

# Investigation of Falls in Older Inpatients- is there a request for a medication review?

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## Background

- Falls are a serious adverse event that contribute to poor outcomes including injury, reduced quality of life and increased costs (1, 2)
- Validated falls risk assessment tools, such as the Ontario Modified Stratify (OMS) tool, have been developed to allow health care professionals to identify patients at risk of falling in the acute setting. (3, 4)
- In New South Wales, all patients must have an OMS completed on admission.
- The OMS allows for identification of those patients at risk of falls, which can then enable specific interventions to be implemented, such as review of medications. (4)
- Medications that can increase a patient's falls risk are known as Falls Risk Increasing Drugs (FRIDs). On the OMS, four classes of medications have been flagged as FRIDs. These include:
  - Antidepressants,
  - Antipsychotics,
  - Opioids and
  - Sedatives/hypnotics.
- As medications are potentially modifiable, a review of a patient's medications is considered as a strategy to minimise falls risk. (2, 5, 6)
- After a patient has had a fall, the nurse is required to complete the "Post fall Management Form." This form provides an opportunity for the nurse to document whether a medication review is needed post-fall.

The aim of this study was to determine the prevalence of falls risk increasing drug administration in the 24 hours preceding an inpatient fall, and to assess concordance with the request for a subsequent medication review.

## Methods

All falls occurring for patients admitted under Aged Care at Royal North Shore Hospital between July 1<sup>st</sup> 2016 and December 31<sup>st</sup> 2016 were identified retrospectively from the incident reporting system. Demographic data and FRID administration records were obtained from electronic medical records and automated dispensing systems respectively. Microsoft Excel® was used to generate descriptive statistics.

## Results

- A total of 66 falls occurred in 48 inpatients over 6 months
- Median age of inpatients was 89 years (range 66-97)
- Similar proportions of males and females (47.9% and 52.1% respectively)

## Admission

- Overall, 69% (33/48) of patients were on an antidepressant, antipsychotic, opioid or sedative/hypnotic.
- In 12.5% (6/48) of patients, a medication review for FRIDs was requested on the OMS (Figure 1, as circled in red)

The screenshot shows the 'Medications' section of the OMS tool. It includes a 'falls risk' checkbox and four radio button options: Antipsychotics, Antidepressants, Sedatives/Hypnotics, and Opioids. A red circle highlights this section. Above it, there are fields for 'Total TS + MS Score' and 'TOTAL OMS SCORE', and a 'Clinical Judgement' dropdown menu set to 'High Risk of Falls'.

Figure 1: Screenshot of medication section from the OMS assessment tool

In the 66 falls, the following medications were administered within 24 hours prior to the fall:

- 27.3% (18/66) had received an opioid.
- 19.7% (13/66) had received an antidepressant.
- 16.7% (11/66) had received an antipsychotic.
- 12.1% (8/66) had received a sedative/hypnotic.

## FRID administration in the 24 hours prior of an inpatient fall

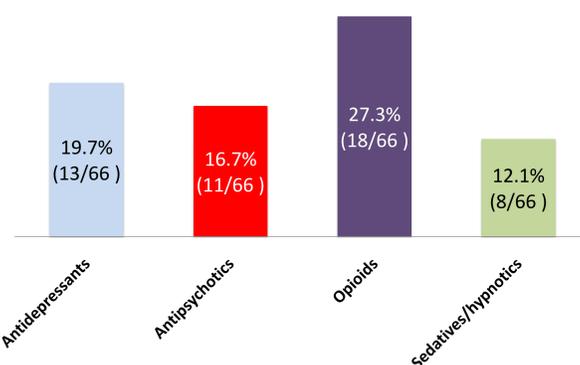


Figure 2: Prevalence of FRIDs administration in the 24 hours prior of an inpatient fall

## Post Fall

- A medication review for FRIDs was requested after the fall in 41.7% (20/48) of inpatients (Figure 3, as circled in red)
- A medication review was most frequently requested in those that received a sedative 100% (8/8), followed by opioids 38.9% (7/18), antidepressants 30.8% (4/13) then antipsychotics 18.2% (2/11).
- In 22.7% (15/66) of falls, a FRID was administered to the patient in the preceding 24 hours however no medication review was requested as post-fall documentation was incomplete or never completed.

The screenshot shows the 'Post fall management form'. It includes several checkboxes for documentation: 'Fall prevention information provided to patient / carer / family', 'Falls Risk Score redone', 'Fall Risk Assessment and Management Plan (FRAMP) reviewed', 'Implemented and documented in patients notes', 'High fall risk status documented in notes', 'Clinical handover updated', and 'Medication review requested'. The 'Medication review requested' checkbox is checked and circled in red. Below these are fields for 'Referrals made' and 'Notified of fall and injuries'.

Figure 3: Screenshot of medication review section from the post fall management form

## Discussion

- This audit demonstrated that a number of older patients are taking FRIDs on admission (69% of patients on either of the listed FRIDs) however only a small percentage (12.5%) of these are being identified by nursing staff on admission with a request for a medication review.
- Although the number of medication reviews increased to 41.7% post-fall, it is concerning that in 22.7% (15/66) falls, no medication review was requested post-fall despite the patient being administered a FRID
- Ideally, a medication review should be completed on admission to help prevent or minimise the risk of falls.
- In 100% of patients that had received a sedative prior to their fall, a nurse had requested a medication review post-fall. This suggests that nursing staff are very familiar with identifying this class of medication as a FRID.
- In only 18.2% (2/11) of patients on an antipsychotic a medication review was requested post-fall. This suggests that increased awareness of identifying these types of medications as FRIDs is warranted.

## Conclusion

Although a number of older patients are taking FRIDs in the 24 hours preceding their fall, a medication review is not always requested post-fall. Furthermore, there is a large discrepancy in the number of patients taking FRIDs and documentation of this on the falls risk assessment tool on admission. Future studies should focus on improving communication between nursing staff, the medical team and pharmacist to ensure medication review in older patients at high risk of falling and on FRIDs.

## Acknowledgements

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## References

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