QualTech PRIZE 2022 HEALTHCARE Mumbai, Mar 2023

TEAM EXCELLENCE AWARDS
for CONTINUAL QUALITY IMPROVEMENT BREAKTHROUGHS

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SELFLESS SERVICE FOR A HEALTHY SOCIETY
VIJAYA MEDICAL & EDUCATIONAL TRUST

PROJECT TITLE – "AUDIT OF CRITICAL CARE OUTREACH TEAM SERVICES"

PRESENTER NAME
R. Lakshmikutty
M.sc(Nursing)

DESIGNATION: Nurse Educator

ORGANIZATION:
Vijaya Medical & Educational Trust

INTRODUCTION

Critical Care Outreach (CCOT) Services are considered to be an **essential and integral part** of a hospital wide approach in improving the early identification and management of clinically deteriorating patients in the wards.

The identification of critically ill or deteriorating patients is a **key for early admission to the intensive care unit** .

Some services **implement early warning triggers** to support healthcare teams to identify deteriorating patients earlier and ensure an appropriate response to the patients needs.

A number of different models of critical care outreach services have been introduced but this does however remain a mainly **nurse-led service**.

PROBLEM DEFINITION

- ✓ **Deficit in communication,** coordination of care and information exchange between ICU and general ward professionals may increase the risk of ICU readmission and mortality.
- ✓ There has been a **lack in identifying and initiation of treatment** in patients who are deteriorating in the step down wards.
- ✓ **Inconsistency in the practice of tracking and triggering** system in the wards(MEWS)

