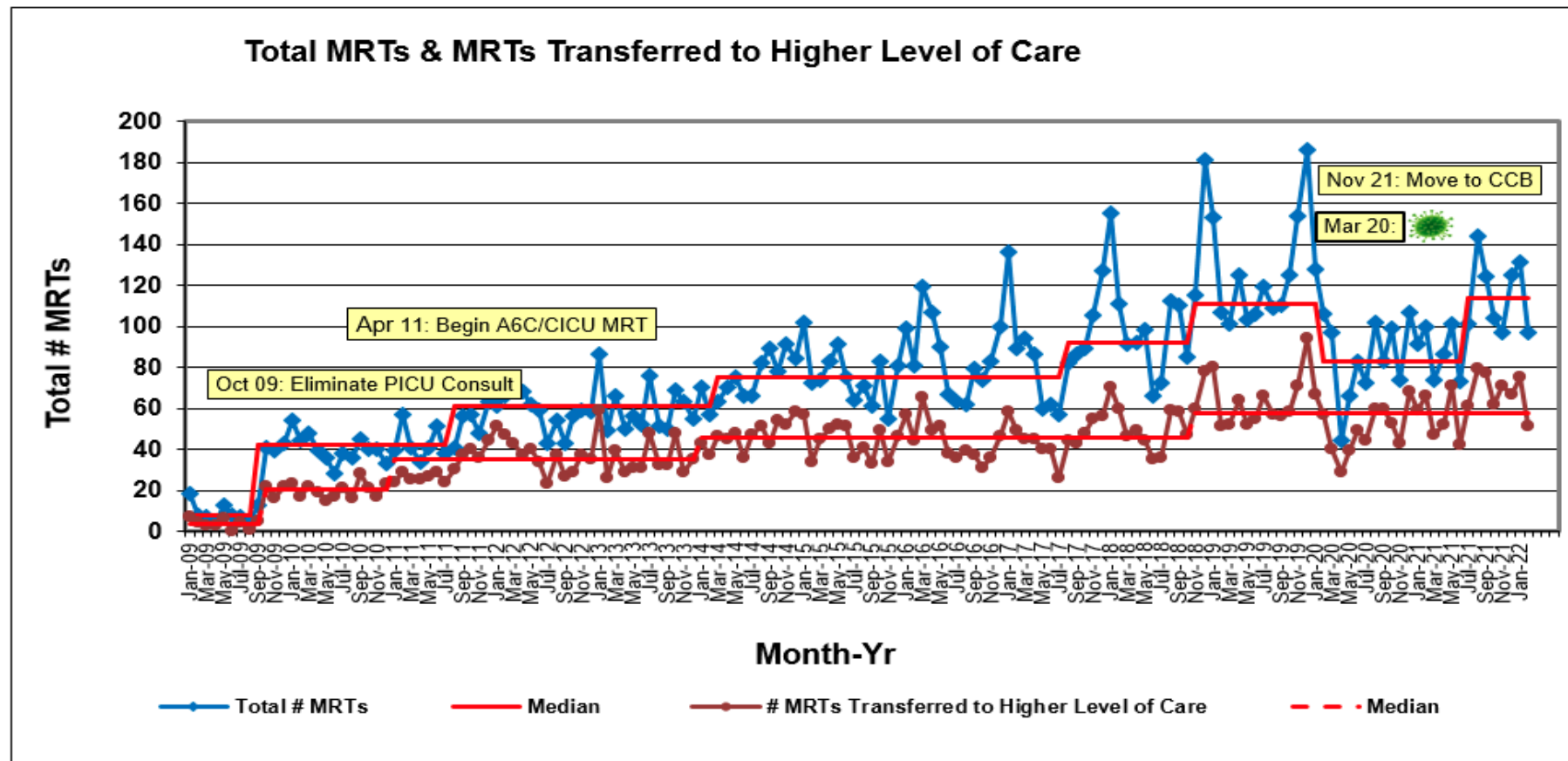


How Code Blue is Different

- **Emergent** medical attention!
- Patient is experiencing **severe and/or acute change in status**
- Patient requires **Positive Pressure Ventilation (PPV)**
- Patient in need of **CPR**
- 16 identified “Code Team” members



What changed?



- Increasing numbers of MRTs
- Increase recognition of early deterioration
- Expansion of the Critical Care Building (CCB)

What's possible?

- A dedicated team
- Better response times
- Less emergent transfers



Overall Aim of Critical Care Outreach Team

- Keeping PICU resources in the PICU
- Shorten Code Team response times
- Improve situational awareness
- Be a resource!



Benefits/Measures of Success

- Outcome Measures
 - Sustain current measures
 - Emergency Transfers - 1.99/10,000 patient days
 - MRT Preventable Codes - 908 days as of 5/10/2021
 - Codes -0.81/10,000 patient days
 - Reduce PICU readmission rate from 2% to less than 1%
- Process Measures
 - Response time to code
 - MRT response time (pilot team vs. PICU staff on G3)
- Balancing Measures
 - Number of MRTs
 - MRT Transfers to the PICU

Critical Care Outreach Team Trial Data

- Gathering data
- Addressing barriers

Date	Shift	MRT	Watcher	PICU Transfer	Codes	Other
	TOTAL	125	548	334	21	199
12/1/22	A	1	9	7	0	2
12/1/22	P	1	9	7	0	2
12/2/22	A	5	8	5	0	5
12/2/22	P	4	4	6	0	1

Emergent Transfers & Transfers back to PICU within 24 hours

Time period: October 2021 – February 2022

	% for Nov-Dec		October		November		December		January		February	
	With Freestanding Team	With No Freestanding Team	With Freestanding Team	With No Freestanding Team	With Freestanding Team	With No Freestanding Team	With Freestanding Team	With No Freestanding Team	With Freestanding Team	With No Freestanding Team	With Freestanding Team	With No Freestanding Team
Emergent Transfers	29%	71%	0	3	1	2	1	3	0	1	0	0
Transfers back 24 h	33%	67%	0	1	2	3	1	3	0	5	0	3

% of days with Freestanding coverage: **23%** **70%** **52%** **35%** **14%**



Critical Care Outreach Team Trial

- Trial data showed the CCOT arrives 1.6 minutes prior to the Code Team
- In Fiscal Year 2020, we averaged 20-30 code activations per month



Funding the Critical Care Outreach Team

- Initial ask
 - Registered Nurse
 - Registered Respiratory Therapist
 - Provider likely an Advanced Practice Provider

24/7 Coverage		Total Hours	FTEs	Backfill FTEs	Total FTEs	Salary Cost
APRN	168	4.2	0.8	5.0	\$ 675,360	
RN	168	4.2	0.5	4.7	\$ 315,894	
RT	168	4.2	0.5	4.7	\$ 256,664	
					Total Salaries	\$ 1,247,917
					Benefits	\$ 349,417
					TOTAL COST	\$ 1,597,334

Building a Critical Care Outreach Team



- Finding an office space
- Creating a workflow
- Spreading the word
- What about downtime?

