Falls Prevention in Primary Care

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KEY MESSAGE

- Ageing, acute illness and poorly managed long term conditions increase falls risk
- Primary care staff are the first line in falls prevention
- Primary care staff can identify and modify many risk factors
- Modifying risk factors reduces the risk of falls and improves quality of life
- If falls continue or staff are unable to identify risk factors the person should be referred to a falls clinic.

ABSTRACT

Each year 1.57 million older people fall more than three times and 70,000 fracture their hips. Falls can lead to disability and even death. The NSF for Older People identified falls prevention as a major health priority. This paper explains how primary care practitioners can contribute to falls prevention reduce falls risk and improve quality of life for the older person.

WHY THIS MATTERS TO ME

In my last post as a nurse consultant I ran a falls clinic with a physiotherapy colleague. We found that many of the problems that increased falls risk were little problems that added up to one large falls risk. Many clinicians working in primary care did not appreciate how valuable their knowledge of patients was in preventing falls and how they could use their skills to cut falls risk and improve quality of life. Other colleagues did not appreciate the value of nurse and therapy led clinics in carrying out detailed assessments that could complement their work in primary care and lead to patients experiencing improved quality of life.

In my current post at Ealing and Harrow Community Services I am nurse consultant and am clinically responsible for a nurse led intermediate care ward. The ward admits people who require a higher level of care than can be provided at home and aims to prevent acute hospital admission. Around 50 percent of patients are admitted because of falls.

INTRODUCTION

Primary care staff often encounter people who have sustained a fall. Falls are the commonest cause of accidental death in older people. Every five hours someone dies as a result of a fall. Each year 1.57million people aged over 65 have three or more falls, 310, 000 sustain fractures, 70 000 of these are hip fractures. Hip fractures increase the risk of death by 16 times in women and 12 times in men in the 30 days after fracture.

The National Service Framework for Older People identifies prevention of falls as an important health priority and requires NHS Trusts to set up falls prevention services. Although falls prevention services are vitally important the contribution that primary care staff can make to preventing falls is equally important. This paper aims to enable primary care staff to understand why older people fall and what can be done to reduce a person's risk of falls. Table one illustrates the role of primary care staff in falls prevention.

Table one: The role of primary care staff in falls prevention

Primary care staff	•Identify people at risk of falls, modify identifiable risk factors, when possible. Monitor for further falls •If still falling refer to level one falls clinic
Level one falls clinic. Nurse or therapy led	•Holistic assessment and identification of risk factors. work with others e.g physiotherapists to modify risk factors. Environmental asessment and modification if necessary. Monitor for further falls. •If unable to identify risk factors of falls persist refer to level two falls clinic.
Level two falls clinic. Medical led	•Indepth investigation and identification of risk factors. Modify risk factors when possible. Use harm minimisation strategies when it is not possible to modify risk.

WHY DO OLDER PEOPLE FALL?

Although there are literally hundreds of reasons why people fall, some risk factors are more common and easily remedied that others. Table two outline the main risk categories and how these can be checked.

Table two: Checklist on factors affecting falls risk

What is increasing fall risk	Check
Acute illness	Chest infection, ear infection.
Undiagnosed disease	Stroke, Parkinson's diabetes, poor nutrition and hydration.
Long term conditions	Can disease management be optimised to risk of falls
Malnutrition and dehydration	Acute and chronic fluid and nutritional deficits
Visual problems	Date of last eye test. Is person wearing glasses when needed?
Problems with gait, balance, mobility	Gait, foot problems, suitable shoes, if aides used check suitability and ferrules
Continence problems	What the person was doing when falls occurred. If the person has urinary frequency, especially at night.
Postural hypotension	Sitting and standing BP. Medication that can affect blood pressure. Normal level activity
Medication	Medication that may be contributing to falls risk.
Hazardous or unmodified environment	Where falls take place.

