QLL125

Improving the Bed Waiting Time (BWT) for General Paediatric Patients in Hospital Shah Alam (HSAS)

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1. INTRODUCTION

The general paediatric ward in HSAS faced significant challenges with bed occupancy, as evidenced by a Bed Occupancy Rate of 741.45% in 2021 for its 40 gazetted beds.
This situation underscores the difficulties in providing timely care for paediatric patients.
Addressing these issues is essential for enhancing health outcomes and improving patients satisfaction in paediatric cares.

1. SELECTION OF OPPORTUNITIES FOR IMPROVEMENT

1.1 PROBLEM IDENTIFICATION & PRIORITISATION

	Problem list	S	M	A	R	T	Total
1.	Prolonged BWT of General Paediatric Patient in HSAS	9	9	9	6	9	42
2.	Prolonged Waiting Time of Paediatric Patient prior to Consultation in the Paediatric Clinic	6	9	9	6	9	39
3.	Overcrowding of patients at the screening station in Neonatal Intensive Unit (NICU)	6	4	3	6	3	19

4 Group members		1	2	3
	Rating scale	Low	Medium	High

1.2 REASON FOR SELECTION

- **S** – SERIOUSNESS: It increases healthcare cost, morbidity and mortality rate and even led to crowding and lower parents' satisfaction, especially during the COVID pandemic
- **M** – MEASURABLE: Data pool can be collected.
- **A** – APPROPRIATE: JKNS re-instated BWT ≤ 240 minutes in Lean Operational and Sustainability Guideline 2014
- **R** – REMEDIABLE: This problem can be tackled with various intervention and BWT can be shortened.
- **T** – TIMELINESS: This remedial measures can be implemented within short period of time

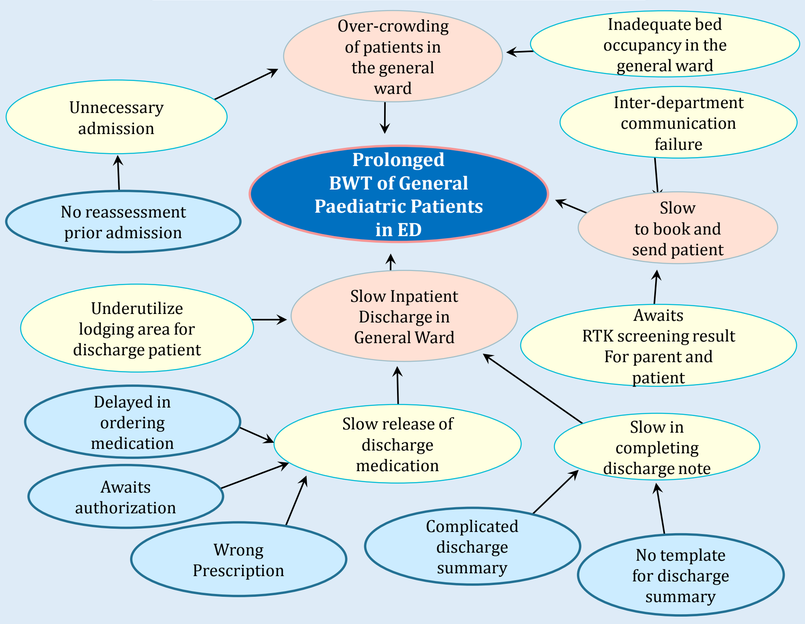
1.3 LITERATURE REVIEW

Prolonged LOS affects the functionality of the ED and quality patient care, leads to crowding in ED.
(Kapari M et al 2021)
Delays in delivery time-sensitive therapies, worse patient outcomes and provider /patient dissatisfaction.
(Bond K et al 2007)
High hospital occupancy has a significant and quantifiable negative influence on ED throughput, affecting patients hospitalized.
(Debra FH et al 2009)

1.4 PROBLEM STATEMENT

- **Problem**: High percentage of prolonged BWT among paediatric patients in HSAS at 46% in 2022
- **Effect**: Contribute to crowding in ED, increase health care cost, higher morbidity and mortality risk with lower parents' satisfaction
- **Cause**: Inefficient system and current work process with no proper guideline
- **Aim**: To improve BWT for higher percentage at >80%

1.5 PROBLEM ANALYSIS CHART



1.6 TERM & DEFINITION

TERMS	DEFINITION
Bed Waiting Time (BWT)	Time measured between the disposition decision in ED by paediatric team and admission to an inpatient bed in the ward.
Booking Book	Documentation of date and time paediatric patients are being booked by ED team, accepted by staff in General Paediatric Ward and their arrival time to General Paediatric Ward.
Team leader (TL)	Team leader who is the staff nurse who responsible during particular shift for bed arrangement in Paediatric ward

