NHS Greater Glasgow
Strategy for Osteoporosis and Falls Prevention

2006 - 2010

Strategy for Osteoporosis and Falls Prevention 2006

Strategy for Osteoporosis and Falls Prevention 2006

1. Introduction

1.1 Overview

This strategy is a sub set of the Glasgow City Older People's Strategic Framework and forms part of the commitment to promote older people's independence and well being. The strategy has been developed by the Osteoporosis and Falls Steering Group, which contained representatives of geriatric medicine, osteoporosis services, allied health professionals, public health, planning and local authority social work.

The Osteoporosis and Falls Steering Group issued a consultation draft of this strategy in 2005. Consultation focused on the completeness of the strategy, whether it contained the correct elements, and which elements were considered to be a priority for development/investment.

In general consultation responses were supportive of the proposals in the strategy and expressed a desire to move to implementation. This document has been revised in light of the comments received. A summary of the points raised in the consultation and the Osteoporosis and Falls Steering Group's response is available on the GGNHS website www.nhsgg.org.uk.

1.2 Planning Arrangements

A series of sub groups have been responsible for planning various elements of the strategy:

- Care Homes Subgroup
- Home Falls Prevention Subgroup
- Hospital Subgroup
- Osteoporosis Subgroup
- Physical Activity Subgroup

As the Osteoporosis and Falls Prevention Strategy moves to implementation there will be a need to review the planning and management structures for this work. This needs to be undertaken in light of the GGNHS response to Partnership for Care, which will result in a different planning and management context.

1.3 Developing the Strategy

The planning partners have developed the osteoporosis and falls prevention strategy taking into account the English National Service Framework Standard Six which aims to: *'reduce the number of falls which result in serious injury and ensure effective treatment and rehabilitation for those who have fallen.'* by:

- *prevention (including the prevention and treatment of osteoporosis)*
- *improving the diagnosis, care and treatment of those who have fallen*
- *rehabilitation and long term support*

The approach taken in developing this strategy has been to focus on various target groups:

- The population as a whole (Section 4)
- Individuals at risk of falling (Sections 5-7)
- Individuals at risk of injury from falling (Sections 8-9)
- Individuals at risk of fracture (Section 10)
- Individuals affected psychologically by falls (Section 11)

2. Falls, Osteoporosis and Older People in Glasgow

2.1 Existing Information Sources

Information about falls in Glasgow is derived from a disparate range of sources, varying greatly in their purpose, methodology and coverage in time, place and person. There is compelling justification for investment in more complete, accurate and relevant information systems in this area. However, the key points below highlight the enormous scale of the falls burden among older people in Glasgow.

2.2 Falling, Osteoporosis and Injuries in Older People

A third to one half of people over 65 years old living in the community fall each year, many fall more than once, and the risk of falling increases with age. In Glasgow the estimated annual number of falls in the community is likely to be of the order of 45,000 to 68,000. Falls in the frailer population living in care homes are estimated to be in the region of 12,000.

Older people are particularly susceptible to serious injury if they fall; one in three women and one in twelve men over the age of 50 are affected by osteoporosis, which leads to an increased risk of fracture. Almost 50% of all women experience an osteoporotic fracture by the time they reach the age of 70.

In the year ending 31 March 2003, 2463 people aged 65 and over were admitted as an emergency following falls and 83 died as a result of falls. In addition, falls are associated with considerable physical, psychological and social consequences; 50% of hip fracture patients lose the ability to live independently, frequently precipitating admission to long-term care. Fear of falling exerts a significant limitation on daily activities, quality of life and social well-being in older people.

2.3 Economic Impact on Health and Formal Social Care Sector

Hip fractures exert a direct impact on older people's ability to live independently. Of 805 patients admitted from home with femoral neck fracture, 26,118 acute NHS and 7,398 continuing care bed days (both NHS and social care) were used in the six months following admission. The total net costs for this care amounted to £8,991,888; of this total cost, £8,583,353 was attributable to acute care costs and £ 408,535 to care home costs. This is likely to be an underestimate social care costs where coding of care home is not always clear and costs associated with home care packages were not included.

2.4 Impact on Orthopaedic Capacity

The orthopaedic workload generated by hip fractures represents a substantial opportunity cost, particularly on orthopaedic capacity. 16,193 orthopaedic bed days were utilised in care of this cohort of hip fracture patients over the six months period following admission. This represents approximately 1,500 elective hip replacement procedures, almost triple current total elective hip replacement activity.

