

Promoting evidence informed service development: a study of falls services in Cheshire

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Background: This study investigated two initiatives for preventing falls in Cheshire: public events to raise population awareness about falls and ways of preventing falls, a programme of falls assessments and falls prevention classes. **Aim:** The study aimed to support service development by generating local learning about: the falls risk status of older people attending the public events and their use of services for preventing falls, the efficiency and effectiveness of the falls programme. **Methods:** A local adaptation of an instrument used in similar research was administered to assess the falls risk status of older people attending the public events. This instrument captures data about the age, sex, gait, sensory deficit, falls history, current medication, medical history, mobility and living situation of respondents. Attendees were also asked about their current use of falls services. To evaluate the falls programme data were collected about the characteristics and referral sources of service users and, for users of the falls prevention classes: their mobility and balance on joining and completing the classes; their fear of falling and confidence linked to falls at the start of the classes and six months later; the number of falls they experienced in the six months before starting and after completing the classes. **Findings:** Of the 453 attendees screened, 64.3% were at medium risk of falling or above and 34.3% had suffered previous falls. None were accessing falls prevention services. During its first year, 324 individuals were referred to the falls programme. Overall, among those individuals who provided data for analysis, there was a statistically significant improvement in the 'clinical' outcomes assessed and a statistically significant reduction in the occurrence of falls. The majority of respondents indicated that they achieved an improved confidence linked to falls and a reduced fear of falling. **Conclusions:** Studies of this type can provide a valuable contribution to local learning but the characteristics of the research collaborations developed can affect study designs and the quality of the information generated.

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Improved contracting arrangements between service commissioners and providers may provide an opportunity to increase the rigour of local developmental studies.

Key words: accidental falls; health services research; preventive health services; program evaluation

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Introduction

Falls are a leading cause of injury and concern among older people. Among individuals living at home it has been estimated that: around 30% of them aged over 65 years and 50% of them aged over 80 years fall each year; 20%–30% of these falls result in individuals having reduced mobility and independence; around 10% of falls lead to serious injury and about 5% to fractures; around 20% of frequent fallers followed up at one year are either in hospital, in long term care or have died (O'Loughlin *et al.*, 1993; Rawsky, 1998; Tinetti *et al.*, 1998; Cryer and Patel, 2001; Tinetti, 2003; Todd and Skelton, 2004; Morse *et al.*, 1987).

The treatment of falls also consumes a substantial amount of health care resources. It has been estimated that: around 10% of ambulance calls to individuals over 65 years are because of a fall and around 60% of these are taken to hospital; rates of hospitalisation for falls among older people are around five times higher than for other causes of injury (Cryer, 1998; Close *et al.*, 2002; Todd and Skelton, 2004). In addition, falls are a leading cause of patient referral to services for intermediate care (Roe *et al.*, 2003; Beech *et al.*, 2004).

As a result, policy documents are encouraging health and social care providers within England to further develop their services for preventing and managing falls among older people (eg, Department of Health, 2001; NICE, 2004; Royal College of Nursing, 2004). The research described in this paper focused on two service initiatives that have been introduced within Cheshire to address this policy directive: the use of public events to raise population awareness about falls and ways of preventing falls (henceforth referred to as falls awareness events) and the development of a multifactorial falls prevention programme targeted at individuals classified as being at medium or high risk of falls.

The overall aim of the research was to generate information to support decision-making surrounding the local development of local falls services. In relation to this aim, a focus on the selected service initiatives allowed two complementary research questions to be explored:

- Among the local population of older people, what is their risk status for falls and their use of services for preventing falls?
- For those at medium or high risk status of falls, how successful is the multifactorial falls programme in reducing their risk factors and the consequences of falls that they experience?

Cheshire County Council provided funding for the research. In addition to that organisation, other organisations represented within the research collaboration included: Central and Eastern Cheshire and Western Cheshire Primary Care Trusts, Cheshire East Community Health, Keele University and Edge Hill University.

