Project report for the Foundation of Nursing Studies

'Ward Workout' - implementing nurse-led exercise programmes for inpatients on rehabilitation wards for older people at a NHS Hospital Trust

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Date: 24-10-05

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Project rationale

The rationale was that by promoting exercise the project team would make a contribution to healthy ageing beyond falls prevention alone: activity and exercise improves physical well being, promotes social interaction and promotes positive mental health.

Aims

1. to implement nurse-led exercise programmes on four rehabilitation wards for older people at King's College Hospital
2. to enhance the role of nurses in rehabilitation
3. to complete the local portfolio of falls prevention strategies, in accordance with evidence based practice guidelines

Background

The National Service Framework for Older People (DoH 2001) sets a standard for older people "who have fallen (to) receive effective treatment and rehabilitation and, with their carers, receive advice on prevention through a specialised falls service". King's College Hospital, the NHS Trust where this project was based, already had a multidisciplinary falls service in place, covering A&E, falls clinic and inpatient investigation and treatment.

The King's service draws on the growing evidence base around interventions to prevent falls. This points towards a need for a co-ordinated falls strategy involving multi-professional working and a multi-dimensional approach to falls management (Close, McMurdo 2003). These approaches typically combine interventions such as exercise, education, medication review and hip protection. Studies have shown that falls and fracture rates in institution care can be reduced by between 25 to 50 % using this type of approach (Jensen et al, 2002; Becker et al 2003).

Within multidisciplinary falls services, there is an emerging role for nurses to contribute to falls prevention strategies and lead aspects of falls services. Locally, nurses provide front-line falls risk assessment using the STRATIFY screening tools (Oliver et al 1997) and provide individualised falls action plans. A nurse led randomised controlled trial of hip protectors has been completed. Two Specialist Falls Practitioners (one nurse and one physiotherapist, in post) work closely with ward staff and support the multidisciplinary falls service.

The missing element of the local falls prevention work was the promotion of exercise for inpatients. Exercise programmes can increase mobility, strength and balance amongst older people, and reduce the incidence of falls, (Day et al 2002), and are recognised by the National Service Framework for Older People (DoH 2001, Standard 8) as a key health promotion activity. Research by Robertson et al (2001) has demonstrated a role for nurses in delivery of
these programmes. The project team wished to apply the principles of nurse-led exercise programmes to use in hospital. It was proposed that following specialist training, the Falls Practitioners and a new role of Exercise Assistant (at nursing Health Care Assistant grade) would provide core delivery of exercises for older inpatients, working closely with trained Link Nurses and other ward based nursing staff to assimilate the approach into broader ward rehabilitation.

**Project design and implementation**

The project team proposed to implement nurse-led exercise programmes using an action learning approach. In this context, action learning meant that the team would meet regularly to learn from their experience, review progress and if necessary make the adaptations required for the project to successfully move on. Action learning is a cyclical process, although the project consisted broadly of three phases, which are described below.

**Phase 1 – preparation April – June 2004**

Phase 1 consisted of preparation and training of staff, development of supporting literature and patient information and consolidation of support for the project. A project team was set up, consisting of the Nurse Consultant, Matron, Falls Practitioners, Practice Development Nurse and two identified Link Nurses. A multidisciplinary advisory group helped to steer the project and a user involvement group was also set up. The new post of Exercise Assistant was specified and advertised.

An important part of the preparation was the provision of places for the project group, including Link Nurses and Exercise Assistant, on the training course "Exercise for the prevention of falls & injuries in frailer older people" (specialist training for Postural Stability Instructors) Website: [http://www.laterlifetraining.co.uk](http://www.laterlifetraining.co.uk). This training course contains both theory and practice components, and confers a qualification of 'Postural Stability Instructor' on successful completion of both components of the course. It was possible to arrange for the course to be delivered at King's, which optimised attendance arrangements. Once trained, the project team devised and agreed local evidence based guidelines for development of individual and group exercise programmes.

Initial user involvement drew on an existing group of local older people, who have advised on a number of recent service improvements. The project was discussed with representatives of this group, and specific advice was sought on the design of the patient information leaflet and posters for wards.

The project communication strategy included meetings with multidisciplinary and management colleagues to introduce the project and raise its profile, and ward based meetings and publicity to announce the project preparation and purpose.
Phase 2 Implementation – June 2004 – March 2005

Launch

A project launch event held was at King's, kindly sponsored by Pfizer. Information and exercise demonstrations were made available, with healthy refreshments to reinforce the healthy ageing message. The event was attended by clinical and management staff of King's, members of the user involvement group, the Foundation of Nursing Studies and Deborah Sturdy, Nursing Advisor to the Department of Health. A feature in the Nursing Times and other publications followed.

