



Promoting the highest quality of rehabilitation for people with stroke

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**Free paper and Poster
Abstracts**

Free paper presentations

Important landmarks in stroke survivor recovery – does use of a Goal Setting and Action Planning (G-AP) framework contribute to their achievement in community rehabilitation settings?

Category

Research

Authors

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Institutions

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Background

The G-AP framework has been developed to guide goal setting practice with stroke survivors in community rehabilitation settings. Prior to an evaluation of its effectiveness, we sought to understand what stroke survivors perceived as important landmarks in recovery, and if G-AP contributed to their achievement. We were particularly interested in stroke survivors' experiences of goal attainment and/or goal adjustment (or disengagement) in the context of their recovery journey.

Methods

Staff in three community rehabilitation teams received G-AP training. G-AP was implemented in each service for a 6 month period. In-depth interviews with 18 stroke survivors were conducted. Interview data were analysed using a Framework approach to investigate stroke survivor views of important landmarks in their recovery and the contribution of G-AP (if any) to their achievement.

Results

Stroke survivors discussed important landmarks in their recovery in terms of 'doing *what I want to do*', '*being who I want to be*' and '*feeling OK with where I'm at*'. G-AP contributed to their achievement by supporting stroke survivors to (i) identify personal goals (ii) motivate and sustain goal related behaviour (iii) experience goal related success and setbacks and (iv) gauge progress and make informed decisions about what to do next. Understanding and accepting limitations helped stroke survivors adjust or disengage from goals that were proving difficult to achieve.

Discussion

Whilst goal attainment is an important measure of stroke survivor recovery; at best it can only provide an incomplete picture. Reaching important landmarks in stroke survivor recovery is also likely to involve understanding limitations and adjusting (or disengaging from) goals proving difficult to achieve. G-AP can support both goal attainment and goal adjustment in community based stroke rehabilitation settings

Conclusion

Staff delivering community based stroke rehabilitation should consider how to support stroke survivors to attain, and where necessary, adjust personal goals.

Increasing physical activity and reducing sedentary behaviour in stroke survivors with the use of a personalised behavioural intervention: A feasibility study

Category

Research

Authors

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Institutional affiliations

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Background

Increasing physical activity (PA) and reducing sedentary behaviour (SB) are important objectives in stroke rehabilitation. However, many stroke survivors feel unsupported following discharge and spend 81% of their day sedentary, which increases their risk of further morbidity. There is therefore a need to develop an intervention that supports stroke survivors to increase PA and reduce SB during the transition from hospital to home.

Purpose

To explore the feasibility, safety and acceptability of a novel personalised brief behavioural intervention for stroke survivors to increase PA and reduce sedentary time after discharge.

Method

Design: feasibility RCT using mixed methods including a 6 week follow-up.

Participants: Stroke patients without contra-indications to physical activity.

Intervention: a tailored motivational interview, delivered within an acute stroke ward and continued post discharge home, over a period of seven weeks on three occasions, 30-60 mins per session. A novel approach was used to tailor the behavioural intervention, using individual PA and SB data. delivered Participants were given additional support as they were discharged from hospital.

Outcomes were explored at baseline, after the intervention and at follow-up with an accelerometer (ActivPAL™).

Results

Recruitment: 22 participants were approached, 77% expressed interest, of which 45% were eligible. Retention: 80% of eligible participants completed all sessions. Safety: there were three unrelated SAEs. The acceptability of the intervention was explored using a feedback form with a Likert scale (1 (negative)-4 (very positive)), yielding an average score of 3.3.

Data completion: there was no loss of data at baseline, two occasions of incomplete data

during follow up, but there were no issues with the equipment. PA and SB results: PA increased from an average of 232 to 3303 steps, breaks in SB increased from an average of 24 to 35 transitions per day.

Discussion

The novel intervention was found to be feasible, safe and acceptable by study participants.

The findings provide a rationale for a future RCT which will test the intervention's effectiveness to increase PA and reduce SB after stroke.

Wristband Accelerometers to motivate arm Exercise after Stroke (WAVES): a pilot randomised controlled trial

Category

Research

Authors

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Institutions

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Background

Engaging impaired arm use in daily activities can be challenging after stroke. We tested the feasibility of evaluating a wristband accelerometer which prompts wearers to increase arm activity whenever levels fall below a personalised threshold.

Methods

Design: Parallel group pilot RCT.

Participants: Any arm impairment <3months post-stroke

Intervention: 4 week self-directed programme to encourage arm activity with twice weekly NHS therapist review plus a wristband providing vibration prompts when pre-agreed hourly activity targets were not met.

Control: Identical therapy programme plus wristband but without vibration prompts.

Randomisation: Independent web-based service.

Outcomes: Recruitment rate, adherence to the intervention, research assessments undertaken (Action Research Arm Test (ARAT)), changes in activity counts per minute (CPM) calculated from accelerometer data.

