

Background and Context for Change

Sunnybrook is an academic health sciences centre and home to Canada's largest trauma centre. The Level 2 Intensive Care Units (ICUs) persistent overcapacity has raised patient flow to a critical priority. Delays in transferring patients from ICU to General Internal Medicine (GIM) wards are caused by ambiguity regarding which GIM team (orange, yellow, blue, red, or silver) is responsible for order writing. GIM physicians use both electronic and paper-based orders, complicating standardization. Additionally, initial data depicted that ~80% of orders were written only after bed cleaning, contributing to an average delay of 5 hours in patient transfers.

Aim Statement

The primary objective of this project is to enhance ICU-GIM patient transfers by ensuring timely, equitable, and safe transitions. Using multidisciplinary collaboration and QI tools, we aim to improve physician order-writing compliance to 80% by ensuring orders are written as soon as beds become available.

Family of Measures

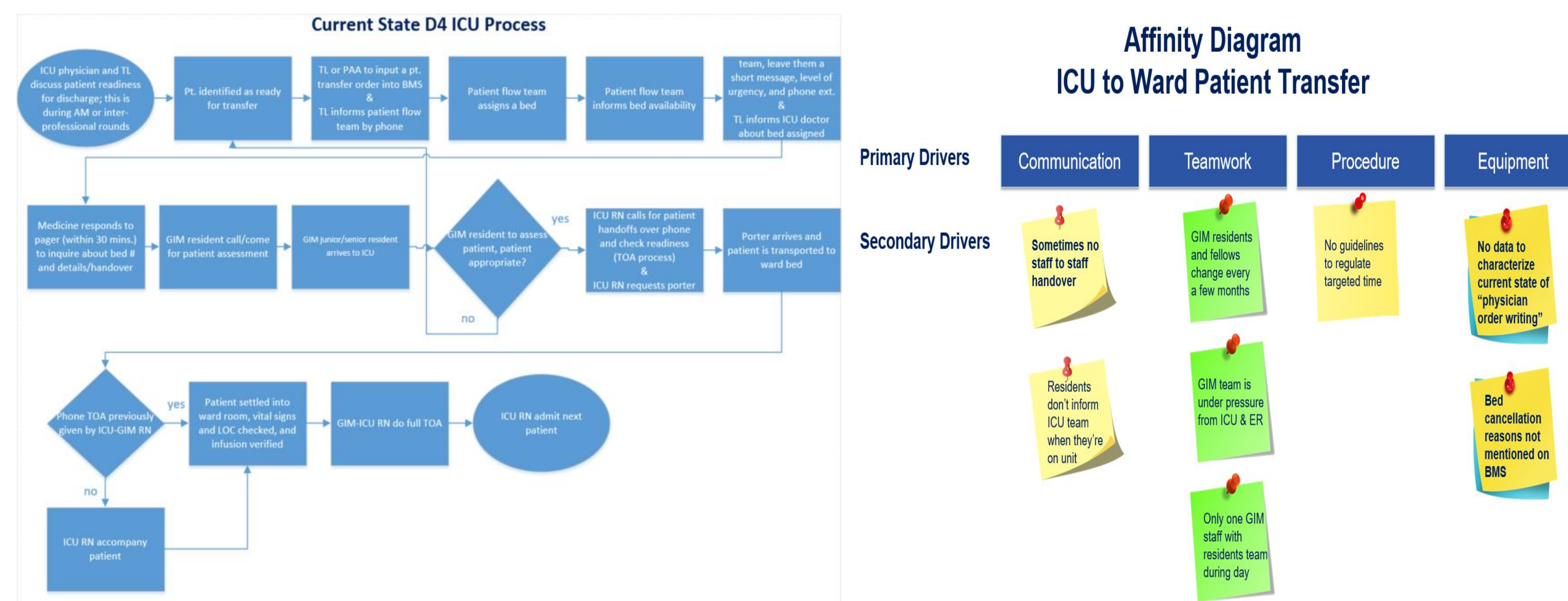
- **Outcome:** Improve physician order writing time by ensuring the orders are written as soon as the bed is reserved, aiming for an 80% compliance.
- **Process:** Increase the compliance rate of writing orders within 3 hours of bed availability to 80%.
- **Balancing:** Monitor physician workload to ensure that improvements do not lead to burnout or decreased job satisfaction.

Understanding your Problem

Delays in the timely writing of GIM admission orders affect ICU-GIM patient transfers, impacting ICU bed availability. When ICU beds reach full capacity, prompt transfer to GIM wards is essential to maintain ICU availability and patient safety. When admission orders are written after the bed availability notification, this delays patient care by impacting the flow of patients, especially from the Emergency Department (ED) to ICU.