2. KEY MEASURES FOR IMPROVEMENT

2.1 OBJECTIVES

GENERAL OBJECTIVE

To improve the percentage BWT of General Paediatric Patients in HSAS

SPECIFIC OBJECTIVE

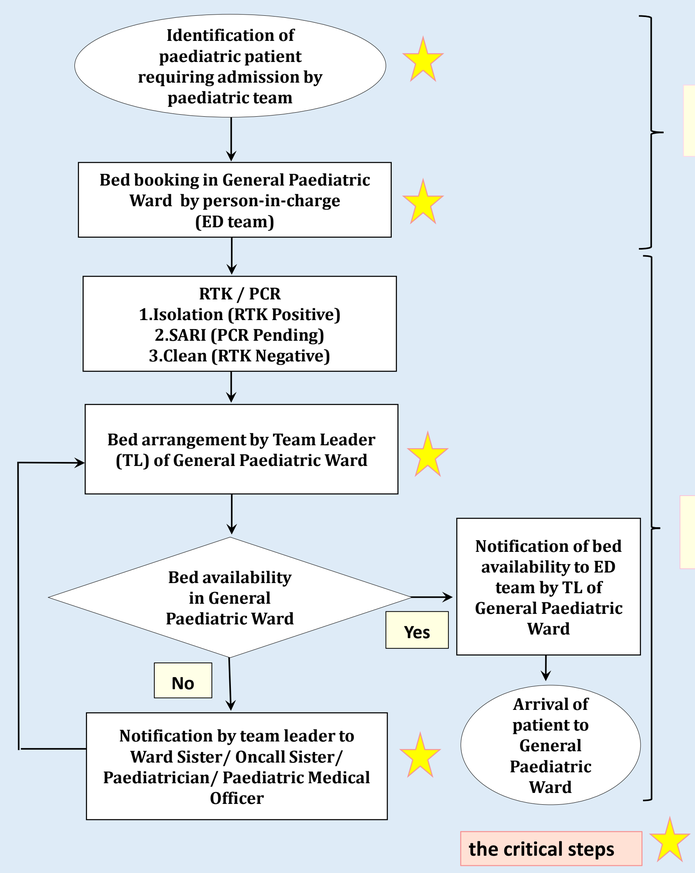
1. To verify the percentage of BWT of General Paediatric Patients in HSAS
2. To identify factors contributing towards prolonged BWT
3. To implement effective intervention strategies based on contributing factors identified.
4. To evaluate and re-evaluate the intervention strategies implemented

2.2 INDICATORS AND STANDARD

Percentage of BWT≤ 240 minutes for Paediatric Patients to be admitted

INDICATOR	Number of Paediatric Patients with Bed Waiting Time(BWT) ≤ 240 minutes / Total number of Paediatric Patients for Admission into General Paediatric Ward	X 100
STANDARD	> 80% , consensus by Paediatric Department Meeting HSAS 2022	

2.3 PROCESS OF CARE



2.4 MODEL OF GOOD CARE

PROCESS	CRITERIA	STANDARD	PRE- INTER VENTION	POST- INTER VENTION
Identification of Pediatric patient requiring admission by Pediatric team	Patients referred by ED team are reviewed by Pediatric team before admission	100%	100%	100%
Bed booking in General Pediatric Ward by person-in-charge (ED team)	To book bed by ED team within 30 minutes after decision for admission by paediatric team.	80%	32.8% ↓	9.4% ↓
Bed arrangement by Team Leader (TL) of General Paediatric Ward	Prepare discharge advice within 2 hours from discharge plan.	80%	87.2% ↑	84.7% ↓
Notification by TL to Ward Sister/ On call Sister/ Pediatrician/ Pediatric Medical Officer if no bed available in ward	Notification must be done by TL if bed is not available.	100%	100%	100%

3. PROCESS OF GATHERING INFORMATION

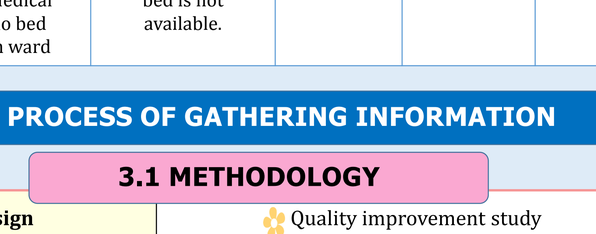
3.1 METHODOLOGY

Study design	Quality improvement study
Site	ED and General Paediatric Ward HSAS
Sample population	All paediatric patients planned for admission to General Paediatric from ED
Sampling technique	Universal sampling
Study period	1/2/22-31/10/22 : • Verification study: Feb 2022 • Pre-intervention: March-April 2022 • Intervention: May-August 2022 • Post-intervention: September-October 2022
Sampling tool	Audit Form Booking Bed Book General Paediatric Ward