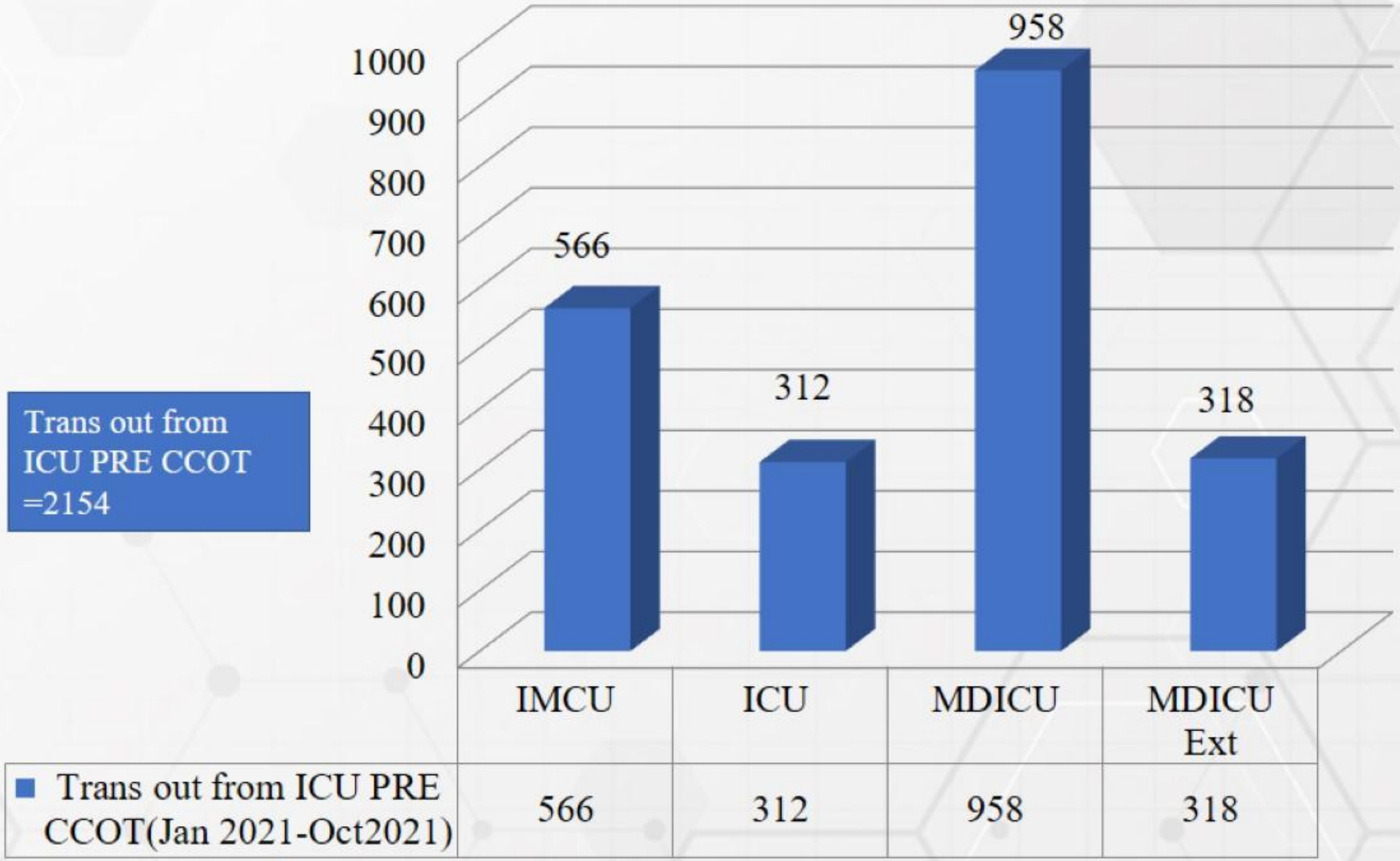
PROBLEM DIAGNOSIS

We had received increased code blue calls and increase in the readmission rates from step down wards to ICU in our hospital. So we decided to audit the number of code blue calls & readmission rates within 48hours to ICU during the period January 2021 to October 2021.

Pre CCOT	TOTAL CODE BLUE CALLS
Jan(2021)	3
Feb	7
March	7
April	3
May	23(Covid 2nd wave)
June	3
July	5
AUG	3
SEP	4
OCT	6
Total	**64**

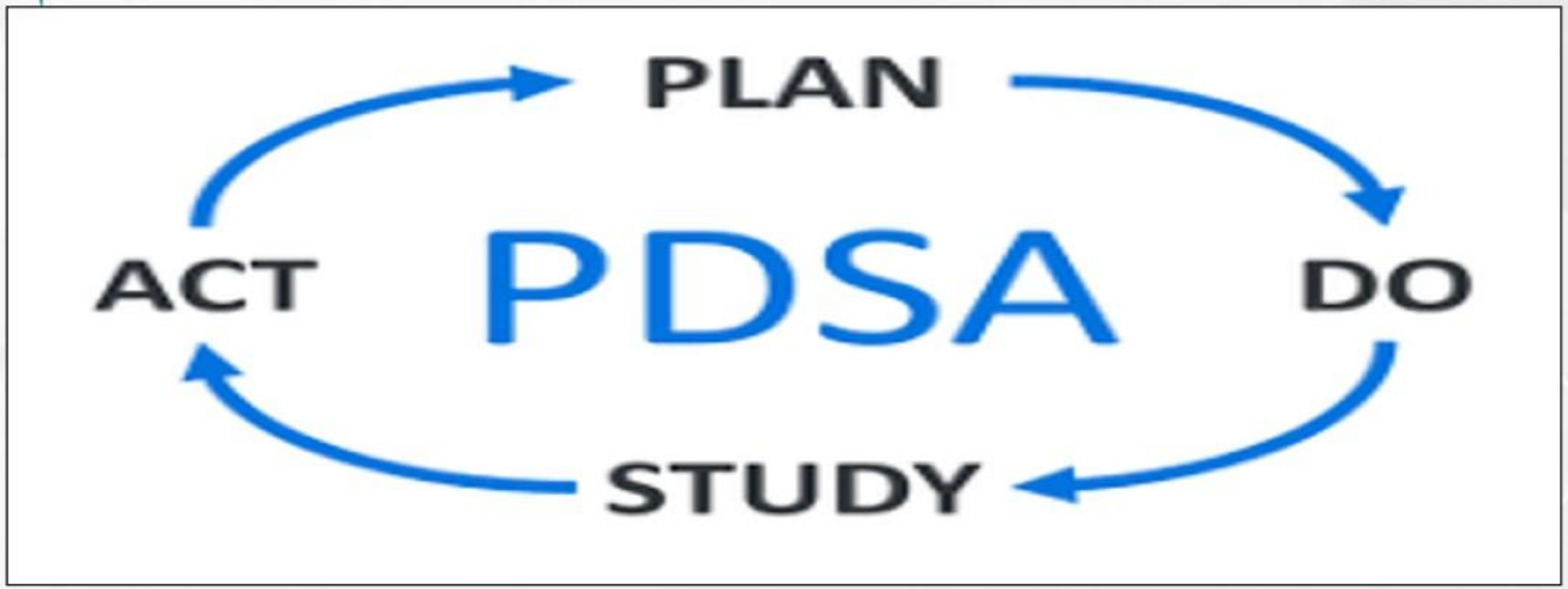
The Table represents the code blue calls in the month of Jan 2021 to Oct 2021 (Pre CCOT).There was increased number of code blue calls for 10 months ,it was peak in the month of may 2021(23).Total code blue calls (Jan 2021 –Oct 2021) = **64 out of which 37(57%) is from stepdown wards.**