Results / findings

Thirty-three participants were recruited from four sites at a rate of 0.6/month/site, median time post-stroke 26 days (IQR:15.5-45). Baseline ARAT for control (n=19) and intervention (n=14) groups were 15[2-35] and 37[16-45]. Wrist-bands were worn for a median of 18.5 [IQR:8-23.5] and 25 [IQR:21.8-28] days. Research assessments were undertaken for 28 and 25 patients at 4 and 8 weeks.

Median number of prompts delivered were 7 per participant/day [IQR: 6,8]. Median CPM during 1 hour before/after prompts was 651 versus 759 (+16.6%; p=0.002). Median CPM across the study for control were: baseline 499[IQR:359,714], 4 weeks 574[IQR:516,891], 8 weeks 428[IQR:288,712] and for intervention: baseline 683[IQR:487,1298], 4 weeks 916[IQR:617,1675], 8 weeks 1317[656,1395].

Discussion

Recruitment fell below target of 1/site/month. Adherence was better within the intervention group. CPM increased immediately after prompting, suggesting a direct behavioural impact. Compared to control, the intervention group continued to increase CPM beyond wristband removal.

Conclusion

Evaluation of a wristband with vibration prompts during a self-directed therapy programme appears feasible. Personalised prompts delivered by a wrist-worn accelerometer may enhance self-directed arm activity after stroke. Improved recruitment and reduced attrition is needed for a large efficacy trial.

Self-managing using the Digital Talking Mats (DTM)

Category

Research

Author

Dr Joan Murphy

Institution

Talking Mats Ltd.

Background

Self-management for people with long term conditions (LTC) is now a key government strategy to encourage people to take responsibility for their own health and well-being. The intuitive design of the DTM means that there is great untapped potential for it to be used by individuals with LTCs as a self-management tool both in their own homes and in health and social care settings. Talking Mats received funding from The Health and Social Care Alliance Scotland to look how using the DTM can help people with long term conditions, including stroke, to manage their health and wellbeing and to recognise their own strengths and abilities.

What is the research question? : Can the DTM empower people with a long term condition to manage their own health and well-being?

Method

We worked with 30 families, including 10 people who have had a stroke. Each participant was given a personal digital licence and taught how to use the DTM. We asked them to complete six digital Talking mats at home on any topic of their choice from the Health and Well-being resource. We analysed the completed mats thematically and visited participants after 6 weeks and again in 6 months to examine how our aims (below) had been achieved.

Results

- Despite fluctuating health needs the data showed a significant increase at the 18 month stage of people placing symbols under 'going well'
- Several people identified self-management actions to improve their well-being.
- Many participants were encouraged by the things that they could still do and were often surprised about how positive their lives were when they looked at their completed mats.
- People reported that the use of the DTM gave them a better understanding of their own individual health and social care needs.

Discussion

The presentation will discuss the above findings and will be illustrated with video examples and stories from participants

Conclusion

The DTM is a useful tool to support self-management and can also help people with stroke to recognise their own strengths and abilities and share their views with others.

Poster presentations

1: Dynamic Lycra Orthoses as an adjunct to upper limb rehabilitation after stroke: A feasibility Randomised Controlled Trial

Category

Research

Authors

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Background

Upper Limb (UL) recovery after stroke is often incomplete. Rehabilitation involves repetitive training that is challenging to achieve. Dynamic Lycra® Orthoses (DLO) are lycra sleeves designed to provide support and sensory feedback, potentially optimising practice effects and outcomes, however evidence of effects is scant. This feasibility randomised controlled trial examined DLO as an adjunct to UL rehabilitation

Methods

Design: Randomised controlled feasibility trial

Participants: Stroke survivors with UL activity limitation admitted to two stroke units 2-4 weeks following stroke onset were randomised 2:1 to DLO or control groups.

Intervention: Participants wore an individually tailored DLO daily for eight hours over eight weeks. Control participants received usual care.

Outcomes: Feasibility outcomes were recruitment, retention, recorded adherence, withdrawal and completion, missing data, adverse events. Changes in Action Research Arm Test, Nine Hole Peg Test, Nottingham Sensory Assessment, Motor Assessment Log (MAL), Motricity Index, Modified Tardieu (MT) were assessed at eight (T2) weeks.

Preliminary Results

Of 710 potentially eligible patients, 43(6%) were randomised, 27 to receive DLO. 22(81%) DLO and 12(75%) control group participants completed T2 assessment. 77% of adherence diaries were returned, 25% completed; mean daily DLO wear was 7 ± 1.3 hours. Three participants withdrew with DLO related adverse events. Groups were well matched at T1. Preliminary T2 data shows higher control group mean scores in MAL amount (28.2 ± 25.0 vs 23.7 ± 22.2) and how well scales (24.5 ± 20.2 vs 20.7 ± 19.8). Mean DLO group elbow MT R1-R2 score at T2 was 18.4 ± 26.1 , compared to 7.5 ± 14.2 in the control group, suggesting higher DLO group spasticity.