The following section of the paper gives a brief overview of the nature of the two service interventions that were studied. The methods that were used in the study are then described followed by the presentation of the study's results. The final section of the paper discusses the broader implications of the research. These include the challenges that academics and local professionals and practitioners can face when they participate in the types of collaborative 'research' venture described here. Possible ways of addressing these challenges are also suggested.

Nature of the service interventions

Falls awareness events

The falls awareness events represented components of larger events that were targeted at older people and which aimed to raise their awareness about services and resources that might be

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relevant to their everyday needs. Hence, in addition to representatives of Western Cheshire Primary Care Trust's (PCT) falls service, other agencies represented at these 'market place' type events included the fire service, the police and vision support.

The events were advertised in the local press and via posters and leaflets that were displayed in venues regularly used by older people (eg, local shops and lunch clubs) or distributed by individuals who had regular contact with older people (eg, staff working in care homes and for organisations such as Age Concern). The events were also held in venues that were seen as accessible for older people, although event organisers do accept that it would have been difficult for 'house bound' individuals to have attended the falls awareness events.

Those planning to attend the events were asked to come along with their bedroom slippers for exchange. When they requested a slipper exchange, individuals were asked to participate in a falls risk assessment exercise (see Methods section). Falls staff then discussed the results of this risk assessment with participants and, where relevant, either suggested that they contact their general practitioner (GP) or pharmacist for further advice or asked if they would like the falls staff to write to these professionals on their behalf. Falls staff could also make direct referrals to local falls prevention programmes.

Multifactorial falls programme

The programme of falls assessments and multifactorial interventions that was established in Central and Eastern Cheshire reflected current guidance from the National Institute for Health and Clinical Excellence (NICE, 2004). It was led by a Clinical Specialist Occupational Therapist; other members of the team that delivered the programme included a physiotherapist, a podiatrist and a therapy assistant.

All referrals participated in a comprehensive falls risk assessment that obtained information about their: falls history; functional abilities; psychological and cognitive function; gait, balance and mobility; medical condition; vision; hearing; existing medication; and exposure to environmental hazards. Following this assessment, all referrals were given advice and information and,

where appropriate, equipment to help them to reduce and manage their falls risk factors.

Where appropriate, referrals were then invited to participate in classes that delivered over an eight week period a series of multifactorial interventions that aimed to improve their gait, balance, strength, functional ability and daily living skills. When this research project was originally designed, it was envisaged that the classes would only be delivered at central venues across the PCT (eg, in Leisure Centres). However, during the course of the research, modified versions of the classes were developed that were capable of being delivered in a person's home. As will be seen later, this evolution of the service did have implications for some aspects of the research study.

Study aims and methods

Aims

The overall aim of the study was to generate information to support the development and evaluation of services for falls within Cheshire. The requirement that the study should generate local evidence for local consumption (primarily) meant that in addition to University academics, health and social care practitioners and professionals had to be key participants both in the design and implementation of the study. Indeed, local staff had the 'final say' in deciding the data that should be collected within the study and how. In part, this was because local staff had the responsibility of collecting the data required.

Methods

Exploring the risk status of the population and their use of falls services

A local adaptation of an instrument that has been used elsewhere in the National Health Service (NHS; Redditch and Bromsgrove, 2004) was used to assess the falls risk status of those attendees at the falls awareness events who agreed to participate. Table 1 lists the components of this instrument and the scores generated by individual responses. An overall score of 0–8 places an individual at a low risk of falls, of 9–15 at medium risk and of 16+ at high risk. Attendees were also asked about their current use of falls prevention