Trans out from ICU PRE CCOT(Jan 2021-Oct2021)



PROBLEM REMEDY

PDSA MODEL



PLAN

- ❑Problem was identified.
- ❑Aims and Objectives were framed
- ❑Selected senior nurses(greater than 5 yrs) as per the criteria
- ❑Training session for 2 months (CCOT) was planned & agenda prepared.

DO

- Training sessions conducted for the selected CCOT nurses. CCOT Observational checklist prepared & modified .
- Separate uniform & badge were provided for the CCOT nurses.
- Data was collected from the key indicators & CCOT observational checklists

STUDY

- Collected Data was analyzed according to the objectives.
- Results were reviewed and compared with the initial audit.

ACT

- Discussions & Recommendations were given to improve the patient outcome.
- Analyzed feed back for the new process.

LOCKING THE IMPROVEMENT

- To strictly follow the **discharge criteria** of patients before shifting from adult ICU to ward.
- **Regular monitoring** of the patients who have been shifted from ICU to step down wards for 48 hours by the Critical care outreach team.
  Rectifying the complaints observed by the CCOT, in the ward bedside with primary consultant, there by preventing the readmission to ICU.
- **Effective communication,** coordination of care and information exchange between ICU and ward staffs, decreased the risk of ICU readmission and mortality.
- **Reaudit** once in six months to track the efficiency of CCOT services.

