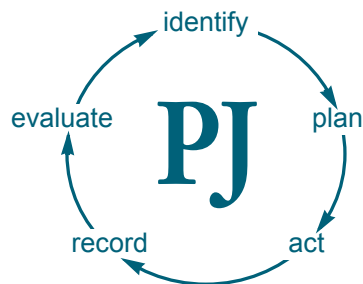


(5) FALLS PREVENTION AND MANAGEMENT

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Each year in Britain one third of the population aged over 65 has a fall and half of these will fall at least twice. This article looks at how falls can be prevented and managed, in line with the National Service Framework for Older People



identify gaps in your knowledge

1. Which medicines should be avoided in older people in order to reduce the risk of falls?
2. What are “T-scores”?
3. What is the function of a “falls team”?

Before reading on, think about how this article may help you to do your job better.

The Royal Pharmaceutical Society’s areas of competence for pharmacists are listed in “Plan and record,” (available at: www.rpsgb.org.uk/education). This article relates to “meeting the needs of the elderly” and “health promotion” (see appendix 4 of “Plan and record”).

Every year, over 400,000 older people in England attend accident and emergency departments following a fall. It seems that women are at greater risk of falling than men, particularly women who live alone — studies show that half of all women aged over 85 will have a fall in any one year.¹ In older people, most fractures from falls occur in the hip, spine or wrist.

Falling can have serious consequences for old people. One study calculated that 67 per cent of accidental deaths in females aged over 65 years were as a result of falling and a fractured femur is associated with 33 per cent mortality within one year.¹ For many people, the fear of falling will limit what they do in their day-to-day lives.

The aim of standard six of the National Service Framework for Older People² is to reduce the number of falls that result in serious injury and ensure effective treatment and rehabilitation for those who have fallen. One of the key interventions to prevent falls described in the NSF is the introduction of public health strategies (eg, increasing awareness) and identification, assessment and prevention measures for those most at risk.

Osteoporosis increases the risk of fractures in older people. The disease affects one in three women and one in 12 men over 50 years and almost half of all women experience an osteoporotic fracture by the time they reach 70 years.² Up to 14,000 people each year die in the United Kingdom as a result of an osteoporotic hip fracture. Vertebral fractures due to osteoporosis can cause loss of height, curvature of the spine and chronic back pain. After an osteoporotic fracture, half of all patients will no longer be able to live independently. Therefore preventing osteoporosis in those at high risk and treating existing disease will have a significant effect on the number and severity of fractures, and this is also an aim of the NSF.

PUBLIC HEALTH STRATEGIES

Public health strategies to prevent falls should encourage appropriate weight-bearing and strength-enhancing physical activity, promote healthy eating (including adequate intake of calcium) and reduce smoking in the general population. Older people who have fallen are at risk of falling again but many of these people might not seek help or advice. However, by looking for the following intrinsic factors, these people can be identified:

- Balance, gait or mobility problems
- Four or more medicines taken (especially ones that are centrally sedating or antihypertensive)

- Visual impairment
- Impaired cognition or depression
- Postural hypotension

Community strategies, such as ensuring that pavements are in good repair and kept clear will help reduce falls. But there are also measures that can be taken in a person’s home. Risk factors at home that can be tackled include poor lighting (particularly on stairs), steep stairs, loose carpets or rugs, slippery floors, badly fitting footwear or clothing, lack of safety equipment (eg, grab rails) and inaccessible lights or windows.

The NSF says that older people who are at risk of falling should be targeted and, with their consent, should be referred to a specialist falls service. Criteria include:

- Those who have had previous “fragility fractures” (a fracture that occurs with a low level of stress or trauma)
- Those who have attended accident and emergency for a fall
- Those who have called an ambulance for a fall
- Those with two or more intrinsic risk factors (see above)
- Those who have frequent unexplained falls
- Those who fall in hospital or in a nursing or residential care home
- Those living in unsafe housing conditions
- Those who are afraid of falling

FALLS SERVICES

The NSF recommends that older people who have fallen (and their carers) should receive help from a specialised falls service. The aim of these new services is to improve treatment of those who have fallen. All those who have fallen should be assessed and action (eg, referral to a falls team) taken to prevent further and more serious falls. The assessment should be carried out in collaboration with primary and social care professionals, building on the single assessment process (*PJ*, 14 June, pp830–2). This should identify other risk factors associated with the person’s health. Falls services should also provide rehabilitation and the long-term support needed to help older people regain mobility, confidence and independence.

A falls service should form part of the overall specialist services for older people in both hospital and community settings. It could

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operate from an acute hospital, a day hospital or an intermediate care setting. The NSF advises that the team should be multidisciplinary and include pharmacists alongside other health care professionals (eg, consultants, nurses, physiotherapists, occupational therapists, and chiropractors) and social care workers.

DRUG THERAPY

Polypharmacy is a risk factor for falls in older people and postural hypotension caused by medication (eg, diuretics and some psychotropics) is a particular problem. Patients taking hypnotics are more liable to fall during the night (eg, getting to the toilet) and this has been shown to be the case for short-acting as well as long-acting benzodiazepines. Over-the-counter sleep aids containing sedative antihistamines may also contribute to the risk of falls, although no formal studies have been conducted. Dehydration can increase risk and this might occur in older patients taking diuretics or laxatives. Medication reviews in patients taking these types of medicine can therefore play an important role in preventing falls.

