



SPL

AUTHORS

Tracy Johnson, BA, RMN, EN, is project manager – hip fracture prevention, North Sheffield Primary Care Trust; **Samantha Binney, HNC**, is manager, North Hill Residential Home, Sheffield

ABSTRACT

Johnson, T., Binney, S. (2003)
Reducing the incidence of falls and hip fractures in care homes.
Nursing Times; 99; 24, 38–40.

A project was developed to provide older residents in care homes with hip protectors if they were at risk of falling. The aim was to reduce the number of hip fractures sustained through falls.

During the project it became apparent that care home staff had little knowledge of hip protectors, and felt unable to take steps to prevent falls. The project extended its scope to raise the awareness of falls-risk assessments and prevention strategies, and developing structures through which best practice could be shared between homes.

Reducing the incidence of falls and hip fractures in care homes

IT HAS been estimated that about one-third of people over the age of 65, and about half of those over 80 will experience at least one fall in a year. People living in care homes have an increased risk of hip fracture (Butler et al, 1996). Masud and Morris (2001) estimate that more than 50 per cent of older people living in residential care will experience at least one fall each year, while Mulcahy and O'Shea (2000) suggest the incidence of falls among this group may be as high as 60 per cent. These rates are not surprising, since falls are a contributory factor in 40 per cent of admissions to care homes.

This article describes a pilot project that aims to reduce hip fractures among older people living in nursing and residential homes in Sheffield.

The project is a city-wide initiative hosted by one of four local primary care trusts. The initial aim was to provide all permanent residents of local nursing and residential homes, who were at risk of falling, with three pairs of free hip protectors – trousers with hip-protecting shells sewn into the sides. While the technical efficacy of hip protectors appears proven (Kannus et al, 2000), low levels of acceptance by potential wearers and a lack of commitment by staff to promote their use adversely affect implementation (Becker et al, 2000).

Identifying risk factors

Although most falls do not result in serious injury, the psychological effect of a fall can be just as damaging as that of any physical injury, resulting in a loss of confidence that may reduce mobility levels and hasten deterioration in health. The ability to identify the characteristics of people who fall, and the circumstances in which they fall, may help form the optimal prevention strategy and target interventions.

A study by Keily et al (1998) that involved 272 nursing homes found that a previous fall history was a good indicator of which residents may be likely to fall. Other factors such as wandering, using an aid, unsteady gait and independence in transferring were also related to falling.

A study by Purushottam et al (1996) among residents unable to walk at all confirms independence in transferring as a risk factor for falling but demonstrates that bed-bound and chair-bound residents also fall. These studies highlight that falls are often not related to a single factor, making it difficult to identify residents at risk of falling.

Risk assessment tools

The development of risk-assessment tools and falls-prevention programmes appears to have taken place in two groups of people: those still living in their own homes and older people in hospital. It is worth considering whether the work undertaken in hospitals might be

applicable to a third group – those living in care homes.

Oliver et al (1997) developed a fall-risk assessment tool following a study undertaken among older people in hospital. This enabled nurses to identify many of the patients who would fall, but failed to reduce the number of falls (Oliver, 2002).

Uden et al (1999) undertook a study to reduce fall injuries through the introduction of fall-risk screening in an inpatient unit for older people in a Swedish hospital. After one year, recording of fall risk rose from nil to 96 per cent and there was improved recording of fall incidents and intervention methods. The study was unable to ascertain if the intervention had reduced fall injuries as the pre-study documentation was too poor to provide this information. However, there were fewer fall injuries in the study group than in the control group.

Fall-prevention programmes

A fall-prevention programme in a Los Angeles hospital (Rome, 2002) used a fall-risk assessment tool and visual methods to help identify patients at risk of falling. It was successful in reducing the fall rate over a 10-month period. Ongoing evaluation of the programme was required to ensure this reduction was maintained.