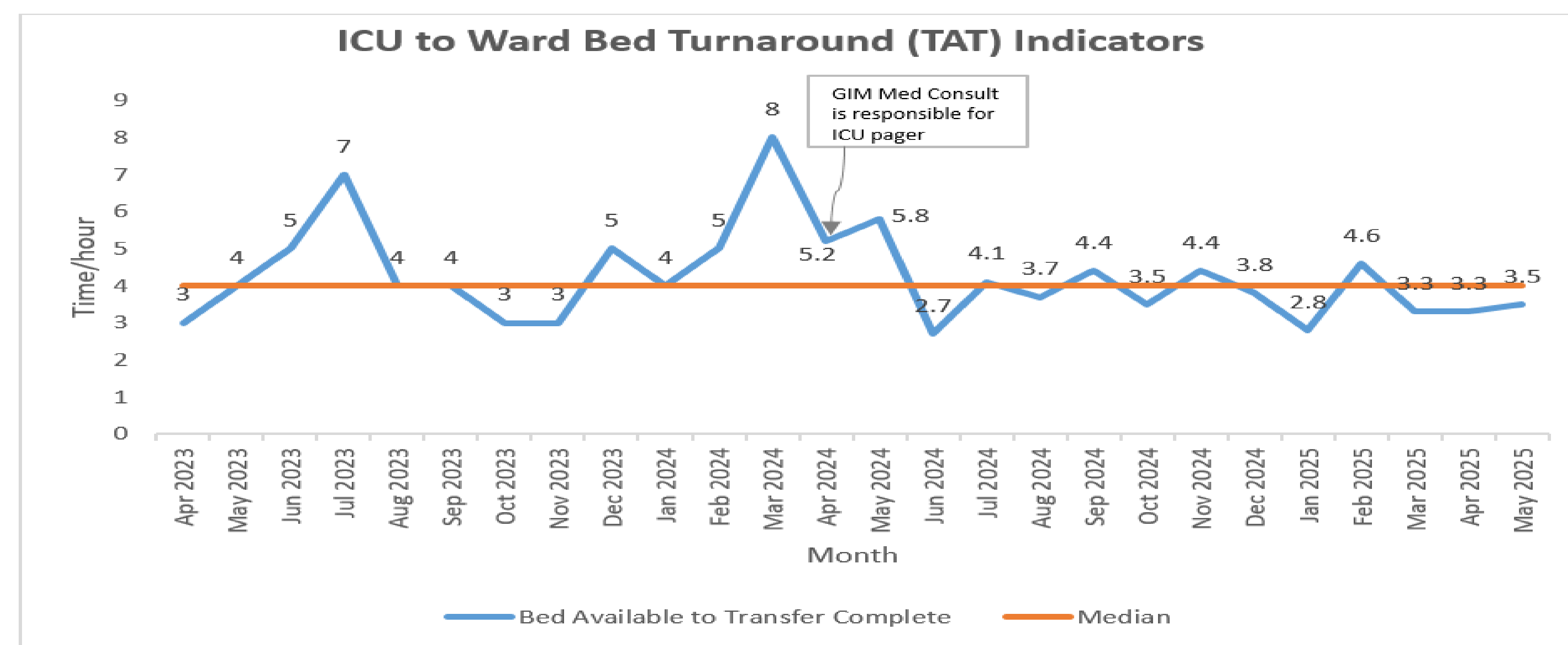


Diagnostics



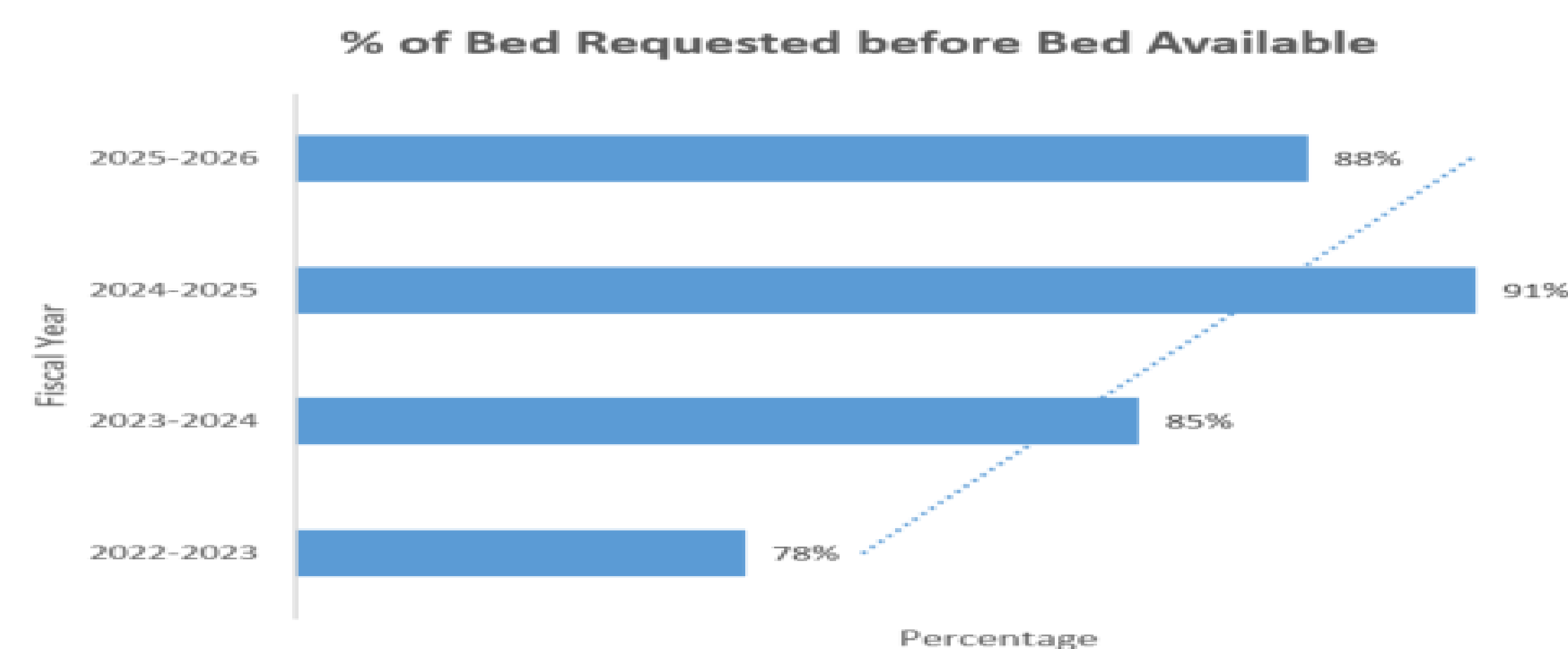
Project Results

- **TAT Improvement:** When GIM Medical Consult assumed responsibility for the ICU pager, the time from initial assessment to order written decreased to an average of 52.5 minutes and time of bed availability to transfer from 4.6 hours in FY 2023-24 to 3.9 hours currently, demonstrating the effectiveness of the collaborative efforts between the ICU and GIM teams to expedite patient transfers.



Index/Methodology

- Bed Available = BMS bed available date/time.
- Transfer Complete = ADT complete date/time.



Notable Consideration

This initiative aimed to support equitable access to care by ensuring timely and safe transfer and freeing ICU beds to accommodate new critical patients, particularly those awaiting admission in the ED. This aligns with the **Equitable Quality Dimension** of our Quality Priorities at Sunnybrook.

To ensure broad staff representation, nurses, PAAs, physicians, residents, chief resident, patient flow team, and decision support team were engaged in this project.

Theory of Change

- “High demand for intensive care unit (ICU) services and limited bed availability have prompted hospitals to address capacity planning challenges.”⁽¹⁾
- “Optimization of a system requires orchestrating the efforts of all components of the system toward achieving the stated purpose.”⁽²⁾

Lessons Learned

- **Engaging Frontline Staff:** Actively involving informal leaders and collecting qualitative data are significant to identifying practical insight for improvement.
- **Data-driven Validation:** It's important to have solid data before scaling QI initiatives.
- **System-level Factors:** Physician order writing timestamp is a minor contributor to transfer delays; bed readiness and porter availability may play a greater role in overall transfer delay.

