This article describes the CHST's four steps to safety approximately 280,000 hip fractures and primary care trust with a population of over 22 million. Of these fallers, 4% will sustain a serious injury (Rubenstein et al., 1994; Thapa et al., 1981). Of these, 11% of falls will result in a soft tissue injury. It is hoped that this discussion will further promote the implementation of evidence-based frameworks to reduce falls and injuries and to transform the health-care delivery into an approach that can reduce falls and injuries to older people in care homes. A pilot project implemented 'four steps to safety' — an evidence-based framework to reduce falls and injuries in local care homes. A pilot project implemented 'four steps to safety' — an evidence-based framework to reduce falls and injuries in local care homes. A pilot project implemented 'four steps to safety' — an evidence-based framework to reduce falls and injuries in local care homes. A pilot project implemented 'four steps to safety' — an evidence-based framework to reduce falls and injuries in local care homes. A pilot project implemented 'four steps to safety' — an evidence-based framework to reduce falls and injuries in local care homes.

Provision of free hip protectors

The CHST's experience of working with three local multi-agency initiatives, the use of hip protectors for injury reduction is considered. This is illustrated by the results of the trial by Becker et al. (2003) and the experience of the group working with North Yorks' Housing and Health Authority. Hip protectors can be obtained from pharmacies and health and social care professionals. It is hoped that this discussion will further promote the implementation of evidence-based frameworks to reduce falls and injuries.

Promotion of exercise programmes

Local implementation has demonstrated the four main areas or steps: 

- Step 1: Falls risk assessment
- Step 2: Provision of free hip protectors
- Step 3: Promotion of exercise programmes
- Step 4: Promotion of prescription of calcium and vitamin D supplements.

The CHST has designed a multifactorial risk assessment for use in care homes and the guidelines on falls from the National Heart, Lung and Blood Institute for Older People. Correspondence to: G Stanley, West Home, Oulwich Hospital, Nursing & Residential Care, November 2005, Vol 7, No 11. Four steps to safety: a practical approach to falls and injury prevention in care homes. Literature review

The implementation of these four steps is illustrated by the results of the trial by Becker et al. (2003). Four steps to safety: a practical approach to falls and injury prevention in care homes. Literature review

The implementation of these four steps is illustrated by the results of the trial by Becker et al. (2003). Observations and conclusions are given for appropriate exercise requirements to ensure that 'appropriate opportunities are given for appropriate exercise and physical activity; appropriate interventions are designed to encourage a proactive approach to falls and injury prevention in care homes.' Implementation series.

The essence of care framework for older people: transforming the delivery of care through practice development activity such as bench marking is an ideal tool to use. Practice development is a key activity for the future and is recognized as effective, which is unsurprising in view of the hundreds of risk factors that have been identified. The CHST has designed a multifactorial risk assessment for use in care homes and identified the use of hip protectors for injury reduction. This is illustrated by the results of the trial by Becker et al. (2003) and the experience of the group working with North Yorks' Housing and Health Authority. Hip protectors can be obtained from pharmacies and health and social care professionals. It is hoped that this discussion will further promote the implementation of evidence-based frameworks to reduce falls and injuries.
use specifically designed documentation and to display publicity was also agreed at these initial meetings.

A strong commitment by the manager is vital for the implementation of this type of intervention, as the OPSN only visits the home on a weekly basis. On a day-to-day basis, the manager supports the project through clinical supervision of care assistants, allowing care staff time for the project, and through education to residents and relatives.

**Step 1: Training/falls risk assessment**

As the first step, the team developed a standardized training package. It taught staff about the causes and consequences of falls in older residents, and provided information on risk-reduction strategies and injury prevention. Training sessions lasting an hour were held within the care homes for small groups of staff.

A participative approach was used, which was derived from social learning theory (Meyer et al, 2003). For example, the trainer demonstrated the hip protectors and encouraged staff to try them on. This approach is intended to make the experience more meaningful for the staff and increase their application of theory to practice.

For ongoing promotion in the homes, a large brightly coloured poster was provided (Figure 1), highlighting the ‘four steps to safety’. Photographs taken in the participating homes were incorporated, including a picture of a resident wearing hip protectors. The poster was very popular with care home staff, with requests for further copies being made. A resident information leaflet and individualized care plan was also provided.

Before the project commenced, a survey was made of the types of falls risk assessment tools that were in use in the homes. A range of tools was identified, including some that the homes had devised for themselves. Unfortunately, none of these has been properly validated. This means that they have not been rigorously tested to ensure that they actually detect potential fallers without missing any out.

For this reason, an evidence-based method of risk assessment was advocated by the project. This method identifies that any resident who is able to rise from the chair, or partially rise, is at risk of falling (Lord et al, 2003). This is a less complicated assessment that may be made by any member of staff.

**Step 2: Hip protectors**

Hip protectors are a type of modified under-clothing that incorporate protective pads or shells over the hip area (Figure 2). There are a number of products that are commercially available, although there is a lack of independent evidence or national standards to guide choice (Hayes, 2004).

