Falls and Fracture Prevention

Pilot Screening Programme in a
Primary Care Team

Falls and Fracture Prevention Partnership Group
Local Health Office, Dublin North Central
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Executive Summary

Problem overview
Falls in older people are a serious problem and a needless cause of ill-health and death. One in three older people fall every year and two-thirds of them fall again within six months. An estimated 5,304 people over 65 living in the Local Health Office (LHO) Dublin North Central (DNC) area fall every year. People with osteoporosis are at risk of fragility fractures, even after minor trauma. One in three women and one in five men over the age of 50 years have osteoporosis. It is estimated 3,157 women and 1,288 men over 65 have osteoporosis in the LHO-DNC area.

Targeted prevention programmes aimed at high-risk groups have been shown to be effective and the key to success is a multifactorial, multidisciplinary, interagency and integrated approach.

Our response
Following training on falls and fracture prevention between 2004 and 2006, a multidisciplinary steering group was established in LHO-DNC to promote and support best practice. The Ballymun Primary Care Team (BPCT) was considered the optimal setting to develop, implement and evaluate an evidence-based falls and fracture prevention pathway. A ‘Partnership Group’ was then formed with members of the steering group and the BPCT. The work was based on the National Institute of Clinical Excellence (NICE) guideline 21 (2004), and organised in two phases due to resource constraints.

The Phase 1 screening process was piloted on people over 65 years from November 2007 to February 2008 by Health Service Executive (HSE) staff and 2 General Practitioners (GP) practices. Ninety-nine people were asked if they had fallen in the last year. If they had, the screening tool was administered. An evaluation looked at the outcomes for service users, staff impact and the project implementation processes. Phase 2 is the Assessment and Intervention component and has yet to be implemented.

Outcomes
Of the 70 people who met the eligibility criteria for the programme 23 (33%) had fallen. Nine of the 23 were found to be at risk of osteoporosis and 6 of the 9 were referred for Dual Energy X-ray Absorptionmetry (DXA) scanning.
The staff impact evaluation highlighted that training was adequate and relevant, and had a positive impact on work practice. Problems were noted, however, with the time it took to administer the walking test and with client data management.

The process evaluation demonstrated that the project fully met the requirements for participation, empowerment, equity and equality, and also for project development and implementation. Difficulties arose with the project management and sustainability primarily due the lack of dedicated co-ordination and Information Communication and Technology (ICT) resources.

**Key learnings**

The screening process led to early detection of falls and/or fracture risk for older people. Using the pathway improved both awareness of falls and fractures and work practices and processes within the BPCT. The background systematic approach employed by the Partnership Group from the outset in the planning, research, documentation and training was essential to the programme’s success. This programme is an excellent example of successful collaborative work.

Dedicated time for such a project is essential. Not all disciplines could participate in the implementation of the screening programme and difficulties arose as staff were trying to manage the project and continue with their normal workload.

**What next?**

The recommendations outlined below are reflective of the learning from developing and implementing this pilot programme. The recommendations are in line with Strategy to Prevent Falls and Fractures in Ireland’s Ageing Population, HSE, NCAOP & DoHC (2008)

**Priorities recommended nationally:**

1. Leadership to support the development, implementation and evaluation of falls and fracture prevention programmes in Primary, Community and Continuing Care Services.
2. Standardised HSE resources and toolkits for prevention of falls and fractures.
3. HSE web-based discussion and information-sharing forum on falls and fracture prevention
4. ICT systems to enable Primary Care Teams share confidential information.

**Priorities for Ballymun Primary Care Team:**

1. Trial the modified screening tool and pathway informed by the national strategy.
2. Explore the possibility of developing the local GP software system to share data.
3. Seek HSE guidance on using the patient-held record as recommended in the National Strategy.
4. Implement and evaluate an evidence-based Falls Management Exercise (FaME) programme.
5. Develop guidelines for fall and fracture prevention in collaboration with other PCTs.
6. Continue professional development and training to build capacity among the BPCT.
Section 1: Introduction

The purpose of this report is to consolidate and share the work carried out on the development, implementation and evaluation of a falls and fracture prevention integrated care pathway, phase 1 of which was implemented by the Ballymun Primary Care Team (BPCT) over a four month period in 2007-2008.

Falls in people over 65 years are a serious problem and a needless cause of ill health and death. It is estimated that one in three older people fall every year and that two thirds of these people fall again within six months. The Irish census, Central Statistics Office (2006) identified that there were 15,914 people over the age of 65 years residing in the Local Health Office (LHO) Dublin North Central (DNC) area. Based on national evidence approximately 5,304 people over 65 fall every year in the DNC area.

Osteoporosis, which increases the likelihood of ‘fragility fractures’, is also of concern. Many people do not know they have this condition as it generally does not declare itself until the first fracture occurs. It is estimated that osteoporosis affects one in three women and one in five men over the age of 50 in Ireland, according to the National Strategy to Prevent Falls and Fractures in Ireland’s Ageing Population (referred to as the National Strategy), HSE, NCAOP & DoHC (2008). This means that approximately 3,157 women and 1,288 men over the age of 65 may have osteoporosis in the LHO-DNC area.