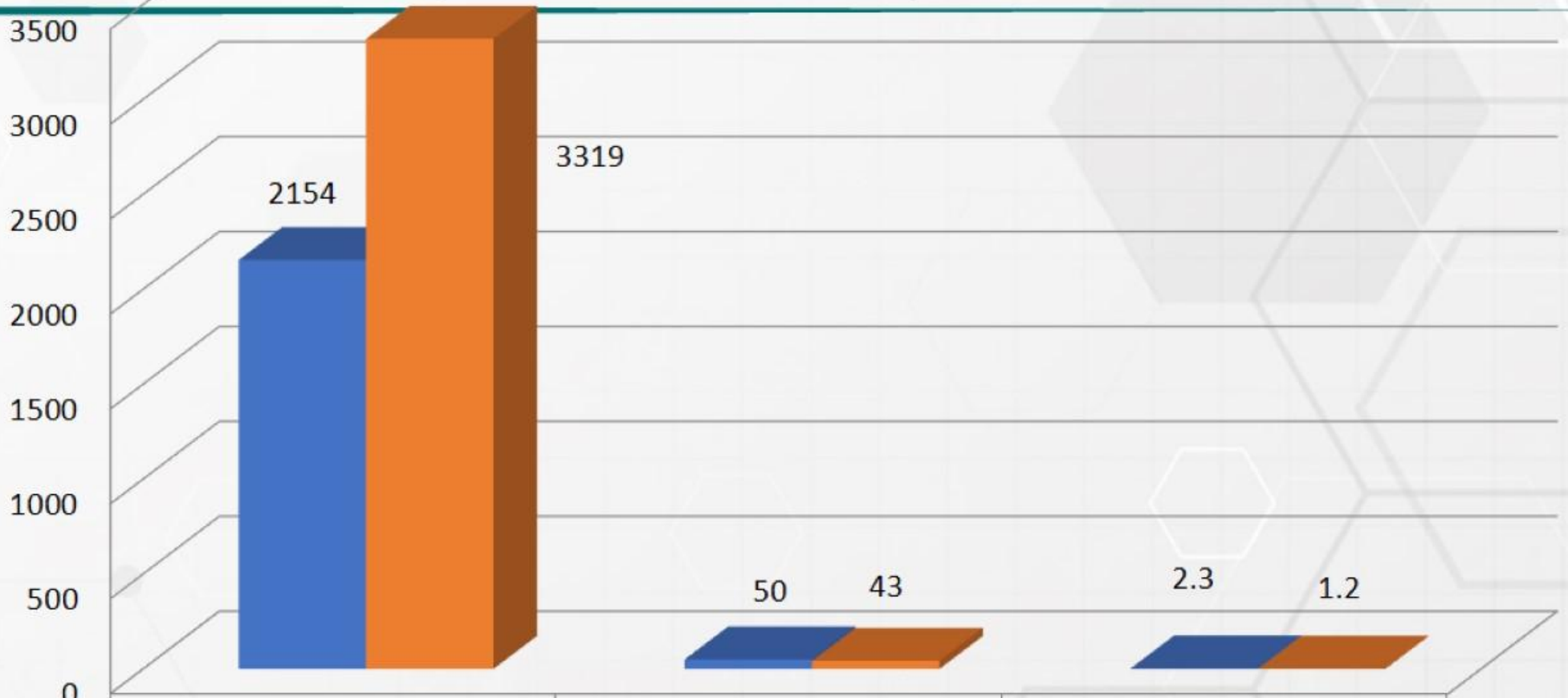
CLONING THE IMPROVEMENT

- **Impressed by the work** of the critical care outreach team in medical & surgical patients, we are planning to extend the critical care out reach team to all patients in the wards who needs close monitoring there by avoiding the code Blues
- **Training staff nurses** to sustain consistency in the practice of EARLY WARNING SCORE

TANGIBLE RESULTS

- Re audit has been done to look into readmission of the patients to ICU from step down wards within 48 hours
- Clinical Observation and intervention of patients transferred out from adult Intensive Care Unit to the step down wards has been improved resulting in improvement of quality and patients safety.
- Strengthening of the continuity of patients care out of adult Intensive Care unit .
- The Critical care outreach team observed **major(total-121)** & minor complaints **(total-131)** and rectified at the step down wards itself, thereby reducing the readmission rates and code blue calls for the above patients.
- The Critical care outreach nurses are **empowered to assess the patients** & provide early intervention for better outcome of the patients.
- Increase quality of care leads to **better clinical outcome good feedback** from the patients, which in turn **increases the revenue**.

Comparison of total no.of transfer out ,total no.of Readmission to ICU within 48hrs & Percentage of readmission rate (Pre & Post CCOT)



	Total no. of transfer out from ICU	Total no.of readmission to ICU within 48hrs	Percentage of readmission rate to ICU within 48hrs
PRE CCOT(Jan 2021-Oct-2021)	2154	50	2.3
POST CCOT(Nov 2021-Aug -2022)	3319	43	1.2

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The graph represents the comparison of total no. of. Transfer out,total no. of readmission to ICU within 48hrs & percentage of readmission rate (Pre & Post CCOT) out of 2154 patients transfer out from ICU (Pre CCOT), **50 patients were(2.3%)** readmitted to ICU within 48hrs but after we implemented critical care outreach team ,there is a reduction in number from **50 patients to 43 patients (1.2%).**

