
Proceedings of SRR

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Making the case for an integrated continence intervention

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Background: Over three-quarters of care home residents are affected by incontinence. Poor carer knowledge, a lack of employer support and difficulties integrating services add to barriers for implementation of continence rehabilitation (CR) in care homes. This survey investigated current continence care practices within care homes in Birmingham.

Method: An anonymous postal survey was developed, piloted and sent to managers of homes catering for people aged over 65, listed in the Birmingham Social Care and Health services care home directory 2005. Freepost envelopes were provided and return of surveys taken as an indication of consent.

Results: Sixty-six (35%) homes returned surveys, indicating 75% of residents were incontinent of urine and/or faeces. Fewer than 50% of the total 1869 residents were able to walk independently but only 6% of homes cited mobility difficulties as a main cause of incontinence. The most common cause cited was advanced age (40%). Management methods focused mainly on briefs and pads but 56% of homes also commented that they currently or previously used a bladder programme, however 35% of these could not specify what this was. External support services (e.g. continence advisors) were used in 56% of homes.

Discussion: Prevalence of incontinence and immobility is high. Knowledge of the cause is poor. Despite evidence of the success of rehabilitation, most cases are passively managed.

Conclusion: Further continence training for care home staff would enable more opportunities for CR by raising carers' awareness of functional causes of incontinence and basic interventions.

Prevention and treatment of urinary incontinence after stroke in adults: a systematic review for the Cochrane Collaboration

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Background: Urinary incontinence can affect 40–60% of people admitted to hospital after a stroke, with 25% still having problems on hospital discharge. This paper presents the findings from a systematic review to determine the optimal methods for prevention and treatment of urinary incontinence after stroke in adults.

Method: We searched the Cochrane Incontinence and Stroke Groups specialized registers, CINAHL and national and international trial databases for unpublished data. Included studies were randomized or quasi-randomized controlled trials evaluating the effects of interventions designed to promote continence in people after stroke.

Results: Seven trials with a total of 399 participants were included in the review. Reported data were insufficient to evaluate acupuncture or timed voiding versus usual care, oxybutynin versus timed voiding, or sensory motor biofeedback plus timed voiding versus usual care. Evidence from a single trial suggested that structured assessment and management of care in early rehabilitation may reduce the number of people with incontinence at discharge (95% CI 0.01 to 0.43). Evidence from another trial suggested that assessment and management of care by continence nurse practitioners in a community setting may reduce the number of urinary symptoms (95% CI 0.59 to 0.99).

Discussion: There was some evidence that specialist input through structured assessment and management of care and specialist continence nursing may reduce urinary incontinence after stroke.

Conclusion: Currently there is little evidence to guide practice in caring for patients with incontinence after stroke. Larger trials are needed evaluating the effectiveness of structured management of care for this client group.

Patients' perceptions of functional electrical stimulation (FES) for drop foot

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Background: Functional electrical stimulation (FES) has been shown to improve walking speed in drop foot stroke subjects by 0.13 m/s. The primary reason for its use has been reported as a 'reduction in effort', which may extend beyond the physical domain to include concentration. This study explored the effects of FES and the users' perceptions of their relative importance.

Method: A questionnaire was sent to 75 adults with hemiplegic gait resultant from stroke. Non-respondents were followed up.

Results: Fifty-eight people responded, of whom 30 were current FES users. FES users identified, from a list of 13 statements, the positive effects upon gait and the single most important reason for using FES. Twenty-two respondents walked faster with FES; only one ranked this effect first. Users rated, on a three-point scale, concentration needed during walking with/without FES. A significant reduction in the perceived level of concentration required with FES was observed ($\text{McNemar } \chi^2 = 13.06, \text{ df} = 1, P < 0.001, \text{ 2-tailed}$). FES users rated the impact of walking with FES in relation to dual-task conditions, represented by 10 statements. Forty per cent ranked avoiding a trip first.

Discussion: Consistent with the literature, increase in walking speed was not of primary importance. The significant perceived reduction in concentration during walking requires further investigation. The dual-task

question supports the importance of fall-avoidance following stroke.

Conclusion: Moderate increases in walking speed appear to be of less importance to users than other effects. Further investigation of the impact of FES on attention and falls is supported.