The Office Space



- Welcome to the CCOT office!

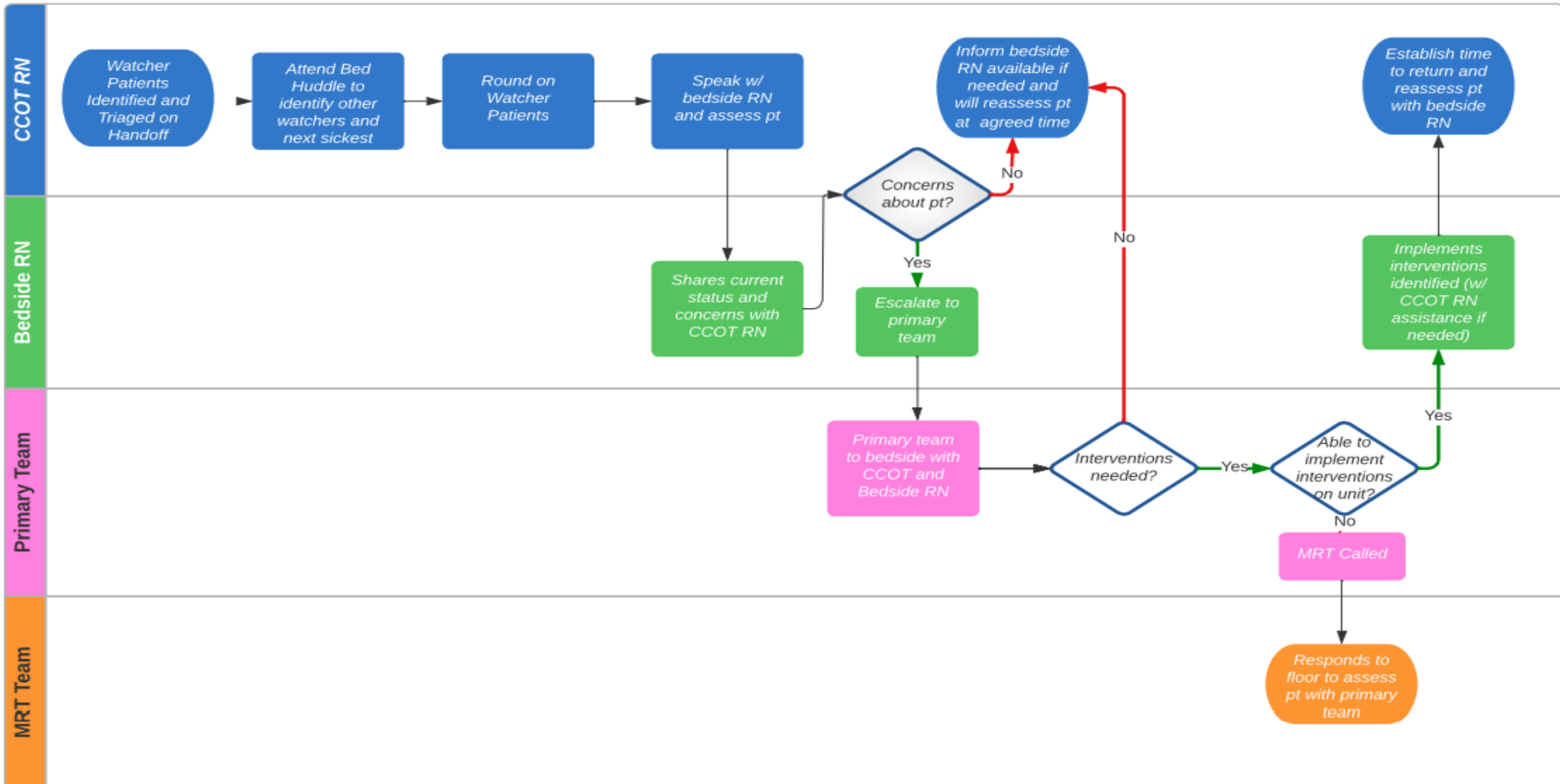
What's the Workflow?

- Code/MRT pages
- Rounding on "Watchers"
- Rounding on Transfers
- Being a resource to units
- Carrying "Backpack"