3. Evidence Base

3.1 Overview

The strategy has been developed in the context of a strong evidence base of over 60 randomised controlled trials of interventions to prevent falling. The evidence shows that risk assessment and multifactorial intervention programmes can achieve a substantial (15-30%) reduction in the incidence of falls among older people. Effective interventions are relatively simple and much can be achieved by redesign and coordination of existing services. Fracture risk can be reduced by targeting effective, evidence based drug treatments to patients with osteoporosis.

3.2 Evidence for Multidisciplinary Assessment and Intervention

The National Institute for Clinical Excellence (NICE) has issued Clinical Practice Guideline 21: The Assessment and Prevention of Falls in Older People. This is primarily about falls prevention for individuals in the community although there is some evidence relating to care homes. The strongest evidence in this NICE guideline (from meta-analysis of randomised controlled trials, **or** at least one randomised controlled trial) states that:

- *All older people with recurrent falls or assessed as being at increased risk of falling should be considered for an individualised multifactorial intervention.*

- *In successful multifactorial intervention programmes the following specific components are common (against a background of the general diagnosis and management of causes and recognised risk factors):*
  - *strength and balance training*
  - *home hazard assessment and intervention*
  - *vision assessment and referral*
  - *medication review with modification/withdrawal.*

- *Following treatment for an injurious fall, older people should be offered a multidisciplinary assessment to identify and address future risk and individualised intervention aimed at promoting independence and improving physical and psychological function.*

3.3 Evidence for Prevention in Hospital

Until recently, the evidence with regard to intervention and falls prevention in hospital has not been clear. Two studies have been published within the last year, however, which demonstrate that a targeted falls prevention programme in a hospital setting can be effective in reducing falls by as much as 30%.

3.4 Evidence for Osteoporosis Treatment

Two guidelines inform clinical practice in the management of osteoporosis. SIGN Guideline 71: Management of Osteoporosis (2003), & NICE Technology Appraisal Guidance 87. The NICE recommendation that all women over age 75 should be considered for a bisphosphate without need for DEXA scanning is out of step with the evidence base and is not consistent with SIGN Guideline 71 and so has not been accepted by the osteoporosis subgroup.

4. Population Approach to Falls Prevention

4.1 Public Health Approach

NSF Standard Six states that: *Public health strategies should reduce the incidence and impact of falls through actions to encourage appropriate weight- bearing and strength enhancing physical activity, promote health eating (including adequate intake of calcium) and reduce smoking in the general population.(6.8)*

The National Osteoporosis Society in its Primary Care Strategy for Osteoporosis and Falls (2002) suggests a life stage approach to this:

Table A: Areas for Action to Prevent Osteoporosis and Falls

Life Stage	Area For Action
From conception to school age	Maternal well being Healthy diet Adequate safe sunshine exposure Adequate weight bearing physical activity
School Age	Healthy diet Adequate safe sunshine exposure Adequate weight bearing physical activity Avoidance of Smoking Caution about excessive dieting and athletic amenorrhoea
Young Adults	Women with amenorrhoea/early menopause Healthy diet Adequate safe sunshine exposure Adequate weight bearing physical activity Avoidance of Smoking Caution about excessive dieting and athletic amenorrhoea Alcohol within recommended safe limits
Adults at mid-life	Women at menopause Healthy diet Adequate safe sunshine exposure Adequate weight bearing physical activity Avoidance of Smoking Caution about excessive dieting Alcohol within recommended safe limits
65+	Selective case finding for people at high risk of osteoporosis Falls prevention measures Healthy diet Adequate safe sunshine exposure Adequate weight bearing physical activity Avoidance of Smoking Alcohol within recommended safe limits

4.2 Local Health Promotion Strategies

The national "Hungry for Success" School Meal Guidelines are now in place in Primary Schools and ensure adequate availability of calcium containing foods. GGNHSB is reformulating its Food and Health Policy to include new standards in relation to Food and Fluid provision in hospitals and particular emphasis on calcium and vitamin D intake in continuing care beds for older people. *'Lets make Glasgow Active- a physical activity strategy for Glasgow'* is available from www.glasgow.gov.uk/healthycities.

5. Preventing Falls in Individuals at Home

5.1 Development of Falls Prevention Pathway

At present there are several places where a patient that has fallen can be referred. These include Interdisciplinary Response and Intervention Service (IRIS), Discharge and Rehabilitation Team (DART), Community Older People's Teams (COPTs), Day Hospital, Home Falls Prevention Programme, and Falls Clinics etc. The Home Falls Prevention Programme will develop a clear and simple referral pathway for patients who have fallen. This will be agreed by all services working with older people will include:

- Agreement on identification and referral of older people who have fallen, fractured or at risk of falling.

