

EXPLORING THE USE OF TELECARE WITHIN APPROACHES TO IMPROVE THE PREVENTION & MANAGEMENT OF FALLS & FRACTURES

BRIEFING NOTE 5: PARTNERSHIP WORKSHOP – 16th JUNE 2010

INTRODUCTION

This is the fifth workshop in a series looking at whether telecare can assist in local falls management and prevention programmes. Ann Murray, Falls Programme Manager within the Scottish Government's Rehabilitation Framework programme welcomed everyone and outlined the programme for today's workshop. Key elements include progress from the partnership areas on their Innovation Projects and a presentation and discussion with Ed Duncan and Andrew Kinsey from Pixic on a technology development they are progressing to assist with Falls Prevention & Management.

TELECARE DEVELOPMENT PROGRAMME UPDATE

Moira Mackenzie, Telecare Programme Manager with the Joint Improvement Team gave a brief overview of recent progress. She advised that all 32 partnership areas in Scotland have submitted information on the local application of Telecare Programme funding and their associated match funding for 2010/11. Twenty areas have specifically mentioned an interest in Falls Prevention and Management. **Action:** Further details of the bid summaries will be circulated in early course.

Moira also referred to discussions with the UK wide Technology Strategy Board who have recently launched a £10m competition. The Telecare Programme is looking to support a consortia bid which builds on progress which has been made with Telehealthcare service redesign across Scotland with an aim of rolling out an 'at scale' development. Falls Management and Prevention has been highlighted as an important factor within this.

The next Telecare Learning Network is scheduled to take place at the Iris Murdoch Building at Stirling University on 11 August. This event will focus on sharing knowledge of innovative health and wellness technologies being developed in Scotland, and explore the potential mutual benefits of collaborative working. **Action:** Details of the network programme will be circulated to attendees at today's workshop with an invitation to participate.

FALLS PROGRAMME UPDATE

Ann Murray advised that progress continues to be made on the national Falls Programme.

Results of National Progress Mapping Exercise

A recent mapping exercise has been undertaken to establish a baseline of activity and identify national priorities for the next 2 years. This was a particularly opportune time to develop a baseline as the NHS Quality Improvement Scotland (QIS) sponsorship of the Programme technically ended in Dec 2009 prior to transferring into the Rehabilitation Framework. It was also a good time to support the falls leads and co-ordinators to undertake a 'stock check' of progress, and encourage focus on activity which is aligned with evidence based impacts.

The mapping exercise was co-ordinated by local Rehabilitation Co-ordinators. They were encouraged to work with falls leads/co-ordinators to undertake a self assessment of their progress against 40 indicators. The indicators were identified from evidence as key components of a preventative and holistic falls management service and were aligned in a

questionnaire with the 4 stages of the NHS QIS Up and About Pathway. Participation was voluntary, and 11 of the 14 local Health Boards took part (including 36 Community Health Partnerships). Responses were collated and anonymised.

The self assessment framework was designed to reflect the journey of care in the context of a Falls Prevention and Management pathway. This is arranged around 4 main stages which aim to;

- Support health improvement and self management
- Identify from an overall population those who are at high risk of falling and offer interventions to avoid or assist
- Respond timeously and appropriately to a person who has fallen
- Identify what interventions can be provided to prevent recurring falls and fragility fractures

The self assessment methodology encouraged Health Boards to score themselves from 0 to 5. (0: didn't have information, 1: identified as an area of improvement but no work currently going on. 2 or 3 if an action plan is in place and work is progressing to varying degrees, either in part of the Board area or across the area. 4: partially achieved. 5: achieved in full).

Ann summarised the responses across various stages/indicators. This identifies a generally mixed picture but with lots of activity going on, and some areas where there are gaps in activity e.g. 9 out of 11 Health Boards did not have a clear plan for who would respond to an uninjured fall.

Further information on the mapping exercise will be circulated in due course, however Ann provided a summary of findings identifying common factors which contribute to success.

Factors which contribute to Success

1. A funded falls lead/co-ordinator. Many of the existing posts are temporary, so sustaining progress beyond this year is an area of concern.
2. Having champions at all levels who have enthusiasm, influence and tenacity
3. A strategy in place (6 of 11 boards have a strategy) with a funded, phased implementation plan
4. Staff identified who can deliver Phase 4, as this stage is key to success. A rehabilitation/enablement service has to be in place.
5. Recognition of the importance of addressing falls and osteoporosis in combination
6. Links established with related developments and services
7. Investment in staff training and development
8. Be open to learning from the experience of others
9. Buy in from GPs
10. Access to relevant data to establish need, target interventions, support direct care, evaluate and review services, and evidence impact of interventions.

