Briefing Document on Medication use and Falls

This document is intended as a "briefing document" and is not to be regarded as a document offering definitive legal advice in relation to the subject matter.

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About the IMSN

The Irish Medication Safety Network (IMSN) is an independent group of pharmacists and other specialists working in the acute sector, whose principal aim is to improve patient safety with regard to the use of medicines through collaboration, shared learning and action.

The following document is based on best practice as of June 2013.

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Definitions

A fall has been defined as: "*a sudden, unintentional change in position causing an individual to land at a lower level, on an object, the floor, or the ground, other than as a consequence of sudden onset of paralysis, epileptic seizure, or overwhelming external force*" .[1]

ADL	Activities of Daily Living
FALLSAFE	A Royal College of Physicians (UK) delivered quality improvement project (2010-2012) which focused on prevention and management of falls in clinical hospital wards in Southern England.[2,3]
NICE	National Institute for Health and Care Excellence (UK)
START	Screening Tool to Alert doctors to Right Treatment.[4]
STOPP	Screening Tool of Older People's Prescriptions.[4]

Introduction

The consequences of falling, particularly for older people, are a serious public health problem and a cause of ill-health and death. As people get older, the risk of falling, and of injury or harm from falls, increases. One in three older people fall every year and two-thirds of them fall again within six months. As Ireland's population ages, the burden of falls and related injuries could double over the next 25 years. Falls and harm from falls can be predicted and prevented.[5]

Older people experience more concurrent illnesses, are prescribed more medications and suffer more adverse drug events than younger people. Many drugs predispose older people to adverse events such as falls and cognitive impairment, thus increasing morbidity and health resource utilisation.[4]

The literature and hospital-based exploration of fall-related injury suggest that the following groups of patients are most at risk for injury if they sustain a fall:

- Individuals who are greater than or equal to (≥) 85 years old or frail due to a clinical condition
- Patients with bone conditions, including osteoporosis, a previous fracture, prolonged steroid use, or metastatic bone cancer
- Patients with bleeding disorders, either through use of anticoagulants or underlying clinical conditions
- Post-surgical patients, especially patients who have had a recent lower limb amputation or recent, major abdominal or thoracic surgery.[6]

The IMSN briefing document focuses on falls and the extrinsic risk factor medication.

Irish hospitals, in general, have a falls policy, however specific individual hospital guidance on falls risk and medication is inconsistent.[7]

Causes of Falls

Risk factors for falls are multifactorial. Any hospital's falls prevention programme policy should address the intrinsic, extrinsic and environmental hazards identified as risk factors in falling (Table 1)

Table 1: Risk Factors for Falls and Fractures adapted from HSE 2008 Strategy[5] & Lamis et al. (2012) [8]

Intrinsic:

Muscle weakness
History of falls
Gait and balance deficits
Visual deficit
Arthritis
Depression
Cognitive impairment
Age greater than 80 years
Urinary incontinence
Orthostatic or postprandial hypotension
Dizziness
Fear of falling
Limited activity

Environmental:

Environmental hazards
Home hazards

Extrinsic:

Use of assistive devices
Impaired activities of daily living (ADL)
High level of activity (community setting)
Medications (see below)

Medication:

Polypharmacy (≥ 5 medicines daily)[9]
Drugs which affect Central Nervous System[8]
- Anticonvulsants
- Antidepressants
- Antihistamines (sedating)
- Antiparkinsonians
- Antipsychotics
- Anxiolytics, Sedatives and Hypnotics
- Opioid analgesics

Class 1a antiarrhythmics
Antihypertensives
Diuretics
Laxatives

Discussion – Resources on Medication and Falls

There is controversy regarding the strength of evidence for medicines associated with falls. Differences in study methods, setting, power and definitions of a fall have made it difficult to draw firm conclusions regarding the impact of various medicines on falls risk.[10, 11] Additionally, there are challenges in terms of competing clinical priorities when considering discontinuing falls risk medicines.

Despite the points above, medication review is considered a worthwhile intervention as part of a multi-factorial falls prevention policy and is advocated by many patient safety organisations. A number of publications are available which may form useful resources when specifically looking at a medication and falls risk, for a hospital falls risk policy.