Staff training and development

The aim of staff training and development was to embed awareness of the benefits of exercise for healthy ageing within nurses’ existing concepts of rehabilitation, and to increase their knowledge of the specific exercises used. It was intended that in this way they would gain sufficient understanding for them to follow through and encourage patients to carry out prescribed exercises. Given that the project was based on rehabilitation wards within an acute hospital setting, it was also important that the longer-term benefits of exercise were perceived, together with an awareness of how the available local community services made the continuation of exercise programmes after discharge real and possible. The project team worked closely with the Clinical Unit's Practice Development Nurse to deliver ward based teaching sessions. The content included:

- the benefits of the exercise
- the role of the link nurses
- role of the exercise assistant
- criteria for referral and who to refer to
- exercises for balance and strength

The nurses were also given an option to attend a practical session of the above exercises.

Exercise programmes delivery.

The Ward Workout exercise programme drew on the portfolio of exercises that were published by the OTAGO exercise programme (Campbell and Robertson 2003). The OTAGO programme used exercises that have a good evidence base for improving strength and balance and reducing falls, and delivers these in the community, using home visits and incorporating walking programmes. For hospital use, the project team retained the exercise portfolio but modified how it was delivered, using one-to-one teaching and supervision on the ward, and excluded the walking programme.

The referral criteria for Ward Workout were circulated to the nurses, doctors and therapists on the rehabilitation wards. Referrals were accepted from all
sources. Patients were then assessed and selected using local criteria, which ensured that patients were appropriately placed on the programme. The criteria are shown in Box 1. Functional assessment of the patient was done by the Falls Practitioner, using a combination of physical outcome measures, self-assessed measures, and review of the medical notes.

**Box 1 Criteria for Ward Workout**

- Patient scores greater than or equal to 2 on the STRATIFY risk assessment
- Medically fit
- Able to stand independently (includes use of aid) for at least 30 seconds

To be effective in reducing falls, the exercises must challenge the person’s strength and balance. This means that the exercises must include a standing component, and incorporate some resistance work using weights or therabands. Chair-based exercises alone will not be effective in reducing falls in the longer term. There are risks involved because if the exercises are overspecified then they could be harmful. To avoid this, a qualified instructor must select the correct level of intensity for the individual, and make the exercise prescription. This includes allowing rest days between exercise sessions. Having completed the Postural Stability Instructor course, all of the project team were competent to do this, although day-to-day responsibility was taken by the Falls Practitioners.

Each patient was given a personalised exercise pack and diary to record their exercise activity and level. In a ward setting, the project team felt that it was important that the exercise prescription was clear to both the patients and ward staff, so that overactivity was not encouraged. The Exercise Assistant then visited the patient three times a week to teach and supervise the exercise programme, progressing the patient onto higher levels of intensity as appropriate.

In order to make patients more comfortable, they were offered choice of environment, either at the bedside or the ward-based therapy rooms. Patients were also given the option of choosing the time at which they wanted to carry out their exercise. Sessions were structured in such a way that they were both fun and challenging, making it an enjoyable and worthwhile experience. In doing so, patients were helped to build confidence and develop a positive attitude towards exercise. Regular contact from the exercise assistant enabled continuity and built trust with the patients.

The provision of a dedicated Exercise Assistant role ensured consistency in delivery of the exercises, something which would not have been feasible if the ward nurses had been expected to take this entirely on themselves.
On discharge, patients were offered advice on the options for exercise in the community. These were:

1) Individual exercises at home
2) The OTAGO exercise programme (home based) with a community instructor
3) Group exercises at the Day Hospital
4) Group exercises in a community class

**Patient follow up**

A questionnaire was administered on discharge to measure satisfaction with the programme. At four weeks post discharge a phone call was made to ascertain whether they have had any falls and whether they were continuing with exercises.

**Phase 3 - Project evaluation – each three months, and  March 2005**

Project evaluation was designed to be a continuous and cyclical process, with regular meetings of the project group and reflection on progress and learning. The project design was that of an implementation study, in which the team accepted the evidence that individual, targeted exercise can reduce the risk of falls and promote healthy ageing. The focus instead was on whether the intervention was feasible and sustainable in practice. For this reason, the rate of falls or health status of the patients was not the primary outcome measure. The team was interested in the benefits perceived by the patients and the rate of patient recruitment and participation, both throughout the project and post discharge. Patient satisfaction was evaluated via questionnaire. Staff satisfaction, knowledge and participation were explored through use of a staff questionnaire, review of participation in exercise programmes and reflection through action learning.

