Inpatient Falls on Medicine Units at McGill University Health Centre

A Quality Improvement Perspective

Munazzah Jaffer, Richa Sharma, MDCM, Dhana Jaafar, MD, Saman Ahmad*, MDCM, FRCPC, MSc.

Faculty of Medicine and Health Sciences, McGill University, Montreal, Canada
Department of Medicine, McGill University, Montreal, Canada
Research Institute of McGill University Health Centre, Montreal, Canada *Email: saman.ahmad@mcgill.ca

McGill University
McGill University Health Centre Research Institute

Background & Objectives

FALLS at the MUHC medicine wards (Royal Victoria Hospital – RVH; Montreal General Hospital; MGH) are the most frequently reported incident, representing a significant cause of harm and morbidity, as well as prolongation of hospitalization.

→ An estimated 1,150 falls occur annually, of which 33% result in injury, and 1.4% cause permanent harm.

ISSUE We are consistently higher than the benchmark for fall rate on the medical wards, necessitating further investigation into the circumstances surrounding falls and the effectiveness of current fall prevention strategies.

OBJECTIVES of this study are to:

- Explore the circumstances surrounding falls;
- Identify associated patient and environmental risk factors;
- Assess implementation of current fall prevention strategies (i.e., MORSE Fall Risk Assessment score, CATT Recommendations);
- Collaborate with all stakeholders to improve fall risk.

Medical Ward	Fall count 2023	Fall count 2024
MGH:15th Floor	74	50
MGH:14th Floor	39	65
RVH: C09	63	34
RVH: D09-CS	44	25
RVH: C09-N	8	12
Total	**235**	**196**

Methods

Stakeholder interviews with the MUHC Fall Committee members and allied healthcare professionals (PT, OT, Nursing managers, assistant head nurses, and more)

↓

Gemba field analysis of medicine wards at MGH and RVH and fishbone analysis

↓

Retrospective chart audit of random 104 patient falls reported between October 2023 - October 2024, with quarterly sampling to reduce seasonal biases

↓

Prospective 2-week ward audit in May 2025 (n = 126) to assess adherence to the MORSE Fall Risk Assessment Score, selection and adherence to CATT recommendations.