From a financial perspective falls and resultant injuries have a major impact on services and resources. Irish information on the Burden of Illness due to falls shows that by 2010 the costs will be approximately €520-€551 million, taken from the National Strategy, HSE, NCAOP & DoHC (2008). Developing a fall and fracture prevention programme is a sound economic investment to this serious and preventable problem.

Research shows that falls can be predicted and prevented. Targeted prevention programmes aimed at high-risk groups have been shown to be effective and the key to success is through a multidisciplinary interagency approach. It is beyond the scope of this report to detail all these findings; readers are directed to the National Strategy, HSE, NCAOP & DoHC (2008) and its references section for further details.
Section 2: Getting started

Between 2004 and 2006 staff from Community Occupational Therapy, Physiotherapy, and Public Health Nursing in DNC attended a three-day Fall and Injury Prevention training programme run by the Health Promotion Services in Health Service Executive (HSE) Dublin North East (DNE) and Dublin Mid-Leinster. This evidence-based training highlighted the need to develop a multidisciplinary approach to prevent falls and fractures among older people. The training encouraged participants to run workshops and training sessions locally, to discuss the issues relevant to their particular setting, and to explore ways to implement evidence based practice.

2.1 Identifying gaps in service provision locally

Occupational Therapists and Physiotherapists who attended this training gave a joint workshop to their peers. A brainstorming session at this workshop revealed anecdotally that there were gaps in service provision, and that only a small percentage of older people had a comprehensive multidisciplinary approach to the prevention and management of falls and fractures.

2.2 Organising for success

Following on from this workshop, an interim working group of Occupational Therapists and Physiotherapists was formed in December 2005 to examine how to put the evidence into practice. A gap analysis was made between evidence based practice and current practice. The group liaised with the Health Promotion Service DNE to plan how best to develop a multidisciplinary approach to implementing best practice in the area.

In mid-2006 the Occupational Therapist and Physiotherapist on the BPCT formed a multidisciplinary group to examine introducing a falls and fracture prevention programme within that team. Members included a General Practitioner (GP), GP Practice Nurse, Community Nurse, Counselling Psychologist, and Dietician.

In September 2006 the interim working group gave a presentation to the LHO-DNC General Manager, Manager of Services for Older People, Director of Nursing, and the Managers of the Health and Social Care Professions. The presentation outlined the scale of the problem of falls and fractures in the area and recommended an evidence based service aimed at prevention. Managers agreed to support a multidisciplinary approach and to release staff to explore ways of implementing
an interdisciplinary service. It was decided that a steering group representing all relevant services would be formed, which would report to the DNC Older Persons Care Group.

2.3 Building alliances for an interdisciplinary and interagency approach

In October 2006 a multidisciplinary steering group was established, with representatives from health promotion, dietetics, community nursing, occupational therapy, physiotherapy, residential and day care services, and a 3rd level institution.

The Geriatricians in the Mater Hospital were informed of the formation of the steering group and were supportive of the initiative. Discussions were held with Age Action to explore how best to include older people’s perspectives in the steering group. It was deemed that this would be more appropriate later on in the development of the programme.

The steering group initiated a SWOT analysis (i.e. strengths, weaknesses, opportunities and threats) to assess the most feasible community setting to implement a falls and fracture prevention programme. They identified B PCT as the most suitable multidisciplinary team, and began working with them to develop and implement a programme.
Section 3: Planning for implementation of a falls and fracture prevention programme

In June 2007 a Partnership Group was formally established with representatives from the LHO-DNC steering group and BPCT.

3.1 Terms of reference of partnership group

2. Identify the target group at risk, through an appropriate screening process.
3. Develop a range of criteria and guidelines for the assessment and intervention process.
4. Develop, implement and evaluate a fracture and falls prevention training programme for the relevant staff.
5. Implement interventions targeting intrinsic and extrinsic risk factors for fractures and falls, and determine the best ways to ensure multidisciplinary integration in this process.

Working groups were established to deliver on the terms of reference, and these subgroups reported back to the partnership group (see Figure 1 below). These working groups consisted of staff from GP Practices, BPCT, Community Care, Residential, Day Care and Health Promotion services.
3.2 Outcome of working groups

3.2.1 Current practice working group

Current practice for the relevant services regarding the screening, assessment and interventions to prevent falls and fractures were reviewed. This was carried out by a staff questionnaire on the BPCT in August 2007.