ACUTE ILLNESS

Falls can be an indication that the person is unwell. The person who develops an acute illness such as a chest or ear infection may well present with a fall. Treating identified infection reduces falls risk. It's important to be aware that many older people have asymptomatic bacteriuria. A urine dipstick reading is an unreliable indicator of urinary tract infection in older people and treating an older person for urinary tract infection in the absence of urinary symptoms exposes the person unnecessarily to the hazards of antibiotic therapy. Erroneous diagnosis or urinary tract infection also causes delays in finding out the reasons why the person is really falling.

NDIAGNOSED DISEASE

Falls can indicate that the person has suffered a mild stroke or is developing Parkinson's disease. Observation of facial changes such as a lopsided smile or a face that is devoid of expression can alert you to such problems. Simple checks of limb function and power can confirm such suspicions and enable you to make an appropriate referral.

LONG TERM CONDITIONS

The person with a long term condition may be falling because the condition is worsening, or because the person is not complying with medication and treatment. If you suspect this check, optimise treatment if you are able or refer for further investigations and treatment.

POOR NUTRITION AND HYDRATION

Falls can occur if a person is dehydrated or malnourished. Observing the person, how clothes fit and if rings seem loose can alert you to the possibility of weight loss and enable you to address this. You can also observe the person for signs of dehydration and enquire about fluid intake. Correction nutritional and fluid deficits improves health and reduces falls risk

VISUAL PROBLEMS

Poor vision increases the risk of falls. If a person cannot see clearly he or she is at greater risk of falls. Some age related changes are not yet treatable. The best we can do is to prevent further deterioration. Many older people have treatable eye conditions. Researchers found that 76% of hospital inpatients admitted following a fall had poor vision; 40% needed glasses, 37% had cataracts, 14% senile macular degeneration.

Seventy nine percent of individuals with poor vision were treatable. If the person has fallen check when the person last had an eye test and recommend an eye test if the person has not had one within the last year. If the person is housebound the person's optician may offer a domiciliary service. If this is not possible then you can recommend a specialist domiciliary optician (see further information). If the person is diagnosed as having an eye disease the optician will inform the GP and recommend a specialist referral if necessary.

GAIT BALANCE AND MOBILITY PROBLEMS

Foot problems are common in older people, 80% of older people have at least one foot problem. Foot pain makes people walk more slowly. It impairs balance and stability and increases the risk of falling. Observation of the person's gait, expression on walking and choice of footwear can help to identify foot problems. If the person is wearing oversized slippers, footwear with slits or holes cut in it to accommodate bunions, foot deformities or swelling this will increase the risk of falls. You can encourage the older person to buy suitable shoes that are wide enough to accommodate these problems (see further information) and refer the person to a podiatrist. Podiatrists are skilled in treating common foot problems, correcting gait abnormalities and reducing foot pain. Podiatry treatment improves gait and reduces falls risk.

Osteoarthritis of the knee and hip can cause pain and lead to the person developing an arthralgic gait. This unbalances the body and increases the risk of falls. In severe cases the person may require a joint replacement. In many cases aids such as a walking stick help to provide additional support and stability. Physiotherapists are expert in providing appropriate treatment or aids for such patients.

If the person has a walking aid, observe the person using it. Sometimes people acquire walking sticks and walking frames. These can be the wrong size and the person may have to stretch or stoop to use the aid. This increases falls risk. It's also worth checking the ferrules on any aid. Ferrules are the rubber stoppers on the end of walking sticks and frames. The ferule should have a whorl pattern on it. If the pattern has worn off or the rim of the ferrule has worn through then the aid is dangerous and can increase the risk of falls. The community physiotherapist can supply and fit new ferrules.