- Agreement as to which service is best placed to undertake assessment of older people:
  - Following an inpatient admission
  - Following a fracture and return home
  - Who also require rehabilitation
  - Who are persistently falling
  - Who have complex needs

- Agreement as to the standard elements of a falls risk assessment for home settings and the standard interventions.

5.2 Home Falls Prevention Programme incorporating Falls Administration Centre

A pilot falls prevention project in the North East area agreed referral pathways from community (including GPs, health, social work, carers, and self referral) and A&E. The service developed a comprehensive screening tool and established pathways to a range of appropriate interventions. Following a successful evaluation of reduction of risk factors associated with falls and positive service user feedback, the project is being rolled out across GGNHS as the Home Falls Prevention Programme.

The model uses a trained, high-level OT support worker, working under the supervision of a clinical lead, to undertake the screening assessment of all those referred. The screening assessment tool is a battery of short assessment tools including:

- Mini mental state
- Timed up and go (TUAG)
- Westmead Home Safety Assessment
- Hagorn OT
- Hospital Anxiety and Depression Scale

The assessment enables the service to make appropriate referrals to a range of other services for assessment/intervention, including:

- Physiotherapy /exercise programme
- Occupational Therapy
- Optometry
- Podiatry
- Dexa Scan
- Day Hospital review
- Community Older Peoples Teams
- Pharmacy – medication review

It is intended that the service should also include a Falls Administration Centre to deliver Triage function i.e. gathering basic information and directing referrals to the appropriate service. It will maintain a central falls database, to support research and evaluation of falls prevention activity and monitor the requirement for additional capacity in the system.

Financial Implications

	Non recurring £K	Recurring £K
Existing Funding Source Home Falls Prevention (Delayed Discharge Financial Framework)	20	313
Additional Funding Required Falls Administration Centre Database	44	15

5.3 Outpatient Falls Clinics

The hospital subgroup will develop an agreed set of protocols and procedures for outpatient fall clinics based on an assessment of evidence. This will be implemented in all 5 sites in Greater Glasgow and be subject to regular evaluation and review, as the evidence base develops. It is envisaged that the clinics will see patients with syncope (transient loss of consciousness), complex pharmacology and 2+ falls with preceding symptoms. Work will be undertaken to scope the demand on day hospital services.

The clinics will undertake specialist medical review with comprehensive Falls Screening Documentation being provided prior to the clinics by the Home Falls Prevention service. Consultants and AHPs from the hospital service will meet following the clinic to discuss patients and agree an appropriate action plan

The hospital subgroup will collaborate with the Greater Glasgow Heart MCN to define the role of a small dedicated syncope service for people who have an unexplained loss of consciousness. This will include the development of agreements about patient pathways, referral criteria and resources.

Financial Implications

	Non recurring £K	Recurring £K
Additional Funding Required Equipment Senior 1 OT(0.6) Senior 2 OT Technical Instructor	4	 19.5 33.5 23
Out Patients Falls Clinics Total	4	81

5.4 Standardised Tiered Exercise Programme

Individuals will be referred to an appropriate exercise programme based on their Tinetti falls risk assessment and/or their Elderly Mobility Scale (EMS) score.

All day hospitals run exercise programmes but these vary from site to site. Programmes will be increased to 10 weeks and delivered on a twice-weekly basis. These will be physiotherapy led for first 6 weeks and then coach-led. On discharge, patients will be referred into level 1. The aim is for once weekly level 1 and once weekly level 2 PSI (Postural Stability Instructor) led community programmes in community based centres throughout GGNHS. Falls education programmes (how to deal with a fall during and after) are being considered and will be run with exercise programmes. Table B gives details of the proposed exercise programme

Table B: Standardised Tiered Exercise Programme

Programme	Target Group
Hospital based	Suitable for frail, functionally dependent individuals who require high level of supervision
Level 1 (Community based)	Suitable for patients slightly more independent, better safety awareness
Level II (Community based)	Higher level balance activities for functionally independent people
Level III (Hospital based Osteoporosis class).	Primarily for the post-menopausal Osteoporotic group. Also suitable for low risk fallers.
Level IV (Existing Community based Ozone)	Primarily for the post-menopausal Osteoporotic group Also suitable for independent older individuals for prevention purposes.
Exercise booklet / video (basic seated warm up and exercises in sitting and standing)	Suitable for all patients. (This will be used in care homes settings as a home based physical activity intervention.) Plus separate osteoporosis video.