The relationship between spasticity, power and function early after stroke

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Background: Stroke is a major cause of morbidity. The contributors to reduced function are multifactorial and may include spasticity and motor loss. The aim of this study is to explore the relative contributions of spasticity and power to function.

Method: Consecutive patients were identified from the hospital stroke register over a one-year period. Patients were excluded if they had a poor immediate prognosis. Consenting patients were followed up at day 7, and month 3 after stroke. We assessed the elbow, wrist and knee for: muscle tone, using the Modified Ashworth Scale, and power, using the Medical Research Council (MRC) scale. We assessed function using the Barthel; the Hand item of the Motor Assessment scale (HMA); and timed 5-m walk.

Results: Of the 276 patients recruited, we obtained data for 169. Their mean age was 71, and 46.7% were female. Each measure of function at day 7 and month 3 was regressed on spasticity. Spasticity had a significant relationship with each measure of function, but when power was added, the relationship was no longer significant. The exception was wrist spasticity, which retained its significant relationship with the HMA when power was added.

Discussion: Spasticity was negatively related to function. The effects of spasticity on function were generally non-significant when power was taken into account.

Conclusion: Helping patients regain their function may be better achieved by helping them increase their power rather than reduce their spasticity.

Use of NHS rehabilitation services by care homes in relation to ADL dependency profiles of residents

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Background: A lack of evidence hampers the ability to determine if UK care homes provide services that meet the demographic care needs of elderly residents. This study aims to explore if rehabilitation services provided in care homes, and accessed through the NHS from within care homes, relate to profiles of dependency in activities of daily living (ADLs) of elderly residents.

Method: Residents ($n=607$) of 24 care homes (11 nursing homes (NH) and 13 residential homes (RH) in the South Birmingham PCT (SBPCT)) were surveyed using the Barthel Index (BI). Dependency profiles on individual items of the BI were used to provide an indication of the nature of rehabilitation services required by residents. Number of referrals from care home residents to NHS rehabilitation services was obtained from the SBPCT.

Results: The proportion of NH residents with dependency in specific ADLs were: 71% in mobility, 68% in transfers, 99% in toileting, 57% in grooming and 65% in faecal incontinence. Both RH and NH residents showed dependency in dressing (83% NH and 65% RH) and urinary continence (80% NH and 60% RH). Care home residents constituted 9% of NHS inpatient rehabilitation admissions, 0.5% and 0% of referrals to outpatient rehabilitation services and community rapid intervention service respectively.

Discussion: Emphasis of care may be on managing current functional status as opposed to maintaining or improving independence.

Conclusion: Despite evidence indicating that independence in ADLs can benefit from rehabilitation and high levels of dependency in residents of care homes, very few residents actually received NHS rehabilitation services.

Motor apraxia: is rehabilitation effective?

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Background: People with motor apraxia after stroke often have difficulty carrying out everyday activities

such as making a hot drink. Those affected cannot select the right object at the right time or have difficulty using objects (e.g. a spoon) correctly. This study aimed to investigate whether interventions for motor apraxia produce a sustained reduction in disability.

Method: A Cochrane Collaboration systematic review was conducted, and a search strategy devised to identify all published and unpublished randomized controlled trials. Four reviewers extracted the data and analysed the study quality. A meta-analysis of eligible trials was conducted using weighted mean difference, 95% confidence intervals and a fixed effect model.

Results: Three trials and 132 participants were included. One used strategy training compared with usual occupational therapy. Another study compared gesture training for apraxia with aphasia treatment and the third compared two specific methods: transfer of training and functional approach. Overall there was a small and short-lived therapeutic effect on the Barthel Index in the two studies reporting ADL: mean difference (95% CI) = 1.28 (0.19 to 2.38), $P=0.02$, in favour of the experimental group. However this was not necessarily clinically significant. Furthermore it did not persist at the longer term follow-up in the one study reporting this: mean difference (95% CI) = 0.17 (-1.41 to 1.75), $P=0.83$.

Discussion: There is insufficient evidence to support or refute the effectiveness of therapeutic intervention for motor apraxia after stroke.

Conclusion: Further research must employ third party randomization to ensure allocation concealment and must blind outcome assessors.