Ageing and inactivity leads to muscle loss and increases falls risk. Only 14% of 75 year olds are sufficiently active to maintain health. Ageing and inactivity leads to poor posture. The person often walks with the head forward and bottom sticking out. This leads to the centre of balance changing and the person becoming more unstable. The person may have poor proprioception and may have to look at feet and legs to work out where they are. Walking speed is reduced. The quadriceps muscles in the thighs can waste. This leads to the knees being poorly supported and more likely to give. Calf muscles can waste. The person tires easily, doesn't lift the feet, shuffles and is more likely to trip. Poor mobility increases the risk of falls. The person who is less mobile looses muscle strength and balance deteriorates.

Much of what is considered to be the ageing process is really caused not by ageing but by inactivity. Older people can regain 27% of muscle strength reversing age related decline by 15 years by attending one exercise class a week and doing home exercises. If the person has poor posture or poor mobility you should recommend exercise classes. People who are very frail may benefit from the OTAGO exercise programme specially designed for frail older people. These programmes are usually run by community physiotherapists.

CONTINENCE

Ageing leads to the kidneys becoming less efficient at concentrating urine and a reduction in bladder capacity. These changes mean that is normal for the older person to get up once or twice in the night to pass urine. The older person may develop continence problems such as urgency. Continence problems can contribute to falls risk. Continence assessment can address any treatable problems, reduce falls risk and improve quality of life. .

POSTURAL HYPOTENSION

Postural hypotension is normally defined as a fall in systolic blood pressure of 20mm of mercury or more, when rising from sitting to standing. This makes a person feel dizzy on standing and increases falls risk. Addressing the causes is often straightforward. Inactivity and deconditioning can lead to postural hypotension. Increased activity and exercise often corrects the problem. Dehydration can lead to postural hypotension, correcting dehydration and reviewing diuretic therapy if prescribed often helps. Medication given to treat hypertension can lead to postural hypotension and will require review. If postural hypotension persists compression stockings can help. The person should have a Doppler ultrasound to check for arterial problems. If compression hosiery is required then grade three full length stockings are most effective. In my experience many older people struggle with grade three compression stockings and grade two compression though less effective is better tolerated. If all other measures fail then medication such as fludrocortisone may be prescribed.

MEDICATION

Any medication that sedates, causes confusion, hypotension or dehydration may increase the risk of falls. Unfortunately, older people consume 43% of all prescribed medicines, more than any other group. More than 90% of people aged 75 or over are prescribed regular medicines. Older people are prescribed an average of 4 medicines. Older people who are receiving four or more medicines are now to have those medications reviewed twice a year and the review is to be recorded. Medication review has been shown to significantly reduce the number of falls in people living in care homes. Table three provides details of some medicines that can increase the risk of falls.

Table three: Medicines that can increase falls risk

- Benzodiazepines
- Psychotropics
- Sedatives
- Diuretics
- Digoxin & other anti-arrhythmics
- Hypotensives
- Codeine and morphine based analgesics
- More than four medicines

Antidepressants increase the risk of falling by between 50-200%. Tricyclic antidepressants can cause a fall in standing blood pressure this can lead to dizziness and fainting. When serotonin reuptake inhibitor antidepressants such as fluoxetine were introduced, they were considered safer. Unfortunately a study of over 2,000 people living in Tennessee nursing homes proved that there was little difference in fall rates in those treated with tricyclics and newer antidepressants. Every person receiving antidepressants had a higher rate of falls than those who were not. The rate of falls increased as the dose of antidepressant rose. Older people receiving antidepressants are more likely to fall and fracture a hip than those who are not. Antidepressants are frequently prescribed to older people and clinicians must balance the risks of untreated depression against the risk of falls. Recent research indicates that the benefits of antidepressants have been exaggerated and that depressed people can recover without the use of drugs.

Sedatives and benzodiazepines increase the risk of falling. The risk is dose related and increases in line with the number of sedatives and antidepressants taken. These are not recommended for long term use and should be discontinued gradually.

