OPTIMIZATION OF ELECTIVE CESAREAN PROCESSES TO MITIGATE DELAYS:
A Multi-Phasic Project

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DESCRIPTION

The FAST (**F**low and **A**ssessment of c-**S**ection **T**eam) Project is a quality improvement (QI) initiative at Humber River Health's Birthing Unit aimed to reduce significant delays in elective cesarean sections (C/S), impacting patient experience and operational efficiency. Initially plagued by delays 91% of the time, averaging 61 minutes per delay, the goal was to streamline access and enhance the quality of care. Patient experience, crucially defined by timely, organized care, guided the team's efforts to ensure complex pregnant patients received prompt and appropriate treatment. FAST Project composed of key stakeholders like physicians, program director, manager, and clinical leaders, collaborated across departments to investigate and address the root causes of delays.

OBJECTIVE

To aim for 80% of C/S procedures to start within five minutes of scheduled time.

ACTIONS TAKEN

The interprofessional team utilized structured QI methodologies:

- Retrospective review conducted to quantify delay durations.
- Prospective study mapped patient journeys and analyzed delay causes using QI tools, such as root cause analysis and fishbone diagrams.
- Established a dedicated Operating Room nursing team solely for elective C/S procedures, optimizing clinical pathways and enhancing surgical efficiencies.

Central to the approach was the Plan-Do-Study-Act (PDSA) model, which identified 10 root causes of delays.
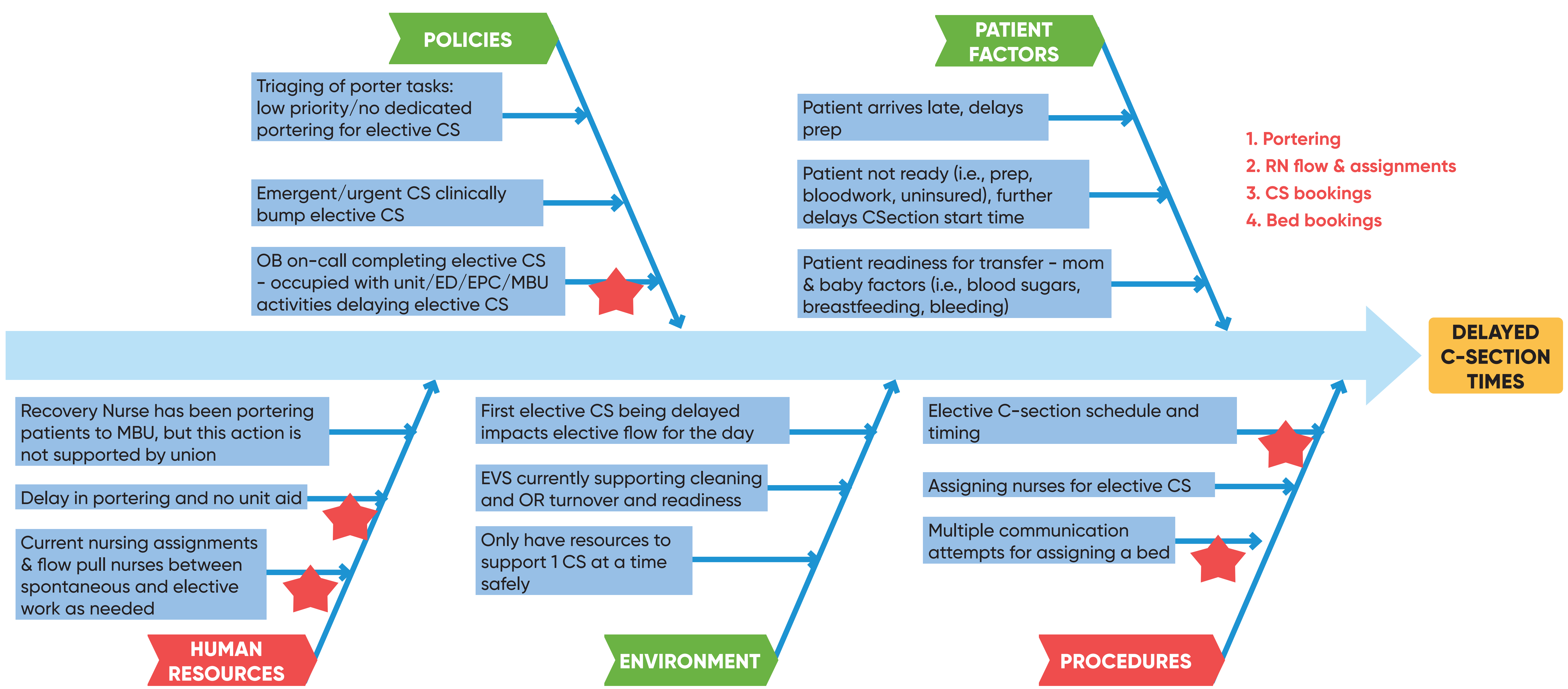