Table 1 Falls risk scoring instrument

Sex (circle one only)	Sensory deficit (circle all that apply)	Medical history (circle all that apply)
Male	1 Reduced sight/wears glasses	2 History of high alcohol intake
Female	2 Reduced hearing/wears aid	1 Diabetes
	Balance problem	2 Dementia/Alzheimer/
		Confusion Parkinson's disease
		Fits
		Transient ischaemic attack
		Cerebro vascular Accident/stroke
		Continence problem/water infection
Age (circle one only)	Fall history (circle one only)	Mobility (circle one only)
Below 60	0 None	0 Full
60–70	1 Indoor fall	2 Uses walking aid
71–80	2 Outdoor fall	1 Restricted
81+	1 Both	3 Bed bound
Gait (circle all that apply)	Medication (circle all that apply)	Current living situation (circle one only)
Steady	0 Blood pressure	1 Lives alone/is carer
Hesitant	1 Water tablet	1 Lives with carer/relative/partner
Poor transferring	3 4 or more medications daily	1 Carer package/support
Unsteady	3 Tranquilizers	1 Lives in residential care
	Sedation or sleeping tablets	1
Evaluating risk (add scores together)		
3–8	9–15	16+
Low risk	Medium risk	High risk

activities and services. Finally, the Falls Coordinator noted details of those occasions where she directed individuals to further services for offering advice and interventions relevant to their falls risk factors.

Evaluating the multifactorial falls programme

The following data were collected about the characteristics of all referrals to the programme during its first year of operation: age, gender, residential status, carer status, falls risk status and reason for referral/history of falls. Details of the referral source and referral outcome (eg, accepted onto the programme, referred to an alternative or additional service) were also collected for all service users during this period of one year.

The analysis of such data helps to identify the levels of integration between those services, which provide immediate care for fallers or identify individuals at risk of falls and those services, which focus on falls prevention. For example, in this study,

local collaborators were particularly interested in monitoring referral rates from Accident and Emergency (A&E) to the multifactorial falls programme. 'Inadequate' referral rates from A&E departments to falls prevention services have also been identified in national surveys (Clinical Effectiveness and Evaluation Unit, Royal College of Physicians, 2006).

Measures that have been recommended for use by clinicians were used to assess the gait, mobility and balance of those service users who were invited to participate in falls classes (Mathias *et al.*, 1986; Duncan *et al.*, 1990; Podsiadlo and Richardson, 1991; Gardner *et al.*, 2001; NHS Scotland, 2001). Individuals were asked to carry out the following tests when they started and completed the classes:

- 'timed up and go' test (the time in seconds for an individual to walk a distance of 6 metres)
- 'functional reach' test (the distance that an individual is able to reach in centimetres without losing balance)

- ‘chair sit to stand’ test (the time in seconds for an individual to complete 5 times the action of moving from sitting to standing)
- ‘four test balance scale’ (a series of balance tests of increasing difficulty, the tests range from standing unaided to standing on one leg unaided and the assessment stops if a patient cannot keep their balance for 10 seconds during a test)
- ‘steps to turn’ (the number of steps an individual takes to turn 180 degrees).

Fear of falling and levels of confidence linked to falls are patient orientated aspects of outcome that have been shown to be important in other studies (Ballinger and Clemson, 2006; Roe *et al.*, 2008). Again assessment techniques that had been used in published research elsewhere were considered for use in this study: for example, the Falls Efficacy Scale (Tinetti *et al.*, 1995). However, local falls staff preferred to use ‘simple’ locally derived questions for assessing service users’ confidence and fear of falling (see Table 5 for the questions posed). These questions were posed when individuals started their falls classes and at a time point six months after their completion.

A similar approach was used to assess changes in the occurrence of falls among service users. They were asked, ‘How many times have you fallen in the last six months?’.

The data required for the six-month follow-up were obtained via telephone calls to the homes of service users. It is accepted that this approach may have excluded individuals who no longer lived at their original address and as a result any individuals whose health may have deteriorated.

Data analysis and ethical approval

Descriptive statistics were used to analyse data relating to user characteristics and referral processes. For the ‘clinical’ measures of outcome, differences between the pre- and post-test scores were calculated. The Shapiro–Wilks test (Royston, 1993) suggested that the data were not normally distributed and thus median differences were generated with appropriate 95% confidence intervals. These provide more clinically useful information than the conventional *P*-values, which come from applying the Wilcoxon Rank Sum Test for paired data (Kirkwood and Sterne, 2003). The same approach was used to assess differences in

the occurrence of falls among participants. For the other ‘patient’ orientated outcomes, a basic ‘improved’/‘stayed the same’ comparison was used. Finally, the local NHS Research Ethics Committee for Cheshire granted ethical approval for the study.