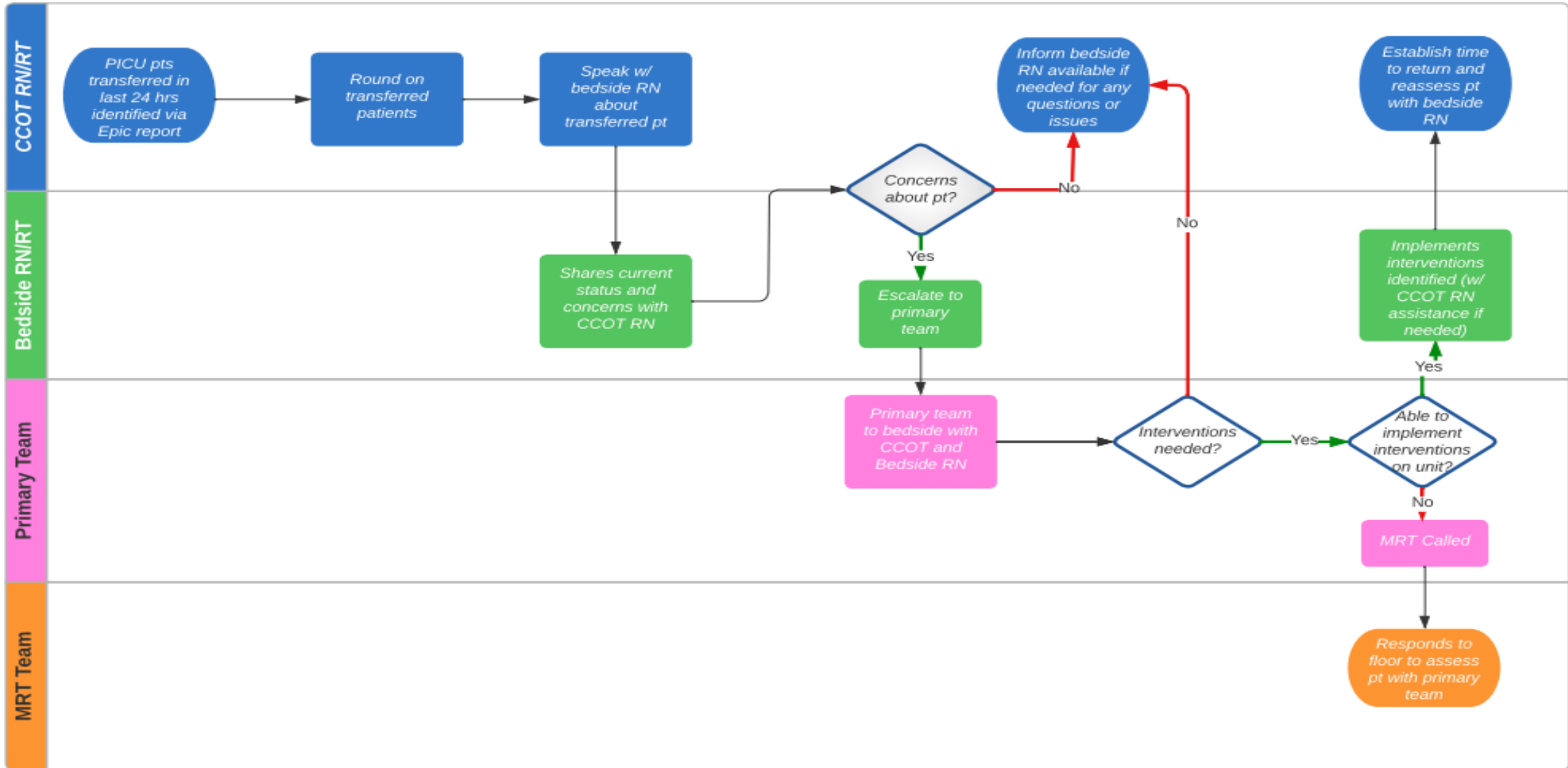
Rounding on Watcher Patients

Jerry Schwartz | August 17, 2022

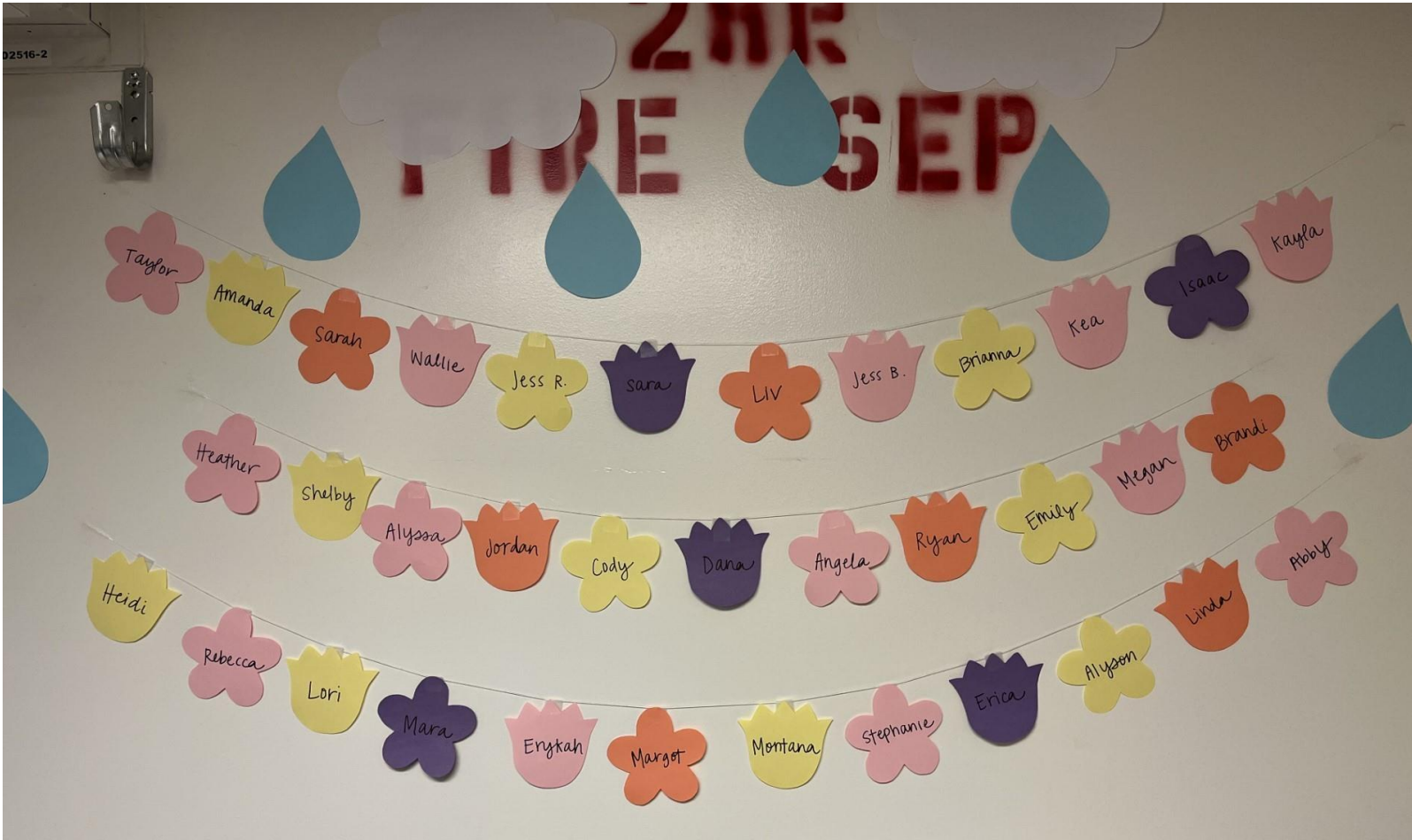


CCOT Rounding on Patients Transferred from PICU

Jerry Schwartz | October 27, 2022



Team Members



- Requirements to be a CCOT member
- Fostering relationships
- Balancing schedules