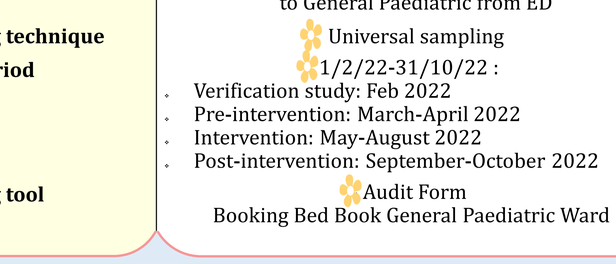
Inclusion Criteria	Exclusion criteria
Pediatric patients that are reviewed by Pediatric Medical Officer in ED HSAS.	Direct admission from Pediatric / Local Clinic. Referral admission for step-up/step-down. Patient admitted under the care of other discipline. Patient from OSCC. Patient that require admission to ICU/HDU

4. ANALYSIS AND INTEPRETATION

Pre intervention data



Percentages of contributing factors



5. STRATEGIES FOR CHANGE

Delayed in bed booking and sending patients to General Pediatric Ward by person-in-charge

Pediatric Medical Officer
- to inform/communicate with the ED staff regarding plan for admission
- ensure booking is done within 30 minutes.

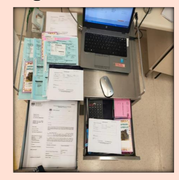
Covid screening before admission

NCOV PCR	NCOV RTK
• lower respiratory tract infection cases • Intubated • cases with clear Covid epid link	• all other diagnoses • cases with confirmed Covid infection within 3 months from the date of current admission

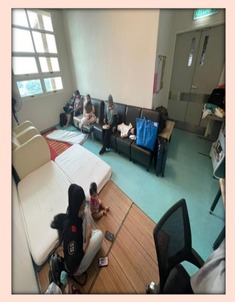
Slow Inpatient Discharge in General Pediatric Ward

Briefing on discharge trolley, process of care for discharge

Fully utilize pre discharge check list



To reinforce usage of discharge lounge in pediatric ward to lodge discharge patient.



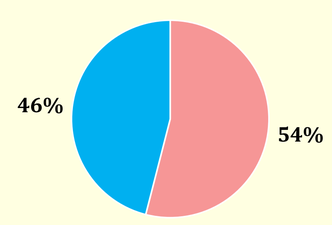
To prepare discharge documents a day before for patients that are planned to be discharged

Unnecessary admission

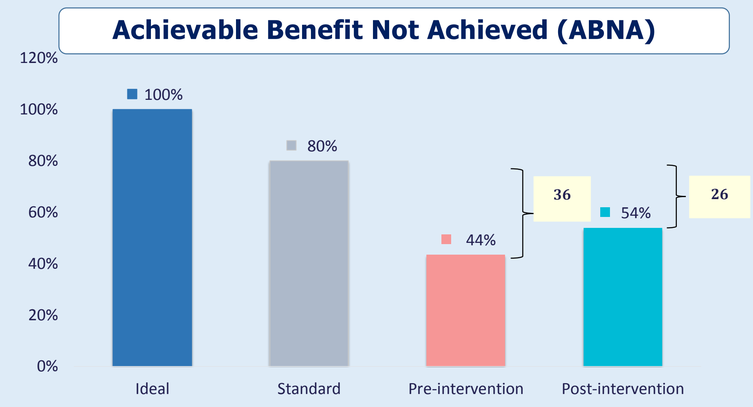
Allocation of Pediatrician in ED to review and reassess pending Pediatric cases to avoid unnecessary admission.

6. EFFECT OF CHANGES

Post intervention data



Achievable Benefit Not Achieved (ABNA)



7. LESSON LEARNT

1) Advantages of this study; prolonged bed waiting time is national even global issues, ideas could be shared among the country or world.
2) High staff turnover among staff including project group member contribute to weakness of the current study.
3) If about to repeat the study, to get consultation and guidance from quality assurance committee, dedicated quality assurance facilitators and support from multiple discipline healthcare personnel and discipline.

8. NEXT STEP

To continue with the second cycle of study with new strategies for change to ensure can achieve the standard with :

- Collaboration with ED team and pharmacist
- To gather more members for the subsequent cycle of the study

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