

### PROBLEM DEFINITION

Patients and hospital staff are dissatisfied by the length of stay experienced by urgent pleural effusion patients.

Currently, 15% of urgent patients stay in hospital longer than the necessary 3-5 days of recovery.

## **ROOT CAUSE ANALYSIS**

Patients are staying in LHSC for an inoptimal period of time after their pleural effusion surgeries. Due to the high variance in individual patient's needs, the hospital does not have a system to predict and reduce length of stay.

Patients	Provider Tas	k	Policies/Ethics	
Patients do not have an adequate method of Healthcare provide improvement communicating feedback to clinicians and administrators Patients are not satisfied by their length of stay Healthcare provide improvement Healthcare provide improvement	rs are not given adequate feedback for Overstaying in hospital dissatisfaction are providers are unaware of the targets/thresholds they meet Resistance to change in current practices Over-capacity leads Chest f	s leads to patient Ethical practices ma feedback e referred and transferred to LHSC, but Lack tran to delay in treatment tube insertion can only be completed in certain ns of the hospital	ay limit the effectiveness and reach of asparency in clinician conduct No repercussions for failing to meet wait time targets	Unpredictable and
Healthcare access and quality: Higher quality clinicians produce more effective feedback cycles Gender and racial bias: clinicians may not receive appropriate feedback when treating racialized groups, preventing equitable treatment Socioeconomic status of patients: patients may feel less comfortable raising their concerns and questions to clinicians, leading to prolonged length of stay Surgeons on staff and r	LHSC is considered a tertiary institute - so patients suffering from complex issues get sent there and there is nowhere else to go al expansion does not align with population growth tus: Hospitals with inadequate funds do not have burces to implement effective feedback practices for 3 surgeons, however there are 5 to available space for them to operate	chnology that provides live updates and timeline where supervisors can track common (length of stay or quality of care). Communicat een updated since 1994), Overcrowding and limi compromise on safety	Busy and fast-paced environment sion of work hours and burnout leads to worsened ion and poor patient experience ited staff lead to long wait times that	inoptimal length of stay
Social Determinants of Health Figure 1. Ca	use and Effe	ect Diagra	Environment	
Up to 48 Hours	A Few Hours	Up to 3 Days	5 to 7 Days	2 to 4 Days
Incoming ER Initial   Patient Radiology   A Few Hours Blood Work   Blood Work Potential   Delay CT Scan	Consult Thoracic Surgeosn Yes Pleural Effusion? No Other Departments	Wait for Available Bed	Surgery Fluid Sent for Analysis	Patient Receives Intervention
Figure 2. Pro	ocess Flow D	Diagram		
After speakin	a with the ph	nysicians	and nur	ses. we

realized the importance to facilitate more effective communication and create predictive tracking systems.

# **Reduce Pleural Effusion Patient Length of Stay**

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Since the Pandemic, hospitals have been overwhelmed with the overflow of patients, healthcare workers burnt out from working extra shifts, and concerns regarding the quality of care have risen.

We want to improve efficiency by reducing patients' overall length of stay. We chose to start small by focusing on pleural effusion surgical patients.

## AIM Statement: By March 20th, 2023, implement a performance reporting mechanism with a focus on reducing average length of stay by 2 days for urgent pleural effusion patients.

P - Planned to change patient's length of stay D - Measured length of stay in Oct. & Nov. and ran some analysis, we hypothesized some lag time S - People's adaptability to change has increased A - Interventions on a larger scale might be needed to facilitate a more effective change

Challenges to implementation included long wait time for project approvals, complications associated with privacy laws, and difficulty altering existing systems.



Due to the data's high variability and unpredictability, no clear trends were observed. Chance is influencing the process and causing data points to fluctuate around the median,

# long-term plan.



### IMPLEMENTATION

## MEASUREMENT & RESULTS

### Figure 3. Run Chart

### SUSTAINABILITY

As a team, we plan to carry on the project with the guidance of Dr. Rahul as its implementation time was longer than expected. We predict a lag time in seeing true results, and look forward to formulate a