



Evaluation of Falls Clinics and development of a measurement and outcomes framework

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Review of Movement Disorder Clinics

Executive Summary

From the National Ageing Research Institute

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Executive summary

Falls remain a major public health problem for older people in Australia. While some falls are purely accidental and likelihood of prevention might be negligible, the overwhelming majority of falls among older people result from an interaction between intrinsic and extrinsic risk factors, many of which are modifiable. Effective falls prevention requires a multi-pronged approach, ranging from population based strategies such as education and promotion of physical activity shown to reduce falls (eg group exercise and tai chi), through to individual approaches based on comprehensive assessment and targeted interventions for those with established high risk of recurrent falls. Falls Clinics are an example of the latter.

The Victorian Department of Human Services has developed a strong whole of community approach to falls prevention since the mid 1990's. This has included funding for a series of programs aiming to reduce falls among older people in the community (Foothold on Safety), residential aged care facilities, and hospitals (both sub-acute and acute hospitals, through Quality Improvement Funding, and through the Aged Care Division). Since 1998, the Victorian Department of Human Services has funded 14 Falls Clinics across Victoria. Victorian Falls Clinics are seen as leaders nationally, regularly hosting visitors from interstate and overseas.

The first described multi-disciplinary Falls Clinic in Australia was established in 1988 in Melbourne. The number of Falls Clinics in Australia, and those reported in the international literature have increased substantially since the late 1990's. To date, however, there has been relatively little published data relating to outcomes of Falls Clinics, and no attempt to synthesise what has been published. The aims of this project were to:

- review the research literature (published, as well as conference proceedings and project reports) to describe the research evidence about the effectiveness of Falls Clinics;

- evaluate outcomes from three Victorian Falls Clinics to identify effectiveness of interventions across a range of key outcome measures;
- review assessment procedures currently used in Falls Clinics in Victoria with the aim of developing recommendations for a minimum data set of outcome measures; and
- provide a snapshot of issues associated with clients who do not attend 6 month review appointments at Falls Clinics.

There are a number of other types of specialist Clinics for older people. Movement Disorder Clinics provide a long term, multi-disciplinary case management approach for people with a wide variety of progressive neurological disorders affecting movement. The majority of clients attending Movement Disorder Clinics have a diagnosis of Parkinson's disease or Huntington's disease. An additional stream of activity for this project involved reviewing the research evidence relating to effectiveness of Movement Disorder Clinics, and to analyse data available from the Kingston Movement Disorder Clinic in Melbourne.

Key findings

A/ Literature review – Falls Clinics

The review of research literature identified one randomised controlled trial using a multi-disciplinary (medical and occupational therapy) comprehensive assessment and targeted management program for a high falls risk group (older people presenting to an Emergency Department after a fall), which resulted in a significant reduction in falls. Additionally, seven pre – post design studies of multi-disciplinary Falls Clinics reported an average reduction of over 50% in the proportion of clients falling after a Falls Clinic intervention, compared to prior to the intervention. Most of these studies also reported some improvements in balance, mobility, and related measures following Falls Clinic interventions. Each of these studies involved samples of older people with high risk of recurrent falls and injuries. However, few investigated effectiveness in reducing injuries associated with falls, and none have reported an economic evaluation of the Falls Clinic intervention. These issues remain important research questions to be addressed.

B/ Local Falls Clinic data analysis

The literature review was supported by an analysis of data from three Victorian Falls Clinics (Melbourne Extended Care and Rehabilitation Service; Bundoora Extended Care Centre, and Barwon Health – Grace McKellar Centre). Data from 163 clients with complete Falls Clinic episodes of care were analysed. The sample had an average age of 76 years, 80% had fallen an average of 5.3 times in the six months prior to the Falls Clinic assessment, with 16% of clients having a fracture from one or more of these falls. This client profile reflects a group with high risk of recurrent falls and falls related injuries. An average of 2.3 major risk factors contributing to falls risk were identified for each client, and an average of 4.4 interventions were implemented or referred on for implementation. The most common interventions included home exercise programs, supervised therapy programs, and home safety assessments and modifications. Outcomes measured six months later identified that:

- almost half of the clients reporting a fall in the six months prior to Clinic assessment had not fallen in the six month Falls Clinic intervention period, and of those who continued falling, the frequency of falling was substantially reduced. Falls Clinics do not systematically collect data at six months on falls injuries, so comparison of falls injuries between the Falls Clinic intervention period and the preceding six months were unable to be made; and
- small but significant improvements were achieved on several key balance and mobility measures.

A small sub-sample had measures of compliance with recommended interventions reported. Complete compliance ranged from 55% (home modifications) to 86% (medication change) for the more commonly recommended interventions. Client compliance clearly influences outcomes, and this is an area that warrants further investigation.

These results from Victorian Falls Clinics are consistent with those reported in the published literature.

C/ Towards development of a Minimum Data Set of outcome measures for Falls Clinics

Currently there is considerable diversity in the range of outcome measures used by Victorian Falls Clinics. Through this project, and with the support of the recently developed Victorian Falls Clinic Coalition, a recommended Minimum Data Set of outcome measures has been defined. This Minimum Data Set is considered to be a framework of minimum outcome data that should form the basis of Falls Clinic assessment, but should not be considered prescriptive or limiting to the range of measures used by Clinics. It has potential to form the basis for a more systematic analysis of Falls Clinic outcomes across all Victorian Clinics, including outcomes in terms of falls related injury, and possibly form part of an economic evaluation of Falls Clinics. It may also be useful in undertaking quality improvement activities investigating relevant issues such as client compliance with Clinic recommendations.