Some of the exercise programme patients may be able to attend outreach classes locally, although many (particularly the frailer elderly) will still require ambulance transport. It is estimated that approx 80% patients will require transport. Dialogue is underway between Patient Transport Services and the voluntary sector, in order to provide transport to those attending the hospital facility and level 1 programme.

Financial Implications

	Non recurring £K	Recurring £K
Additional Funding Required Standardised Tiered Exercise Programme Total	64	163

5.5 Falls & Osteoporosis (Direct Access DXA Services)

All patients who fall will have their clinical risk factors for osteoporosis reviewed according to the criteria used for the Direct Access DXA Service (DADS). Although this protocol has been available for use within the North-East Glasgow Falls Project, it has not yet been rolled out along side falls services elsewhere in the city and is likely that when fully implemented this will increase the numbers of referrals through the Glasgow DADS Service.

5.6 Community Pharmacy

In response to the need to support the care of patients at risk of falls/fractures and osteoporosis, the majority of Glasgow's community pharmacists have received training to identify patients at risk of falls/fractures, review medication and provide ongoing support for concordance with medication, fully integrating with existing care pathways. The new contract for Community Pharmacy Services offers great potential for harnessing the skills, expertise and patient contacts of community pharmacists throughout GGNHS. A chronic medication service and a public health service form part of the new contractual arrangements, both of which could be applied to the support of patients at risk of falling.

There are 3 levels of support provided by pharmacy

- In the Community Pharmacy setting identifying those at risk of falls, offering information and referring onto the Home Falls Prevention Programme in line with local protocols. (Public Health Service)
- In the Community Pharmacy, General Practice or through home visits, clinical medication review for those referred by HFPP/COPTs.
- Clinical medication reviews in Falls Clinics, collaborating with secondary care based pharmacists. This has the added benefit of linking directly with the patient's community pharmacist pre- and post- clinic appointment. Current service is operating on short term funding and additional investment is needed to ensure that pharmacy support is available delivered for all 5 clinic sites.

Financial Implications

	Non recurring £K	Recurring £K
Additional Funding Required		
0.5wte Grade E pharmacist		23.5
0.5wte A&C 3		7
Travel, training etc		0.5
Pharmacy Support to Falls Clinics Total		31

6. Preventing Falls in Individuals in Care Homes

6.1 Development of Falls Risk Management Protocol for Care Homes.

Older people who move to care homes usually do so because frailty/ill health means that they are no longer able to stay safely in their previous homes. Many older people entering care homes have a history of falls and mobility problems that have not been resolved satisfactorily by rehabilitation. Therefore falls risk management in care homes is not likely to prevent all falls but it should reduce their incidence.

Care Homes will be supported to manage and reduce the incidence of falls. Work will be undertaken in partnership with care home staff to develop a falls risks management protocol for care homes. It recommended that this be included within future social work contracts with care homes and to be supported by the health support to care homes initiative. The protocol will include consideration of the following:

i) Individual Falls Management

Requirement for each resident with a recent falls history to have a Falls Action Plan carried out in partnership with the person who is falling and their carer/family. The Falls Action Plan should document:

- individual staff's roles and responsibilities
- any behaviors leading to falls
- environmental/personal and communication needs
- aids and equipment to prevent falls

ii) Regular Review of Falls Data

Each care home to review all falls on a 3-monthly cycle or more frequently if required. The care home to identify overall patterns in falls in the home e.g. falls occurring in a particular place or at a particular time. Action should then be taken and recorded to reduce these risk factors. The 3-monthly review to include an audit to ensure that action plans are in place for people who have fallen. The actions plans for frequent fallers and all serious incidents should be reviewed.

iii) Development of Protocols for Equipment. Alarms and Other Interventions

A group has been established to develop guidance for the use of equipment to reduce the risk of frequent falls this would include guidance on seating, bed rails, non slip mats, lap straps and low level beds/mattresses, some of which could be defined as use of restraints. (See section 9). This will either be incorporated into the falls risk management protocol or be used alongside it.