The introduction of a fall-risk assessment tool, evidence-based fall-prevention care plans and staff education across one hospital trust in England resulted in only a slight reduction in falls – but a 44 per cent reduction in fall-related reportable incidents (Barnett, 2002).

It seems there is the opportunity to reduce falls and related injuries in hospital settings through systematic and ongoing strategies. The question remains whether similar approaches could achieve the same results in care home settings.

Care home client groups

Care homes tend to be independently-owned and vary in the number of experienced nurses they employ.

Care home residents are often older, frailer and more dependent than hospital residents. Nazarko (1999) also suggests that nursing home staff may not have the skills to minimise fall risk and can use counterproductive strategies such as discouraging walking and administering sedatives.

A multidisciplinary falls consultation service at a nursing home in Tennessee highlighted some of the specific needs of care homes in relation to falls prevention (Ray et al, 1997). This service offered an individual care plan based on environmental and personal safety, wheelchair maintenance, medication review and walking and transferring assessment. Regular training events were held to motivate staff and promote the sharing of ideas. The greatest success was achieved among residents who had

had three or more falls in the previous year and where the recommended care plan had been closely followed. This group experienced 50 per cent fewer injurious falls. One limitation was the rate at which recommendations were implemented. Over a third were not in place at the end of three months and half of the suggested changes to medication regimens were not completed. In the UK, however, prescribing and management of medication is the responsibility of GPs.

Enabling care home staff to reduce falls appears to require more than education and multidisciplinary support. It may be necessary to address such issues as workplace cultures, systems and practices as well as links with the primary health care team.

Care home guidelines

Department of Health-sponsored guidelines for preventing falls in older people (Feder et al, 2000) recommend that risk assessment be undertaken for all care home residents who have had at least one fall with referral to a GP. US and British guidelines recommend that interventions for care home residents include staff education, gait training and advice on appropriate aids and medication reviews (American Geriatric Society et al, 2001). The *National Service Framework for Older People* (DoH, 2001) supports these guidelines. It recommends:

- Staff in community health, primary and social care settings be trained to recognise older people at risk of falling and offer appropriate interventions;
- Local systems for falls services be reviewed;
- Health, social services and the independent sector audit their procedures and put in place risk-management measures to reduce the risk of older people falling.

This paves the way for primary care groups and trusts to work with care homes to reduce falls and related injuries. While many developments around fall prevention appear to have taken place in hospital settings it seems there is real potential to transfer these to care homes, despite the differences between the two settings.

Pilot project to reduce hip fractures

Twenty-five homes are currently participating in the project, having been invited to join in a phased approach over eight months. The core elements of delivery are:

- A one-hour session on hip protectors;
- Initial support to enable staff to identify which residents may benefit, to discuss the wearing of protectors with each resident and to measure for the size required;
- Two-monthly visits to monitor use and to provide on-going support for staff.

Initially it was envisaged that my role would be to train and support staff in the use of hip protectors, monitor their use, evaluate the project and make and implement recommendations.

Having spent my nursing career in the NHS I had limited knowledge of the independent care sector so I used the early days of the project to meet managers and find out what people knew about hip protectors. It became clear

that few staff were aware of them or had used them.

What also began to emerge was that falls and related fractures were often a source of anxiety for staff. While they wanted to prevent both, they often felt it was beyond their control to do so or that falls were inevitable. Any training staff had received was more about what to do in the event of a fall – first aid and how to identify a hip fracture – rather than about preventing falls in the first place.

These early meetings also helped me to realise that staff in the independent care sector can feel isolated from the NHS and in their day-to-day work. It was important to acknowledge these factors and to recognise that each home had its own culture, working practices, areas of expertise and day-to-day pressures and demands. Their level of engagement with the project would depend on these factors.

While the aim of the project had been to focus on introducing hip protectors to reduce hip fractures, it seemed there could also be an opportunity to work with staff on wider aspects of fall management and prevention such as:

- Raising awareness of risk assessment and management procedures;
- Raising awareness of other available interventions, devices and local services related to falls prevention;
- Celebrating and sharing some of the good practices which were already in place in some homes.