Inpatient Falls on Medicine Units at McGill University Health Centre

A Quality Improvement Perspective

McGill University Health Centre Research Institute

McGill UNIVERSITY

Results

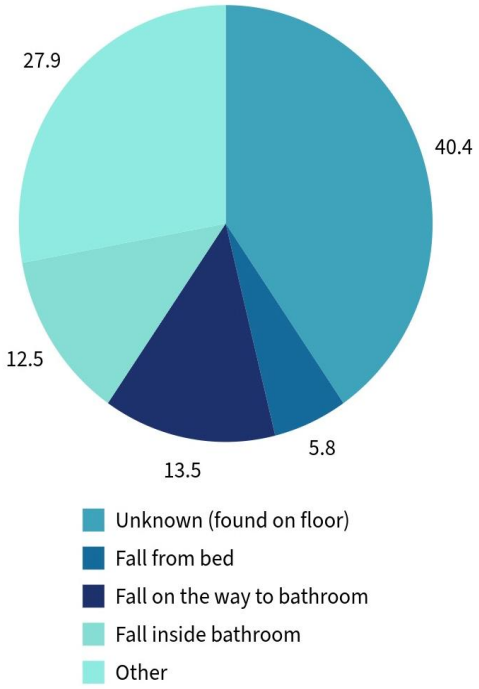

Figure 1. *Causes of fall - % (n = 104)*

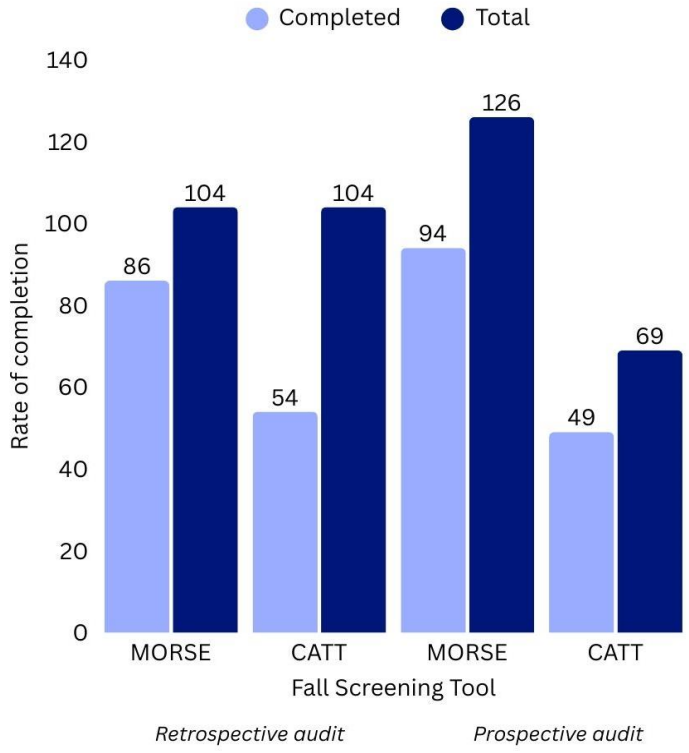

Figure 2. *Completion rate of fall risk screening tools*

CATT recommendations	Selection rate	Selection rate	Adherence rate (%)
	Retrospective audit	*Prospective audit*	
Patient room closer to nursing station	14/54	11/49	90.9
Check on patient frequently	40/54	35/49	86.2
Untangle tubing on floor	27/54	19/49	96.7
Glasses/hearing aid within reach	11/54	13/49	93.3
Mobility aid at bedside	33/54	26/49	**63.5**
Review high-risk Rx with MD/PharmD	**13/54**	**10/49**	**68.8**
Consult PT/OT	52/54	28/49	83.9
Show patient how to get up slowly	7/54	24/49	100
Walk patient TID	11/54	9/49	74.1
Use of nightlight	6/54	13/49	-
Toileting schedule	**13/54**	**5/49**	100
Commode at beside	**15/54**	**9/49**	**40.7**
Stay with patient in bathroom	**5/54**	**14/49**	91.1
Assist patient on stronger side	9/54	11/49	81.8
Raise bedrails	53/54	39/49	100
Bed alarm	**7/54**	**13/49**	100
Geriatric chair	6/54	2/49	100
Magnetic belt	4/54	4/49	62.5

Figure 3. *Selection and Adherence to CATT Recommendations*

Inpatient Falls on Medicine Units at McGill University Health Centre

A Quality Improvement Perspective

McGill University Health Centre Research Institute

McGill University

Discussion

Commonly identified risk factors associated to falls included unassisted toileting (26% were bathroom related falls), unavailable mobility aids (25% of falls), at least 1 sedative medication use (68% of falls) and environmental barriers such as non-adapted bathrooms.

The retrospective audit revealed a **suboptimal use of fall prevention tools**, with a rate of MORSE score completion of 86 out 104 fall patients (83%). Patients who were attributed a high MORSE score of 46 or above had CATT recommendations selected in 51.9% of high-risk patients (54 out of 104).

In the prospective audit of all patients admitted to the medicine wards, the rate of MORSE score completion was of 74% (94 out of 126 patients). Of those patients, 69 patients had a MORSE score of 46 and above, and yet, only 49 out of 69 patients had selected CATT recommendations (71%). This means that the number of high-risk patients is likely higher due to **incomplete screening.**

Selection of CATT recommendations was variable between patients and was not based on a standardized process. Of note, **bathroom-related recommendations** (e.g., commode at bedside, staying with patient while in bathroom, toileting schedule, and use of bed alarm) were **selected in less than 30% of high-risk patients**, and yet, bathroom-related falls were one of the major causes of falls identified. Another risk factor for falls that we identified was use of sedative medication, and yet reviewing high-risk medication with MD/PharmD was selected in less than 25%.

Lastly, **adherence to these selected CATT recommendations was suboptimal** and variable, with **no documentation** to track implementation of these recommendations.

Conclusion & Future Perspectives

Our study highlights that current fall prevention tools such as the MORSE score and CATT recommendations remain sub optimally used despite being mandatory and are not consistently re-evaluated based on the clinical evolution of the patient.

Fall prevention requires a multidisciplinary approach and should involve all key members of the circle of care. We suggest involving physicians, medical residents and learners to optimize adherence to the current fall prevention strategies by performing weekly audits, automatic medication review upon admission, and reviewing falls as part of monthly morbidity and mortality rounds.

Moreover, safe environmental optimization such as providing mobility aids and commodes to all patients with mobility issues, as well as modifying bathroom facilities, are both crucial to prevent bathroom-related falls.

Lastly, staff shortages remain an important barrier to providing safe supervision during bathroom visits and scheduled toileting and should be addressed to reduce falls in the long term.

Inpatient Falls on Medicine Units at McGill University Health Centre

A Quality Improvement Perspective

McGill University

McGill University Health Centre Research Institute

Evidence of Conflict of Financial Interest

	Co-author	Conflict disclosures
1	Munazzah Jaffer	No Conflicts of Interest.
2	Richa Sharma	No Conflicts of Interest.
3	Dhana Jaafar	No Conflicts of Interest.
4	Saman Ahmad	No Conflicts of Interest.