Results

Exploring the risk status of the population and their use of falls services

In total, 453 attendees at the 8 public events requested a slipper exchange and agreed to participate in the study. The Falls Coordinator who ran these events and undertook falls risk assessments (H.T.J.) indicates that only two of those who requested a slipper exchange refused to participate in the study. The nature of the events meant that it was not feasible to record how many older people attended the events but did not make themselves known to the Falls Coordinator by requesting a slipper exchange. However, she estimates that this number was low.

For the 453 participants, Table 2 presents results in relation to their demographic characteristics, falls risk status and falls history. The vast majority were elderly, 66.5% being 71 years or over. Overall, 64.3% were scored as being at medium risk or above of falling of whom 16.6% were at high risk. The falls professionals participating in the study indicate that individuals at medium risk or over would benefit from access to falls prevention or rehabilitation programmes. None of those screened were accessing such programmes.

Attendees were also asked about their history of falls. Of those attending, 34.3% indicated that they had had a previous fall and 15.9% a fall in the previous six months. Of this latter group of 72 individuals, 45 indicated that they had fallen more than once. Again, none of these individuals were currently participating in falls prevention activities.

Following the risk assessment exercise, 125 study participants were either asked to contact or were referred to other services for addressing their falls risk factors. Of these, 44 participants were directed to their GPs, 37 participants to their local pharmacists, 14 participants to Age Concern home assessment services and 14 participants to

Table 2 Characteristics of attendees at the falls awareness events

Heading	Number of attendees (% of total attendees)
Gender	
Female	317 (70.0)
Male	136 (30.0)
Age	
<60	10 (2.2)
60–70	128 (28.3)
71–80	166 (36.6)
81+	108 (23.8)
Missing	41 (9.1)
Falls risk score	
0–8 (low risk)	111 (24.5)
9–15 (medium risk)	216 (47.7)
>16 (high risk)	75 (16.6)
Missing	51 (11.2)
History of falls ever	
None	248 (54.7)
Indoor fall	51 (11.3)
Outdoor fall	53 (11.7)
Both	51 (11.3)
Missing	50 (11.0)
History of falls in last six months	72 (15.9)

a falls prevention programme run by Age Concern. The low number of ‘referrals’ to falls prevention programmes reflected a low provision of such services at that time. It was not feasible to assess whether participants actually contacted any of these services as a result of the advice that they received at the Falls Awareness Events.

Evaluating the multifactorial falls programme

During the first year of its existence, which ended at March 08, there were 324 referrals to the falls programme. Demographic, falls risk status and referral information about these service users is presented in Table 3.

The majority of referrals were aged over 70 years and lived alone in their own homes. In keeping with the access criteria for the programme, all referrals were at medium or at high risk of future falls: indeed, a recent fall was the reason why the vast majority of individuals were referred to the falls programme. Data not presented in Table 3 indicated that 57 (17.6%) of the referrals already had access to a falls service: 51 were users of community rehabilitation/intermediate care services

Table 3 Details of referrals to falls prevention programme

Heading	Number of referrals (% of total referrals)
Age	
Under 60	7 (2.2)
60–70	23 (7.1)
71–80	100 (30.9)
Over 80	191 (58.9)
Not known	3 (0.9)
Falls risk score	
0–8 (low risk)	0 (0.0)
9–15 (medium risk)	58 (17.9)
16 (high risk)	164 (50.6)
Not known	102 (31.5)
Accommodation type	
Own home	314 (96.9)
Residential home	8 (2.5)
Temporary accommodation	2 (0.6)
Carer status	
Living alone	195 (60.2)
Living with spouse/carers	89 (27.5)
Unknown	40 (12.3)
Referral source	
GP	66 (20.4)
Ambulance service	69 (21.3)
Other acute care sources	57 (17.6)
Community rehabilitation/ intermediate care	44 (13.6)
Housing agencies offering supported accommodation for older people	40 (12.3)
A&E	3 (0.9)
Other	45 (13.9)
Reason for referral	
Recent fall	319 (98.5)
High risk of fall	5 (1.5)
Referral outcome	
Participated in falls prevention classes	220 (67.9)
Referred to falls prevention classes elsewhere	31 (9.5)
Referral inappropriate	27 (8.3)
Patient ill or required hospital care	18 (5.6)
Patient declined	18 (5.6)
Out of area/died	10 (3.1)