Building on these findings, Ann then introduced the workshop activity. This aims to explore how the impact of falls prevention and management approaches can best be measured, evidenced and reported. **Action:** A further workshop is to be held in October by the Rehabilitation Framework programme to explore this in more detail – information on this will be circulated by Ann when available.

MEASURING IMPACT WORKSHOP

A series of questions were identified to prompt discussion in the workshop. The groups were also asked to think about impacts in the context of the 6 dimensions of quality identified

within the NHS Quality Strategy – person centred, safe, effective, efficient, equitable and timely. Participants worked with their locality teams then shared their responses. with the wider group.

Q1; Why measure any impact of Falls Prevention & Management approaches?

- To measure performance
- To justify impact, which could be positive or negative
- To allow a reporting tool for management information purposes
- To consider what difference the activity has made to improving outcomes for the end user, system, staff
- To share information with other partners
- To justify service expansion and improvement
- To allow cost benefit analysis, and justify any transfer of resources
- To measure changes or deviations in performance
- To learn more about what is happening, and identify any unintended consequences

Q2: What should we measure?

- Qualitative information to capture patient centred/carer elements
- Benefits to user/staff of change in approach
- Ensure any interventions are safe - risk assessments could assist with this
- Range of quantitative measures to identify effectiveness and efficiency e.g. rates of falls within the population group, prevention of admissions to hospital (acknowledging this is a judgement call)
- Information to identify whether approach is equitable and timely. Already measure time taken to respond, but not sure if we are measuring the right things.
- If doing a pilot, need to plan how the information is best shared/used to justify further investment
- Number of fallers identified
- Need to measure any reduction in the number and severity of falls within service user group
- Reduction in fractures
- How successful interventions have been
- Better capture A&E attendances for falls – how many appropriately admitted
- How many multifactorial assessments have been undertaken and the results of these (costed interventions?)
- Impact on admissions and re-admissions
- Impact of different kinds of interventions for different types of faller – range of options
- Multi agency inputs
- Identifying number with osteoporosis at first fracture
- Number of secondary and subsequent fractures in service user group
- Number of CAS call outs
- Comparison of costs of interventions
- Comparing models to see progress/issues, justify expansion

Action: Information on telecare impact measurement approach to be circulated for information.

Q: Should there be core measures plus local?

- It was agreed that a core set of measures would be useful, to ensure standards and measure performance, identify local issues against a benchmark. A&E attendances could be core. A case has been put forward for including cause of injury into the ISD data set.

- No national coding for fallers at the moment although locally some are doing this
- Number of falls, type of falls and where they occur: Consistently measure the number of inpatient falls – every hospital measures this now, although may not be consistent, falls within a care home, falls coming through the community alarm/telecare service, falls within sheltered housing – rate per service user
- Would be useful to have community based data – need guidance on how to achieve it locally

Q: What have we got already

- Some of this information is available locally/nationally at the moment e.g. inpatient falls, but some not as robust or collated in a consistent way.

Q: Where are the gaps in data

- Lots of gaps in data.

Q: Challenges/possible solutions?

- A positive solution to identifying fallers has been collaborative working with the community alarm/telecare services. This has also provided some element of response.
- Some possible impact areas/outcomes have already been identified within the Innovation Projects. These should be looked at to inform impact measures.

Action: Ann and Moira agreed to take these comments away and come back to the next workshop with around 6 possible impact measures. These would be aligned with the stages of the Up and About Pathway approach. Further discussion could then take place around these and on how difficult/easy they might be to collect.

PRESENTATION & DISCUSSION

Andrew Kinsey and Ed Duncan were welcomed again to the workshop and gave a brief presentation of a technology initiative they have been progressing within Pixic to assist with the problem of falls. Pixic is a high technology system and silicone design company which was established in 2008. They seek to invent and develop new technology within the health area, and successfully won the SMART Scotland Award in January 2010.

Their development was set within the context of falls and the impact of falls on the healthcare system in terms of resources and the individual in terms of quality of life and mortality.

- “Every 5 hours someone dies after an accidental fall in the home”.
- “In an 800 bed acute hospital there will be about 24 falls a week”.

There are issues associated with many of the technological solutions to falls e.g. pendants need to be worn and are dependent on battery, user activation. The Pixic solution uses a sensor based on acoustics and is plugged in to electric sockets on the walls. It is a room based solution rather than a monitoring system for the whole house, but has battery back up in event of power failure.