Discussion

The study was feasible however initial interpretation indicates indicators suggest the intervention may not be beneficial for all outcomes.

Conclusions

Full statistical analysis will be completed by June 2018, and findings will be reported.

2: Implementation of Dynamic Lycra Orthoses as an adjunct to usual upper limb rehabilitation within the context of a feasibility Randomised Controlled Trial (RCT): A qualitative study of therapists' clinical reasoning processes

Category

Research

Authors

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Background

Embedding study interventions and procedures into usual rehabilitation practice is vital for trial success and eventual implementation. In planning and undertaking a feasibility RCT we explored therapists' clinical reasoning as they implemented Dynamic Lycra Orthoses (DLO) as an adjunct to upper limb (UL) rehabilitation after stroke.

Methods

Rehabilitation staff in three in-patient stroke units facilitated DLO wear with stroke survivors over 8 weeks, following a feasibility RCT study protocol, after which fifteen purposively sampled staff participated in semi-structured interviews. Perceptions of the intervention, perceived benefits and fit with practice were explored. Interviews were audio-recorded and transcribed. Framework Analysis structured data management and data were interrogated using Normalisation Process Theory (NPT). Initial analysis evidenced rehabilitation staff as active agents in the decision-making processes on when to temporarily remove (during rehabilitation) or discontinue DLO wear. Secondary analysis explored the clinical reasoning underpinning these decision-making processes.

Findings

Patient preference was the main factor in the decision-making process around discontinuing DLO wear. **DLO fit with practice**: In the context of rehabilitation sessions, DLO wear was stopped and restarted as dictated by therapeutic need. **Perceptions of effectiveness** or mechanism of action of the DLO did not influence decision-making. **Adverse reactions** such as swelling or skin markings acted as a strong trigger for discontinuation of the garment.

Conclusions: Clinical reasoning in the context of the feasibility trial showed a level of complexity; there were similarities and differences to clinical decision-making processes in non-research contexts. The research context superseded evaluation of overall treatment effectiveness, but decision-making to work with or without the DLO in discrete rehabilitation activities was simply dictated by perceived therapeutic need and opportunity. Maintaining patient comfort trumped any research duties.

3: Robot Assisted Training for the Upper Limb after Stroke (RATULS): Fidelity of the enhanced upper limb therapy programme

Category

Research (work in progress)

Authors

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Introduction

The RATULS trial evaluates robot assisted training for upper limb (UL) recovery after stroke or an enhanced UL therapy programme of the same frequency and duration, versus usual post-stroke care. For the enhanced UL group the protocol states a therapy dose of 45 minutes of repetitive task-orientated practice, 3 times/week for 12 weeks (27 hours) should be provided. In each session, participants practise activities towards their UL goals. These are selected at the initial therapy session and reviewed/adjusted at the end of weeks 4 and 8. At one of our four study centres recruitment has ceased and intervention delivery is complete. Here we report the enhanced UL therapy programme fidelity for that study centre.

Methods

The study therapists recorded data about each session on a bespoke proforma. Data were uploaded to an online database and analysed descriptively. Ethical approval was obtained prior to recruitment.

Results

Over 42 months, 66 participants concluded the enhanced UL therapy programme, attending 1999/2376 (84%) sessions and 244/264 (92%) of review sessions. Median therapy duration within enhanced UL therapy sessions was 45 minutes [IQR 45-45] with the median total duration being 23hr 50min [IQR 19hr 45min–26hr 0min]. The median number of repetitions practised per session was 127 [IQR 42-149]. The median total number of goals set across the UL therapy programme was 8 [IQR 6-10] with a median of 4 being achieved [IQR 1-5].

Conclusion

The fidelity of RATULS enhanced UL therapy programme can be accurately quantified and includes a high number of repetitions. The RATULS trial results and compliance with the intervention for all study centres will be reported in 2019.

4: Goal selection and achievement in upper limb therapy: experience of NIHR RATULS trial

Category

Research

Authors

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Background

The ongoing NIHR HTA RATULS multicentre RCT is evaluating robot assisted training for upper limb (UL) recovery after stroke, (1hour sessions, 3 times/week for 12 weeks) compared to i) an enhanced upper limb (EUL) therapy programme of the same intensity, and ii) usual post-stroke care. Those randomised to EUL therapy select up to 12 functional UL goals during the programme and practise activities towards them. The intervention is delivered by a therapy assistant supervised by a senior therapist. We describe the goal choices categorised according to the Canadian Occupational Performance Measure (COPM) or impairment, type of activity practice, and goal achievement of participants recruited to date.

Methods

Data about each UL therapy session were recorded on a bespoke proforma and subsequently uploaded to an online database. Data were analysed descriptively.