Operational Implementation

Date	Unit	Room	Pt Info (Name, Age, Wt, MRN)	Reason For Watcher Status	MRT Criteria (from Epic Order)	Respiratory	Admission diagnos	CCOT intervention suggested or complete your shift	Notes
	A3S	##		hypoxia	Hr >160, RR>40, >45% FIO2, >q2 Aw Clx	34%	chronic resp. failure		
	A3S	##		resp distress	HR >150, RR >60, SBP >70, CR >3, AMS, another ventilator change, >40% FIO2	26%	new onset seizures		Febrile
	A4N	##		sepsis	CR >3, moderate WOB, HR >150, SBP <95, AMS/lethargy	RA	s/p intestinal transplant		having bloody wound vac OP, received PRBCs
	A7C	##		asmtha	Severe WOB, RR>30,	cont albuterol	status asmthatic		

- Navigating EPIC
 - Staffing
- Communication
- Prioritization

Spread the Word

Call us
Beep us
If you need to reach us!



Critical Care Outreach Team

Who are we - Dedicated PICU RN and RT available 24/7

What we do - We round on Watchers and patients who have transferred out of the PICU in the past 24 hours. We are available for a second opinion / to bounce ideas off. We also are available as an additional resource to help escalate concerns you have or to be an extra set of hands!

Where we are - We are available on Voalte by searching "CCOT". We have an office on A2 and make multiple rounds on the units each shift, so we are always nearby!

- Quick messages for easy communication
- Announcements at the house-wide bed huddle
- Presenting at staff meetings

What about our spare time?



- Being the unit resource
 - ECG
 - Bedside gases
 - Busy units or patients
 - Teaching

Sustained Measures

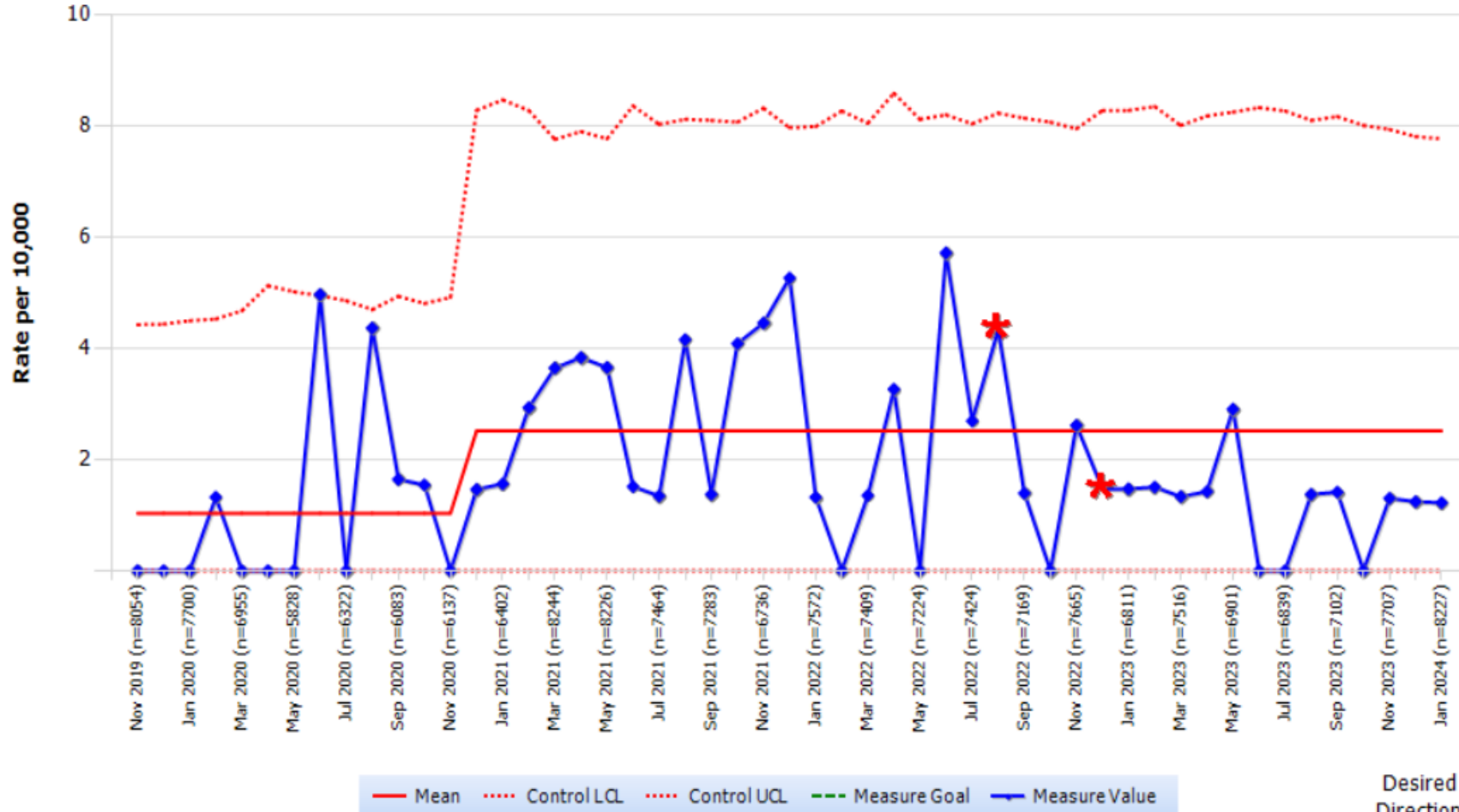
- Emergent Transfers plus codes

	Events	Rate
FY22	30	3.5
FY23	22	2.6
FY24 YTD	16	3

- Codes outside the Critical Care Areas

	Events	Rate
FY22	66	0.8
FY23	68	0.8
FY24 YTD	45	0.85

Rate of Emergency Transfers (non-code related)



Date	Annotation Description
12/1/2022	CCOT Team Live
8/1/2022	NET Scoring Tool Live A6NS, A3N, A4NS, A4C1, A7NS, A7C, LA4-2