3.2.2 Screening, Assessment & Integrated Care Pathways working group

Validated tools in the NICE (2004) guideline and the NHS DOAS (2006) pathway recommendations were examined. A pathway to screen for risk of falls and fractures was developed; a screening tool was also developed. All screening documentation developed for Phase 1 were tested on some staff prior to the pilot. Guidelines were developed for assessments to be implemented in Phase 2 which were based on the NICE (2004) guideline.
3.2.3 Interventions working group

Each discipline examined the recommended best practice in their area of expertise in the NICE (2004) guideline and the NHS DOAS (2006) pathway, and considered what would be feasible for them to adopt. Four intervention guidelines were developed which had the strongest evidence rating in the NICE (2006) guidelines. The assessment and intervention groups then completed a draft document with guidelines for the assessments and interventions for Phase 2.

The working group advised that further resources would be required to implement and evaluate the entire interdisciplinary pathway. The main resource required is the time for health professionals to implement the screening, assessments and interventions and to coordinate the entire fall and fracture prevention programme. Administrative support is needed to ensure the pathway is implemented, coordinated, and audited effectively.

3.2.4 Training working group

Examined and planned the staff training needs for the pilot project and for the introduction of the entire pathway.

3.2.5 Evaluation working group

The European Quality Instrument for Health Promotion (EQUIHP) Netherlands Institute for Health Promotion and Disease Prevention, and the Flemish Institute for Health Promotion (2005), document completed as the framework for the process evaluation.
Section 4: Implementation Process of Phase 1

The implementation of the falls and fracture pathway had the support of managers, but no funding was available for a falls prevention co-ordinator or project manager. Following consultation with the relevant healthcare managers, the Physiotherapy Manager agreed that the Senior Physiotherapist on the BPCT could assign up to two hours a week over four months to co-ordinate the implementation of the phase one pilot. The Dietetic and Occupational Therapy Managers gave approval for staff to allocate some time to the implementation and evaluation of the pilot programme.

Due to the scale of the project and the considerable modifications required to work practices across several disciplines, the implementation was planned on a phased basis. Phase I consisted of a screening process for case risk identification. Due to staff shortages the Occupational Therapist had a limited input and Community Nurses were unable to take part. Phase 2 aimed to introduce assessments and interventions using an integrated care pathway. Phase 2 has not yet been initiated.

4.1 Eligibility

People over 65 years of age enrolled with the BPCT. The criteria for enrolment are that the client lives in the geographic area and is registered with specifically named GPs.

4.2 Consent

The team discussed the issue of consent to share relevant information. They agreed that the consent obtained in writing by the BPCT, when the client initially registered with the team, was adequate for this programme. Only members of the BPCT could access the spreadsheet results of the falls and osteoporosis risk screening tool.

4.3 Identification and screening of those at risk of falls and fractures

A comprehensive case identification pathway was developed for BPCT clients (Appendix 2). More specifically:

- During routine visits to the health centre or in their home, a health professional in the BPCT asks an eligible older person if they have fallen in the past year.
- If they receive a ‘yes’ response, the Falls & Osteoporosis Risk Screening Tool (Appendix 3) is administered. This consists of three sections: an osteoporosis risk questionnaire, a falls history,
and an objective measure of gait and balance using the ‘Timed Up and Go’ test developed by Podsiało and Richardson (1991).

- Results of this screening determine which of three possible pathways the client enters.
- Advice on health and well being was given to all clients. For this pilot the ‘Keep Safe this Winter: Preventing Falls and Trips’ leaflet published by the HSE National Communications Office was used (Appendix 4).

4.4 Timescale

The implementation of the pilot screening programme took place between 1st November 2007 and 28th February 2008.

4.5 Documentation

The following documents were developed by the partnership group for this pilot programme:

1. Falls Prevention Pathway for Phase One (Appendix 2).
2. Falls & Osteoporosis Risk Screening Tool (Appendix 3).
3. Multiple falls addendum document (Appendix 5).
4. List of medical conditions increasing the risk of osteoporosis (Appendix 6).
5. Template of letter for GPs (Appendix 7).
6. Spreadsheet to record clients’ data, located in a shared folder on the HSE intranet.
7. Staff feedback questionnaire following training on Phase One pilot project.
8. Staff feedback questionnaire following completion of Phase One.

4.6 Training

The following training was undertaken during the development of the programme:

- **June 2007:** Members of the partnership group attended a one-day Integrated Care Pathway (ICP) training course, run by the Irish Society of Quality and Safety in Healthcare.
- **Sept.-Oct. 2007:** GPs, GP Practice Nurses, Community Nurses and Health and Social Care Professionals involved in the screening process undertook one hour of calibration training on using the screening tool. This training was given by members of the Partnership Group who were also working in the BPCT. The parameters of the pilot programme were outlined and instructions were provided on how to use the database to record information.
Section 5: Evaluation

The partnership group evaluated the pilot pathway in three ways:

5.1 Outcome evaluation on the clients’ data collected by the team from the client spreadsheet.
5.2 Impact evaluation on all staff involved in implementing the pilot, through an administered questionnaire.
5.3 Process evaluation of the planning, implementation and evaluation of the pilot using the EQUIHP, Netherlands Institute for Health Promotion and Disease Prevention, and the Flemish Institute for Health Promotion (2005).