Results

Between 01.04.2014 and 30.11.2017, 209 participants selected 2051 UL goals. The majority of goals were in the COPM self-care category; 1200/2051 (58.5%). Within self-care 503/1200 (42.0%) of goals were aimed at feeding. Productivity goals were chosen for 331/2051 (16.1%) goals and impairment goals were selected for 433/2051 (21.1%) goals. The COPM category chosen least was leisure with only 87/2051 (4.2%) goals. The majority of activity practice for all goals was whole-task practice; 1657/2051 (81%). 901/2051 (44%) of goals were achieved. Those goals achieved were; 508/1200 (56.4%) self-care goals; 161/331 (48.6%) productivity goals; 39/87 (44.8%) leisure goals and 193/433 (44.6%) impairment level goals.

Discussion

A wide range of UL goals, predominantly self-care and involving whole task practice, were selected but goal achievement was low.

Conclusion

It is important to record the content of interventions in rehabilitation RCTs. Goal selection and achievement in previous trials has not been reported in this detail. Further research is needed to understand and optimise goal setting both in trials and in clinical practice.

5: Augmented arm therapy after stroke: how do patients cope? A qualitative investigation

Category

Research (work in progress)

Authors

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Background: Only half of stroke survivors with arm impairment regain some function six months after stroke and 50% of stroke survivors with initial arm impairment still have problems with arm function 4 years post stroke.

There is evidence that at least 20 hours of augmented arm therapy is necessary to improve arm function. This dose of arm therapy cannot normally be provided by the National Health Service. Therefore self-management is encouraged to achieve the suggested dose. The EVERLAP project, within this study is nested, compares early augmented arm therapy with later augmented arm therapy after stroke.

It is not known yet, how stroke survivors cope with self-managed augmented arm therapy (EVERLAP) outwith therapy-led sessions.

This study explores stroke survivors and family members/carers' experiences of how they cope with self-managed augmented arm therapy (EVERLAP).

Method

Design: Qualitative study with semi-structured interviews.

Participants: 15 EVERLAP participants and 4 family members/carers have been interviewed to date.

Analysis: Content analysis.

Results

Main categories retrieved from the transcripts to date include: 'changes in life after stroke', 'nature of self-management', 'nature of EVERLAP exercises' and 'decision-making and problem solving'.

Discussion

Self-managed augmented arm therapy is encouraged more with a family member/carer present during the rehabilitation process, arm therapy needs to be meaningful in peoples' lives as well as self-managed augmented arm therapy is more feasible if activities are embedded into their daily routine.

Conclusion

The study so far indicates that stroke survivors cope better if self-managed augmented arm therapy is embedded into their daily routine.

6: Using Activity Monitors in Upper Limb Rehabilitation After Stroke Research: A Feasibility Study

Category

Research (work in progress)

Authors

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Background

It is vital in rehabilitation research to accurately measure treatment outcomes. There are often discrepancies between clinical tests, self-reports and what participants actually do in everyday life. Activity monitors tend to give more accurate information about actual amount of use, however this is only useful if the monitors are worn and provide sufficient data for analysis. ActivPAL3 monitors were used as an objective measure of arm activity in free-living conditions for the EVERLAP feasibility study, which compared early versus later augmented arm rehabilitation with usual care after stroke. This work in progress aims to assess the feasibility of using the activity monitors by looking at the compliance of wearing the monitors during the study.

Method

Participants were asked to wear a tri-axial accelerometer (ActivPAL3) on the lower part of each forearm and mid-thigh of the less affected leg, ideally for 7 days following each of four assessments over 6 months. Monitors were waterproofed, and attached using OPSITE. Participants were also issued with a short activity diary to enable the start and end of each active day to be identified for the purpose of the analysis. Measuring compliance was done by using the ActivPAL3 software to record the number of complete days the activity monitors were worn. This will be compared with the activity diaries and any reasons for non-compliance stated.

Results

The results from the activity monitor mapping will inform the analysis of the activity monitor data as an outcome measure of upper limb movement within the EVERLAP intervention and control groups.

Discussion and conclusion

Findings about device wear compliance will inform future studies evaluating the effects of rehabilitation on actual arm use in free-living conditions.

7: Feedback Integrated Rehabilitation for Sit-to-stand Training (FIRST): A pilot randomised controlled trial

Category

Research

Authors

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Background

The ability to stand up from a sitting position is commonly impaired after stroke (Boukadida, Piotte, Dehail, & Nadeau, 2015). Since manual rehabilitation services are being challenged by the increasing stroke population and budget constraints, patients have sub-optimal access to professional therapists. Technology may offer solutions. A virtual reality based system, aimed at training the sit-to-stand movement in stroke survivors, with visual (3D avatar) and audio feedback on performance (i.e. weight-symmetry loading, muscle strength and upper-trunk posture) was developed. The aim of this study was to test the feasibility and clinical effectiveness of this system in the stroke population undergoing rehabilitation.