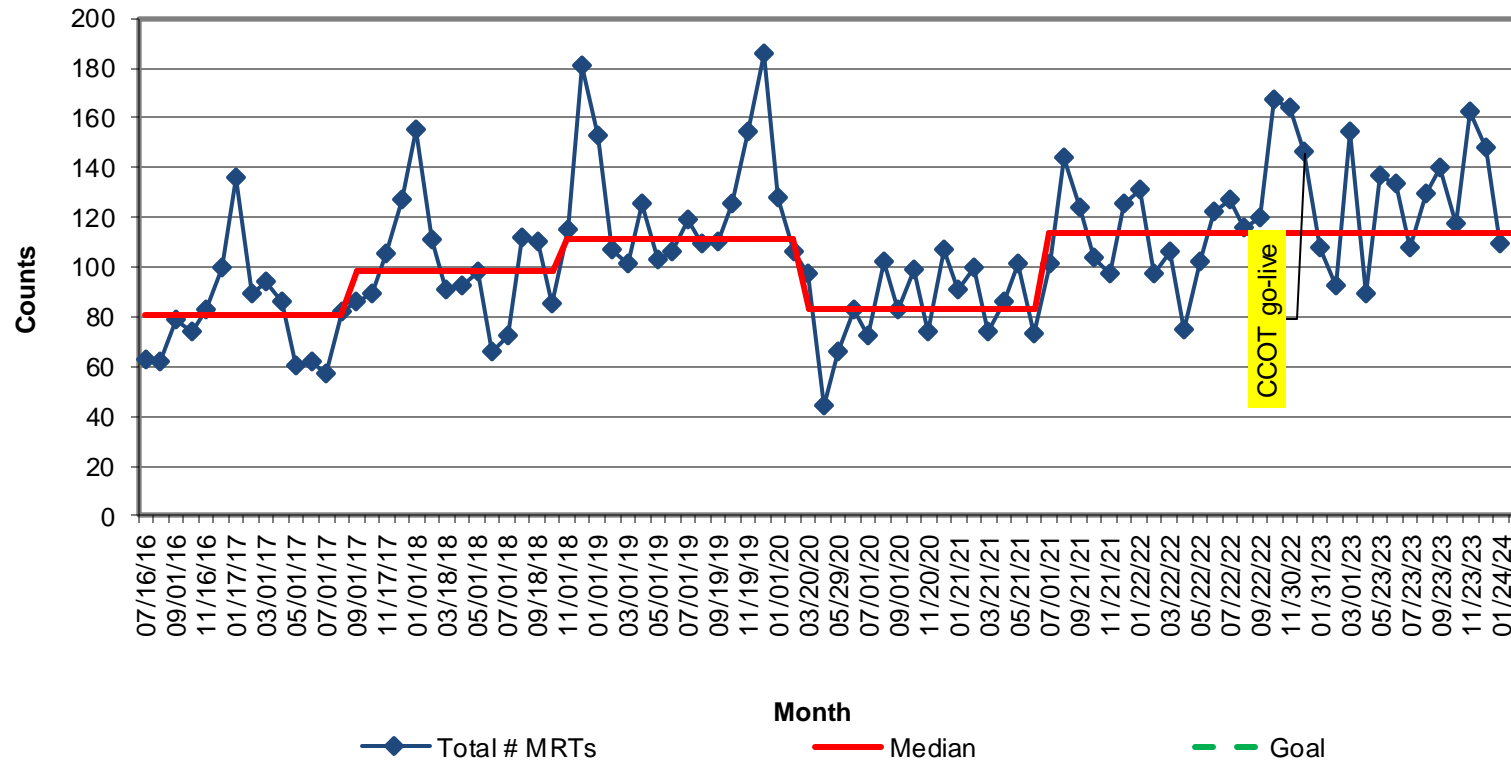
Centerline: 2.51

	Events	Rate
FY22	23	2.68
FY23	15	1.76
FY24 YTD	5	0.9

MRTs Increasing year over year



Total # MRTs



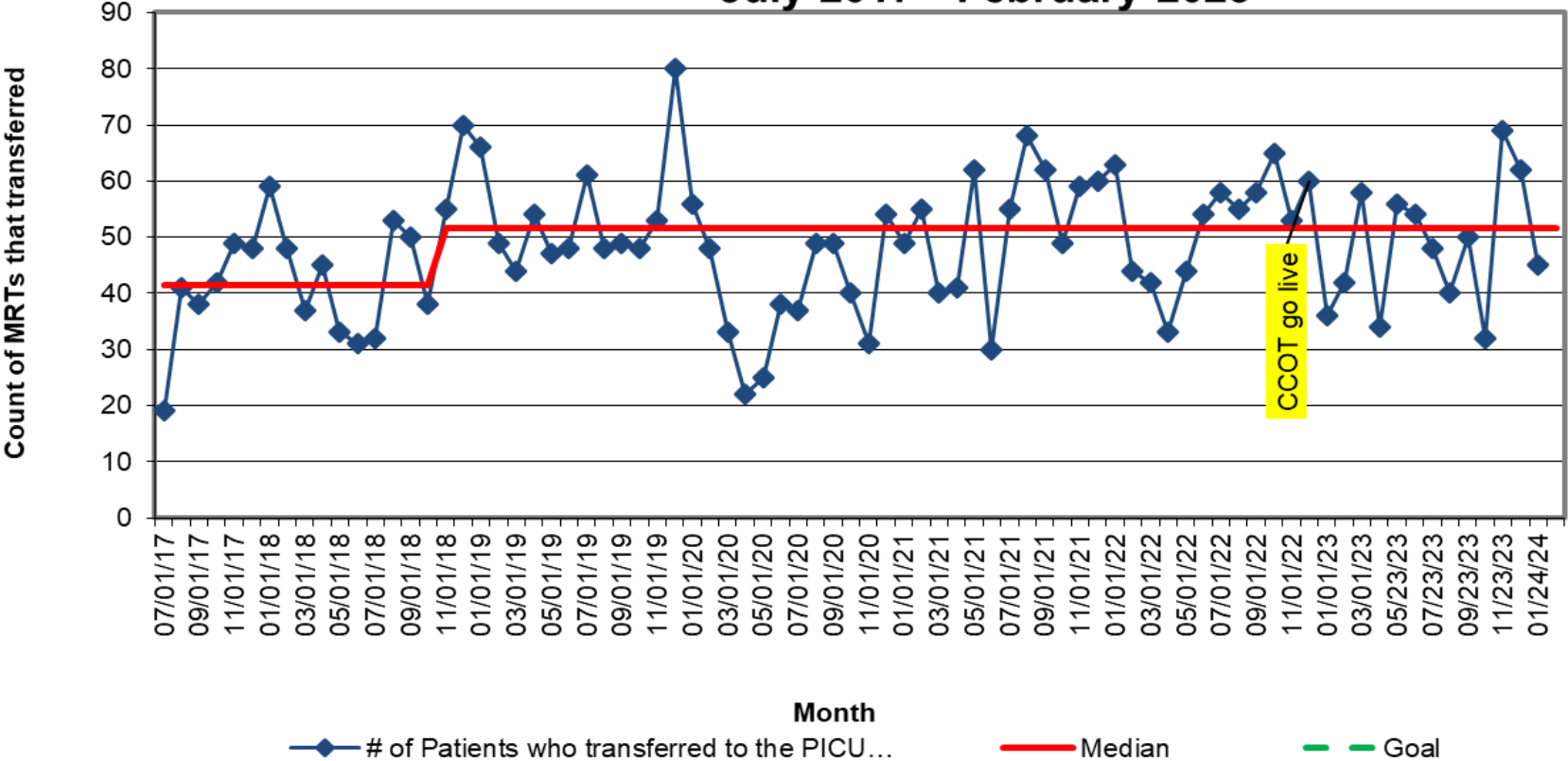
	Events
FY21	1062
FY22	1328
FY23	1553
FY24 YTD	913



