A survey and feasibility RCT of pre-discharge home visits for patients with a stroke: the HOVIS Trial (Home Visits after Stroke)

Grant holder
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Overview

Pre-discharge home visits are routinely completed by occupational therapists with patients who have had a stroke as part of the process of preparing for discharge (Chibnall 2011). Home visits are thought to increase patients’ ability to cope at home (Lannin et al 2007) and to increase their safety at home (Johnston et al 2010). However, despite their frequent use, there is little evidence to support the clinical or cost effectiveness of pre-discharge occupational therapy home visits with patients after stroke, and little is known about current procedures and practices.

Methodology

There were three strands to the research, which were:

1. Semi-structured interviews with 20 senior occupational therapists working in in-patient stroke care. The interviews explored aspects of pre-discharge home visiting practice. The occupational therapists were selected from a sample of 75 volunteers from the College of Occupational Therapists Specialist Section for Neurological Practice. They were purposively sampled in order to encompass a range of urban and rural locations across the United Kingdom. Interviews were analysed using thematic analysis (Braun and Clarke 2006).

2. A survey of stroke units in England examining pre-discharge home visiting practices. A questionnaire was designed, piloted and mailed to the lead occupational therapist for stroke at 184 stroke unit sites in England. The questionnaire covered various aspects of home visiting practice including: number of visits completed, reasons for completing visits, time spent on visits, procedures and reporting.

3. A feasibility randomized controlled trial (RCT) of pre-discharge home visits for patients with a stroke. This was conducted at the stroke rehabilitation unit at the Royal Derby hospital and comprised: a randomized controlled trial and a cohort study. Patients for whom there was clinical uncertainty about the need to conduct a home visit were randomized to the home visit or control group; patients for whom a visit was deemed ‘essential’ were enrolled into the cohort study.

The research was funded in full by the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care for Nottinghamshire, Derbyshire and Lincolnshire (NIHR CLAHRC NDL). Additionally, an MPhil degree was completed, which was funded by the UKOTRF award, which examined the characteristics of patients with a stroke who were believed to need a pre-discharge home visit by occupational therapists. The research for the MPhil was comprised of components from parts 1 and 3 above, and combined qualitative and quantitative approaches. A literature review was also conducted as part of the research.

Key findings from the project

- **Interviews**
  The findings from the interviews suggested that occupational therapists balanced characteristics of the person with factors related to the home environment when deciding whether a home visit was indicated. A cognitive impairment was a key factor in decision to complete a home visit with a patient with a stroke. Some of the occupational therapists had concerns about whether the most physically and cognitively impaired patients would be able to cope with the demands of the visit (Whitehead, 2013).

- **Survey**
  In the survey, variations in the number of visits conducted at different stroke unit sites were identified. There were also wide variations in the time spent on completing home visits (including travel, preparation and write up). A mean time of 63 minutes (SD 20.36) was spent on the actual visit with a range of 10 to 135 minutes. However, a number of procedures were consistent across stroke unit sites including: occupational therapists’ reasons for completing home visits, people present on the visit, and home visit documentation (Drummond et al 2012).
Feasibility RCT
Ninety-three people were allocated to the RCT. Of these 47 were randomized to intervention and 46 to the control. Thirty-three patients were enrolled into the cohort study and received a home visit. There were no significant differences in outcome between the groups in the RCT for the primary outcome measure (performance in extended activities of daily living) at one month. The main finding was that recruitment to the trial was feasible and that no safety issues were identified (Drummond et al, 2013).

Literature Review
A paucity of literature on occupational therapy pre-discharge home visits was identified. Overall the literature on occupational therapy home visits was heterogeneous both in terms of the methods the outcomes that were reported.

MPhil
Four characteristics were identified as being particularly key factors which occupational therapists believed impacted on the need for a home visit. These were: moderately severe physical disabilities, mild to moderate cognitive impairments, cortical strokes and living alone. Occupational therapists balanced information about the characteristics of the person with information about the home environment (including availability of support within the home); in order to decide whether a pre-discharge home visit was indicated.

A statement of how the research activity has or will benefit service users and the profession
Home visits are believed to be a resource intensive intervention in terms of staff time and expenses. This has implications for service users and occupational therapists and for ensuring that home visits are provided to appropriate patients. The feasibility RCT has shown that a trial is both feasible and warranted. This has laid the foundations for a further, definitive study of home visits which should provide evidence as to whether home visits are clinically and cost effective for patients with a stroke. This has implications for both the services users and the occupational therapy profession.

The survey and interviews have updated knowledge of current occupational therapy practices in this area and have facilitated a greater understanding of how occupational therapists may decide which particular patients should have home visits. The MPhil study was conducted concurrently with the Home Visit after Stroke (HOVIS) study. The findings will be combined to inform the design of the next phase of the research – a definitive randomised controlled trial.

The current National Clinical Stroke Guideline provides limited recommendations as to when a home visit should be completed (Intercollegiate Stroke Working Party, 2008). This present study has facilitated a broader understanding of the factors which occupational therapists consider to be important when deciding whether a home visit is needed. This will form the basis for the development of future clinical guidelines and facilitate a move towards increased consistency in practice for occupational therapists and stroke units. This should reduce the differences between stroke unit sites and facilitate greater equality for patients.

The impact the funding has achieved in terms of research capacity development
PW had day-to-day involvement in all aspects of the HOVIS study and was an author on all of the publications arising from the research. He gained experience of qualitative, survey, and RCT methodologies. He gained experience of qualitative and quantitative data collection and analysis. Additionally, PW had day-to-day responsibility for the feasibility RCT. He set-up and maintained the database for the feasibility RCT and took a lead role in the analysis of the data.

As part of the taught component of his MPhil registration, PW completed a comprehensive and wide ranging training programme at the University of Nottingham. The courses provided a solid introduction to research methods, approaches and the research environment. In addition, PW completed The Nottingham Systematic Review Course. The training programme has increased PW’s skills and research knowledge. PW submitted his MPhil thesis in November 2012, and his degree was confirmed in January 2013. He will graduate in July 2013.
As part of his research training programme, PW was successful in obtaining a Building Experience and Skills Travel Scholarship (BESTS). This award allowed PW to travel to Sydney Australia to visit a team of occupational therapy researchers who were completing a study of home visits with older people. This increased PW’s knowledge of the application of research techniques more generally, and enabled him to form international links.

An outline of the grant recipient’s future research career plans
PW has recently been awarded an NIHR Doctoral Research Fellowship and registered for a PhD at the University of Nottingham in January 2013, supervised by Professor Avril Drummond. This personal research award will provide funding for three years to complete a research project which and to complete a further comprehensive research training programme. The research project will investigate whether an occupational therapy intervention can increase independence in activities of daily living for users of homecare re-ablement services. During this period, PW will further develop his collaborative links with social care services in order to deliver this project and pursue his career ambitions.

Further Planned Outputs
PW is currently to working on the further dissemination of the research findings. He is currently working on further papers to be submitted for publication, one of which will be submitted to the British Journal of Occupational Therapy. He has recently submitted abstracts for presentation at the Society for Research in Rehabilitation and the World Federation of Occupational Therapy Congress.

References


Whitehead, P. (2013) What are the characteristics of patients with a stroke who are believed to need a pre-discharge home visit by occupational therapists? MPhil Thesis, University of Nottingham.