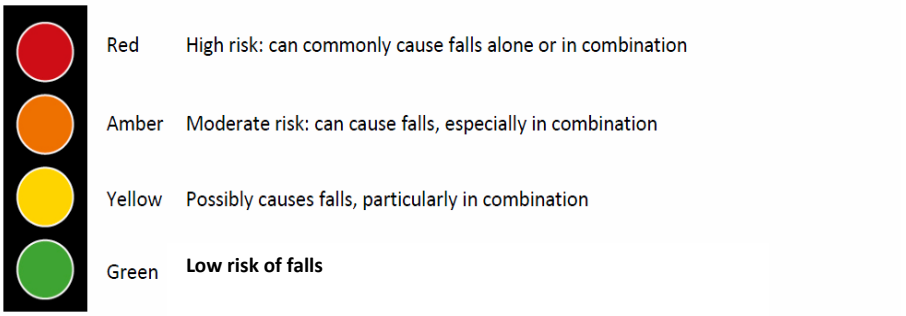
FALLSAFE

The Royal College of Physicians (UK) led on a quality safety initiative - the Fallsafe project – which focused on prevention and management of falls in clinical hospital wards in Southern England from 2010-2012.[2] From the Fallsafe project results, the College recommends that all patients should have their drug burden reviewed with respect to its propensity to cause falls. The medication history should establish the reason the drug was prescribed, when it was commenced, whether it is effective and what its side effects have been. An attempt should be made to reduce the number and dosage of medications, and ensure they are appropriate and not causing undue side effects with respect to falls risk.

The Fallsafe project recommends the following:

- Avoidance of prescriptions for night sedation.
- Medication review for medication that can increase the risk of falls – they provide a list of medications divided into drugs which affect the brain, and drugs which affect the heart and circulation.

John Radcliffe Hospital, Oxford, the key lead in the FallSafe project, published guidance on Medication and Falls in hospitals, subsequently approved by the British Geriatrics Society.[12] Medications are classified into different classes of risk of falling, using a traffic light system (see below). For the most updated list, see http://www.bgs.org.uk/campaigns/fallsafe/Falls_drug_guide.pdf



The Royal College of Physicians (UK) provide a comprehensive online falls prevention resource[13], and advocate a care bundle for all patients to reduce risk of falls. It defines tasks which should be undertaken at admission to identify those patients at increased risk, and to ensure the environment around the patient minimizes risk of falling. Additional care bundles are provided for those over age of 65, and for patients who have suffered a fall.

See reference list for website addresses for falls prevention resources, and specific FallSafe care bundles.[3, 12, 13]

HSE

The 2008 publication Strategy to Prevent Falls and Fractures in Ireland's Ageing Population[5] states that a review of medication(s) and dose(s) should be undertaken as part of multifactorial assessment. Suggested interventions relating to medicines include:

- Withdrawal or minimisation of psychoactive medications.
- Withdrawal or minimisation of other culprit medications.

JOINT COMMISSION INTERNATIONAL (JCI) PATIENT SAFETY GOAL

Joint Commission International (JCI) is an American based accrediting body for hospitals, used globally, and nationally by 17 private hospitals and one public hospital in Ireland.

Reducing the risk of patient harm resulting from falls is one of six international patient safety goals of JCI.[14]

The JCI note that falls account for a significant proportion of injuries in hospitalized patients. In the context of the population it serves, the services it provides, and its facilities, the organisation should evaluate its patients' risk for falls and take action to reduce the risk of falling and to reduce the risk of injury should a fall occur. The evaluation could include fall history, medications and alcohol consumption review, gait and balance screening, and walking aids used by the patient. The organization is required to establish a fall-risk reduction program based on appropriate policies and/or procedures. The program should monitor both the intended and unintended consequences of measures taken to reduce falls.

STOPP/START

Front line staff working in both hospitals, and in the community, can use the STOPP and START tools reliably during their everyday practice to identify potentially inappropriate medications, and potential errors of omission in older patients.[15]

Conclusion

Inpatient falls often result in injury, prolonged hospital stays, higher medical costs and increased mortality rates.[8] There are many risk factors for falling and for harm resulting from falling. Medications are considered an extrinsic risk for falls.[5] Certain medication classes as outlined in table 1, in addition to the number of concomitant medications taken by a patient, are risk factors for falling.[8]

The NICE 2013 Falls guidance re-iterates the importance of medication review, as part of a multifactorial approach to falls prevention.[16] In practice, even where medications that can cause risk of falls are identified, in many cases (e.g.antihypertensives) there are challenges changing or stopping them as the clinical benefit may outweigh the falls risk to the patient.

The IMSN recommends that, in collaboration with a pharmacist, a specific section on medications and falls risk, referencing useful tools for front line staff to identify risk to patients, should form part of a hospital's falls risk policy.

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