MRTs transferred to PICU



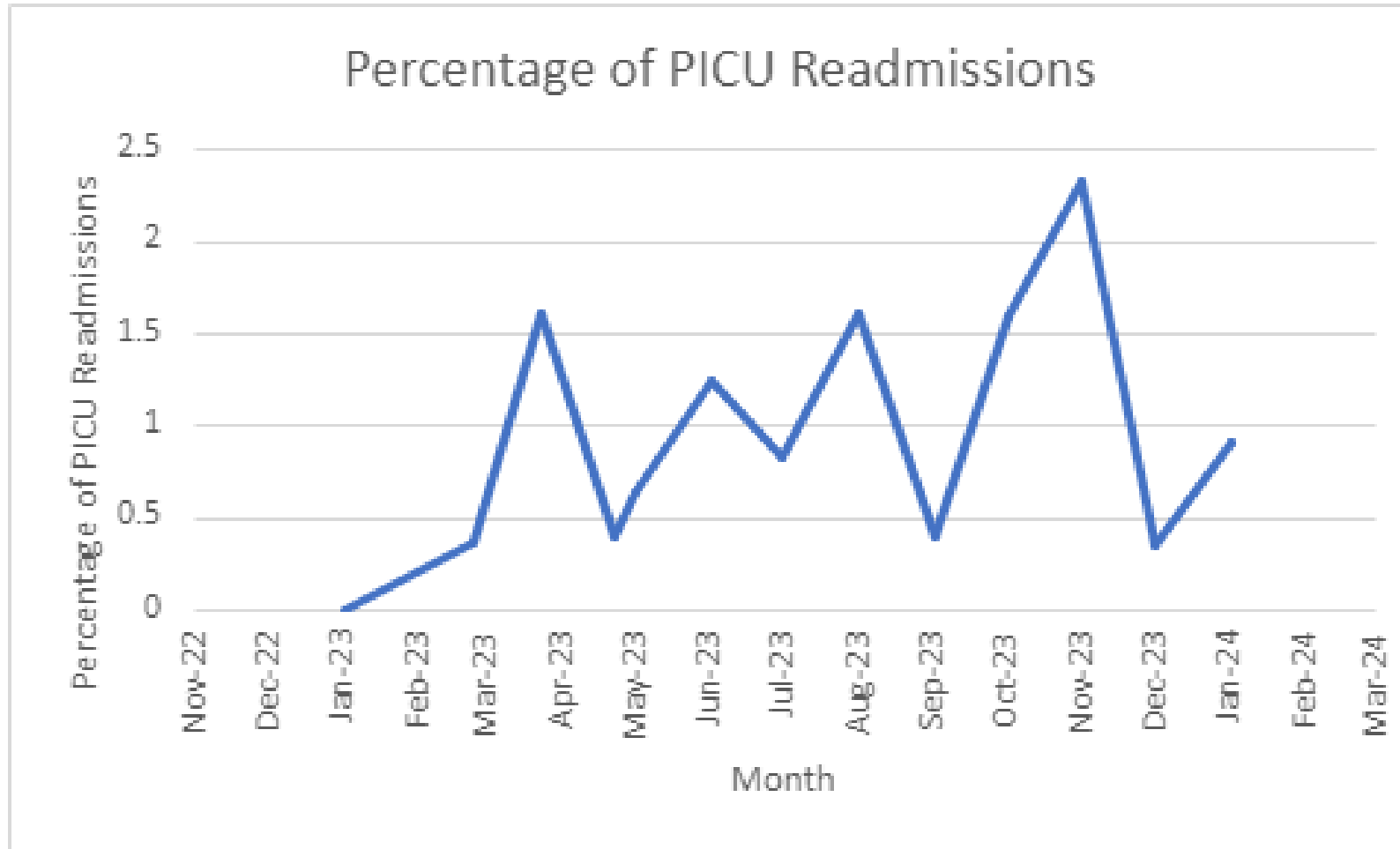
of Patients who transferred to the PICU
July 2017 - February 2023