Hypotensive drugs are commonly prescribed for hypertension and heart failure. Heart failure is difficult to diagnose, not all cases of swollen feet and ankle oedema are caused by cardiac failure. Accurate diagnosis and appropriate treatment is essential.. The standard therapy for people with heart failure is ACE inhibitors, beta blockers and diuretic therapy; GPs should consult a specialist before prescribing them to frail older people. Side effects include dry cough, hypotension, which can cause falls, high levels of potassium, which can lead to cardiac arrest and renal failure. It is important that drugs are only given when clinically indicated and dosage is carefully titrated to avoid side effects.

Beta-blockers reduce pulse rate. This may help people with angina or tachycardia but causes problems in patients who have pre-existing bradycardia or heart block. The excessive slowing of pulse may result in dizziness and fatigue. This can increase the risk of falls. Beta-blockers should not be used in patients with heart block (unless they have a pacemaker) or

anyone with a pulse below 60 beats a minute. Non-selective beta-blockers such as propranolol are potentially harmful in diabetics prone to hypoglycaemia. Cardioselective beta-blockers are less risky. All beta-blockers can mask the tremor, tachycardia and sweating that warn diabetics of hypoglycaemia. Beta-blockers should never be stopped suddenly – they should be tailed off.

Diuretics are prescribed to treat hypertension, heart failure and sometimes oedema caused by immobility. Diuretic therapy should be prescribed with care and monitored to reduce risks of falls and other adverse effects.

Analgesics especially codeine based analgesics such as cocodamol and codydramol can cause confusion in older people. This can increase the risk of falls. Some analgesics such as Tramadol and morpine based analgesia also increase falls risk.

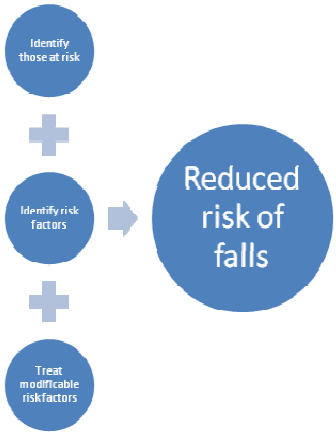
Its important to be aware that older people often don't take prescribed medication, only about 60% of adults with long term conditions take medicines regularly enough to obtain any benefit. Medication review and minimising medication can increase the chances of the person taking prescribed medication and cut the risk of falls.

ENVIRONMENTAL HAZARDS

It's worth enquiring where the falls are taking place. Some times the person's home may have hazards, such as a step into the kitchen, that increase falls risk. The Australian government has offered older people free home safety checks and subsidised the cost of modifications required. Modifications included non-slip flooring, improved lighting and fitting grab rails. The total number of falls fell by 63%.

CONCLUSION

Ageing, illness, care and treatment and lifestyle factors can increase the risk of an older person falling. Often the older person has more than one falls risk factor. Primary care staff who work closely with older people are in an ideal position to identify, treat risk factors and to ask others to treat risk factors. These actions can make a huge difference to the person's quality of life and may spare the person the pain and complications related to falls. If primary care staff are unable to identify falls risk factors or if the person continues to fall despite interventions then it important to refer the person to a specialist falls clinic.



RESOURCES

Domiciliary opticians

The Outside Clinic Provides domiciliary eye tests to older people.
http://www.outsideclinicdirect.com/OutsideClinicDirect.aspx

Vision Call specialise in providing domiciliary eye tests to people in care homes but have just launched a domiciliary service. They also provide staff training on caring for older people with visual problems
http://www.vision-call.co.uk/DomiciliaryServices.asp

Foot wear

Cosy Feet provide a range of footwear for people requiring wide footwear and people with foot problems. They provide catalogues and a mail order service.
http://www.cosyfeet.com/footwear-c-88.html?gclid=CMX-yJDzoZICFQ8HQwodkySaQg

Hotter provide a range of footwear for people requiring wide footwear and people with foot problems. They provide catalogues and a mail order service. http://www.hottershoes.com/HotterSite/pages/home/default.asp?

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