Because of this, the care home staff and residents evaluated three products in order to identify whether any one product was more popular or more likely to be worn:

- The Caresse hip protector in white or grey (Remploy Healthcare, Aberdare)
- Safehip plus in black (Robinson Healthcare, Worksop)
- The HipSaver slim-fit in beige (Win Health Ltd, Jedburgh).

Ten residents in each of three homes were provided with one of each brand. Evaluation of the products was undertaken by conducting interviews with both residents and care staff, and by carrying out ‘spot checks’ to see if residents were actually wearing them. The residents reported that they were happy to wear the hip protectors, but relied on care staff to help them with putting them on and remembering to wear them. They identified no strong preference for a particular product.

The care assistants expressed commitment to the use of hip protectors and only expressed concern regarding staining of the lighter-coloured products. Overall, no one...
Evidence-based practice

product or colour was found to be more popular or frequently worn than any other.

The National Service Framework for Older People (Department of Health, 2001a) advocates the use of ‘champions’ to improve older people’s services. With support from the care home managers, ‘clinical or practice champions’ were identified to take forward the use of hip protectors within each unit in the care homes. The champions were provided with a resource folder, to help organize the documentation and monitor stock usage. They were also provided with tape measures and indelible markers, to ensure correct fitting of products and identification for laundry purposes.

Step 3: Promotion of exercise programmes to reduce the risk of falls

Exercise programmes based on research evidence have been designed specifically for older people and have been shown to significantly reduce the incidence of falls (Skelton and Dinan, 1999). The exercises can improve balance, strengthen targeted muscles, increase flexibility, build endurance, build fitness and improve general wellbeing.

This type of exercise has been used in care home settings (Becker et al, 2003; Figure 3), with residents who are mobile and at risk of falls. Residents need to be assessed and selected for these programmes—the exercise described below is not intended for those who are not able to stand.

In order to be able to role model and promote good practice in exercise to prevent falls, the OPSNs from the CHST undertook an intensive postural stability instructors (PSI) training. It is not necessary for care home nurses to have this level of training in order to supervise a resident’s exercise programme, but an appropriate resident assessment does need to be carried out by a skilled PSI instructor before a resident commences the exercise programme, so as to ascertain if he or she is suitable to participate and to prescribe safe exercise.

Typically, exercises start with gentle warm-up then progress to stretching, strengthening and balance work. The end of the exercise session consists of a cool-down period and gentler stretching. There are both physical and psychological benefits for residents, as an exercise group provides social interaction between the staff and residents and exercise programmes can also reduce an individual’s fear of falling.

The role of the OPSN and the care home staff is to help and lead the residents in the exercises, giving encouragement. The OPSN needs to promote a positive attitude among the staff in the care homes so as to dispel any doubts about the appropriateness of the exercises, and promote safe practice.

Step 4: Calcium and vitamin D

Osteoporosis literally means ‘porous bones’. The condition results in low bone mineral density and consequently an increased risk that a fall will result in a fracture, particularly of the wrist, spine and hip. There are a number of risk factors for osteoporosis, which include long-term steroid use, certain medical conditions, family history of fractures and smoking history, all of which apply equally to men and women. Long-term immobility also lowers bone mineral density and nursing home residents who are less mobile are consequently likely to be at higher risk than many of the general population.

The use of calcium and vitamin D supplements has been shown to reduce the risk of hip fracture in older people within residential care settings (Chapuy et al, 2002). It is cheap and effective, and available in a chewable tablet that is taken daily. Osteoporosis treatments such as bisphosphonate treatment may also be indicated for some residents. Yet from the CSHT’s (unpublished) records of local residents’ prescriptions, it was found that only 14% of the residents at risk of falls were receiving any of these treatments.

The ‘four steps to safety’ aims to increase awareness among care home staff and GPs of the importance of both an adequate diet and prescription of appropriate calcium and vitamin D supplements.

Staff training forms a cornerstone of the approach, since the care home staff are key in liaising with residents’ GPs. They have an important role in ensuring that adequate...
dietary sources of calcium and vitamin D are available for residents and that residents have safe exposure to sunlight, which boosts natural production of vitamin D. This basic message is reinforced through poster information and through clinical reviews, in which the OPSNs and project pharmacist provide further advice for residents.

Conclusions
This article has described and discussed a four-stage approach to falls and injury prevention, based on risk assessment, risk reduction, hip protection and bone health promotion. When this approach is applied, research evidence suggests that the effect will be more than the sum of the parts.

The experience of the CHST is that care homes can successfully implement evidence-based practice as part of a practice development approach, supported in this case by training and facilitation by OPSNs. But for staff to be empowered to make changes, organizational values and support are essential, and it is in this way that care home managers are ultimately key to the success of any such project.

The Care Homes Support Team 'Four Steps to Safety' is supported by the South London Integrated Pathway for Falls (SLIPS) project.

Figure 3. An exercise programme designed to reduce falls risk.


522
Nursing & Residential Care, November 2005, Vol 7, No 11