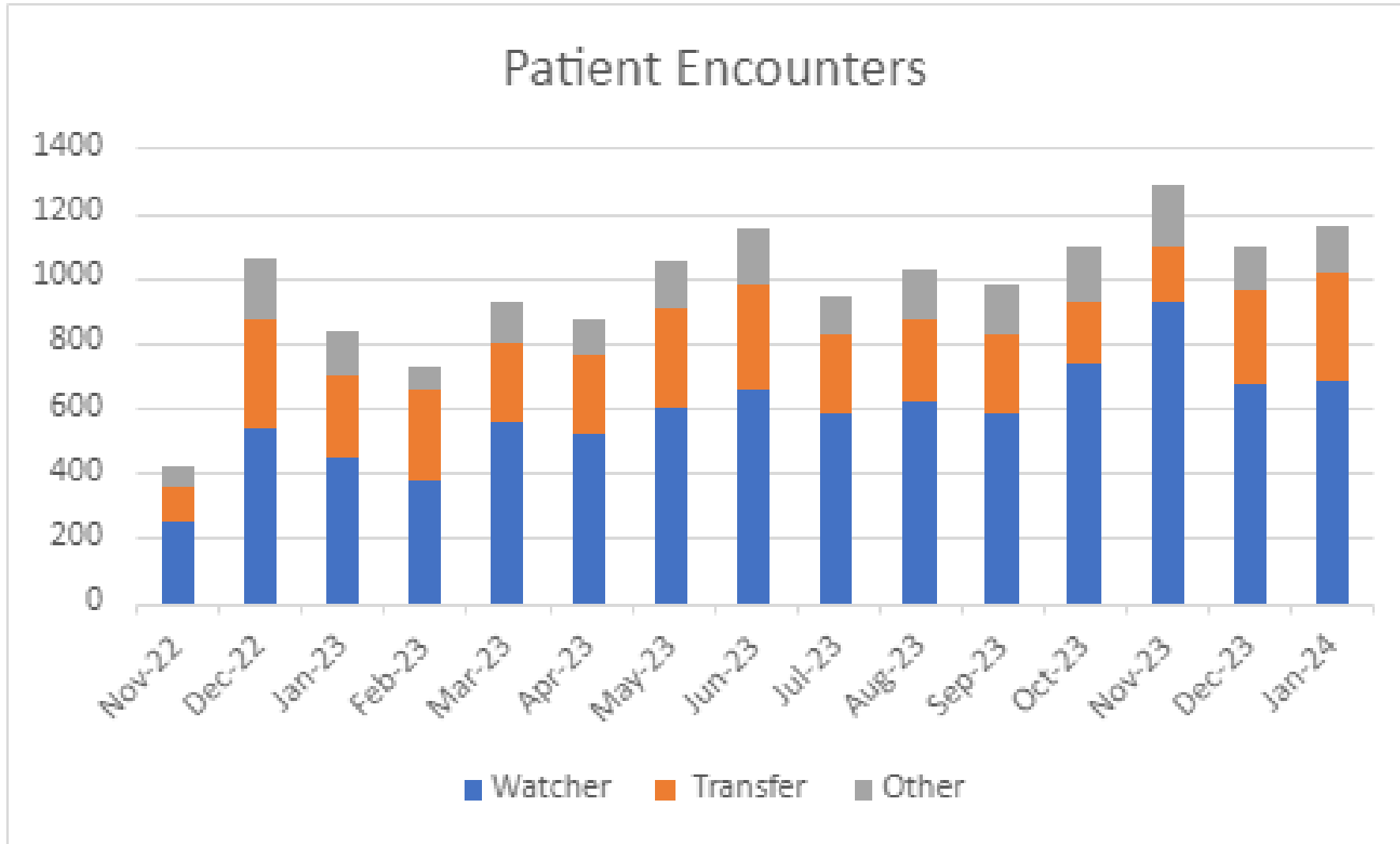
	Events	Rate
FY21	537	50.5
FY22	633	47.6
FY23	629	40.5
FY24 YTD	346	37.9