D/ Non-attendance at six month follow-up assessments at Falls Clinics

The six month follow-up assessment is used by most Falls Clinics, primarily as a means of identifying longer term benefits of interventions, and providing ongoing feedback to clients about long term falls prevention. A brief analysis was undertaken of six month follow-up assessments at one of the Clinics, which identified that 38% of clients did not re-attend the follow-up assessment. Most common reasons for non-attendance were that the client forgot (44%), or was too unwell (33%). Most clients considered they had benefited from the Falls Clinic intervention, and only one third of those who were falling in the six months prior to initial assessment at the Clinic had experienced any falls in the following six months. There appear to be benefits for the client and the Clinic in conducting the six month follow-up, and strategies to improve the proportion of clients attending need to be explored.

E/ Review of Movement Disorder Clinics

Movement Disorder Clinics are another type of specialist Clinic, specifically providing multi-disciplinary assessment and management programs for people with movement disorders. Movement Disorder Clinics differ substantially from Falls Clinics in the type of clients seen (most commonly Parkinson's disease, and Huntington's disease) and the nature of

intermittent but long term assessments and intervention required over time. A research review identified few studies which report the model of care, processes and outcomes associated specifically with these Clinics. A small number of studies have demonstrated significant short term improvements associated with mono-disciplinary interventions, particularly for clients with Parkinson's disease. Analysis of data from the Kingston Centre Movement Disorder Clinic provided some baseline information about the profile of clients, and limited information about interventions and outcomes. More comprehensive systems are required for data centralisation and retrieval to facilitate improved analyses investigating outcomes from the Clinic in future, and these are being considered for implementation by the Movement Disorder Clinic team at Kingston Centre. The Movement Disorder Clinic team also work closely with the Kingston Centre Geriatric Research Unit, which has conducted and published an extensive research stream of activities investigating aspects of assessment and management of clients with movement disorders, and are currently seeking funding for a randomised controlled trial to evaluate the effectiveness of Movement Disorder Clinic interventions.

Project recommendations

The results of this project, and the independent but timely development of a Falls Clinic Coalition in Victoria provide a potential basis for further activity:

- to strengthen the evidence supporting Falls Clinic activity; and
- to investigate aspects of best practice / improved models of care within and between Clinics.

In order to build on the current research knowledge and best practice in Falls Clinics, a number of further actions are recommended:

A/ Introduction and field testing of the Minimum Data Set for outcome measures for Falls Clinics

The Minimum Data Set for outcome measures will provide a systematic approach to data collection within Clinics in terms of using measures considered most useful in evaluation of outcomes. The recommended Minimum Data Set will be put forward for endorsement at

the next Falls Clinic Coalition meeting in November 2002, and it is proposed that it then be field tested for a period of six months.

B/ Research support to address gaps in evidence for Falls Clinics

Key research gaps remain unanswered in the research literature on Falls Clinics. Important system wide research questions need to consider effectiveness in reducing falls related injuries, and economic evaluation. On a micro level, research needs to investigate aspects related to enhanced best practice. Areas of potential research include strategies to enhance client compliance with recommended interventions, and investigation of factors influencing outcomes (eg diagnosis, cognitive impairment).

C/ Support for evaluation and implementation of best practice models for Falls Clinics

There is some diversity in the structure, target group, operation, and interventions provided by the various Falls Clinics. There is potential for comparison between different models of Falls Clinic practice (for example, comparison of standard Falls Clinic practice, with a Falls Clinic service incorporating a screening process for a range of interventions, one of which may be a Falls Clinic assessment). Best practice models also need to consider effective linkages with other relevant agencies and groups, such as general practitioners and other health professionals. The current trend for some Falls Clinics to include specialised areas of activity, such as vestibular dysfunction and syncope assessment and management may also warrant further evaluation.

D/ Support for development and production of standard education resources for Falls Clinic clients

Currently there are no standard educational resources available for clients attending Falls Clinics to be used to support the clinical recommendations of the team. Development of a series of standard educational resources is one strategy that is likely to enhance client compliance with Clinic recommendations for interventions.

E/ Research to address gaps in evidence in the evaluation of outcomes for Movement Disorder Clinics

There remains a need to investigate the short term and longer term outcomes associated with Movement Disorder Clinics, which consider the broad range of physical, psychological, and carer stress outcomes relevant to this client group with chronic,

progressive disorders. Ideally, this type of analysis would also incorporate a health economic evaluation.

Summary

Falls Clinics appear to be an effective component of a system wide approach to falls prevention, which is particularly targeted to those with high established risk of recurrent and / or injurious falls. Movement Disorder Clinics also appear to have an important role in early diagnosis and ongoing management to improve outcomes for people with progressive neurological disorders, although the current research evidence is less strong. There is a need for further research and activity to enhance outcomes and best practice in Falls Clinics and Movement Disorder Clinics. The outcomes of this project provide a useful foundation for these future developments.