GP = general practitioner; A&E = Accident and Emergency.

and 6 users of exercise services offered by the local Borough Council.

GPs, ambulance services and acute and community therapists were the main sources of referral but referrals from A&E were lower than anticipated. Referral sources grouped under ‘other’

included Social Services (10 referrals), clinic physiotherapists (eight referrals), community matrons (six referrals) and the local Borough Council (eight referrals).

Results at the base of Table 3 show the outcome of the referral process. A total of 220 (67.9%) individuals were invited to participate in the newly established falls prevention classes, with 31 (9.5%) being re-directed to a similar service that operated elsewhere in the PCT. A small number of referrals (18) decided not to participate in the programme.

By the end of March 08, 183 of the 220 referrals who participated in the newly established classes had completed their eight week courses. On completing the classes 58 users were referred to an other falls preventative service: mainly exercise classes offered by the Borough Council and Age Concern. The resource constraints of the study meant that it was not feasible to collect details of the outcome of these on-going referrals.

Of the 183 individuals who had completed their classes, 86 received them in a 'clinic' and 97 in their homes. Data to assess changes in the 'clinical' measures of outcome were obtained from 80 of the 86 individuals who received their classes in a clinic (the remaining six did not attend their last session but were regarded as having completed the course). Unfortunately, it was only

feasible to collect 'clinical' outcome data for three of the individuals who received their classes at home. This was because it proved difficult to administer the 'clinical' outcome measures selected in a home environment. As previously indicated, when the evaluation was designed it was assumed that the falls classes would primarily take place in a clinic setting.

Results for the 83 individuals for which 'clinical' outcome data were available are presented in Table 4. For the 'chair sit to stand', 'timed up and go' and 'steps to turn' assessments, a reduction in the baseline measure (a negative value in the Table) represents an improvement in the test score. An increase in the baseline measures (a positive value in the Table) represents an improved score for other assessments. As can be seen, between when they started and ended their falls classes, the group overall achieved statistically significant improvements in all of the 'clinical' outcomes used.

A follow-up telephone call to individuals, who had completed their falls classes six months earlier, successfully obtained 'patient orientated' outcome data from 34 individuals. The relatively low number of users providing 'patient orientated' outcome data are in part due to the fact that many service users were not eligible for six-month follow-up when data collection for the

Table 4 'Clinical' test scores of service users at start and end of falls prevention classes

Test (number of patients)	Mean baseline measure	Median change	Minimum (maximum) change	95% confidence intervals	P-value
Chair sit to stand (<i>n</i> = 83)	37.7 s	-14 s	+11 (-64)	-18, -9	<0.001
Four point balance (<i>n</i> = 83)	1.8 tests successfully completed	+1 test successfully completed	+0 (+3)	+1, +1	<0.001
Timed up and go (<i>n</i> = 83)	26.6 s	-7 s	+22 (-36)	-8, -6	<0.001
Functional reach (<i>n</i> = 83)	15.9 cm	+9 cm	+32 (-20)	+6, +12	<0.001
Steps to turn (<i>n</i> = 83)	6.4 steps	-2 steps	+1 (-6)	-2, -1	<0.001

Table 5 Comparison of 'patient orientated' measures between when service users started their falls prevention classes and six months later