Method

A phase two pilot randomised controlled trial (RCT) was conducted at a stroke rehabilitation unit. All participants underwent two functional assessments (Tinetti Assessment Tools (TAT) and Elderly Mobility Score (EMS)) 48 hours before the study began and at the end of the trial. The experimental group received augmented sit-to-stand (STS) training for four weeks, three sessions a week, while the control group received standard physiotherapy.

Results

Sixteen participants completed the trial, eight in each group. No adverse events were recorded during the study period, while the retention rate was 100%. The increase in TAT score (t-value=2.48) and EMS (t-value=4.32) in the experimental group were statistically significant ($p < 0.05$) better than the control. Regarding the system acceptability, participants found it motivating, intuitive and enjoyable.

Discussion

To our knowledge, this is the first RCT evaluating a virtual-reality system that provides automated visual and audio feedback during STS training. The system is feasible and safe in a clinical environment. The computerised biofeedback was found to be superior to standard physiotherapy in recovering the STS movement.

Conclusion

Virtual reality systems have the potential to benefit future stroke rehabilitation.

Reference

Boukadida, A., Piotte, F., Dehail, P., & Nadeau, S. (2015). Determinants of sit-to-stand tasks in individuals with hemiparesis post stroke : A review. *Annals of Physical and Rehabilitation Medicine, REHAB-869*, 2–7. <http://doi.org/10.1016/j.rehab.2015.04.007>

8: Observations of the motor control differences between treadmill (fixed and self-paced), indoor and outdoor walking

Category

Research (work in progress)

Authors

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Background

Treadmills are used for gait rehabilitation in various conditions, including stroke. The use of self-paced treadmills, which adapt their speed to their users, could present a better match to the overground walking experience. This work explores the motor control (muscle activity) differences between walking on fixed-pace and self-paced treadmills as compared to overground walking.

Methods

17 able-bodied adults, (10 females, aged 26.59 ± 7 years, weight 67.78 ± 9.92 kg) participated. Participants walked at their self-selected speed, in four conditions; 1) indoors overground 2) outside overground 3) on a fixed-pace treadmill and 4) on a self-paced treadmill. Electromyography (EMG) electrodes (Delsys, Boston, USA) were attached over the surface of four lower limb muscle groups (tibialis anterior, gastrocnemius, hamstrings and quadriceps) and, integrated with inertial sensors which identified gait cycle events. The EMG signals from up to 23 cycles per person were extracted for analysis, variables included: pattern repeatability, contraction duration and contraction frequency per cycle.

Results

Preliminary results suggest a general difference in motor control. Firstly, there was greater variability of muscle activity pattern during outdoor (0.427 ± 0.16) compared to fixed (0.259 ± 0.04) and self-paced (0.328 ± 0.08) treadmill walking. There was a greater number of contractions per cycle during fixed-pace treadmill (2.19 ± 1.13) compared to self-paced (1.5 ± 0.6) and overground (1.87 ± 1.22), finally contraction duration presented greater asymmetry overground (24.8) than on the treadmills (7.1).

Discussion

This novel approach to quantifying motor control suggests, from initial analysis, that walking on a treadmill, particularly a fixed-pace treadmill, requires a different motor output to walking overground. These preliminary findings could explain the lack of positive outcome from treadmill studies in stroke populations, but this would need support from the remaining healthy participants and the addition of clinical data.

Conclusion

Preliminary EMG analysis of treadmill and overground walking suggests a different motor programme might be employed. Analysis of the remaining healthy participant and stroke survivors is currently underway.

9: Physical Activity for Non-ambulatory Stroke Survivors (PHANSS-1): Exploring the thoughts and views of Stroke Survivors and Carers.

Category

Research

Authors

Megan Lloyd (Glasgow Caledonian University), Dawn A Skelton (Glasgow Caledonian University), Brian Williams (Napier University), Gillian Mead (University of Edinburgh), Jo Booth (Glasgow Caledonian University), Frederike van Wijck (Glasgow Caledonian University)

Background

Stroke guidelines recommend physical activity (PA); however recommended interventions utilise walking, thereby excluding non-ambulatory stroke survivors (SS) (i.e. those who cannot walk independently). This is an important gap, because sedentary behaviour, known to be an independent risk factor for ill-health, places non-ambulatory SS at higher risk. To design a new PA intervention for this population, it is important to seek service user and provider views to ensure its acceptability.

Aim: to explore the views of service users; SS and carers of SS, on needs, goals, barriers, motivators and preferred format of PA.

Methods

Design: Qualitative

Study population: SS recruited through 5 NHS boards and various community routes.

Data collection: Individual face to face interviews (around 75 minutes) with SSs (N=14) and Carers (N=7).

Data analysis: Transcripts were analysed using framework analysis with embedded constant comparative method.

Results

Key themes: 'Stroke journey', 'Life after stroke: carers', 'Perceptions and knowledge of PA', 'PA participation' and 'Intervention modelling'.