6.2 Development of Falls Risk Management Element of Health Support to Care Homes

The Health Support to Care Homes group will be tasked with supporting falls risk management. Options suggested by the care homes sub group for consideration include:

i) Prescription of Calcium/Vitamin D

GPs to implement the consensus statement recommendations about the use of Calcium and Vitamin D3 supplementation for older people living in care homes.

ii) Referral Pathway for Further Assessment

Agreement of referral pathways for further assessment for residents who develop problems associated with falls risk:

- gait, balance and mobility, and muscle weakness
- osteoporosis risk
- perceived functional ability and fear relating to falling
- visual impairment
- cognitive impairment and neurological examination
- urinary incontinence
- cardiovascular examination and medication review.

iii) Exercise for Care Home Residents

Enabling staff within the care home to deliver an exercise intervention for residents. The programme should follow that of the exercise book and video. (Comprises basic seated warm up and exercises in sitting and standing. Suitable for all patients.) There will be a few individuals who are more functionally able and these individuals should go to the nearest level 1 class in the community. A WTE Supt III physiotherapist could be seconded to work alongside the AHP care home team to give training to staff in all Care Homes and Day Centres in Greater Glasgow. The role could also include publicising the video and booklet and give training updates to all care and day centre staff.

iv) Falls Prevention Co-ordinators

Employing a number of falls prevention co-coordinators. Their role would be to:

- Increase awareness of falls prevention and management,
- Promote the correct use of Cannard assessment forms
- Support homes in developing and reviewing falls action plans for high risk residents
- Encourage the ordering of hip protectors for eligible residents and compliance in wearing the garments

v) Falls Prevention Training for Care Homes

In order to ensure that care homes are able to undertake falls prevention programmes and action planning, there should be a rolling training program for staff including:

- Use of Cannard
- Identification of Environmental Risk Factors
- Identification of Personal Factors
- Use of Mobility aids

- Promotion of Physical Activity
- Analysis of Pattern of Falls
- Equipment and Alarm protocols
- Training on adequate seating provision
- Continence assessments

Financial Implications

	Non recurring £K	Recurring £K
Additional Funding Required Falls Prevention Support to Care Homes Total		141

6.3 Wider Issues for Older People's Planning

The care homes sub group has identified a number of issues that contribute to falls but are outwith the remit of the steering group. It recommends that the older people's planning consider the following issues:

- Care home construction and design i.e. glass and glazing used and outside environment
- Fire doors being too heavy, or spring close action sweeping residents off their feet.
- Access to transport within a community based setting.
- Staffing issues – both turnover and capacity

7. Preventing Falls in Individuals in Hospital

7.1 Hospital Falls Co-ordinator

The evidence from the two published studies is consistent with the view that Falls Coordinators can make a significant contribution to falls prevention in hospital. The role of a Hospital Falls Coordinator would include ensuring all wards carry out effective risk assessment and appropriate interventions, staff and patient education, co-ordination of hip protector ordering, overview of equipment and restraint protocol implementation, and appropriate clinical effectiveness studies. The post holders will be either AHPs or nurses.

The Falls Coordinator would also have a role in liasing with the Home Falls Prevention Service; the Fracture Liaison Service and DADS; have links with the IRIS and DART services; and possibly also with patients who present in A & E Departments with falls.

Financial Implications

	Non recurring £K	Recurring £K
Additional Funding Required Office and Educational Equipment Hospital Falls Coordinators	12	 172
Hospital Falls Coordinators Total	12	172

7.2 Exercise Programmes

Patients with transfer/gait problems will be automatically referred to physiotherapy for a Tinetti gait and balance assessment to be carried out. Physiotherapy will develop a structured exercise plan and follow on referral into day hospital and/or community exercise programmes.

7.3 OT Falls Protocol

OTs working in Care of the Elderly in North Glasgow have undertaken work to develop a protocol for patients referred to OT for falls assessment including home/environmental visit. This would meet the requirements of the NICE recommendation for home assessment on discharge form hospital. It should be implemented pan GGNHS in conjunction with the home falls service.

7.4 Osteoporosis Prevention

Patient who fall and do not fracture should also be referred for osteoporosis risk assessment using DADS criteria.

7.5 Review of Cannard as Falls Risk Predictor

The information about patients Cannard scores should be compared with the Accident/Incident Reporting data.

8. Preventing Individuals Sustaining Further Injury From Falls Using Hip Protectors

8.1 Current Service Provision

Work to identify those at highest risk of falling either in assessment or rehabilitation wards or NHS long-term care or in care homes, has been undertaken using Cannard. An arbitrary cut-off of 13 has been used to allow hip protectors to be ordered. All hospitals and care homes (including those in our partner local authority areas outwith Glasgow City) have been encouraged to assess all current residents and all new admissions.

8.2 Training and Awareness Raising

Training and awareness raising will be developed to ensure all staff are taking appropriate action to assess patients and order hip protectors appropriately. There is a considerable backlog of audit data with regards to the clinical effectiveness of hip protector usage, which is being addressed. Analysis of this data would allow comparison of Cannard scores with subsequent fractures using record linkage as part of the monitoring and evaluation of this strategy.