Below, the manager of one residential home shares her experience of participating in the project.

Case study

North Hill is a 28-bed purpose-built residential care home for older people. It receives referrals from social workers from both the community and local hospitals. Places are offered to people requiring residential and enhanced residential care.

Although the home is monitored by the National Care Standards Commission, as manager I am responsible for formulating guidelines, policies and procedures. The National Minimum Standards for Care Homes for Older People came into force in April 2002, and provides the main guidelines for all care homes and the benchmarks by which they are monitored.

For the first time, fall prevention has been clearly stipulated as an action point in Standard 7.3: 'The service user's plan meets the clinical guidelines produced by the relevant professional bodies concerned with the care of older people and include risk assessments with particular attention to the prevention of falls'.

On first reading this, I was unsure how to develop our existing risk-management procedures to meet this new requirement. As a private organisation, we rarely receive information from professional bodies and opportunities to learn and share skills and knowledge with others can be limited. So when the letter arrived giving details of the hip-protector project I jumped at the chance to become involved.

As a staff team we had not previously used or been

REFERENCES

American Geriatric Society, British Geriatric Society, American Academy of Orthopaedic Surgeons Panel on Falls Prevention (2001) Guidelines for the prevention of falls in older people. *Journal of American Geriatrics Society*; 49: 5, 664-672.

Barnett, K. (2002) *Reducing patient falls in an acute general hospital*. London: Foundation of Nursing Studies.

Becker, C. et al (2000) The other side of hip protectors. *Age and Ageing*; 29:186.

Butler, M. et al (1996) The risks of hip fracture in older people from private homes and institutions. *Age and Ageing*; 25: 381-385.

Department of Health (2001) *National Service Framework for Older People*. London: DoH.

Feder, G. et al (2000) *Guidelines for the Prevention of Falls in Older People*. London: Department of General Practice and Primary Care, Queen Mary and Westfield College.

Kannus, P. et al (2000) Prevention of hip fracture in elderly people with use of a hip protector. *New England Journal of Medicine*; 343: 21, 1506-1513.

Keily, D.K. et al (1998) Identifying nursing home residents at risk for falling. *Journal of American Geriatrics Society*; 46: 551-555.

Masud, T., Morris, R.O. (2001) Epidemiology of falls. *Age and Ageing*; 30: (suppl 4), 3-7.

For related articles on this subject and links to relevant websites see. www.nursingtimes.net

REFERENCES

- Mulcahy, R., O'Shea, D. (2000) Falls in the elderly. *Health Care of Older People*; 13: 1, 1-5.
- Nazarko, L. (1999) Upwardly mobile. *NT Nursing Homes*; 1: 1, 28-30.
- Oliver, D. et al (1997) Development and evaluation of an evidence-based risk assessment tool (STRATIFY) to predict which elderly inpatients will fall: case control and cohort studies. *British Medical Journal*; 315: 7115, 1049-1053.
- Oliver, D. et al (2002) Preventing patient falls (letter). *Age and Ageing*; 31: 75.
- Purushottam, T. et al (1996) Injurious falls in nonambulatory nursing home residents: A comparative study of circumstances, incidence and risk factors. *Journal of American Geriatrics Society*; 44: 3, 273-278.
- Ray, W.A. et al (1997) A randomised trial of a consultation service to reduce falls in nursing homes. *Journal of American Medical Association*; 278: 7, 557-562.
- Rome, S. (2002) Developing a fall-prevention program for patients. *American Journal of Nursing*; 102: 6, 24A-24D.
- Uden, G. et al (1999) Use of initial risk assessment and recording as the main nursing intervention in identifying risk of falls. *Journal of advanced Nursing*; 29: 1, 145-152.

aware of hip protectors so the following initial package of intervention was agreed:

- Free training for staff on the use of hip protectors;
- Three pairs of hip protectors provided free to clients considered at risk of falling;
- Support from the project manager throughout the implementation of our intervention.

