# Multifactorial assessment in patients presenting with fall

**Authors:** Yadee Maung Maung Myint, Kyaw Lin Su Khin, May Thin Khine and Myat Thiri Win

## Aims

Fall is the commonest cause of death from injury in the population aged over 65, and many falls result in fractures and head injuries. The aims of this study are:

- to improve the management in the multifactorial risk assessment for patients presenting with fall at the Princess Royal University Hospital (PRUH)
- to assess the adherence of National Institute for Health and Care Excellence (NICE) guidelines in terms of management and risk assessments of fall patients
- to identify the outstanding problems in the management of fall patients
- to introduce a fall checklist within the trust to facilitate the optimal management for patients presenting with fall
- to compare the results of the two cycles of audits before and after introducing the fall checklist.

## Methods

All patients who presented with fall from 1 May 2017 to 14 May 2017 to the Princess Royal University Hospital were included in the study. Sample size was 52 patients in the first cycle of audit. A proforma was created according to the multifactorial risk assessments in fall patients (NICE guidelines) to collect the data. All the data were collected within 2 to 3 days after admission date. After the first cycle of audit, the results were presented during departmental teaching and a fall risk assessment checklist, which is easy to use and provides relevant information for fall risk assessments, was introduced. Junior doctors, nursing staff, occupational therapists and physiotherapists were asked to fill in the checklist for patients presenting with fall during clerking and ward rounds. Re-audit was carried out 1 month later (from 24 June 2017 to 6 July 2017). Inclusive criteria were the same as first cycle of audit. Sample size was 18. Assessment of multiple factors for fall patients were analysed again.

## Results

First cycle: 52 patients presented with fall to PRUH over 2-week period (out of 514). None of the patients were assessed for osteoporosis risk (NICE recommended to use either FRAX or Qfracture). 48% were documented for visual impairment. 75% were tested for abbreviated mental test score (AMTS). Half of the sample size was documented for urinary incontinence.

**Authors:** Acute medicine, King's College Hospital NHS Foundation Trust, Bromley, London, UK

**Table 1. Percentage of risks assessment for patients presenting with fall in both audit cycles**

| | First cycle | Second cycle |
|---|---|---|
| Previous fall history | 53.8 | 55 |
| Gait and mobility | 80.7 | 61.1 |
| Osteoporosis risk assessment | 0 | 22.22 |
| Visual impairment | 48 | 51.1 |
| Cognitive impairment | 75 | 83.3 |
| Neurological examination | 9.6 | 66.6 |
| Urinary incontinence | 51 | 66.6 |
| Assessment by physiotherapist/ occupational therapist within 48 hours | 73.07 | 94.4 |
| Lying/standing blood pressure | 48.7 | 66.6 |
| Cardiovascular examination | 100 | 100 |
| Medication review | 50 | 61.1 |

Re-audit: Most areas of the fall risk assessment improved during second cycle. The figures for documentation neurological examination and urinary incontinence were 66.6% and 77.7% respectively which has improved compared with the first cycle of audit. 94.4% were seen by physiotherapist and occupational therapist during 24 to 48 hours. The figure has increased to 66.6% for lying/standing blood pressure documentation. Comparison between two cycles are presented in Table 1.

## Conclusion

The multifactorial risk assessments for patients presenting with fall has improved significantly in most areas with the use of the fall checklist we introduced. It can also be used to avoid duplication of documentation by different team members and can be used as an effective handover between different team members. This study has pointed out the certain areas which can be easily improved by documentation and effective handover. Overall, there was satisfactory improvement in the multifactorial risk assessment for patients presenting with fall except a few areas (assessment of gait or baseline mobility). The constraints for these areas need to be addressed and alternative methods to improve the assessment (eg collateral history from family or nursing home) can be implied in the future. ■

## Conflict of interest statement

There is no conflict of interests.