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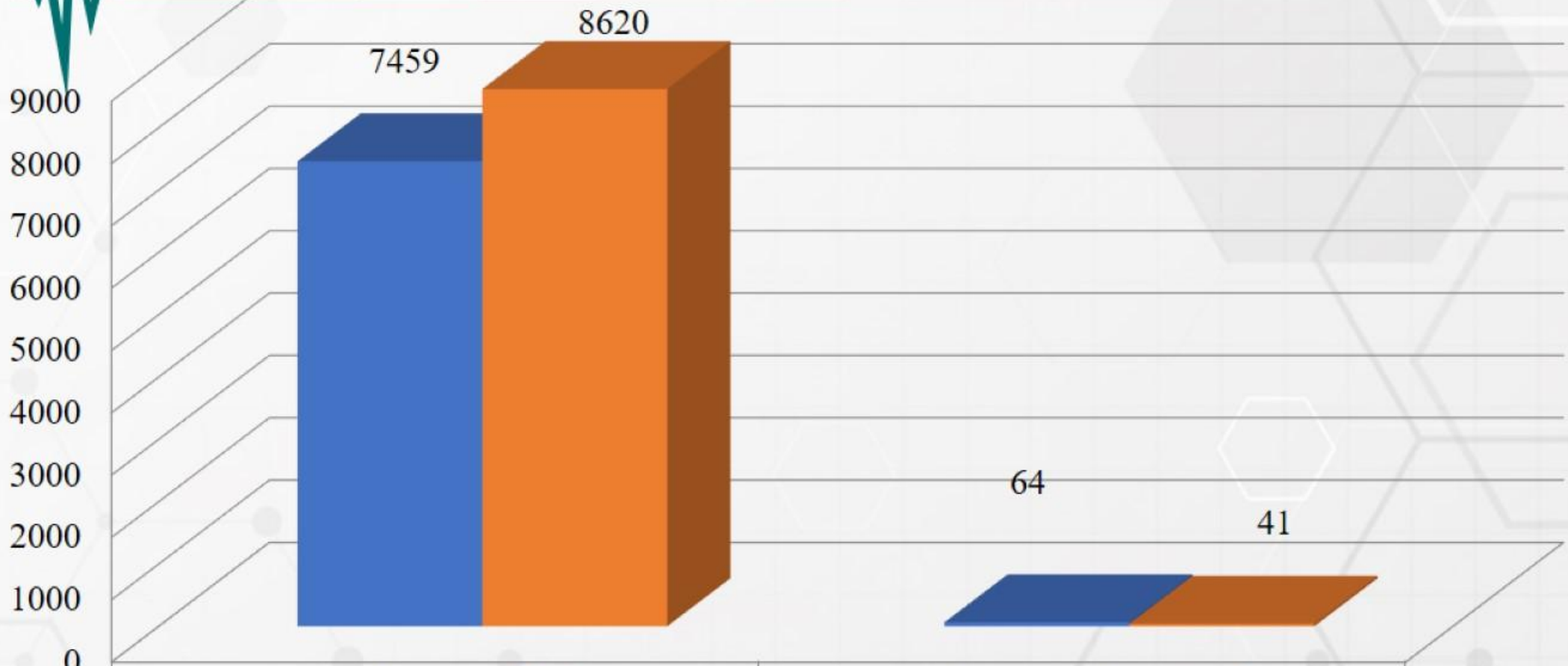
Comparison of total number of ward admission & Total of Code blue calls (Pre CCOT & Post CCOT)



	Total no.of.Ward Admission	Total no.of Code Blue calls
Pre CCOT	7459	64
Post CCOT	8620	41

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The graph represents the comparison of total number of ward admission & total number of Code blue calls (Pre CCOT & Post CCOT) Amongst **41 code blue calls** during post CCOT ,
12 were the step downed patients from ICU within 48hours(29%) The Critical care outreach team not only prevents the readmission to ICU within 48hours but also facilitate early transfer to ICU for better outcome of the patients & reduces the mortality.