5.1 Outcome evaluation

The outcome evaluation is based on analysis of the clients’ data. The data was gathered during the screening, then entered on the spreadsheet on the HSE intranet shared folder.

| Clients were asked the initial question ‘Have you fallen in the last year?’ (n=99) |
|---|---|---|
| Fully eligible for pilot study: 74% (n=70) | Eligible for study but not enrolled in the PCT: 11% | Not eligible for the study as not in the PCT catchment area: 15% |

99 people were asked the question ‘Have you fallen in the last year?’

However, only 70 people were eligible to be included for data analysis.

28 people were screened who were not eligible, as they lived outside the catchment area or were not enrolled in the PCT. One client was entered twice.

Figure 2: Eligibility for pilot study
Figure 3: How many fell in the last year

Figure 4: Which professions asked about falls

Completion of case identification tool for those who had fallen (n=23)

Number of people requiring full screening: 23.
Screening completed: 22 (96%).
Screening not completed: 1 (4%).

The person not screened was rescheduled by the GP to come back at a later stage.
Professions that completed the screening tool on the 23 clients

- GPs 12 (49%)
- GP Practice Nurses 5 (23%)
- Occupational therapist 1 (5%)
- Physiotherapist 5 (23%)

Figure 5: Professions that completed the screening tool.

Care pathways for the clients who completed the screening tool (n=22)

- 45% Pathway 3
- 14% Pathway 1
- 41% Pathway 2

Figure 6: Care pathways for clients who completed the screening tool

### Pathway 1
- Medical problem or unexplained fall
  - Refer to GP for focused medical assessment
  (Pathway 1)

### Pathway 2
- Recurrent falls
- Single injurious fall (any injury)
- Single fall with TUG score greater than 20 seconds
  - Refer as appropriate
  (to PHN, OT &/or physio)
  (Pathway 2)

### Pathway 3
- Single explained fall with TUG less than 20 seconds
  - Provide and discuss ‘Winter Initiative Brochure’
  (Pathway 3)

Figure 7: Overview of Pathways
5.2 Impact evaluation

The partnership group decided that a semi-structured interview with each member of staff who implemented the pilot pathway would capture the most information. A questionnaire was designed and evaluated by the Health Promotion Service, then administered to staff by a BPCT member who was also on the partnership group. Staff were asked about:

(i) the screening tool;
(ii) the spreadsheet;
(iii) the training they received;
(iv) their comments and recommendations.

In total, 14 questionnaires out of a possible 18 were completed by staff. One staff member was on maternity leave and three had left the service. The main findings were as follows:

Results

i) Screening Tool

- The Screening Tool in terms of ease of use and time to complete, scored above average.
- The ‘Timed Up and Go’ (TUG) test scored lowest overall in terms of ease of completion in practice, the time it took, and how acceptable it was to complete.
- GPs and GP Practice Nurses in particular rated both the TUG and the Screening Tool the least favourably.
ii) Spreadsheet

• Rated lowest in terms of:
  (a) Checking whether clients had been previously screened.
  (b) Ease of completion: 70% stated that they felt the database could be improved upon, and there was a suggestion to link it to the GP computer software programme.

iii) Training

• Scored highly across professions: it was considered to be adequate and relevant and to have had a positive effect on work practices.
• 38% said they would benefit from further training.

iv) Comments and recommendations

• All GPs reported good satisfaction with the Dual Energy X-ray Absorbtionmetry (DXA) scan service in St Mary’s Hospital.
• Other GP comments included: ‘My practice has changed, but protocol-driven programmes are difficult in day to day general practice’; ‘A good team experience’; ‘Very useful as a start to multidisciplinary working, but overall difficult to use in daily duties’; and ‘An electronic patient record would be a lot better than an Excel spreadsheet for inputting results, assuming all members were able to access it.’
• 30% (n=4) said they would not recommend the pathway in its current format to another primary care team. Three of these four were GPs.
• 70% of the respondents (n=10) stated that they would be prepared to recommend it to another Primary Care Team.

5.3 Process evaluation

The partnership group decided to evaluate the process of planning, implementing and evaluating this pilot pathway, using the EQUIHP Netherlands Institute for Health Promotion and Disease Prevention, and the Flemish Institute for Health Promotion, (2005). EQUIHP is an instrument for quality development and assurance of health promotion projects. It is a combination of a checklist, to assess the quality of health promotion projects, and a set of guidelines, to improve their quality. It was divided into four separate sections. Questions from each section were answered by ticking one of three possible indicators:

Yes ☐ Partly ☐ No ☐

and by answering each question with specific details.
Section One – Framework of Health Promotion Principles

The indicators included participation, empowerment, equity and equality.

- This pilot project fully met all these indicators.

Section Two – Project Development and Implementation

The indicators were subdivided into sections on analysis, aims and objectives, target group, intervention, implementation strategy, and evaluation.

- This pilot project fully or partially met all these indicators.

Section Three – Project Management

The indicators were subdivided into sections on leadership, planning and documentation, capacity and resources, participation and commitment, and communication.

