

Falls prevention: partnering occupational therapy and general practitioners.

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Abstract.

The Falls STOP project was a partnership between general practitioners (GPs) and occupational therapists with the common goal to reduce accidental falls in the elderly. A home visiting service was implemented that included the organisation of home modifications, education on falls prevention strategies and referral to other community services. The pilot demonstrated some valuable benefits to sixty-eight clients referred to the program by twenty GPs. A number of resources were developed such as a falls risk questionnaire completed by patients while waiting to see the doctor, and a falls prevention educational booklet. A significant challenge for future preventative programs is rousing the interest of a larger group of referring doctors, and promoting the benefits of shared care arrangements with occupational therapists that target specific health issues such as falls in the elderly.

Introduction

Approximately one third of elderly people fall each year, and falls are the major cause of injury and death in the over 65 age group. It is estimated that 55% of falls occur at home (Tibbitts 1996). They are the most common cause of accidental injury in the elderly requiring hospitalisation (Australian Bureau of Statistics 1996), 85% of fractures involving a fall occur at home, with 25% of these associated with an object in the home (Norton, Campbell, Lee-Joe et al 1997). There has been significant discussion as to the role of intrinsic and extrinsic risk factors (Sattin, Rodriguez, De Vito and Wingo 1998; Hinman 1998) and the need to embrace a multi-factorial approach (Tinetti, Baker & McAvay et al 1994) in reducing falls in the elderly.

The literature is replete with examples of falls prevention programs and strategies. These strategies include environmental modifications (Sattin et al 1997, Smith & Widiatmoko 1998; Carter, Campbell & Sanson-Fisher et al 1997; Connell 1996), population based interventions (Beurden, Kempton, Sladden & Garner 1998; Byles, Harriss, Nair & Butler 1996; Hahn, Van Beurden, Kempton et al 1996) exercise programs (Kannus, Niemi, Palvanen & Parkkari 1997; Campbell et al 1997) and medical management of identified risks (O'Mahoney & Foote 1998; Koski, Luukinen, Laippala & Kivela 1996). Despite numerous attempts to identify a discrete area to target, multidisciplinary multi-factorial approaches that include preventative strategies seem to have most potential for reducing disability and death as the consequence of a falls injury (Byles et al 1996; King & Tinetti 1996; Luukinen et al 1996; Brandis 1999).

This paper presents a two-year pilot falls prevention project (Fall STOP) involving the Gold Coast Division of General Practice and the Gold Coast Hospital Occupational Therapy Service. This is one component of an approach to Falls prevention that has been developed by the Gold Coast Health District Service and is shown in the chart below. The inpatient module 4 has been described elsewhere (Brandis 1999).

Chart 1: Gold Coast Fall STOP Falls Prevention Project.



The General Practice pilot was developed on a similar model to the Make it Safe program run by the South Australian Health Commission (Thompson 1996). Fall STOP differed by utilising professional expertise of occupational therapists to provide home assessments for the elderly and organise environmental modifications within the context of the clients medical circumstances following assessment by a GP. This feature is important, as previous studies (Sattin et al 1998; Carter et al 1997) suggesting that home modifications have limited value in preventing falls have used other professional groups often in isolation from a medical assessment.

The Division was approached and was enthusiastic about participating in the Gold Coast area. The Gold Coast City has a resident population of 320,000 with 14.6% aged 65 or over, compared to the state average of 11% in this age group (ABS 1996). The Gold Coast Division of General Practice has approximately 420 doctors identifying themselves to the Division as GPs.

Method

The Division provided a volunteer GP for initial consultation and project design. It was concluded that there would be merit in using a simple falls risk questionnaire, to be completed while waiting to see the doctor. From this a screening checklist was developed, similar to those described elsewhere (Brandis 1999; Oliver, Britton, Seed et al 1997). The aim of this tool was to highlight people’s awareness to intrinsic and extrinsic falls risk factors, promote safe behaviour and address key safety factors in the home.