An overarching theme of a general lack of PA service provision for this population emerged. PA interventions should be based around and adapted to the individual SS. Psychosocial factors, such as low self-esteem and confidence, emerged as common barriers to participation. SSs reported no preference in terms of service provider qualification (provided they were appropriately trained and experienced) or group/ individual intervention format.

Discussion

Non-ambulatory SSs and carers expressed the need for a bespoke PA programme, while acknowledging the practical and personal barriers to implementing such a service. The results helped inform the design of a novel PA intervention for non-ambulatory SS (PHANSS-2).

Conclusion

The emerging themes suggest that SSs do not have a specific preference to PA format or service provider background. However, psychosocial barriers must be addressed before non-ambulatory SS can be expected to participate in tailored PA.

10: Physical Activity for Non-ambulatory Stroke Survivors (PHANSS-2): Developing a feasible and acceptable programme for stroke survivors who cannot walk independently

Category

Research

Names of authors and affiliations

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Background

Physical activity (PA) is recommended in stroke guidelines; however underpinning evidence is based on ambulatory stroke survivors (SS) and utilise walking based interventions, which cannot be directly applied to non-ambulatory SSs. PA can improve health, mood and adaptation to life after stroke. As this population is at higher risk of ill-health because they spend more time sitting, a PA programme tailored specifically for this population is required.

Method

Design: mixed-methods, observational feasibility study

Objectives:

1. To examine recruitment and retention rates, preliminary effects and adverse effects, uptake and adherence to the intervention.
2. To explore views of non-ambulatory stroke survivors and their carers on the delivered PA programme.

Participants: Non-ambulatory SSs living at home or in a care home and their carers, where applicable.

Intervention:

Participants received a 12 week home-based, individual or group PA intervention, with 1 supervised, 1 hour PA session and 2 self-managed home sessions per week. Participants also took part in 4 short interviews/focus groups to explore views on the programme and to discuss exercise tailoring and progression. Outcomes were assessed pre and post

intervention and at 3 month follow-up. Outcomes included measures of goal achievement, body function, activities and participation, and carer burden.

Results

Of N=9 participants enrolled, 7 completed the intervention and 6 completed follow-up. All reported positive experiences of the intervention; however outcomes were inconclusive post-intervention and at follow-up. No serious adverse events (SAE) resulted from study participation. Intervention adherence ranged from 75-100%.

Discussion

Recruitment was challenging. Little change was observed in outcomes, but positive feedback, high adherence and retention rates and no intervention-related SAEs suggested that -once recruited- participants enjoyed the intervention and found it valuable.

Conclusion

The PHANSS-2 intervention appears to be safe, feasible and acceptable for non-ambulatory SSs. A future RCT is required to determine its clinical and cost-effectiveness.

11: How does dog ownership impact on adjustment and quality of life of people with post-stroke aphasia?

Category

Research (work in progress)

Author

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Background

It is well-documented that people with post-stroke aphasia can experience significant social isolation with subsequent reduction in quality of life. While there is increasing evidence that dogs can serve a therapeutic purpose for people with a range of conditions such as dementia, autism and mental health disorders, there is currently a paucity of data connecting aphasia with dog ownership. Specific questions are: how people with aphasia relate to their dogs as they adapt to their new circumstances and altered communication; whether/how dog ownership enhances well-being and reduces social isolation; whether problems arise in the relationship between the person with aphasia (PWA) and their dog; whether practical problems arise with dog ownership as a result of impaired communication. This qualitative study endeavours to investigate this.

Method

Dog-owning people with post-stroke aphasia and/or their close family members, friends or carers are being recruited through Speech and Language Therapy services in NHS Grampian to take part in semi-structured interviews. The transcribed interviews will be analysed for themes which are pertinent to the questions posed above.

Results

While formal analysis is still to be carried out, several themes are emerging regarding the positive aspects of dog ownership. These are: reduced withdrawal; a sense of role and routine; companionship; the dog's ability to adapt to changed communication; the PWA's ability to relax more than in human interactions; the relatively easy social context provided by dog-walking. However, some negative themes are also emerging. These are: practical problems (e.g. controlling the dog, negative interactions with other dog-walkers, dealing with the vet); family friction regarding changes in responsibility for the dog; negative changes in the PWA's response to the dog or in the dog's response to the PWA.

Discussion and conclusion

Implications for further research and practical application of the findings will be discussed and conclusions drawn.

12: Enabling People with Aphasia to Make Life Changing Decisions

Category

Clinical Practice Innovation (work in progress)

Authors

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Background

Increasingly Speech and Language Therapists are asked to become more involved in determining if people with Aphasia (PWA) are able to make decisions affecting their future e.g. granting power of attorney or discharge destination. Often the issue of capacity is raised acutely regarding patients with Aphasia by medical staff or their family, especially if there are financial implications. Initially guardianship may be suggested but caution should be advised, as the patient's communication may improve adequately allowing the patient to grant power of attorney.