Barriers to breast and cervical screening for women with physical disabilities: a qualitative study

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Background: The National Service Framework¹ targets improvement in health outcomes and access to services for people with long-term neurological conditions. Studies suggest that women with physical disabilities do not access routine cancer screening services, despite having the same risks as other women.^{2,3} The purpose of this study was to understand inequity in screening services for this group.

Setting: Rural Lincolnshire.

Method: A purposive sample of eight women aged 20–64 (mean 55 years) with long-term disabling conditions (1 stroke, 6 multiple sclerosis, 1 cerebral palsy) were identified from among those known to community rehabilitation services. All were full-time wheelchair users. Audio-taped, semi-structured interviews were conducted in participants' homes. Data were transcribed and analysed using constant comparative methods⁴ by two independent researchers.

Results: The women experienced barriers when accessing breast and cervical screening, which impacted negatively on their experiences. Barriers existed in the structure of services, their organization and delivery, in the availability and use of screening equipment and in participants' interactions with health professionals delivering services. Service users tended to be well-informed and proffered solutions to some barriers. Some were deterred from screening by previous experience.

Conclusion: The study offered insight into the lived experience of eight women with physical disabilities accessing cancer screening. Surmountable barriers exist that deter women with physical disabilities from accessing screening services. An appreciation of these barriers by service providers and policy makers could enhance services and increase uptake by this group.

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Memory rehabilitation following stroke: a systematic review of literature

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Background: Memory problems are a common cognitive complaint following stroke. Memory rehabilitation programmes are carried out in clinical practice to reduce memory problems. However, research evidence examining their effectiveness has been limited. The aim of this study was to determine the effectiveness of memory rehabilitation by a systematic review of literature and meta-analysis.

Method: A search strategy was developed, and trials were identified from databases. The methodological quality of selected trials was assessed independently by two reviewers. RevMan 4.2 was used for data analysis and the generation of the review.

Results: A total of 188 studies were identified, but only six fulfilled our a priori inclusion criteria (based on type of study, participants, interventions and outcome measures). Data from 12 participants from one randomized controlled trial were included, in which memory problems identified by the participants were treated using a memory strategy training programme, and compared with a 'drill and practice' control group. The treatment group improved on tasks retrained during the programme, with effect sizes of 1.20 ($P=0.23$) for paired associate tests, 4.19 ($P<0.0001$) for a route-learning task, and 0.35 ($P=0.73$) for a subjective memory questionnaire.

Discussion: There was a dearth of trials on memory rehabilitation and many studies had methodological limitations and were of poor quality, therefore a meta-analysis could not be carried out. Data from the trial included in this review suggested that while the memory rehabilitation programme improved performance on tasks that were trained, there was poor generalization.

Conclusion: There is insufficient evidence to support or refute the effectiveness of memory rehabilitation following stroke.

Evaluation of motivational interviewing early after acute stroke: a randomized controlled trial

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Background: Psychological problems are detrimental to recovery following stroke. Patients' expectations have been found to affect recovery. If low expectations could be reframed they may provide the motivation for patients to fully engage in the rehabilitation process. Motivational Interviewing (MI) is a patient-centred method of enhancing motivation to change behaviour, where interactions with patients provide empathy and understanding, reinforcing hope, self-efficacy and/or optimism. The study aimed to determine whether MI can benefit patients' mood at three months post stroke.

Methods: A single-centre, randomized controlled trial. Consecutive stroke patients, meeting the inclusion criteria, were randomized, balanced over age, sex, function and location, to usual care or MI. Patients in the MI group received usual care plus four sessions of motivational interviewing. The primary outcome was mood, measured by the GHQ-28 (good (< 5); poor (≥ 5)), at three months post stroke.

Results: We randomized 411 patients: 207 to the usual care group (mean age 69, female 41%); 204 to the MI group (mean age 69, female 42%). Eighty-one (39%) patients in the usual care group and 100 (49%) patients in the MI group had a good outcome. Logistic regression revealed a significant benefit of MI over usual care ($P=0.033$; OR = 1.60, 95% CI 1.04–2.46).

Discussion: The three-month results indicated that MI benefited patients' mood after stroke. It remains to be seen whether this benefit is maintained and whether it leads to other longer term benefits.

Conclusion: MI may benefit patients' mood three months after stroke.