**Results**

Seventy-six patients were recruited to Ward Workout, of which 4 subsequently withdrew whilst in hospital. Fifty-three patients were female and twenty three were male.

1. **Patient participation in exercise in hospital**

Patient participation rates were one of the main outcomes of the project. This would indicate whether the programme was practically possible, within organisational constraints, acceptable to patients and easily integrated into their planned rehabilitation. Data showed that there was a good participation rate, with an average of 66% of exercise sessions completed as prescribed. Twenty-two patients completed 100% of prescribed sessions. The participation rate is summarised in **Table 1**
Table 1 Patient participation rates

<table>
<thead>
<tr>
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<th>Average per patient</th>
<th>Range</th>
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<tbody>
<tr>
<td>Number of sessions prescribed</td>
<td>12</td>
<td>2 - 67</td>
</tr>
<tr>
<td>Number of sessions attended</td>
<td>8</td>
<td>1 - 59</td>
</tr>
<tr>
<td>Percentage participation per patient</td>
<td>66%</td>
<td></td>
</tr>
</tbody>
</table>

2. The patient experience with Ward Workout

The patient experience was an important aspect in the Ward Workout project as encouragement for on-going exercises after discharge was one of the aims. On discharge each patient filled out a satisfaction questionnaire to assess how he or she felt about the programme.

Satisfaction was quite high among the patients who participated, and a number of interesting themes emerged.

General Benefits

Patients who participated generally thought the exercises were good and had some general effects, such as breaking up the day in hospital, and being quite exhilarating.

Physical benefits

A number of patients reported physical benefits from the exercises like decreased stiffness, release in tension, improved mobility, decreased pain and swelling, an increase in energy and appetite.

Psychological benefits

There were also some psychological benefits reported by doing the exercises or the way they were provided. These included increased confidence and motivation and the ability to succeed.

Financial

It was interesting to note that some patients were even thinking of the financial benefits: satisfaction was high because it was free!
The exercise session

A number of positive comments were made on the exercises and the way they were delivered, such as having someone supervising the session to correct any mistakes or to be available in case a fall occurred. The patients also liked the weights used in the resistance (strength) training component.

The results of the survey indicate that patients had different views on the benefits of the exercises, which were largely positive. However, it also interesting to note that none of the patients thought of exercises as a means of reducing their falls.

3. Patient participation after discharge

Half of the seventy-two patients who completed Ward Workout went on to some form of home based or community exercise programme on discharge. The type of programme depended on patient choice and the recommendation of the Falls Practitioner and Exercise Assistant. For example, some patients were not able to continue exercise without supervision, due to frailty, cognitive impairment or other reasons.

Table 2 Exercise programme participation on discharge

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Ongoing exercises (all types)</td>
<td>36 (50%)</td>
<td></td>
</tr>
<tr>
<td>Not able to continue without supervision</td>
<td>21 (29%)</td>
<td></td>
</tr>
<tr>
<td>Unwilling to continue</td>
<td>10 (14%)</td>
<td></td>
</tr>
<tr>
<td>No exercises given - too ill</td>
<td>4 (5%)</td>
<td></td>
</tr>
<tr>
<td>Too advanced for the exercises</td>
<td>1 (2%)</td>
<td></td>
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</tbody>
</table>

The majority of patients (30) opted for home based exercises rather than group exercise in a community setting.

Thirty patients were followed up by phonecall approximately four weeks after discharge from hospital, to ask whether they were continuing with the exercise programme. The results are presented in Table 3

Table 3. Participation in exercise programme four weeks post discharge

<table>
<thead>
<tr>
<th></th>
<th>Home exercises</th>
<th>Community/group exercises</th>
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</thead>
<tbody>
<tr>
<td>Number continuing with exercise</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>Number discontinued exercise</td>
<td>6</td>
<td>1</td>
</tr>
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</table>
4. Staff Involvement in the project

The role of the nurses emerged as indirect, but important - one of support, encouraging the patients and following through the principles into patient education, falls prevention and general rehabilitation. Ward nurses also had a role in the identification of appropriate patients and were very keen to help motivate patients to take part in the programme.

A survey was carried out at the end of the project to assess staff involvement, and their rating of the importance of exercise, both for the patient and as part of nurses’ role in rehabilitation. Fifty questionnaires were distributed across the multidisciplinary ward team, of which twelve were returned. Seven nurses and five physiotherapists completed or partially completed the questionnaire.