- The indicators on leadership related to the qualifications and competencies of the project manager. As there was no dedicated project manager, different people at different stages in the process volunteered to lead in different areas. Therefore the indicators for a project manager were deemed irrelevant.
- The indicators on planning and documentation were fully or partially met.
- The indicators on capacity and resources, including financial resources, were either partially met or not met.
- The indicators on participation and commitment, and communication, were fully or partially met. Working as part of a multidisciplinary group highlighted the differing priorities, expectations and time commitments.

Section Four – Sustainability

- The aims, objectives and results of the pilot screening programme have been reviewed in view of continuation and modified.
- The pilot screening tool and database are not sustainable in their current form. The team have modified the screening tool and pathway and shared this with other teams.
- They have yet to decide on the best method to share client information in the absence of an integrated ICT system.
- The benefits of early risk identification are clearly outlined in international research. Further work is needed to ensure this pathway can become sustainable.
Section 6: Findings and Analysis

This programme highlights that 33% (n=23) of the identified population (n=70) had a fall in the last year. This is in keeping with national findings, HSE, NCAOP & DoHC (2008). It is likely that two thirds of these people (n=14) will fall again within six months. Of the 23 people who had fallen, 43% (n=9) were found to be at risk of osteoporosis, and 66% of those at risk (n=6) were referred on for a DXA scan. The GPs reported great satisfaction with this new referral pathway.

The falls and fracture prevention pathway provided health professionals with an identified pathway and ensured that all clients received health promotion advice and literature. Greater multidisciplinary teamwork was achieved but staff shortages meant that not all disciplines were able to take part. Five disciplines were trained in using the tool; however, the outcomes are based primarily on results from three disciplines.

Due to staff shortages the Occupational Therapist had a limited input and Community Nurses were unable to take part. GPs and GP Practice Nurses found the screening tool unsuitable for ongoing use because of time pressures and interruptions in work flow. They would consider using a modified version. Community Nurses, although unable to take part in this pilot, have also said they would consider using a modified version of the tool. Physiotherapy and Occupational Therapy services found the screening tool acceptable and are using it in their practice. Owing to the difficulties with the spreadsheet used in the pilot, they are currently not recording their findings on this spreadsheet.
Section 7: Discussion

7.1 Programme development

The health professionals in the partnership group had a common goal but differing perspectives and approaches on what to do and how to do it. For example, some people wanted immediate action while others were focused more on a slower planned approach which included evaluation mechanisms from the outset. This created tension between those who wanted to ‘get on with it’ and those who favoured a more measured approach. It took time to negotiate a consensus and it required commitment and compromise from all those involved. A communication plan was written and circulated. This plan detailed all aspects of communication around the project.

This pilot programme was carried out with no extra funding. The main resource was staff time. HSE staff were allocated time to attend meetings and to conduct some developmental work. However, this had to fit in with workloads, and people often had to juggle to deliver on tasks to progress the initiative. Those involved reported that it was a very time consuming process.

Staff enthusiasm, willingness to improve practices, and belief in the potential benefits to be achieved for both service users and service providers were the driving forces in the successful implementation of this pilot project. Extra resources would be essential in the future to facilitate the development of the pathway: to include integrated multidisciplinary assessment and interventions, facilitate an ongoing audit, and ensure that implementation of the pathway is sustainable.

The GPs supported the implementation of the screening during the pilot programme. The implementation of an integrated care pathway, including assessments and interventions, would require significantly more time from GPs and would have resource implications.

The background work conducted by the partnership group in the research, documentation, training and preparation for implementation was a key component of the success of the programme.

7.2 Programme implementation

The Ballymun project was carried out prior to the publication in June 2008 of the National Strategy, HSE, NCAOP & DoHC (2008). Much of the work carried out in Ballymun is in keeping with the recommendations of this strategy. There are three differences between the National
Strategy HSE, NCAOP & DoHC (2008) falls algorithm and the screening tool in the Ballymun pilot project. In the strategy algorithm, a patient is asked if they have experienced difficulties in walking or with their balance rather than using the TUG Test as part of the ‘screen’, they are also asked if they have a fear of falling. Screening for osteoporosis risk is not done unless the person requires a multi-disciplinary assessment.

Lack of an integrated Information Communications Technology (ICT) system was a major stumbling block for this programme and an ongoing barrier to encouraging participation. There were challenges in recording patient data as the GPs used an electronic patient record (EPR) while others used paper based records. Also the excel sheet created on the HSE’s shared folder was not compatible with the GP system.

A lot of falls and fracture prevention-related health promotion material has been published in local areas over the years. Although it is often of good quality, once out of print it tends not to be reproduced, and is therefore effectively ‘lost’. Even the ‘Keep Safe this Winter’ leaflet, which was published by the HSE national communications unit and which this pilot used, has a seasonal heading which lessens its suitability for year-round use.