Methodology

We reviewed our current use of assessments with PWA to establish a consistent pathway (Please see attached pathway). We piloted the pathway on several patients and discussed findings at the weekly multi-disciplinary team.

Results and Outcomes

Implementation of the pathway consistently enabled PWA to make decisions and regain control of their lives. We carried out an audit over 2 years; it showed out of 6 patients, 4 were able to grant POA.

Discussion

It is a time intensive process which is linked to patient's recovery rate. In line with the Adult's with Incapacity (Scotland) Act 2000; we wanted to devise a clear and consistent pathway to enable Speech and Language Therapist's to evaluate a PWA's communication. There is currently no published UK wide pathway available for SLT's to utilise and guide decision-making. It is a complex process not only due to the language impairment but other factors e.g. cognitive impairment, visual difficulties and low mood.

Conclusion

People with severe aphasia and very limited verbal output are able to be supported using their preferred communicative means to enable them to make decisions e.g. power of attorney, discharge destination and P.E.G feeding. This has improved patients' and their families, wellbeing, quality of life and independence.

13: Evaluating the therapeutic effects of web-based mindfulness for stroke survivor and family caregiver partnerships: a protocol

Category

Research (work in progress)

Authors

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Background

Psychological difficulties are common following stroke. The interconnected nature of stroke survivors and family caregivers means optimum outcomes are more likely when they are supported in partnership¹. Mindfulness-Based Interventions (MBIs) use meditation to improve psychological wellbeing. MBIs involve attending classes and regular home practice. Stroke survivors highlight potential challenges with attending lengthy structured classes and welcome the chance of learning MBI with a family caregiver². Stroke survivors and family caregivers might benefit from learning MBI via different methods. This study will explore the feasibility, appropriateness, meaningfulness, and effectiveness of web-based MBIs for stroke survivor and family caregiver partnerships.

Method

The protocol is registered with *ClinicalTrials.gov* (NCT03473054) and aligns with the Single-Case Reporting Guidelines In Behavioural Interventions [SCRIBE] statement. Purposive sampling will recruit community-dwelling stroke survivor-family caregiver partnerships (n=5 dyads). Participants will complete a web-based MBI, which includes ten videos (30 minutes each), twelve activities, and five audios. The study is a mixed method multiple single-case (A-B) design: two-week baseline, four-week intervention, and four-week follow-up. All participants complete the Hospital Anxiety Depression Scale (HADS) weekly and have semi-structured interviews after follow-up. Interpretative Phenomenological Analysis (IPA) will be used for interview data.

Results

Recruitment and completion data will determine feasibility and appropriateness. HADS data will be presented using individual graphs and raw data for future meta-analysis. Visual and statistical analysis will determine clinical effectiveness, effect size, and statistical significance. The IPA results will use themes and participant's quotations, to provide context and meaning to the study.

Discussion

Findings could determine whether using web-based MBI in partnership has value for participants and help tailor such interventions for the specific needs of the population.

Conclusion

A mixed method multiple single-case design will be used to evaluate the feasibility, appropriateness, meaningfulness, and effectiveness of web-based MBI for stroke survivor and family caregivers.

References

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2. Jani, B. D., Simpson, R., Lawrence, M., Simpson, S., & Mercer, S. W. (2018). Acceptability of mindfulness from the perspective of stroke survivors and caregivers: a qualitative study. *Pilot and Feasibility Studies*, 4(1), 57.

14: Involving Stroke patients in Quality Improvement

Category

Audit or service Evaluation

Author

Emma Barnes, NHS Lothian

Background

Stroke patients commonly report their rehabilitation needs have not been met and inpatient rehabilitation does not adequately prepare them for living with their condition. Attendance at the NHS Lothian Quality Academy and revision of the 6 Essential Actions to Improving Unscheduled Care Programme highlighted the importance of patient centred service development. As a team we decided to gather patient feedback as the foundation for identifying and developing our improvement plan.

Methodology

Focus group with stroke survivors 1-10 years post stroke (12 participants).

1-1 Patient interviews around 1 month post discharge (45 Participants).

Open questions were asked to allow the patients to lead the discussion.

What went well?

What didn't go well?

What would you change?

Results/Outcomes

Focus group themes:

1. Hospital Environment is detrimental to recovery infections limit therapy/access to gym. Anxiety of unfamiliar surroundings, routines. Patients highlighted a preference for therapy at home.
2. Value of home passes offering a realistic insight into life at home.
3. Communication/information must be individualised and frequent.
4. Amount of therapy - Not enough, long wait for therapy at home.
5. Support around transition - Not adequate, long waits for intervention.

1-1 Interview feedback. What didn't go well?

1. Impact of disruptive patients affecting sleep and wellbeing
2. TV and environmental noise unpleasant.
3. Inpatient stay too long.
4. Not enough therapy input.
5. Communication and staff attitudes poor.
6. Follow up lacking or too long a wait.
7. Discharge planning rushed.