The results of the nurses’ response are summarised in table 3:

Table 3: nurses’ response to staff questionnaire

<table>
<thead>
<tr>
<th>Importance of exercise for the older person</th>
<th>Nurse’s involvement in promoting benefits of exercise</th>
<th>Nurse’s role in Rehabilitation</th>
</tr>
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<tbody>
<tr>
<td>Very important</td>
<td>67%</td>
<td>55%</td>
</tr>
<tr>
<td>Important</td>
<td>11%</td>
<td>22%</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>Little importance</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Not important</td>
<td>0%</td>
<td>0%</td>
</tr>
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Discussion

Practice development and staff training

Staff training and development was an integral part of the project, although formal teaching sessions were initially difficult to set up due to the wards being busy. Eventually, at least 5 nurses attended each session. Their interest was evident but some apprehension was also observed. This could have been due to several reasons: one of the main ones would be that nurses initially focussed on the fact that they did not have time to do these exercises with patients, rather than considering the broader integration of the approach into rehabilitation. Another reason is that nurses have always believed that physiotherapists do exercises with patients.

It was possible to allay these fears, and a valuable issue which subsequently emerged from the sessions was that nurses do recognise their role in the rehabilitation of patients and although there might be time constraints,
provision of some exercise could be incorporated in their daily routine e.g. doing some stretches when they having a wash in the morning.

To obtain the skills and knowledge needed, the project team undertook the Postural Stability Instructor course that is run by Later Life Training. This course develops confidence, skills and practical knowledge to prescribe and teach exercises with older patients. The project team members who undertook the full training all found that the experience profoundly changed their view of nurses’ potential to get involved with promoting exercise for healthy ageing and falls prevention. The experience of two of the project team is quoted in Box 2

In the broader context of evidence-based interventions for prevention of falls in older people, nurses need a comprehensive knowledge base, including understanding of the role of exercise. Therefore the exercise approach is taught within wider falls education programmes within the Trust. At King’s the introduction of e-learning for health care professionals provided an opportunity for us to diversify the teaching and learning methods that are available to develop staff knowledge of healthy ageing, exercise and falls prevention. The project team developed a module on falls prevention and management that incorporated sections on exercise. This was published within a specific e-learning programme about hospital care of older people. The module has been very popular with hospital staff, being voted best module at the e-learning launch event held in September 2005.
Professional roles and boundaries

The project team were aware of both the overlaps and the territorial barriers that can exist between professional roles within the rehabilitation team. For example, prior to commencing the project, the promotion and provision of exercise was widely perceived by both nurses and therapists as the conventional province of physiotherapy. This led to some initial scepticism from therapists that nurses could successfully adapt their role and do so safely and competently. For this reason, the achievement of a qualification in exercise instruction endorsed nurses’ credibility within the multidisciplinary team and resolved any initial reservations that were expressed by colleagues.

Eventually, multidisciplinary colleagues did fully recognise the credibility of the intervention, and it became easier to suggest that the project exercise assistant and Specialist Falls Nurse could prescribe and teach exercises with the patient rather than this needing to be controlled by the physiotherapists. A breakthrough was achieved when therapy and medical colleagues also made referrals for suitable patients.

At the outset of the project, it was hoped that the Link Nurses who qualified as Postural Stability Instructors would be able to follow through and encourage patients to carry out prescribed exercises, as well as identifying patients for the programme. In practice, this did not happen due to organisational change and staff movement within the Hospital. With the loss of the link nurses from the rehabilitation wards within a few months of the project start, nursing involvement had to focus on the remaining ward staff engaging in an integrated and more indirect approach.

Course leadership and management.

The most evident marker for the project’s eventual success was that the project team was made up of a variety of nurses at different grades and from different wards. There was a sense of inclusion from the beginning and all members of the team were aware of the projects aims and objectives.

The project intended to challenge nurses’ perception of the scope of their role in rehabilitation and extend their professional boundary. This type of process can be unsettling, since it is asking nurses to take on new skills and to risk aspects of professional credibility in the view of other members of the multidisciplinary team, who may themselves feel territorially threatened. For this reason, strong leadership was essential to inject the initial momentum and vision into the project, convince both nurses and other professional groups of the potential for success and to cement inter-professional links and communication. The leadership of the Consultant Nurse and Matron and their conviction that the project could succeed helped the project team to focus on where the project was going, and what their role was in implementing it. It was evident at the beginning that there was thoroughness in planning the project. There were clear time lines for getting people involved, achieving the training of the link nurses in the postural stability training and recruiting the Exercise Assistant.
As the project implementation phase got underway, the benefit of thorough planning and preparation became apparent. This meant that the team were prepared to deal with some of the objections and barriers raised by multi-disciplinary colleagues and were more confident at addressing these through the workshops and teaching sessions. Alongside these professional barriers was the practical challenge that the rehabilitation wards were preparing to move hospital sites, as part of a Trust-wide consolidation of facilities. Consequently there was some institutionally generated anxiety amongst the staff concerning the logistics of moving frail older people from one site to another. This organisational change alone, including the re-allocation of the Link Nurses to non-project wards, could have terminated the project without the ongoing vision of the project leaders and the full involvement of the team in problem-solving and planning.