**7.3 Achievements**

The evaluation of the pilot programme demonstrates the success of phase one. The training of health care professionals in falls and fracture prevention and the pathway and screening tool facilitated the identification of older people at risk of falling and osteoporosis in a primary care setting. For the individuals who took part in this pilot programme, it was a major benefit.

The evaluation doesn’t capture what a significant achievement it was to develop and implement this programme. People in the group came from different backgrounds and disciplines, which meant there was a wide variety of skills and expertise that people generously shared. The volume of work to be completed by a small number of individuals was enormous, but people willingly took on tasks despite their own workload.

The BPCT and the partnership group have gained a lot of experience by doing this pilot project and by reflecting on its findings. Since the pilot, the work they undertook has been shared with other local PCTs, who are also starting to develop falls and fracture prevention programmes.
Section 8: Recommendations

There were a number of key learnings from developing and implementing this pilot programme. The recommendations outlined below are reflective of that learning. National recommendations, which are in line with the National Strategy, HSE, NCAOP & DoHC (2008), have been made. While the group recognise the importance of national leadership in falls and fracture prevention, it can only deliver on recommendations for the LHO DNC Area.

8.1 National

- National agreement needs to be reached on suitable patient record mechanisms that would allow multidisciplinary teams to share confidential information.
- National in-built fall alert system for those requiring screening or at risk of falling
- A nationally agreed Unique Health Identifier is urgently needed.
- Expertise and leadership within the HSE is needed to help develop, implement and evaluate further programmes to prevent falls and fractures in PCCC services.
- Standardised resources and toolkits for use in a primary care setting in Ireland are needed to educate the general public, older people and health personnel on healthy ageing and the prevention/management of falls.
- A national HSE web-based discussion and information-sharing forum on falls and fracture prevention should be developed so health personnel can share their expertise and experiences. This would also reduce the duplication of teams developing similar programmes simultaneously.

8.2 Steering Group

The Falls and Fracture Prevention Steering group in LHO-DNC will:

- Continue to promote interdisciplinary and interagency working to implement the National Strategy, HSE, NCAOP & DoHC (2008) in PCCC services.
- Continue to support the professional development of health personnel in falls and fracture prevention.
- Maintain strong links with the local health promotion service, and follow up on the falls prevention training programme run by the Health Promotion Service and Physiotherapy Service in 2008.
- Ensure proven effective strategies continue to be implemented when developing fall and fracture prevention programmes.
• Liaise closely with the geriatricians and multidisciplinary teams in the Mater and Beaumont hospitals.
• Continue to network and share knowledge

8.3 Ballymun Primary Care Team

The BPCT will:

• Trial the modified pilot screening tool and pathway which are now in line with the recommendations in the National Strategy, HSE, NCAOP & DoHC (2008). The team will then trial the modified tool.
• Work with other PCTs in Dublin North Central to develop and implement standardised guidelines for falls and fracture prevention among older people.
• Endeavour to develop best practice in multifactorial assessments and interventions.
• Consult with local older people and voluntary groups and involve them in the planning of any future falls and fracture prevention programme
• Implement and evaluate an evidence-based 24 week Falls Management Exercise (FaME) LaterLife Training (2003) programme run by the physiotherapy service in collaboration with the local community
• Provide ‘Healthy Ageing’ sessions in collaboration with three community groups during Positive Ageing Week 2009
• Seek clarification from the HSE on how to implement and use a patient-held record
• Continue with professional development and training to build capacity among the BPCT to reduce falls and fractures in older people and high risk groups.
• Continue to explore the possibility of further developing their local GP software system, so that the multidisciplinary team can use it to share falls-related client data.
Appendix 1

Acknowledgements

The successes of this programme have been achieved through true multi-disciplinary working.

The falls and fracture prevention partnership group would like to acknowledge the extensive support they received professionally and personally from the following: the Care Group for Older People, the managers of all the services involved, the Health Promotion Service, the Falls and Fracture Prevention Steering Group and the Ballymun Primary Care Team.

A special thank you to Dr Niamh Martin, former Health Promotion Officer for Physical Activity, HSE Dublin North East, for her expertise and assistance in research and to Irene O’Byrne-Maguire, Clinical Risk Advisor, Clinical Indemnity Scheme, State Claims Agency, for her guidance and valuable input in compiling this report.

Partnership group members 2007-2008

<table>
<thead>
<tr>
<th>Name</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titi Akindipe</td>
<td>Senior Physiotherapist</td>
</tr>
<tr>
<td>Andrea Charlson</td>
<td>Senior Occupational Therapist</td>
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<tr>
<td>Vanda Cummins</td>
<td>Senior Physiotherapist, Ballymun PCT</td>
</tr>
<tr>
<td>Clare Farrell</td>
<td>Assistant Director of Nursing</td>
</tr>
<tr>
<td>Michelle Mc Kevitt</td>
<td>Senior Occupational Therapist and Acting Manager</td>
</tr>
<tr>
<td>Marion O’Flynn</td>
<td>Senior Counselling Psychologist, Ballymun PCT</td>
</tr>
<tr>
<td>Dr. Leán O’Flaherty</td>
<td>Senior Dietician, Ballymun PCT</td>
</tr>
<tr>
<td>Áine O’Riordan</td>
<td>Senior Physiotherapist and Acting Manager</td>
</tr>
<tr>
<td>Bernadette Rooney</td>
<td>Health Promotion Officer</td>
</tr>
</tbody>
</table>