INTANGIBLE RESULTS

- It Enhances the **effective communication** between the Critical Care Outreach Team & treating consultant that helps to improve the quality care of the patient.
- It also enriches the **ward nurse to gain knowledge** to deal with critically ill patients.
- **Improved the satisfaction level** of the patients and attenders.
- There is a **good support ecosystem** created for the ward nurses resulting in the improvement of quality of nursing care.
- **Consultants are satisfied** by the work of the critical care outreach team as their patients are monitored frequently by the team ,as they get immediate updates about their patients health status.

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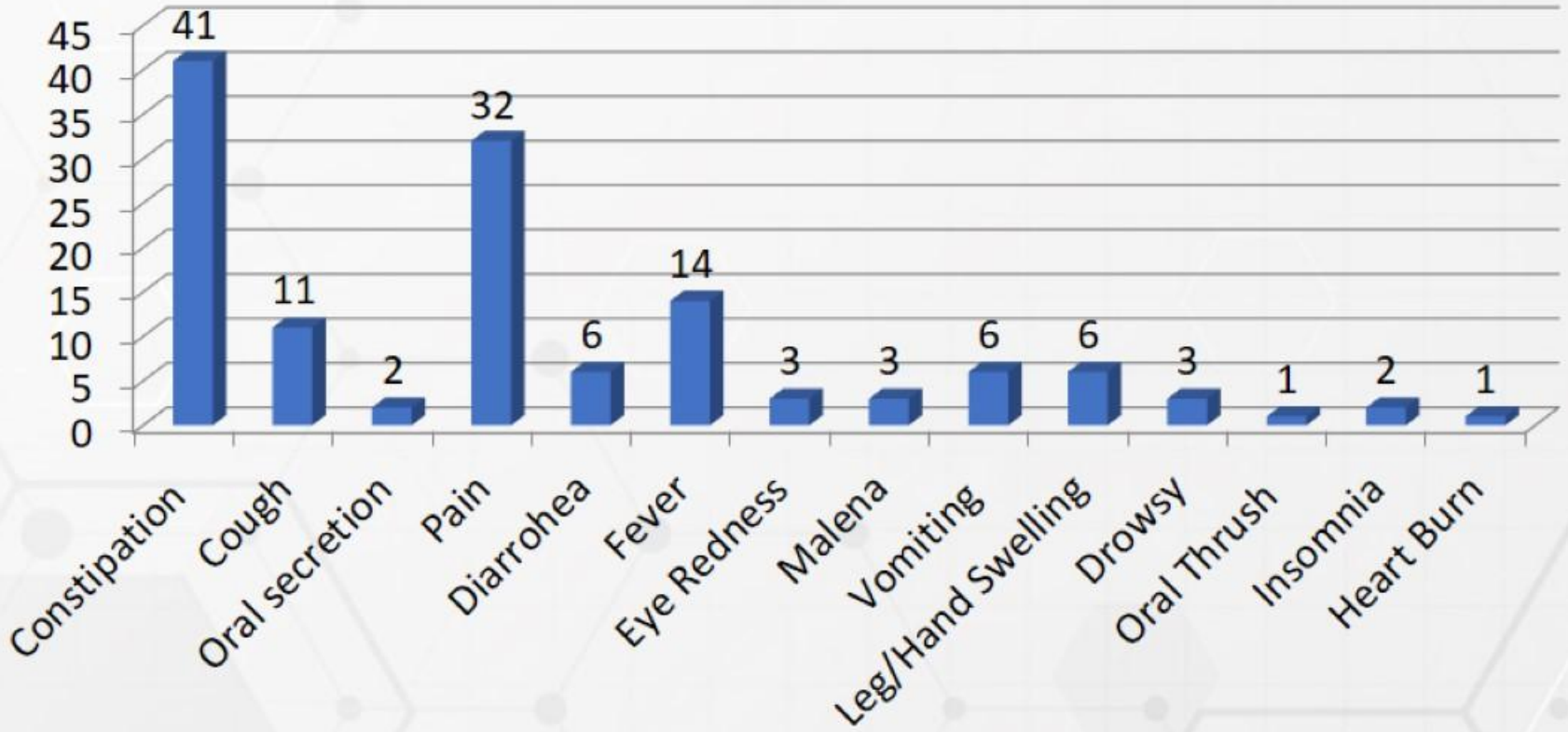
TOTAL NUMBER OF MINOR COMPLAINTS RECTIFIED BY THE CCOT TEAM (NOV 2021 TO AUG 2022)