The Postural Stability Instructor training that the team undertook proved to be intensive and challenging, but this had the effect of enhancing a sense of involvement and mutual support amongst the team. It fostered a sense that the team believed the patients were receiving very beneficial nurse led therapy; the team members wanted the project to work because the benefits could be observed on a direct and practical level. Within the project team it was clear that there was a leader but that the team respected each other’s opinions, roles and contributions to the project. This became even more evident at the feedback sessions that were held with the Foundation of Nursing Studies.

The benefit of an action learning approach was that the project could evolve and adapt based on testing in practice. The overall aims of the project remained valid through the implementation and evaluation phases but implementation within a large and changing NHS Trust required a flexible approach, for which action learning was an ideal framework. The approach also built in the opportunities for structured support. Project group meetings were held at regular intervals, when team members were encouraged to discuss any problems or issues and to contribute their experience and ideas. Team members circulated information, meeting notes and correspondence by email and met informally as issues arose. In addition to the climate of strong mutual support that developed internally, the regular visits and workshops that were provided by the FoNS fostered a sense of external support and ongoing endorsement of the project.

**Sustaining practice development**

The experience of completing this project has enabled the team to reflect on approaches to other practice development initiatives, and how these may be implemented effectively and in a sustained way. A key learning point has been that a team has to be sure about what they are aiming to achieve, have a clear plan and be open to discussion and feedback with some close
monitoring to make it happen. The ability to analyse issues and adapt without losing sight of the goal is crucial, particularly when major structural changes to the organisation occur which are beyond the control of the project team.

Conclusions

The Ward Workout approach has proved to be both feasible and sustainable. It has undergone a successful transition from the status of being a project to being a core component of the rehabilitation service at King’s. The factors which were key to success may be summarised broadly as:

- **Clinical leadership** - this was provided by a project group lead by the Nurse Consultant and Modern Matron for Older People supported by the Specialist Falls Practitioners. The combination of strong leadership and the action learning approach enabled the team to adapt the project within a complex and changing environment without losing sight of the objectives. Team ownership, support and participation all increased the likelihood of success due to high motivation and attention to the project.

- **Action learning** - the action learning approach, and reflective practice, optimised front-line staff involvement and individual and team learning.

- **Resources** - sponsorship by FoNS/Pfizer enabled the project team to undertake training (the PSI course) which was not normally funded from the hospital’s training arrangements, and to meet all equipment, publicity and documentation costs of project phase. The core roles of falls practitioner and exercise assistant were properly funded by the Acute Trust, with a commitment to recurring funding for the exercise assistant once the project had been shown to be effective.

- **Support** - the FoNS/Pfizer provided excellent constructive support throughout the project, and the management and staff at King’s were consistently supportive of the innovation and it’s attendant risks and potential.

- **Patient involvement** - our older patients and their representatives were involved throughout the project. They contributed to preliminary focus group work, helped us design patient information leaflets and posters, and provided feedback and suggestions on the programme and related education and training initiatives, including the e-learning programme into which the team had been able to opportunistically extend the training.
Acknowledgements

The experience of carrying out this project has been very positive for the team, who would like to gratefully acknowledge the following people and organisations:

Theresa Shaw, Kate Sanders and Ros Taylor from FONS, Belinda Dewar and Phyl Runciman for their support throughout the project. Their constructive workshops, visits, feedback and advice were always welcome and truly constructive.

Thanks also to Pfizer for their generous sponsorship of the project and associated events and particularly to Ben Carrick for his interest and follow through.

The team would like to acknowledge the support from managers and clinicians at King’s College Hospital NHS Trust, who have shown genuine commitment to supporting innovation and providing the funding needed to sustain the ‘Ward Workout’ as part of our continuing service for older patients.

We would also like to acknowledge the input of our patients and their representatives, especially Mrs Mary Grover, to the development and evaluation of the project.
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