System fundamentals: based on a network of plugs/remote sensors which link to a base station to identify falls, or foot fall. The data goes to a central hub where it can be processed further if required/appropriate and information on movement patterns can also be identified.

Two applications are being proposed at this stage, as they are keen to move to prototype and test it out in a ‘live’ setting;

1. Care Home Usage: Hub will be belt worn device which care home attendant will wear, plugs will be in individual rooms. The attendant will be able to instantly recognised that something has occurred in Mr Smith's room, and be able to respond.

2. Home Sensor: May appeal to the private market, where someone can buy a kit for their home which can link to telephone based stand alone system. This can alert a neighbour, family member to respond. It is possible to set up the system so that it links to a care alarm centre instead, but would need to explore this in more detail.

Tentative Costings:

Care Home: Anticipate would need 35 sensors in rooms and 5 belt units. BOM for sensor unit – build for £10, selling price circa £40

Belt unit £15 build cost, selling price £60

These are really early figures and further cost modelling will require to be undertaken prior to formal market launch.

Home Solution: System bundle with telephone unit and 2 sensors covering 2 rooms for just under £100.

Why is Pixic better?

It does not need to be worn

It is intelligent – can determine which events are innocent and which are likely falls

Plugs into mains, so no worn out batteries

Can be used to dial a friend, notifying someone outwith the home

It is low cost, aimed at large “consumer markets” – accessible to mass market.

Enhanced Scope

There is potential for the scope of the application to be enhanced e.g. could identify increased risk of falls. Common platform allows for monitoring of levels of activity and fitness within the home. Data and chronology is provided – which could assist identify trends and individual behaviour and trending patterns over a long period. However this piece of research has not been undertaken yet.

Project Overview

At this stage, Pixic are 3 and a half months into their one year research funding. There are four key proof of concept phases to negotiate, and they have successfully completed the first two of these i.e. the design framework is complete and baseline “demo’s” are in place. It is still at a very early stage, but these initial results are very encouraging. A number of falls have been successfully detected within a test environment and they are expanding this with the use of “Buster”, a recently purchased crash test dummy. This will allow them to try out different types of fall. The fundamental concepts of the theory seem viable at this stage, but they are also busy progressing the securing of intellectual property, making contacts with practice to allow for more robust testing of the system, and working to deliver their first product. Pixic identified they are keen to identify potential partners to assist in trialling and funding of their approach.

Discussion/Questions

Q: What approach can be used in the bathroom where there is no plug. A: Although a plug seems to be the favoured approach, the design concept could also be connected to a light bulb. The best packaging still has to be decided, and field trials will assist with this. The system is immune to furnishings, but has to be room based.

Comment: Design is also important to consider and need to think about how it fits into peoples lives.

PARTNERSHIP UPDATE

Ayrshire & Arran/South Ayrshire: Heather Hall

When a progress report was provided in March, Heather had advised that although Ayrshire were developing a large project with 4 phases to identify repeat fallers from the call handling system (Alert System), their innovation project was much smaller in nature and is focusing on falls within sheltered housing (Sheltered Project).

Sheltered Project

A falls register within South Ayrshire's 20 units of sheltered housing was started in July 2009. Over the period up to Dec 2009, 116 falls were recorded with around 20 repeat fallers. There were 18 A & E attendances, and 14 unscheduled admissions. The aim of the project is to build in a more anticipatory approach which will shift the balance of care into the community. As part of this approach a training programme has been developed for the wardens, who can now directly refer residents who have fallen or who are at risk to the Integrated Care Team (ICT). Initial criteria had been identified, but this was quickly revised by ICT to further identify those at risk. Some initial targets for the project have been identified e.g. reduce falls by 10%, reduce unscheduled admissions by 20%, deliver joined up services. It is recognised that these will be useful to assist identify the effectiveness of approach.

The project team also recognised the importance of demonstrating the cost effectiveness of a preventative approach and they have been getting assistance from a colleague working on the Integrated Resource Framework. They are looking at the needs of those who fall and the types of intervention that are possible, including some time and motion studies. Also analysing who is delivering inputs just now and assessing whether these are most effective. There were some initial concerns about the potential for increasing referrals beyond a manageable rate, but so far the rate of increase has been manageable. However, an unintended consequence has been an increase in referrals to other services e.g. home care, podiatry. The response of the sheltered housing wardens has been very positive, with them identifying they feel much more positive about what they are doing. The cascade training programme has been particularly useful – 'Positive Steps Programme' that has been amended with input from the wardens. This will be delivered by the wardens to residents on an ongoing basis. All of the referrals made by the wardens to date have been considered appropriate, and all have required a case management approach.