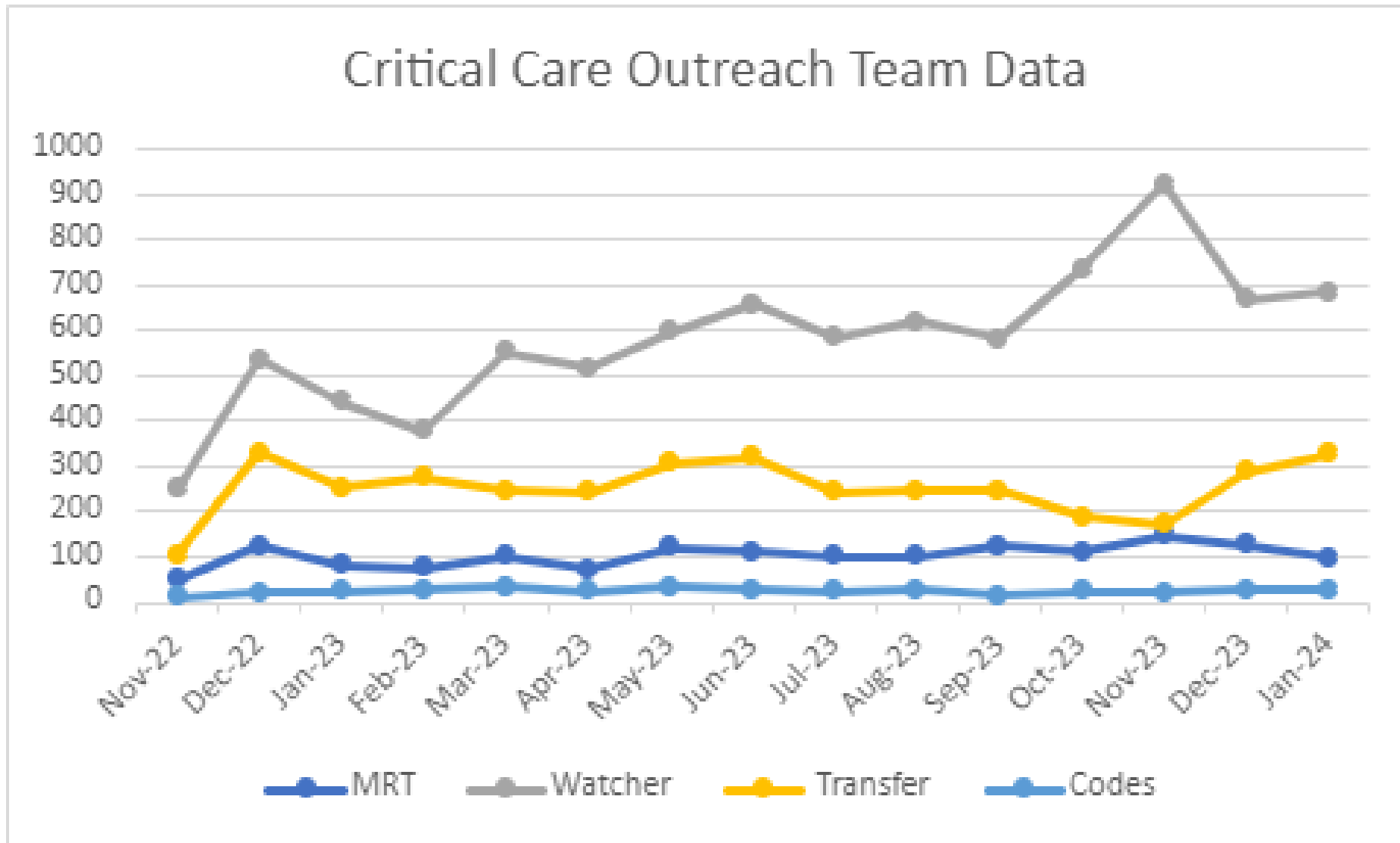
Readmissions to the PICU



Patient Encounters

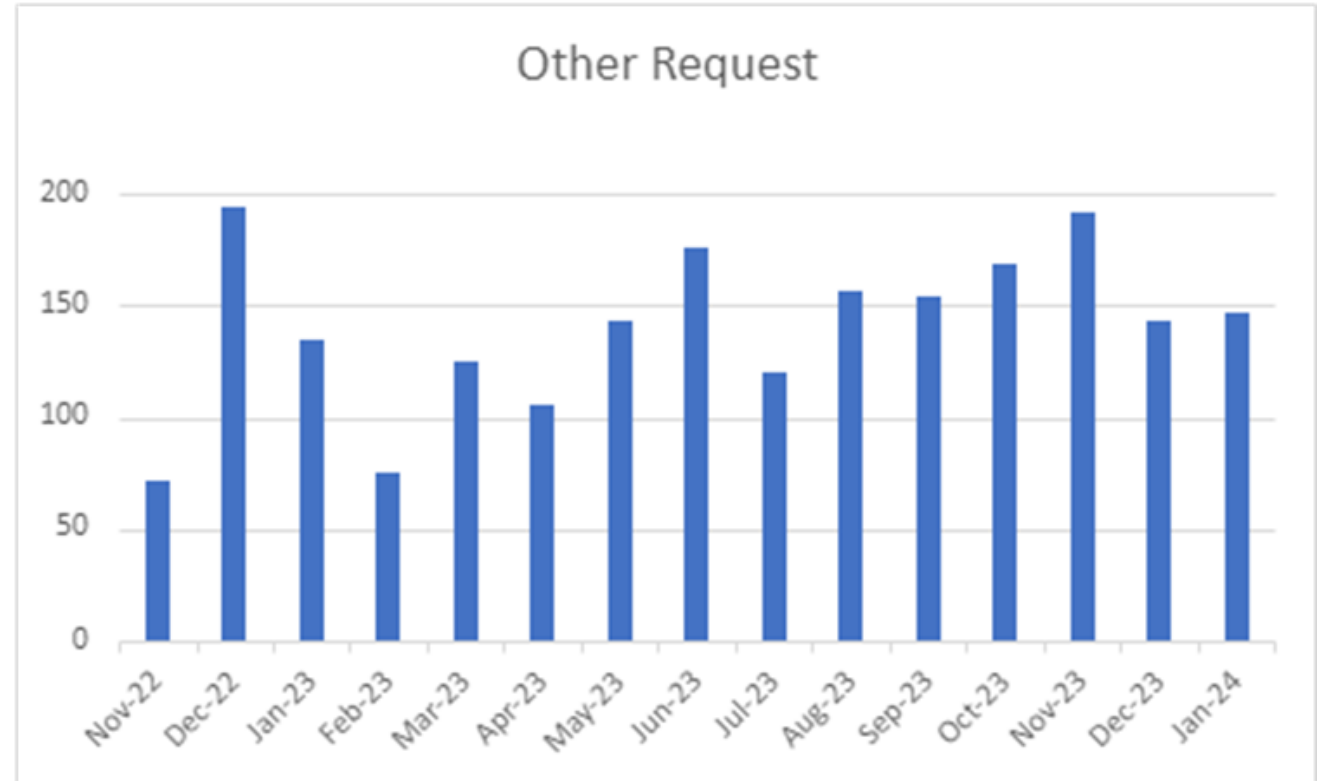


Types of Patient Encounters



CCOT Extras

- ECGs
- NG/NJ & Bridle placement
- HD line access
- Traumas
- Unfamiliar equipment or care practice support



Expansion

- Impacting Codes in Complex Care Clinic
- Telehealth to Liberty watchers in our future



Priceless Feedback

CCOT was amazing!



So impressed with their professionalism and collaboration!



We love CCOT!



CCOT rounding on watchers is very effective!



CCOT are incredibly helpful!



I love having CCOT available to communicate with and update.



Literature References

- (1) Fildes, C., Munt, R., & Chamberlain, D. (2022). Impact of Dual Intensive Care Unit and Rapid Response Team Nursing Roles on Service Delivery in the Intensive Care Unit. *Critical Care Nurse*, 42(5), 23-32. <https://doi.org/10.4037/ccn2022540>
- (2) Hyun, D. G., Lee, S. Y., Ahn, J. H., Huh, J. W., Hong, S. B., Koh, Y., Lim, C. M., & Korean Sepsis Alliance (KSA) Investigators (2022). Mortality of patients with hospital-onset sepsis in hospitals with all-day and non-all-day rapid response teams: a prospective nationwide multicenter cohort study. *Critical care (London, England)*, 26(1), 280. <https://doi.org/10.1186/s13054-022-04149-z>
- (3) Danesh, V., Neff, D., Jones, T. L., Aroian, K., Unruh, L., Andrews, D., Guerrier, L., Venus, S. J., & Jimenez, E. (2019). Can proactive rapid response team rounding improve surveillance and reduce unplanned escalations in care? A controlled before and after study. *International journal of nursing studies*, 91, 128–133. <https://doi.org/10.1016/j.ijnurstu.2019.01.004>
- (4) Wu, Y., Wang, J., Luo, F., Li, D., Ran, X., Ren, X., Zhang, L., & Wei, J. (2022). Construct and clinical verification of a nurse-led rapid response systems and activation criteria. *BMC nursing*, 21(1), 311. <https://doi.org/10.1186/s12912-022-01087-7>



Heidi.salyer@cchmc.org
Angela.emmanuel@cchmc.org