8.3 Eligibility Criteria

Further consideration requires to be given to how to deal with those patients who have been allocated hip protectors then return home and require replacements at some time later. There are also other groups of patients (e.g. those with Parkinson's Disease) who maybe at high risk of falling/re-falling and who either live at home or in a care setting who are not included in the eligibility group and might benefit from being so included, this requires further definition. The Hospital sub group have begun work looking at the appropriate prescribing of hip protectors.

Financial Implications

	Non recurring £K	Recurring £K
Existing Funding Source		
Hip Protectors (Older People's Strategy Financial Framework)		312
Data Base		0.5

9. Preventing Individuals Sustaining Further Injury From Falls Using Equipment Including Guidance On Use Of Restraints

9.1 Current Use of Equipment and Restraints

In the GGNHSB Elderly Care Incidence Study preventative action taken after a fall was frequently limited to reinforcing the need to call for help, using cot sides and providing a walking stick or zimmer frame. However in 16 cases a restraining strap was used to prevent someone slipping from a chair. Some degree of mental confusion was frequently highlighted as a contributory factor by carers in all settings. Carers expressed distress that there seemed to be little that they could do to prevent people falling or injuring themselves. Bed rails were frequently identified as causing more problems than they solved.

Bed and chair alarms, which alert staff when a patient is attempting to get up, are used in a number of settings. In addition staff use certain chairs and lap straps to prevent/delay patients getting up on their own and on occasions bed rails or low level mattresses are used to prevent an individual from getting out of bed unassisted. Where this equipment or methods of restraint is used it is generally documented in the care plan and discussed with the patient and their relative/carer. There is no Greater Glasgow protocol for the use of equipment and restraints, although some initial work has been done in this area.

The Mental Welfare Commission for Scotland has recently released good practice guidance on the use of restraint *'Rights, Risks and Limits to Freedom – Guidance for the use of restraint'*. This includes the use of restraint (physical, mechanical or electronic barriers to moving freely) to reduce the risk of falling.

9.2 Development of Equipment and Restraint Service Protocol

A local protocol will be developed for the use of equipment and restraints to reduce the risk of frequent falls this would include guidance on seating, bed rails, non slip mats, lap straps and low level beds/mattresses. The protocol will include the use of alarms and other ways of intervening rapidly when high-risk individuals who are unsteady and require assistance to walk, try to mobilize alone. The protocol will give local guidance based on the main messages '*Rights, Risks and Limits to Freedom- Guidance for the Use of Restraints'* The protocol should be subject to regular audit and review. A stock of specialist equipment will be provided via GGILES to support the use of the protocol.

Financial Implications

	Non recurring £K	Recurring £K
Additional Funding Required Equipment Protocol Implementation Total	250	50

10. Action to Reduce the Risk of Fractures – Targeting Osteoporosis Treatment

10.1 Essential Elements of Osteoporosis Treatment Service

Optimal primary and secondary prevention of fractures will be achieved through medical treatment of osteoporosis (where confirmed to be present), the major skeletal risk factor for fractures, and also through concurrent use of strategies aimed at reducing falls risk. The service should identify people who have sustained new fractures whether inpatients or A&E attendees, and people identified at risk in the community, who have previously had a fracture or are at high risk of having one. Patients should be offered a scan to assess their bone density – to assess for the presence of osteoporosis (DXA scan) and the results should inform a treatment protocol. Patients should receive advice on the management of their condition, and should be empowered with an understanding of the importance of adhering to long-term treatment. Patients should be referred onto appropriate falls prevention programmes.

10.2 Improving Identification of Patients with History of Fracture

GPs should be encouraged to seek and record past fracture histories (≥50yr) in their computerised record systems. Once identified these patients could be assessed for fracture secondary prevention via DADS. (The DADS service offers DXA scan and treatment recommendations to patients who fulfill specific referral criteria including a history of fracture occurring ≥50yr.) This is an issue relating to the quality of information capture within primary care IT systems and may qualify for payment within the new GMS Quality & Outcomes Framework.

10.3 Improvement of DXA/DADS service

It is proposed to reconfigure DADS to provide a specialist nurse consultation for each referral: the projected workload is 4 sessions of Specialist nurse time per week, per centre. Currently DADS is configured to provide a scan + report (including patient-specific treatment recommendation) but, as highlighted, by Primary Care clinician representatives these patients miss out on the opportunity to discuss their disease with experts In addition it is proposed to employ specialist nurses to link with radiology and secondary care to improve reporting and referrals.