Next Steps

- **Focus Shift:** Redirect attention and priorities toward improving surgery discharge processes in the ICU.
- **Automation Options:** Explore automation of relevant timestamps and align them with the new Health Information System (HIS) to support timely patient transitions.
- **Ongoing Collaboration:** Continue collaboration with Decision Support and Patient Flow teams, working on parallel projects aimed at optimizing safe and equitable patient transfers.

Acknowledgements

I would like to send a heartfelt thank you to my coach **Genny Ng** for her valuable guidance, support, and advice throughout this QI effort. I would like to thank **Brigette Hales** for her expert instructions and guidance. Thanks to the entire D4 ICU team, inclusive to everyone who demonstrated willingness and collaboration to support this effort, specifically, **Dr. Andre Amaral, Peggy Escalona, Julie Nardi, and Nicky Holmes**. Thanks to Decision Support team for helping with data, specifically, **David Geller** and **Michelle Martin Rhee**. Thanks to GIM Chiefresident, **Dr. Adina Weinerman, Dr. Lynfa Stroud, and Dr. Zachary Feilchenfeld**. Thanks to Patient Flow team, specifically, **Virginia Delle Cave, and Gina Hill**. Thanks to all speakers, learners, and organizers at **CQuIPS** who provided instructions, feedback, and advice, in particular, **Maria Pinard, Dr. Bourne Auguste, and Dr. Brian Wong**.

References:

1. Mathews, Kusum S., and Elisa F. Long. "A Conceptual Framework for Improving Critical Care Patient Flow and Bed Use." *Annals of the American Thoracic Society*, vol. 12, no. 6, June 2015, pp. 886–894, <https://doi.org/10.1513/annalsats.201409-419oc>.
2. Rutherford, Patricia, et al. *Achieving Hospital-Wide Patient Flow (Second Edition) the Right Care, in the Right Place, at the Right Time*. 2020.