For further details about this project contact

Áine O’Riordan/Vanda Cummins  Bernadette Rooney
Senior Physiotherapists       Health Promotion Officer
aine.oriordan@hse.ie          bernadette.rooney@hse.ie
Appendix 2: Ballymun Primary Care Team Falls Prevention Pathway

Eligible Client
Client must be over 65 years of age and currently enrolled with Ballymun Primary Care Team

Presents with a fall
Presents to Primary Care Team Member via routine referral

Check: Has client entered pathway in previous 12 months?
Yes
No further action taken
No

Ask: In the past year have you had any fall, including a slip or trip, in which you lost your balance and landed on the floor or ground or lower level?
Yes
Client has fallen

Conduct Falls & Osteoporosis Risk Screening Tool

Pathway A: Medical Problem or Unexplained Fall
Pathway B: Recurrent Falls; Single Injurious Fall; Single Fall with TUG >20 seconds.
Pathway C: Single Explained Fall with TUG <20 seconds
Pathway D: Client Has Not Fallen

Osteoporosis Risk Result
Not at risk
At risk

Falls Risk Result

Request DEXA Scan through GP

Focused Medical Assessment & Intervention
Multifactorial Assessment & Intervention
Provide & Discuss Advice on Health & Well Being; ‘Winter Initiative Brochure’
# Appendix 3: Falls & Osteoporosis Risk Screening Tool

<table>
<thead>
<tr>
<th>Client Name:</th>
<th>D.O.B.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td></td>
</tr>
</tbody>
</table>

## 1. Osteoporosis Risk:

**A. Ask:** Have you suffered a (fragility) fracture?
- i.e. Any fracture caused by a fall from standing height.
- □ Yes □ No

**B. Ask:** Is there a history of fracture among your first-degree relatives?
- History of osteoporosis fracture in the client’s family, especially hip fracture in mother, but also any fracture from osteoporosis in either parent or a sister
- □ Yes □ No

**C. Ask:** Have you been on corticosteroid medication for longer than 3 months? (includes medication via an inhaler)
- □ Yes □ No

**D. Ask:** Do you have any medical conditions, such as rheumatoid arthritis, that increase risk of osteoporosis?
- (See appendix B for other conditions associated with bone loss.)
- □ Yes □ No

**E. Observe:** Is the person underweight or thin? *(Do not ask this question – observation only.)*
- □ Yes □ No

*If answer ‘yes’ to any question (A-E) please refer to GP for referral letter for Dexascan*

## 2. Falls History

**Ask:** In the past year have you had any fall, including a slip or trip, in which you lost your balance and landed on the floor or ground or lower level. Then continue with the following questions.

<table>
<thead>
<tr>
<th>1. How many times have you fallen in the past 12 months?</th>
<th>Activity</th>
<th>Where</th>
<th>When</th>
<th>Footwear Worn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. In relation to your most recent fall: How did you fall?</td>
<td>□ Yes □ No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In case of multiple falls, complete appendix A.</td>
<td>□ Yes □ No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Could you get up from the floor unassisted?</td>
<td>□ Yes □ No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Have you made changes to your lifestyle as a result of your fall(s)?</td>
<td>□ Yes □ No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Did you lose consciousness or black out at the time of the fall?</td>
<td>□ Yes □ No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. ‘Timed Up and Go’ (TUG) Test

Instructions:
- The person may wear their usual footwear and can use any assistive device they normally use.
  1. Have the person sit in the chair with their back to the chair and their arms resting on the arm rests.
  2. Ask the person to stand up from a standard chair and walk a distance of 10 ft. (3m).
  3. Have the person turn around, walk back to the chair and sit down again.
- Timing begins when the person starts to rise from the chair and ends when he or she returns to the chair and sits down.
- The person should be given 1 practice trial and then an actual test.

Observations:

Walking Aid:
- Chair used:
- Footwear used:
- Other observations:

Based on results of Timed Get Up and Go and Falls History….

- Medical problem or unexplained fall
  - Refer to GP for focused medical assessment (Pathway 1)
- Recurrent falls
  - Single injurious fall (any injury)
  - Single fall with TUG score greater than 20 seconds
  - Refer as appropriate (to GP, PHN, OT or physiotherapist) (Pathway 2)
- Single explained fall with TUG less than 20 seconds
  - Provide and discuss ‘Winter Initiative Brochure’ (Pathway 3)

Completed By: __________________________ Date: _________________
Profession: __________________________
Appendix 4: *Keep Safe this Winter: Preventing Falls and Trips* booklet

(PDF Version available on request)

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**In case of emergency**

- Keep emergency numbers in large print near each phone.
- Think about getting an alarm device that will call for help in case you fall and cannot get up.