Financial Implications

	Non recurring £K	Recurring £K
Additional Funding Required		
Reconfiguration of DADS specialist nurse consultation		46
Formal reporting of secondary care DXAs		13
Extension of FLS to link directly with Radiology		23
Improvement of DXA/DADS Service Total		82

10.4 Pharmacological Interventions

The NICE guidance incorporating recommendations about bisphosphonate use would, if implemented, increase the use of these drugs and the associated expenditure. Work will be required to determine what view should be taken on the local application of this guidance. The view of the osteoporosis subgroup is that our current recommendations are sufficient and indeed are compliant with SIGN Guideline 71. Development of a compliance-adherence protocol to foster longer-term adherence to bisphosphonates (and other appropriate anti-osteoporosis therapies) is to be developed. This should be considered as an inclusion in forthcoming pharmacy contract discussions. The identification, of additional patients through the implementation of the strategy will require increased prescribing costs and there should be further discussion with the Pan-Glasgow Prescribing Management Group.

10.5 Physiotherapy and Exercise Services for Osteoporosis

The Physiotherapy and Exercise Service for Osteoporosis targets a patient group that includes less frail, functionally independent patients who have osteoporosis or osteopenia and medium-low falls risk. The majority of patients have sustained a fracture and are at increased risk of further fracture. For many of those with osteopenia, lifestyle modification, and exercise and physical activity specifically, constitutes the major component of their management. It is proposed to expand the physiotherapy component of the Glasgow Osteoporosis Service to meet the needs of the additional patients who will benefit from the proposed introduction of formal reporting of secondary care DXAs, reconfiguration of DADS and the increased identification of vertebral fractures. This expansion would include provision of comprehensive physiotherapy assessment at the patient's local department and provision of additional exercise and education classes across the city, including to areas of the city that are currently poorly served.

Financial Implications

	Non recurring £	Recurring £
0.5 WTE Clinical Specialist Physiotherapist		18,372
1 WTE Technical Instructor III		17,916
0.5 WTE Administration		10,000
Hall hire		2,000
Equipment	2,000	
Physiotherapy and Exercise Service for Osteoporosis Total	2,000	48,288

10.6 Patient Education

Delivery of 2 osteoporosis patient education meetings per annum for each FLS/DADS centre

Financial Implications

Patient Education		Non recurring £K	Recurring £K
Additional Funding Required	Patient Education Total		3

10.7 Improving Identification of Vertebral Fracture

Radiologists will be asked to consider how to implement the key CEPS recommendations for fracture secondary prevention after vertebral fracture:

- The FLS model of care should be adapted to link directly with X-ray departments in Glasgow hospitals to offer routine post-vertebral fracture clinical evaluation.

- Radiologists should adopt a standardised system for reporting fractures and should explicitly refer to the presence of a 'fracture'.

11. Action to Reduce the Psychological Consequences of Falls

11.1 Background

The perceived cause of a fall is important because it may affect a person's interpretation of control over the prevention of future falls. For older adults who fall within the 'safety' of their own home, while doing a routine task, the meaning of that fall is more likely to have a negative impact on their psychological well-being. They are more likely to interpret the fall as an indication that they are beginning to decline physically and/or cognitively, and that this may lead to a loss of independence/ the need to move to a residential home/ becoming a burden to the family. Such thinking reduces self-esteem, attributes the cause of the fall to factors which are outwith the person's control, and can lead to changes in behavior e.g. avoidance behaviors, reduced activities, and social withdrawal.

Consequently, there are increased levels of depression, generalised anxiety, and fear of falling in older people who have already experienced a fall. It is therefore not surprising that the long term effects of falling are associated with many hidden costs such as the onset of additional illnesses or disabilities, and additional carer responsibilities (*Downtown & Andrews, 1990; Cutson, 1994*). Failure to address the psychological consequences of falling may adversely interfere with the rehabilitation aims of a specialist falls service.

11.2 Proposed Service Response

Clinical Psychology could contribute to a multi-disciplinary Falls Service in a number of ways via one-to-one assessments and therapeutic interventions, staff training in psychosocial skills, or a consultancy service to offer on-going education to team members about the assessment of psychological factors. Although contact with a multi-disciplinary service in England has indicated that clinical psychology is used as a standard component of the initial assessment for all new referrals, this is unlikely to be the model of choice for the Glasgow service. The model that would be proposed is one whereby screening tools would be used by other professionals to identify the people who are most likely to require psychological therapy. Such cases would then be assessed by a clinical psychologist, with complex cases receiving one-to-one sessions and group work being offered where appropriate.

Further literature searches, and communication with existing services, is required to establish whether or not there is a satisfactory screening tool, which could be used by other professionals, to identify new referrals who may require further psychology input.