Following the training on hip protectors, staff identified residents who might benefit from using the home's existing risk assessment. They approached residents to discuss the hip protectors and to gain their consent, ensuring that individual residents had made an independent choice. This meant taking the time to fully explain what hip protectors were, why the resident might benefit from them and that they could change their mind at any time. Residents were given time to consider the proposal.

Staff then measured each resident who agreed to try the protectors to ensure they were given the correct size. The project manager visited shortly after commencing use and has continued to visit on a two-monthly basis. This has enabled staff to give feedback on using the hip protectors and ask any questions or get clarification on any issues that may have arisen.

Prior to becoming involved in the project I had already begun work on developing a fall-prevention policy for the home. I was able to share this with the project manager and get some feedback.

As an independent home manager you can feel isolated and with little opportunity to share or try out ideas. Developing this policy helped to identify the good practice that was already occurring and helped identify how practice could be developed.

The next step was to introduce a fall-specific risk-assessment tool and a monthly 'monitoring matrix'. The project manager provided examples of tools used in other homes and organisations. All were very similar and built on known fall-risk factors and I was able to select and adapt a tool to meet the specific needs of our residents. Using the fall-risk assessment tool has helped to raise awareness of several key points in relation to falls prevention. Staff now:

- Ensure Zimmer frames and other walking aids are regularly maintained;
- Are more aware of the side-effects of medication and the need for a review following a fall;
- Are more vigilant at assessing for and removing environmental hazards;
- Are aware of the need to ensure that sight and hearing are assessed;
- Ensure footwear is appropriate and residents receive regular foot care.

The use of the monitoring matrix to record falls has helped to identify:

- Residents who frequently fall;
- The locations where falls occur frequently;
- The types of falls such as slips or trips;
- Possible causes of falls;
- Actions we might take to limit further falls.

Any trends or patterns are relayed back to staff at

handovers so that they can all be aware and take action. This information is incorporated into individual care plans. Information on numbers of falls is also shared on a monthly basis on the home notice board.

Although I had already initiated some work on fall prevention, the project appears to have encouraged the whole team to become involved in fall prevention and to begin to develop a more holistic and proactive approach.

Recent discussions about the developments over the past nine months suggest there has been a change in the ethos of the home. Rather than accepting falls, the staff now feel that they can prevent them. We have seen a small reduction in falls over this period and the challenge is to maintain the changes in practice and to avoid becoming complacent about fall and fracture prevention.

Conclusion

The project has been running for one year, and work to evaluate its impact on the number of hip fractures is currently taking place.

The initial aim was to reduce hip fractures through the use of hip protectors. However, the project has also provided an opportunity to develop work on fall prevention.

Falls often occur due to a combination of factors, so multiple interventions can be necessary to reduce the incidence of falls and fractures. It is hoped that promoting a holistic approach will encourage and support staff to identify and meet individual residents' needs.

It would seem that care homes have not previously had the chance to work in partnership with the NHS to address this major public health issue. This project has provided the opportunity to do so, and has shown that staff in care homes generally welcome working with the NHS. It has also highlighted the fact that learning is a two-way process.

Some homes already have good fall and fracture procedures and practices in place, but opportunities to acknowledge and share these have not been readily available. Work to promote networking in order to share good practice has begun.

Future goals

It has been exciting to work on a project that has been able to grow to meet emerging needs of individual care homes. We are now preparing for the project's second year. Some upcoming challenges are to:

- Promote the implementation of good risk-management procedures across all homes;
- Show the effectiveness of hip protectors and secure further funding;
- Share the learning from this pilot project on a city-wide basis;
- Look at how this model of partnership could be developed to support independent care homes meet other health needs;
- Develop appropriate links across primary health care teams, secondary care and relevant voluntary organisations to promote an integrated fall and fracture prevention service for older people in care homes. ■