<table>
<thead>
<tr>
<th>Doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out of Hours</td>
</tr>
<tr>
<td>Hospital</td>
</tr>
<tr>
<td>Ambulance</td>
</tr>
<tr>
<td>Neighbour</td>
</tr>
<tr>
<td>Garda Station</td>
</tr>
</tbody>
</table>

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**Keep Safe this Winter**

Preventing Falls and Trips

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4: Fall prevention - in each room

**Floors**

- Arrange furniture so that you can easily move around all your rooms;
- Keep the floors clear of papers and books etc. that could cause you to trip;
- Remove rugs or use non-slip tape or backing so rugs will not slip;
- Make sure wires or cords from lamps, telephones etc. do not trail where you walk.

**Stairs and Steps**

- Fix loose or uneven steps;
- Do not leave shoes or books on steps of stairs;
- Have a light switch fitted at the top and bottom of the stairs. As you get older you need brighter lights to see well;
- Install hand rails on both sides of the stairs making sure they reach the toe.

**Bathroom**

- Fit grab rails next to your toilet, bath and shower;
- Use a non-slip mat in the bath or shower.

**Kitchen**

- Keep items you use often within easy reach;
- If you need to reach high shelves use a steady step stool rather than a chair.

**Bedroom**

- Place a lamp close to your bed where it is easy to reach;
- Make sure there is a light between your bedroom and the bathroom;
- Have a phone extension fitted in your bedroom;
- Wear a personal alarm, check with your public health nurse, doctor or local Garda for further information.

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As you get older, a fall can result in broken bones but also in loss of confidence, loss of mobility and loss of your home. Many falls can be prevented and by making small changes you can lower your chances of falling.

**1: Keep active and exercise**

- Regular physical activity makes you stronger and improves your balance and coordination;
- Most adults over 65 should try to keep active. Even if you have chronic illness such as heart disease, high blood pressure, diabetes or arthritis there is a certain level of activity to suit you. Many of these conditions will improve with exercise;
- Begin slowly and start with exercises you feel comfortable doing;
- Start with walking. You can slowly increase the distance you walk;
- Ask your doctor if you are unsure what activities or exercises are best for you;
- Wear loose, comfortable clothing and well-fitted sturdy shoes;

**2: Ask your GP to review your medicines**

- As you get older you may need to change the dose of your medicines. Some medicines or combinations of medicines may make you feel faint or light-headed which could lead to a fall. Please check with your GP for advice;

**3: Have your vision checked**

- Your eyesight changes as you get older. Poor vision can increase your chances of falling. Make sure you get your eyesight checked on a regular basis.
Appendix 5: Multiple falls addendum to screening tool

In the event of more than one fall in the last 12 months, please complete details for each fall.

<table>
<thead>
<tr>
<th>Fall 2.</th>
<th>Activity</th>
<th>Where</th>
<th>When</th>
<th>Footwear Worn</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>3. Could you get up from the floor unassisted?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Have you made changes to your lifestyle as a result of your fall(s)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Did you lose consciousness or black out at the time of the fall?</td>
<td>□ Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall 3.</th>
<th>Activity</th>
<th>Where</th>
<th>When</th>
<th>Footwear Worn</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ No</td>
<td></td>
<td></td>
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</tbody>
</table>
Appendix 6: Medical conditions associated with increased risk of osteoporosis

- Hyperparathyroidism
- Male Hypogonadism
- Thyrotoxicosis
- Anorexia nervosa
- Malabsorptive syndrome
- Inflammatory bowel disease
- Coeliac disease
- Rheumatoid arthritis
- Chronic Liver Disease
- Renal Disease
- Vitamin D deficiency
- Alcoholism
Appendix 7: Template of letter to GP

Date: ___________________

Dear Dr ____________________,

I have conducted the Falls & Osteoporosis Risk Screening Tool on

Client Name: ____________________________________

Client Address: ___________________________________

______________________________________________

Client Date of Birth: ____________________________________________

The results of this screen indicate the client

□ Is at risk of osteoporosis
□ Has a history of unexplained falls

I would appreciate it if you would

□ Refer the client for a Dexa Scan & follow up
□ Investigate whether there is a medical reason for his / her unexplained falls

Please contact me with any further enquiries regarding this matter.

Thank you

Signature: _______________________________________

Name: _______________________________________

Profession: _______________________________________

Contact Phone No.: ___________________________

Please attach a copy of the completed screen with this letter

Ballymun Health Care Facility
Civic Offices
Ballymun Rd
Dublin 11

Ph: 01 8467000
Appendix 8

Additional Resources

Health Service Executive National Communications ‘Keep Safe This Winter’ (www.hse.ie)


Prevention of Falls Network Europe, also known as ProFaNE (http://www.profane.eu.org/).
References

Central Statistics Office, (2007) Census 2006 Principal Demographic Results
Dublin: Stationery Office Government Publication