Discussion

The patient feedback was illuminating and highlighted a range of issues not previously considered. It gave clear focus to our improvement work. The impact of the hospital environment had a more profound effect than therapists had considered. The benefit and value of therapy at home was highlighted by patients.

The feedback gathered directed a number of improvement projects:

- Early Supported Discharge pilot, allowing a more supported transition and earlier more intensive rehabilitation at home.
- Improvement of the goal setting process.
- Ward staff engagement to address environmental issues e.g. noise, boredom, disruptive patients, risk aversion.

Conclusions

Seeking feedback from patients has been extremely valuable; it has provided a different perspective of the rehabilitation journey. Patients find the hospital environment is not the optimal place for rehabilitation and length of stay often too long. The rehabilitation experience is contributed to by all staff working 24 hours a day. Cautious attitude to risk detrimental to rehabilitation process.

Ensuring patients are treated with dignity, respect and empathy at all times is essential. Opportunity for passes are essential for improving patients and their support networks insight and awareness of the condition.

References

NHS Lothian Quality Academy

6 Essential Actions to Improving Unscheduled Care Programme

15: Delivering and evaluating a pilot Early Supported Discharge Stroke Team

Category

Clinical Practice Innovation (work in progress)

Author

Wendy Juner, NHS Lothian

Background

As part of NHS Lothian Quality Improvement plan the AHP team had evaluated the patient experience for those stroke survivors who had been in the Stroke Unit at St Johns Hospital, West Lothian. Patients had indicated that they spend too long in hospital. Previous small tests of change had demonstrated that it is feasible to facilitate earlier discharges. Research demonstrates the effectiveness of Early Supported Discharge for Stroke patients. A larger scale pilot has been delivered and is currently being evaluated.

Methodology

Utilising winter funding the project had 1wte Occupational Therapy staff and 0.2 wte Physiotherapy. The team aimed to reduce the length of stay for stroke patients admitted between January and April 2018 where there were no other barriers to discharge and have a positive impact on patient experience.

Results/outcomes

50% of admissions were discharged home with the pilot team (33 of 66 admissions).

A reduction in LOS was observed (29 days in 2016, 23.9 days in 2017 and 13.5 days during the pilot). The mean number of supported outreach interventions per profession will be presented. Readmission rates and adverse incidents will be reported. The nature of profession specific interventions will be presented. Qualitative data including staff feedback, which will be presented in themes, will be shared. Patient experiences, in the form of survey and stories, have also been collated. Stroke bed occupancy figures will also be presented.

Discussion

The findings to date show a significant reduction in LOS and positive themes in both patient and staff feedback. The staff feedback highlights a collaborative approach to risk taking to facilitate early discharge.

Conclusions

Implementation of an Early Supported Discharge project for Stroke patients in West Lothian has shown significant reduction in LOS and been a positive experience for patients, carers and staff. A business case is now being prepared for submission to NHS Lothian Frailty Programme.

References

NHS Lothian Quality Academy

Fisher R et al, A Consensus on Stroke, Early Supported Discharge;Stroke,2011;42:1392-1397

16: **Assessing Fitness to Drive Post Stroke: Development of an OT Pathway**

Category

Clinical Practice

Author(s)

Kirsty Hazelwood & Rebecca Laing, NHS Fife

Background

After completing a small survey of OTs in Fife working with stroke patients across acute and community services, it was identified there was a clear need for consistency in assessing fitness to drive post stroke. The local OT stroke group set up two small working parties to address issues regarding sharing of information and development of a training package.

Method

The first working party focussed on developing a patient pathway and documentation that would be given to patients and sent to GPs and other relevant parties. The pathway takes the form of a flow chart which documents the different patient journeys from acute to rehab to home with an aim of ensuring that driving is considered and assessed at every part of this journey. This has recently 'gone live' and will be reviewed in one year.

The second working party focussed on developing a training package with a format following national guidelines developed by SSAHP Forum. The training encourages OTs to consider how functional assessment as well as standardised assessment can help form an opinion regarding a patient's abilities in relation to driving and how this can be fed back to medical staff including GPs to support their decision. This will be reviewed on a yearly basis with the possible option of a 'refresher' session each year.

Summary

The survey confirmed the suspected variations in occupational therapists skills and assessments working across Fife stroke services and the need to develop a robust pathway and training with a goal of consistency throughout the patient pathway.

This has resulted in a clear pathway and documentation being developed with aim of informing professionals, reassuring patients with a consistent information and ensuring consistency amongst OTs. Informal feedback from patients already includes 'useful in clarifying the verbal advice given'. The pathway, documentation and training will be reviewed in one year to ascertain if the aims have been met.

Discussion

Is this a useful resource for other areas of practice?

Conclusion

The results demonstrate that collaboration to clarify processes and standardise reports have far reaching patient and profession benefits.