TOTAL- 131

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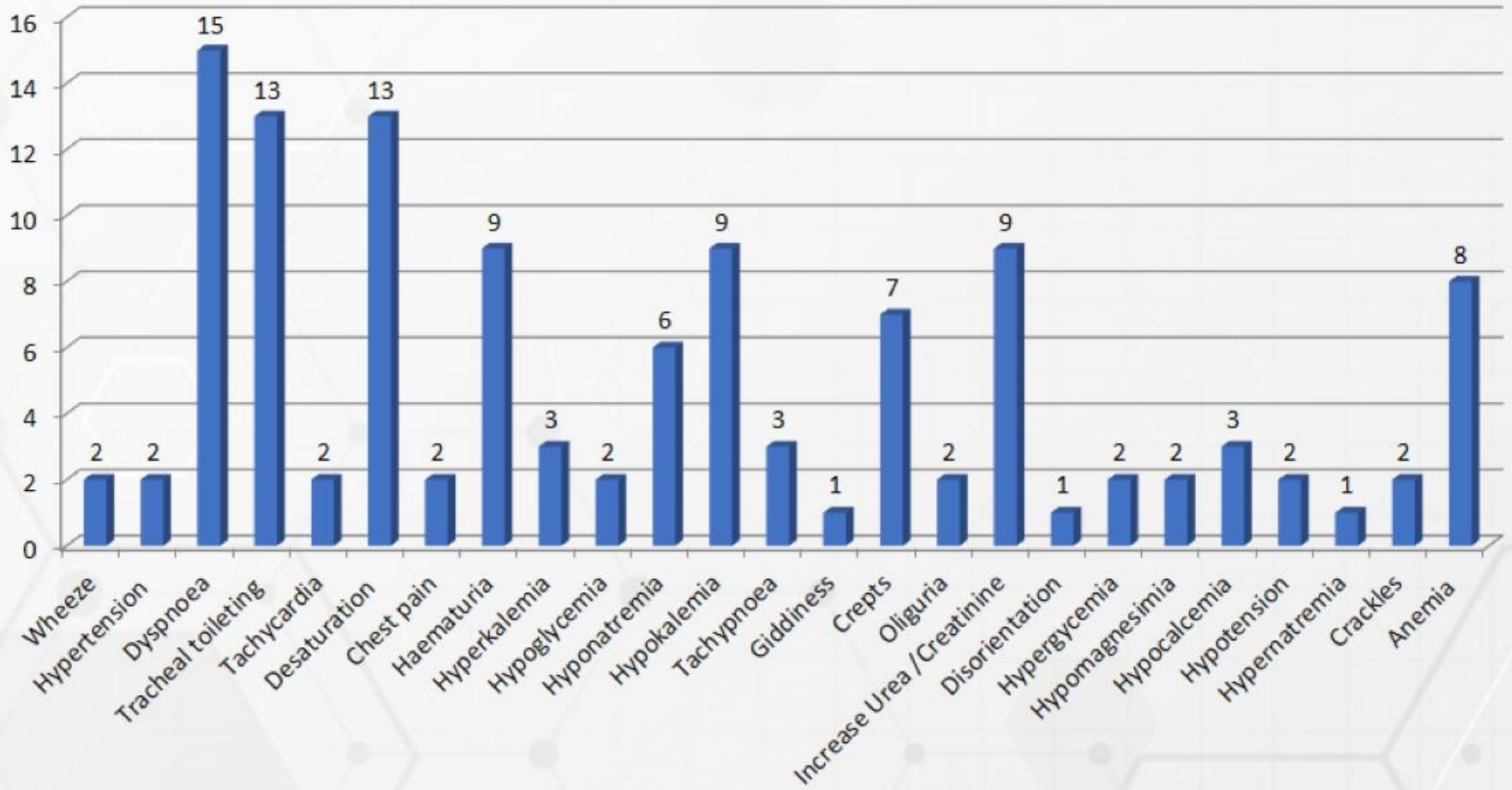
TOTAL NUMBER OF MAJOR COMPLAINTS RECTIFIED BY THE CCOT TEAM(NOV 2021 TO AUG 2022)