Impact type (number of patients)	Number (%) 'improved' six months after completing the programme	Number (%) 'staying the same' six months after completing programme
'Do you have a fear of falling?' (<i>n</i> = 34)	32 (94.1)	2 (5.9)
'Have you lost confidence since falling?' (<i>n</i> = 34)	29 (85.3)	5 (14.7)

Table 6 Comparison of falls experienced by service users in the six-month period before they started and after they finished their falls prevention classes

Measure (number of patients)	Mean baseline number	Median change	Minimum (maximum) change	95% confidence intervals	P-value
Number of falls (n = 34)	3.1 falls	-2	0 (-8)	-3, -2	<0.001

study ended. Loss to follow-up is another reason for the low number, the implications of which will be discussed in the final section of the paper.

The results presented in Table 5 show that at the 6-month follow-up, the vast majority of respondents indicated that their confidence levels linked to falls were higher than when they started their falls classes. Relative to baseline, the vast majority of respondents also indicated that they had a reduced fear of falling.

Finally, the results in Table 6 compare the number of falls that service users indicated that they had experienced during the six months before they started their falls classes and the six months after completing their classes. A statistically significant reduction in the frequency of falls experienced by service users is evident.

Discussion

The study described in this paper represented a collaborative venture involving academics and health care practitioners and professionals. Its main purpose was to generate information to support the development of services for falls within Cheshire.

This final section of the paper first discusses the use of the results that were generated by the study and the ways in which they complimented those available from research published elsewhere. The discussion then moves to an exploration of some of the challenges that researchers face when conducting collaborative ventures of this type and the implications of these challenges. Finally, possible ways of addressing the implications of some of these challenges are discussed.

Overall, 34.3% of the attendees at the falls awareness events who participated in the study had suffered a previous fall. This prevalence rate is similar to findings from published research that indicates that around 30% of over 65s fall each

year (Tinetti *et al.*, 1998; Todd and Skelton, 2004). Hence, although some sections of the elderly population may not have been represented in this local survey (eg, those who are housebound), the results of the study provided further confirmation that falls are a major problem, which affects older people in Cheshire.

Of more specific relevance to local service commissioners and providers was the fact that 64.3% of attendees at the falls awareness events were at medium or at high risk of suffering a fall. This finding was based on the use of a local adaptation of a falls risk assessment instrument that had been used elsewhere in the NHS (Redditch and Bromsgrove, 2004). Reference to the discussion pages of the website of the Prevention of Falls Network Europe (www.profan.eu.org, accessed 12th December 2010) reveals that there is currently debate about the role and merits of such risk assessment instruments. However, in this study, the use of such an instrument provided a means of systematically screening the large number of attendees at the falls awareness events and categorising their risk status (although the volume of attendees did mean that it was not always possible to collect complete data from all attendees, see Table 2).

Results from the falls awareness events also revealed that none of the attendees at medium or at high risk of suffering a fall were accessing services that might help address their risk factors. Local falls professionals feel that individuals who have suffered a fall and those at medium risk of falling and above would benefit from access to a service for preventing falls, such as that piloted in this study. This finding therefore indicated that there was 'unmet need' for falls prevention services in Cheshire.

One possible cause of unmet need is that services for falls prevention are not seen as relevant or desirable by individuals. However, local evidence against this argument is provided by the fact that

the vast majority of individuals (233 out of 251) who were referred to the multifactorial falls programme decided to engage with the service.

Another likely cause of unmet need is limited population and practitioner awareness about the existence of service options with the findings of studies elsewhere providing evidence to support this claim (Clinical Effectiveness and Evaluation Unit of the Royal College of Physicians 2006, Roe *et al.*, 2009). For example, falls staffs, at the events, were able to identify and address this cause of unmet need by directing relevant participants to services delivered by pharmacists and GPs.

Finally, the limited scope and availability of services for falls prevention in Western Cheshire at that time was another key cause of unmet need and a reason why it was not possible to direct all relevant attendees at the public events (those at medium or at high risk of falls) to an available service option. Since the completion of the study, a multifactorial falls programme has been developed in Western Cheshire. The decision to invest in this service was influenced by the exposed evidence of unmet need locally and the emergent findings from the evaluation of the similar programme that had been introduced in Central and Eastern Cheshire.