12. Underpinning Process

12.1 Access

It is vital that older people are able to access the various fall prevention services. Some of these people may be able to attend outreach classes locally, although many (particularly the frailer elderly) will still require patient transport. Providing patient transport for people from their own home (or from a Care Home), to group interventions such as group exercise programmes presents a number of difficulties. Firstly, ensuring that people are able to get to the programme promptly (if using hospital transport patients generally arrive and are collected at a range of different times.) The second difficulty surrounds getting dedicated transport for travel to non-health premises (e.g. leisure centres). A similar situation pertains with regard to graded exercise programmes. Dialogue is required between Patient Transport Services and the voluntary sector, in order to provide transport to support the implementation of the strategy.

12.2 Training

Successful implementation of the strategy is dependent on having appropriately trained staff. Sub groups need to consider implications for backfill, time for trainers and time within programmes for team training and outreach training.

12.3 Resources and Publications

There will be a continuing requirement for leaflets to support the hip protector service, for home exercise booklets and videos, for support for the local authority exercise vides, for support for the local authority exercise and for other training and advertising resources. Further production of the pharmacy health promotion/adherence leaflets for osteoporosis pharmacotherapy will also be required.

Financial Implications

	Non recurring £K	Recurring £K
Additional Funding Required Resources and Publications Total		25

12.4 Information Audit and Evaluation

Better information is needed in two principal domains; firstly, understanding the frequency and pattern of falling among older people at a population level; and secondly developing valid and workable indicators of the performance of the falls prevention strategy. The existing data sources could be developed as the basis for the first of these domains, but would require work to improve their comparability and their relationship to defined denominator populations.

In respect of the second domain, the capacity to benefit from any of interventions proposed in the strategy will depend on local implementation factors. Selected process and outcome data should be developed from the work begun by the pilot home falls prevention programme when it is extended to other areas. Consideration should also be given to repeating the

GGNHSB falls incidence study in elderly care units, possibly on a smaller scale in 'sentinel' settings.

It is essential that a structured audit and evaluation programme is implemented, to 'quality assure' the prevention services and to inform changes and developments in the strategy. Recent examples include a small audit already undertaken around compliance with hip protector wearing, which has generated a more rigorous approach to allocating the garments. Another small audit has changed the way in which osteoporosis services are delivered and has shown that there is a variation in referral to the services across practices; the development of the Falls Liaison Nursing Service occurred in response to that variation, improving equity of access for at least one client group.

Financial Implications

	Non recurring £K	Recurring £K
Additional Funding Required Information, Audit and Evaluation Total		35

Strategy for Osteoporosis and Falls Prevention 2006

13. Financial Framework - Proposed Service Developments

		Non-Recurring £ (k)	Recurring £ (k)
5.2	**Falls Administration Centre Database** 'Triage' point for falls referrals directing them to appropriate service and maintaining central database	44	15
5.3	**Occupational Therapy Support to Falls Clinics & Service** Specialist medical review with linked Occupational Therapy assessments for complex clients	4	81
5.4	**Standardised Tiered Exercise Programme** Series of hospital and community based exercise programmes incorporating muscle strengthening and balance training.	64	163
5.6	**Pharmacy Support to Falls Clinics** Clinical medication reviews undertaken by pharmacists in falls clinics.		31
6.2	**Falls Prevention Support to Care Homes** Additional capacity for health support to care homes team to focus on falls prevention and management support and training		141
7.1	**Hospital Falls Coordinators** Ensuring wards carry out effective falls risk management including education, hip protector ordering and use of equipment	12	172
9.2	**Equipment Protocol Implementation** Stock of specialist equipment for falls risk management provided via GGILES to support local protocol	250	50
10.3	**Improvement of DXA/DADS Service** Additional nurse consultant time and improved links and reporting arrangements		82
10.5	**Physiotherapy and Exercise Services for Osteoporosis** To expand the physiotherapy component of the Glasgow Osteoporosis Service to meet the needs of additional patients	2	48
10.6	**Patient Education** Meetings at osteoporosis centres enabling patients to understand their condition and enhancing compliance with medication		3
12.3	**Resources and Publications** Leaflets, videos and other resources to support various elements of the strategy including exercise and patient education		25
12.4	**Audit and Evaluation** On-going evaluation and review of strategy		35
	TOTAL	**376**	**846**

Strategy for Osteoporosis and Falls Prevention 2006

If you require further copies of the Strategy for Osteoporosis and Falls Prevention, please contact

NHS Greater Glasgow and Clyde
Dalian House
350 St Vincent Street
Glasgow
G3 8YZ

www.nhsggc.org.uk