TOTAL- 121

CCOT Training Program :

S.NO	TOPIC	FACULTY
1	Introduction	Dr.Anil
2	Respiratory Assessment	Dr.Sasi
3	Cardiac Assessment	Dr.Saghya Antony
4	Neurological Assessment	Dr.Fias
5	Renal Assessment	Dr.Fias
6	Xray,ECG,& ABG Interpretation	Dr.Manjunath
7	Basic IVF Principles	Dr.Balaji
8	Multimodel Analgesia(Pain Assessment)	Dr.Manjunath
9	Application of Non-Invasive ventilation	Dr.Balaji
10	Humidification /Nebulization	Dr.Manjunath
11	Feeding principles in ICU	Dr.Balaji
12	HIC policies & Procedures	Ms.Vidyamani
13	Management of lines,plastics,foreign bodies of a patient	Dr.Balaji
14	Critical care & Holistic care	Ms.Maheswari
15	Qualities of Critical care outreach Nurse	Ms.Lakshmikutty
16	Principles of critical care management	Ms.Preshesha Premalatha

CRITICAL CARE OUT REACH CHECK LIST

S.NO	PARAMETER		DAY1	DAY2
1.	**EARLY WARNING SCORE**	Heart rate		
		Systolic Blood Pressure		
		Respiratory Rate		
		Level of consciousness		
		Urine output		
		Temperature		
		Total Score		
2.	**RESPIRATORY ASSESSMENT**	Respiratory Rate		
		Skin colour (Cynosis) (Present or Absent)		
		Use of Accessory muscles		
		Saturation level(Spo2)		
		Oxygen on flow Via		
3.	**CARDIAC ASSESSMENT**	**Heart Rate**		
		Blood pressure		
		Capillary refill time		
		Skin turgor (Normal or Abnormal)		
		Limb Oedema		
		Jugular venous distension		
4.	**NEUROLOGICAL ASSESSMENT**	**A**- Alert		
		V-Verbal		
		P-Painful stimulus		
		U- Unresponsive		
		Pupil Response Size of the pupil(Rt/Lt)		
		Reaction of the pupil (Rt/Lt)		

CRITICAL CARE OUT REACH CHECK LIST

5.	**RENAL ASSESSMENT**	**Total Intake**		
		Total output		
		Urine output		
6.	**PAIN ASSESSMENT**	0-No Hurts		
		2- Hurts Little Bit		
		4-Hurts Little More		
		6-Hurts Even More		
		8-Hurts Whole Lot		
		10-Hurts Worst		
7.	**WOUND ASSESSMENT**	Discharge if any Serous / Purulant		
		Edema (Yes or No)		
		Induration (Yes / No)		
		Discharge if any Serous / Purulant		

8.	**ANTIBIOTIC**	**Name & day of the Antibiotics**		
9.	**BLOOD INVESTIGATION**	Sodium		
		Potassium		
		Urea		
		Creatinine		
		Capillary Blood Glucose		
10.	**PENDING INVESTIGATION IF ANY**			
11.	**PRIMARY CONSULTANT-INFORMED**	YES/NO		
12.	**REMARKS IF ANY:**			

HIGHLIGHTS OF THE TRAINING SESSION:









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