Consumer engagement in developing a poststroke activities programme

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Background: Stroke rehabilitation tends to concentrate on physical and functional attainment. Even if successful, service users may fail to return to pre-stroke social and leisure pursuits.

Method: Semi-structured interviews explored stroke service users' usual, current and potential social and leisure activities plus possible barriers and solutions. Consenting stroke service users ($n=10$, median age 71, 3 female) and/or carers, ($n=3$, median age 69, all female) from consecutive admissions, were interviewed during rehabilitation, and one and six weeks post discharge. A trained stroke service user interviewed service users, researchers explored carers views. Interviews were recorded, transcribed verbatim and explored using constant comparison, thematic and content analysis. Respondents were asked to rate all activities that had been suggested. Trustworthiness via confirmability and credibility were addressed.

Results: Service users could not readily suggest activities that may facilitate resumption of their pre stroke activities, which they considered 'on hold', but identified frequent periods of little mental stimulation as a major problem. Activities suggested ranged from; individual (e.g. e-mail), to group (e.g. bingo), and hospital (e.g. a place to meet visitors), to community (e.g. transport problems). Optional, staff-organized and structured mobile activities were preferred to static, ad-hoc or self-organized. This was confirmed by collated activity ratings.

Discussion: Further research into the poor understanding of holistic continuous rehabilitation, including links to external agencies, is needed.

Conclusion: Stroke had a major impact on the social and leisure activities of most patients, who associated a resumption of activities with attaining a 'normal' state.

Attention control in rehabilitation trials: are lay volunteers a feasible option?

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Background: To determine if between-group differences in rehabilitation trials are truly due to the intervention, an Attention Control Group (ACG) can be compared with an Intervention Group (IG). IG and ACG should give comparable 'doses' of attention. The ACT NoW feasibility study investigated whether lay volunteers could provide attention control for comparison against speech and language therapy for acute stroke patients.

Method: Volunteers were recruited through posters and volunteer agencies. A pilot randomized controlled trial (RCT) was conducted, with half the consenting participants allocated to the ACG.

Results: Only one participant withdrew consent on allocation to a volunteer. Volunteers ($N=24$) tended to be young (83% aged 18–25), female (92%) and students (83%). 'Dose' (mean (SD)) differed between the groups: number sessions/week: ACG 1.1 (0.31); IG 1.8 (0.91) and duration/session in minutes: ACG 32.3 (11.8); IG 39.1 (8.6).

Discussion: The RCT was successfully completed with sufficient numbers of lay people volunteering and most people with stroke consenting to the ACG. However NHS Research Governance procedures are not yet prepared for volunteer involvement. Although enthusiastic, students struggle to find sufficient time during the day to provide the dose required for an intensive therapy study.

Conclusion: The feasibility study suggested valuable changes which are to be implemented for a successful main ACT NoW trial. Volunteer use is feasible but requires considerable resources to recruit and retain people who can deliver at the timepoint and dose required, and time to ensure governance requirements are met.

Body in mind: body perception disturbance in complex regional pain syndrome

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Background: In clinic practice, patients with complex regional pain syndrome (CRPS) commonly report feeling a disassociation of the affected limb from their body claiming that it does not belong. This qualitative study sought to explore the nature of this phenomenon with a view to better understanding the pathogenesis of CRPS.

Method: Following informed consent, 12 participants who met the CRPS classification were interviewed. Qualitative and interpretative methods were used to explore participant feelings, emotions and perceptions about their affected body parts. These videoed semi-structured interviews were coded and analysed utilizing a grounded theory approach.

Results: Six males and 6 females, age range 18–68 years, disease duration from 16 months to 12 years, took part. The spectrum of experience encapsulated both upper and lower limb involvement. Interviews lasted approximately 2 h with many participants expressing feelings of hate and repulsion towards the affected limb. Some had a strong desire to remove the limb. These feelings were about the CRPS limb only as the remaining unaffected body was felt to be normal. Others felt that that the limb was part of their body. They were unwilling to raise these issues with healthcare professionals for fear of being dismissed.

Discussion: The study findings suggest disturbances in body schema. Clinicians should encourage patients to discuss possible changes in body perception as this may have implications for treatment.

Conclusion: Further study is required to measure the extent to which body perception disturbance is experienced in CRPS and whether it is a feature of other chronic pain states.