Figure 1. **Analysis of C/S Delays – July Phase**
Analysis of C/S Delays was completed using a Fish-Bone diagram. The top 4 reasons for delays were identified and strategies were implemented to help mitigate these delays.
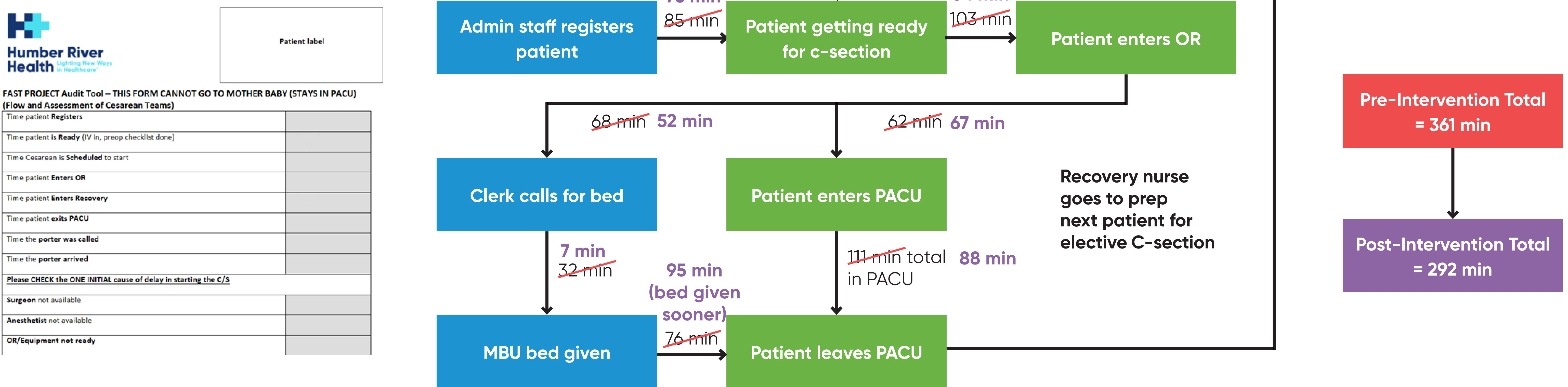

Figure 2. **C/S Delay Improvements: Efficiency in Patient Journey**
Audits were completed to identify delays at every stage of the patient's journey. Interventions were then implemented based on the result of these audits and further assessment was completed to determine the effectiveness.
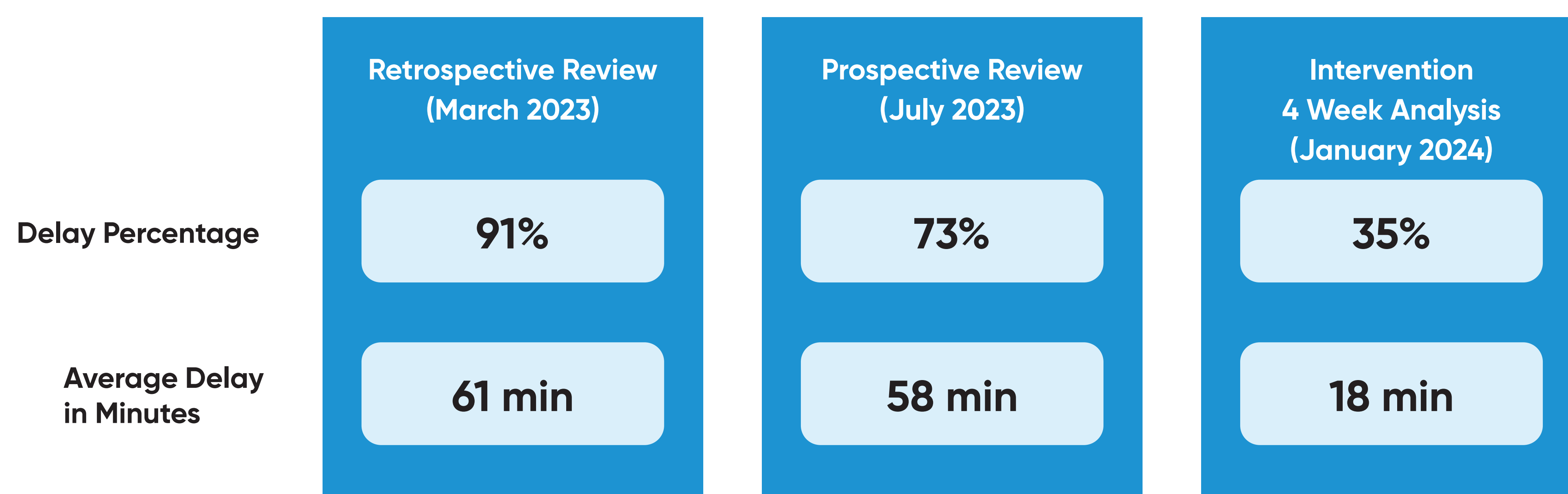
	Retrospective Review (March 2023)	Prospective Review (July 2023)	Intervention 4 Week Analysis (January 2024)
Delay Percentage	91%	73%	35%
Average Delay in Minutes	61 min	58 min	18 min

Figure 3. **C/S Delay Improvements**
Improvements were seen in the number of C/S that were delayed, including the average delay in minutes.

SUMMARY OF RESULTS

Results from the project included:

- C/S delays reduced significantly to 35%; average delays decreased by 43 minutes.
- Improved patient journey times; approximately 69 minutes overall.
- Entire patient journey from registration to post-anesthesia care unit (PACU) discharge reduced from approximately 361 minutes to a total of 292 minutes.

These reductions underscored the impact of each corrective strategy in enhancing care coordination and organization around the patient, resulting in a more seamless experience.

LESSONS LEARNED

The FAST project underscores how strategic initiative, interdisciplinary collaboration, and systematic QI approaches for sustained improvements in maternal healthcare delivery.