To recruit GPs information was provided in the monthly newsletter of the Division and at their meetings by the executive officer. Letters of introduction were sent to twelve doctors identified by the Division inviting their participation in the project, followed by a personal visit by the occupational therapist. The GPs were offered free access to occupational therapy home assessments and intervention for patients referred to the project. These doctors were asked to disseminate the information to other medical practitioners working within their medical centre. A limited number of surgeries were approached so as to allow for a manageable influx of referrals. At the end of the first year an annual project report was mailed to the participating practices. A further fourteen practices were invited to participate in the program in the second year.

In total twenty-six general practice surgeries, comprised of seventy doctors were visited over the two-year period by the occupational therapist. This equates to 17% of GPs who belong to the Division of General Practice on the Gold Coast. Of the twenty-six surgeries visited, thirteen individual practices participated in the program with referrals received from nineteen individual doctors or 27% of the original group of seventy. One doctor who had not been visited referred a patient in response to the newsletter article. These twenty doctors represent 4.8% of all GPs known to the Division.

The falls risk questionnaires were left in the waiting rooms of participating medical practitioners. Patients could self-refer by indicating if they would like further falls prevention intervention. The doctor was able to refer into the program a patient who he/she felt were at a risk of falling following the medical consultation. Methods of

communication from the GP to the therapist were by phone call, facsimile or by completing a standard referral form. Following a home assessment, a typed home visit report was sent to the referring doctor to facilitate communication. In some cases, further follow up was by phone.

Referred patients were telephoned by the therapist to seek consent for a home visit assessment. A falls prevention booklet was developed during the program and these were reviewed with the patient at the time of the visit. Booklets were also sent out to six patients who requested additional information but did not provide consent for a home visit assessment. This method of referral elicited sixty-eight clients for falls prevention intervention with sixty-two of these providing consent for a home visit assessment.

Home modifications following the home visit assessment were organised by a local charitable home modification service providing free tradesman labour. Additional information was supplied to patients at the time of the home assessment and referrals made to other community services.

Results

Referral patterns were examined by reviewing the number received from each general practitioner (see Figure 1).

Figure 1. Referral patterns of participating GPs

Number of referrals	Number of Doctors referring	TOTAL Referrals
1	8	8
2	3	6
3	1	3
4	3	12
5	3	15
7	1	7
17	1	17
TOTAL	20	68

Review of the forty-nine falls risk questionnaires completed showed that twenty-three people (47%) had experienced a fall in the last six months.

A telephone survey of participating GPs was conducted with six (30%) available to provide feedback. It is difficult to assume much from this survey due to the small response rate, however these doctors indicated that the project was worth continuing in their practices. An attempt was made to contact those GPs visited by the therapist but not referring into the program so as to identify reasons for non-participation. In summary it was found difficult to elicit a response, or get past the receptionist in a number of the practices contacted.

A patient satisfaction survey was conducted by telephone six months following the home visit. These findings may be biased as the same occupational therapist conducting some of these surveys also visited the elderly, however a familiar voice may have stimulated recall.

Of a total of sixty-two people who had received a home assessment, forty-eight were able to recall the visit. Fourteen participants were unable to respond to the survey. This included six people unable to remember the visit sufficiently, and eight people not able to be contacted by phone either having moved address or having passed away. A summary of feedback is presented in Figure 2 and is not intended for statistical analysis. Comments were generally positive with participants reporting an improvement with their confidence since the visit. Four participants (8%) had reported a fall since the home visit assessment. The reasons for these included two people who fell during a dizzy spell/blackout, one man who fell subsequent to dozing while adjusting his catheter, and one lady who reported to have lost balance.

Figure 2. Summary of Patient Satisfaction Survey

Survey Question	Response
Did you have modifications to your home following the therapist's visit?	74% Yes
Do you think these changes were worthwhile?	100% Yes
Do you feel safer in your home since the therapists visit?	88% Yes
How valuable did you find the services?	57% very valuable 43% valuable 0% limited or no value
What aspect of the visit did you find most useful?	47% home modifications 13% education/advise 9% resource list 5% information booklet 3% referral to another service 23% the whole visit
Have you had a fall since the visit?	8% Yes

Analysis of data recorded by the occupational therapist provides a service cost on average between \$27 and \$36 per patient. Home modifications organised by the occupational therapist are shown in Figure 3.