Results from the evaluation of the multifactorial falls programme also raised concerns about practitioner awareness of falls services and the levels of integration between services for preventing falls and for providing care following a fall. Although falls are a major cause of older people attending hospital A&E departments, national surveys have revealed that within these departments there are often inadequate procedures for screening individuals to assess their risks of falls and for, where relevant, referring them to specialist falls services (Clinical Effectiveness and Evaluation Unit of the Royal College of Physicians 2006). The evaluation confirmed that this problem existed within Central and Eastern Cheshire: during the first year of its existence, the multifactorial falls programme only received three referrals from its local A&E department.

The development of the multifactorial falls programme and its classes reflected published guidance (NICE, 2004). However, the results generated by the evaluation allowed local stakeholders to check that the claimed benefits of such a programme were being achieved locally. Overall, among those individuals who provided

data for analysis, there were statistically significant improvements in the 'clinical' outcomes assessed and a statistically significant reduction in their prevalence of falls. This result was achieved even though the duration of the falls classes (8 weeks) was lower than that indicated (25 weeks) by the results of a systematic review and meta-analysis of results from studies that have examined the effectiveness of exercise programmes to prevent falls (Sherrington *et al.*, 2008). The majority of respondents also indicated that participation in the falls classes had improved their confidence linked to falls and reduced their fear of falling.

However, although the information generated by this study represented a valuable resource for local decision-making, it is recognised that its quality was affected by the characteristics of this collaborative 'research' venture. All members of the study team had a role in defining the focus of the project and in developing its methods but the professionals and practitioners were responsible for collecting the data that it needed. The active participation of local staff did mean that the study had a valuable role in developing 'research' capacity within host organisations (the need to develop 'research' capacity in this way has been recognised elsewhere (Chen and Majeed, 2005; McDonnell *et al.*, 2006)). However, the use of local staff as 'fieldworkers' did affect the choice of methods and the sophistication of data collection techniques.

For example, although recognised measures were used to assess changes for most of the outcome domains covered, locally developed approaches were preferred for assessing changes in client confidence rather than the use of scales that had been used in research elsewhere such as the Falls Efficacy Scale (Tinetti *et al.*, 1995). It also proved difficult to administer the selected 'clinical' outcome measures in a home environment although this limitation relates to the fact that, when the evaluation was designed, it was not envisaged that the falls prevention classes would be delivered in the homes of service users. In addition, the time that staff could devote to data collection meant that a telephone call was used to capture changes in service user confidence, fear of falls and occurrence of falls. This method of data collection will have failed to access all potential respondents: for example, those in hospital or not at home at the time of the phone call. Service user recall will also have affected the quality of the

data collected about changes in the number of falls that they had experienced during the preceding six months.

Such challenges and study limitations have been reported elsewhere (eg, Abbott *et al.*, 2008). They mean that the role of such collaborative studies is to generate 'locally useful' information that compliments rather than replaces evidence that is generated by studies which are based on more rigorous research designs.

However, policy initiatives such as the development of World Class Commissioning (Department of Health, 2007a) and the use of Joint Strategic Needs Assessments (Department of Health, 2007b) will increase the relevance of local research studies and the importance of identifying ways to increase the quality of the information that they generate. New commissioning arrangements could provide a way forward. For prioritised service areas, the contracts between service commissioners and providers could specify the key 'performance' information required and the key data that should be collected to generate this information. Contracts could also include guidance on how these data should be collected. Finally, this process of negotiation should also ensure that adequate resources are in place to support local research and audit activities.

To conclude, the results presented in this paper demonstrate that local research activities can play a valuable role in supporting evidence informed decision making in agencies responsible for commissioning and delivering services for health and social care. Such studies can also provide a vehicle for developing research and analytical capacity among staff in host organisations although the involvement of local staff can place limitations on the design of studies. Efforts to address these limitations must continue.

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