In 2000, Buckingham Local Pharmaceutical Committee successfully won a bid to Wycombe Primary Care Group to set up a project involving pharmacy support for preventing falls in older people, which was a local health improvement programme (HImP) priority. The pharmacist's role is to review the medication of at risk patients referred to the pharmacy from a local falls programme or a local surgery. Patients from the falls programme were referred if they were taking four or more medicines or at least one drug affecting the central nervous system. The community practice nurse referred fallers when carrying out annual health checks for people over 75 years.

In the former Thanet Primary Care Group, patients were assessed at home by a primary care visitor for risk of falling and their medication was reviewed by a pharmacist. The pharmacist then contacted the patient's GP with recommendations for changing medication, improving compliance and use of OTC medicines. Changes to medication were made in 20 per cent of cases. Other schemes include pharmacist-led hypnotic withdrawal reduction clinics such as the one set up in Ashford Primary Care Trust.

It is worth remembering that older people taking oral corticosteroids for conditions such as asthma and rheumatoid arthritis, are at increased risk of osteoporosis.

OSTEOPOROSIS

Older people with osteoporosis will be at an increased risk of fracture if they fall. The NSF states that interventions to manage osteoporosis should be focused on people with multiple risk factors. People at risk of osteoporosis include:

- Those who have had a previous fragility fracture
- Those taking prolonged courses of corticosteroids
- Those who have had a hysterectomy, premature menopause or amenorrhoea that was not treated to reduce the risk of osteoporosis
- Those who have a disease that increases risk (eg, liver or thyroid disease, malabsorption, alcoholism, rheumatoid arthritis and male hypogonadism)
- Those with a family history of osteoporosis (including maternal hip fracture)
- Those with a low body mass (<19kg/m²)
- Smokers

People who are at high risk of developing osteoporosis should be advised to ensure they get adequate nutrition (especially with calcium and vitamin D), perform regular weight-bearing exercise, stop smoking and avoid alcohol.

The NSF also advises that patients identified as being at high risk of developing osteoporosis should have their bone mineral density measured to determine whether treatment, such as hormone replacement therapy, is appropriate. Bone density is usually measured by a procedure called DXA (dual energy x-ray absorptiometry). This allows the calcium content of the hip bone in the elderly to be measured (the spine is unsuitable in old people because of the high prevalence of arthritis).

action: practice points

Reading is only one way to do CPD and the Society will expect to see various approaches to CPD in a pharmacist's portfolio.

1. Identify patients from your patient medication records who may be at risk of falling and give them a home safety checklist. Various checklists are available on the internet (eg, www.consumer.gov.uk/homesafetynetwork).
2. Familiarise yourself with the Royal College of Physicians guidelines for the prevention or treatment of osteoporosis (www.doh.gov.uk/osteorep.htm) or visit the Scottish Intercollegiate Guidelines Network website (www.sign.ac.uk) for current hip fracture guidelines.
3. Find out how community pharmacists in your area are contributing to falls prevention.

evaluate

To be presented as CPD, you need to evaluate your reading and any other activities. Answer the following three questions:

What have you learnt?

How has it added value to your practice? (eg, have you applied this learning or had any feedback?)

What will you do now and how will this be achieved?

Results are commonly expressed in "T-scores". Healthy young women have T-scores between -2 and 2. Post-menopausal women with scores between -2.5 and -1 have low bone density and women with a score less than -2.5 have osteoporosis. A patient's result can be compared with reference values for people of the same age, height, weight and race and also with any previous results.

Drugs, for example, hormone replacement therapy, selective oestrogen receptor modulators (eg, raloxifene) and bisphosphonates, will be most cost-effective when prescribed in carefully defined, high risk, older people. Older people who are frail or housebound or who have had previous fragility fractures may benefit from supplements of calcium and vitamin D to help prevent hip fracture. Recommendations of the Royal College of Physicians for the pharmacological prevention or treatment of osteoporosis are available at www.doh.gov.uk/osteorep.htm.

NSF MILESTONES

By April 2003, local health care providers (including the independent sector) should have audited their procedures and put in place risk management plans to reduce the risk of older people falling. By April 2004, the HImP and other relevant local plans developed with local authority and independent sector partners should include the development of an integrated falls service and, by 2005, all local health and social care systems should have established this service.

Pharmacists can contribute to the prevention and management of falls by:

- Being involved in specialist falls teams
- Identifying medication-related risks
- Ensuring appropriate use of medication for osteoporosis
- Reviewing the medication of patients who have fallen
- Promoting a healthy lifestyle

REFERENCES

1. Swift C. Falls in later life and their consequences. *BMJ* 2001;322:855-7.
2. National Service Framework for Older People. London: Department of Health. 2001. Available at: www.doh.gov.uk/nsf/olderpeople/index.htm (accessed 8 July 2003).