Current evaluation and findings

A three month evaluation has taken place, which has identified a number of interesting areas e.g

- 19% of referrals to ICT need falls assessment and intervention

Where are we now?

- Keeping project to timescale
- Cascade training and falls tool box have been developed
- Have secured investment of £20k for staff in integrated care team from IRF fund – have managed to attract more funding.
- Concern about opening up referral channels and not able to sustain have not been borne out to date.

Heather advised that by the next workshop meeting they aim to have further results from the evaluation, they will have developed adverts for the Community Rehab Posts, and have more information on cost analysis for preventative approach. May also have widened their horizons to identify fallers from the home care service.

Falkirk & Forth Valley: Linda MacPherson

Linda advised that a regular performance update report is provided by the Mobile Emergency Care Service, which continues to evidence that they are making progress with reducing the rate of falls within their service user group. They are now using similar methodologies to report falls within the Housing with Care/Sheltered Service, Home Care and Residential Care homes, and these will be used to report progress resulting from improvements in falls interventions. **Action:** Electronic copy of Falkirk MECS report to be circulated.

Home Care: Engage staff shortly to send automatic letters to GP's notifying of falls as no local falls register is in place.

Care Homes: Project is now picking up. Now formally recording falls and the situation of these. MECS is engaging with the Care Homes to identify telecare solutions with the aim of preventing move on to other more intensive services.

Sheltered Housing: They are following the MECS pathway to identify frequent fallers and make onward referrals to the REACH team (assessment & reablement team based in Health). The next stage of this project is aiming to collate the same figures as MECS to identify and evidence impact.

At the last meeting it was reported that Falkirk had undertaken a historical audit of falls in *Local Authority Residential Care*. They intend to undertake a comparative analysis which they anticipate will identify a significant reduction of falls from last audit.

Housing with Care units (6 in Falkirk): Are introducing telecare peripherals and are in the process of upgrading the technology systems within these units to enable further telecare sensors to be used.

In summary, Linda advised that steady progress is being made, but they do continue to be hampered by not having a local falls register (hoping GP's will taking appropriate action where haven't accepted an onward referral). Also a Falls co-ordinator post is not in place in Falkirk. However Linda noted that liaison between MECS and Health colleagues is generally good.

Innovation Project

Falkirk are also progressing their innovation project, and one of the MECS staff is now concentrating on assessing the waiting list for MECS. This staff member will also undertake a home based assessment and work on an individual basis with the service user to identify appropriate technology, encourage compliance and minimise the number of false alarms.

By next meeting it is Linda's hope that she can report progress on all of these workstreams, particularly the innovation project.

Action: Ann Murray to liaise with Edith MacIntosh to see if she can come to next meeting to hear progress on Care Home elements.

Tayside/Perth & Kinross: Carolyn Wilson

Carolyn advised that she had reported at the March workshop that the letter they had produced to encourage those at risk of falling to contact the Falls Clinic was producing limited responses. To address this, they aimed to employ a Falls Screener post within the Community Alarm Service as part of their Innovation Project. To progress this a project plan has been developed by Carolyn and Steven Watt and they will be interviewing for the Falls Screener role this Friday. This will be a 14 hour a week post – and 5 good applicants have been shortlisted for interview. The current database will be used to follow up repeat

fallers, and they aim to be able to proactively respond to these individuals quickly after second or third fall. A low level assessment will be undertaken during which further information will be collected on the fall – the post will screen/assess the individual and hopefully pick up contributory factors e.g. poor nutrition, footwear, vision. The postholder will assist to identify those who need onward referral to the clinic and will encourage attendance. Other appropriate interventions will be identified as suitable alternatives. This face-to-face contact approach will be introduced in 2 locality areas and compared/contrasted with a telephone screening approach which will be provided in a further 2 areas to identify if there is any difference in effectiveness. A screening tool has been developed which was modelled on the Glasgow tool, which identified that only 60% of repeat fallers needed to go to a falls clinic.

Action: Draft screening tool to be circulated for information, although is likely to be revised.

DATE OF NEXT MEETING

The next workshop will be held on **Thursday 9th September**. Details of the venue and arrangements will be circulated in early course. It is intended to spend more time going over the detail of local approaches, and discussion of challenges/possible solutions.

Action: Presentations from 3 Innovation areas to be provided at next workshop. Ann to contact Lanarkshire & Edinburgh to see if they also want to provide some formal input.