Figure 3. Most common home modifications, Fall STOP Project

Installation of grab rails	46% of modifications
Application of non-slip surface coating	22% of modifications
Removal of mats	8% of modifications
Program phones	4% of modifications
Miscellaneous (includes: aid prescription, modifying external access)	20% of modifications

Discussion

Although there is considerable encouragement in Australia for general practitioners to become involved in preventative health programs (Hahn et al.1996) and shared care arrangements, our experience showed that when offered a free preventative service, the take up by GPs was low. Of an estimated 420 GPs servicing the Gold Coast, only 4.8% referred patients. On consultation some doctors expressed the feeling of inundation by the number of new programs available as short-term “pilots” and a reluctance to become involved in programs relying on short term funding. These opinions have been supported (Douglas & Sibthorpe 1998) in relation to GP stress. While GPs would like improved access to allied health services (Harris & Powel-Davies 1999) a challenge for this project was recruitment of referring medical practitioners. Reported examples of sharing care between allied health professionals and GPs deals mostly with social workers and nurses (Moorhead 1995), and it is possible that the role of the occupational therapist needed better marketing. While an increase in shared care programs for aged care has been reported, successful arrangements rely on strong incentives for the medical practitioners as well as good personal and professional relationships (Harris et al 1999). Those doctors identifying as having a specific interest in aged care utilised the Fall STOP program more frequently. Of concern is the low number of GPs interested in aged care, particularly when considering the high percentage of elderly people in the catchment area.

The practitioners who enthusiastically embraced the Fall STOP project valued the home visiting occupational therapy service highly. Anecdotal evidence indicated that the therapy service was a valuable adjunct to the medical case management of the patient. In some cases the occupational therapist was perceived by the patient to be from the doctor's practice, and this also reflected positively on the practice referring the patient to the program. One GP commented that his interest and awareness of falls risks had been enhanced by the Fall STOP project. The project may have prompted the doctors to assess each patient more thoroughly for falls risks, and be more considerate of the interplay of intrinsic and extrinsic variables.

From the occupational therapy perspective continuity of care and integration of services were enhanced. The partnership of GP and occupational therapist promoted a more holistic appraisal of the patients' full needs and was a positive experience for the therapist. Although funding for the project has ceased, the small number of participating GPs has ironically ensured the continuation of the program. Patients referred from the participating practices have been mainstreamed to the therapist's caseloads as a part of other home visiting services provided from the hospital.

While a percentage reduction of falls in the last six months from 47% before the intervention to 5% was observed, numbers were very small. The effect of home modifications in preventing falls has been questioned (Norton et al 1997; Sattin et al 1998, Hinman 1998; Carter et al 1997), but the Fall STOP project found increased confidence and a reduced fear of falling. Fear of falling has frequently been referred to in the literature as a significant barrier to full independence in the aged (Vellas, Wayne, Romero et al 1997; Lachman, Howland, Tennstedt et al 1998; Mclean & Lord 1996). The installation of grab rails has been cited as an effective method of not only preventing a fall but also reducing fear of falling (Sattin et al 1998; Mclean & Lord 1996). The personal attention of the visit and increased patient awareness could create a clouding effect with the perceived worthiness of modifications. It is difficult to know in a pilot such as this if patient behaviour changed as a response to the visit and whether the falls risk questionnaire accurately depicted those of greater risk. The reliability of a falls risk questionnaire for use in general practice needs further study. More information is required on the best way of engaging GPs in free preventative services. As the primary health care provider of elderly people in the community, preventative programs will only succeed with their full involvement.

There is conflicting evidence on the value of environmental adaptation in the prevention of falls. Falls in the elderly are often the culmination of the interplay of a number of variables most of which can be addressed by using a partnership approach of the GP and an occupational therapist. While further research is warranted to identify the critical elements in preventing falls and on identifying methods of encouraging doctor participation, the Fall STOP project presented here demonstrates that a collaborative approach has many benefits.

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