Health Education England

Evidence Brief: Stroke plus – Occupational Therapists (OTs) and Physiotherapists

Contents

Produced by the HEE Knowledge Management team Evidence Briefs offer a quick overview of the published reports, research, and evidence on a workforce-related topic.

Date of publication: January 2022

Please acknowledge this work in any resulting paper or presentation as:
Evidence Brief: Stroke plus – Occupational therapists and physiotherapists. Katie Nicholas. (January 2022). UK: Health Education England Knowledge Management Team

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- Complete Evidence Brief list – link for HEE staff
- Complete Evidence Brief list – link for External staff

Key publications – the big picture

Urgent care: the value of occupational therapy
2015, College of Occupational Therapists
See section 5.1 Stroke
Contained within this report are key facts that demonstrate how occupational therapists improve lives and save the NHS and local government money. Many of the College of Occupational Therapists' 30,000 plus members work in the NHS, and all occupational therapy students will have placements in NHS settings. Increasingly, occupational therapists are moving to the forefront of healthcare services, supporting people to stay well, to remain at home and, if they have to come to hospital, to be swiftly assessed, treated and discharged home. This significant report delivers key information regarding the valuable contribution occupational therapists make to primary care, accident and emergency departments, critical care and other specialist settings and agencies such as housing and reablement teams. Alongside information regarding the specialist skills occupational therapists offer, there are also service user stories and costed service examples.

Case Studies

Physiotherapy works: Stroke (see Service Innovation Example - Sherwood Hospitals ESD Team)
July 2019, Stroke Association
The Early Supported Discharge Team in Sherwood Forest Hospitals NHS Foundation Trust enables patients to receive early, specialist stroke care within their home environment. Coordinated rehabilitation is delivered by the multidisciplinary team with access to a consultant and psychology input. The team have knowledgeable rehabilitation support workers trained in all disciplines to ensure that patients receive intensive input.

HEE Star

More resources and tools are available in the HEE Star

Statistics

You can find relevant statistics on the Health and Care Statistics Landscape under **"Health and Care"** and searching for **"Stroke"**

The Stroke Association have collated the latest data on number of strokes, stroke prevalence and stroke as a leading cause of death

HEE National Data Programme

HEE staff can look at the National Data Warehouse (NDL) SharePoint site to find out more about datasets and Tableau products.

Published Peer Reviewed Research

Occupational therapists

The ReWork-Stroke rehabilitation programme described by use of the TIDieR checklist Abstract only*
Author(s): Johansson et al.
Source: Scandinavian Journal of Occupational Therapy 5
Publication date: 2021
Background: About half of those that have had stroke in working age return to work (RTW). Few rehabilitation programmes exist focussing RTW after stroke. Aim: To produce a clear replicable description of the ReWork-Stroke rehabilitation programme targeting RTW for people of working age who have had stroke. Materials and methods: The Template for Intervention Description and Replication 12 item checklist was used to describe the ReWork-Stroke programme developed 2013–2014. This paper presents the development, rationale and processes in the programme to enable replication and provide evidence for implementation. Results: Occupational therapists (OTs) skilled in stroke rehabilitation contribute knowledge about consequences of stroke and coordinate stakeholders involved. The ReWork-Stroke is person-centred, includes individual plans and generic components, consists of a preparation and a work trial phase. During the preparation phase, resources and hindrances for RTW are mapped and a plan for work trial is elaborated. During the work trial phase, the intervention is located at the workplace. The OT conducts recurrent follow-ups and collaborates with employers/co-workers. Conclusions: A person-centred programme has advantages in its flexibility to meet different needs between people and by this thorough description of ReWork-Stroke, others can replicate the programme and its fidelity and evidence can be strengthened.

An exploration of the role of occupational therapists in addressing sexuality with service users post stroke
Item Type: Journal Article
Authors: Heron, J. and OwenBooth, B.
Publication date: 2021
Journal: British Journal of Occupational Therapy (pagination), pp. no pagination
Introduction: Research suggests stroke negatively affects sexuality yet is rarely addressed by healthcare professionals. This study aims to explore occupational therapists' perceptions of addressing sexuality post stroke with service users and whether they perceive it to fit into their scope of practice. Method(s): A qualitative study was undertaken following an inductive reasoning approach. Three occupational therapists working within stroke rehabilitation were purposively recruited. Data were gathered through semi-structured interviews and analysed using inductive thematic analysis to generate four significant themes. Finding(s): Findings generated the following themes: (1) Acknowledging the impact stroke has on sexuality. (2) Consideration of the appropriate stage of the stroke journey to address sexuality; identifying home/community environments to be more appropriate, utilising a multi-disciplinary approach to facilitate this. (3) Barriers to addressing sexuality, including staff's personal feelings, inexperience, limited resources and ageism. (4) Facilitators to addressing sexuality, including approaching the topic appropriately and utilising the role of occupational therapy and resources. Conclusion(s): This study highlights the gap in the stroke journey where sexuality lies and the role occupational therapists can play in closing this gap. Utilising facilitators such as resources and a multi-disciplinary approach can overcome barriers to practice including embarrassment, prejudice and inexperience. Copyright © The Author(s) 2021.

Clinical reasoning underlying acute care occupational therapists' assessment of rehabilitation potential after stroke or brain injury: A constructivist grounded theory study Abstract only*
Item Type: Journal Article
Authors: Lam Wai Shun, P.;Swaine, B. and Bottari, C.
Publication date: 2021
Journal: Australian Occupational Therapy Journal (pagination), pp. no pagination
Introduction: In acute care hospitals, clinicians are expected to rapidly provide recommendations regarding patients' rehabilitation potential and candidacy for postacute rehabilitation. Some studies have investigated factors influencing referral to rehabilitation, but few have examined clinical reasoning underlying referral decisions. This study aimed to investigate what occupational therapists were thinking about (factors influencing reasoning), how they reasoned (thought processes) when evaluating stroke or traumatic brain injury patients' rehabilitation potential, and how they decided on referral to postacute rehabilitation. Method(s): Using a constructivist grounded theory approach, the clinical reasoning of 10 acute care occupational therapists working in a large Canadian city was examined. Participant recruitment, data collection, and analysis were performed simultaneously following theoretical sampling procedures. Therapists' thoughts on patients' rehabilitation potential were collected twice (during chart consultation and initial patient assessment) using think-aloud protocols and semi-structured interviews. Constant comparison, memoing, and diagramming methods were employed during coding to help categorisation and conceptualisation. Finding(s): Numerous patient, clinician, and organisation-related factors were found to influence clinical reasoning. Occupational therapists interpreted these factors in an attempt to (1) predict recovery, (2) estimate rehabilitation potential, and (3) determine rehabilitation candidacy. They used two types of thought processes: (1) building a representation of patients' rehabilitation potential (involving eight steps including gathering and interpreting factors); (2) activating bottom-up and top-down scripts (comparing the expected impact of impairments on activity performance to behaviours observed during activity performance). Furthermore, an algorithm was developed describing how occupational therapists decide on referral to postacute rehabilitation. Conclusion(s): Findings can be used to teach students and novice occupational therapists how to identify and interpret key factors in the assessment of stroke or traumatic brain injury patients' rehabilitation potential. Results also provide insight on cognitive processes that can be taught for efficient assessment of rehabilitation potential and decision-making regarding referral to postacute rehabilitation.
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Occupational Therapists' Perceptions of Home Program Provision for Stroke Survivors in a Lower- and Middle-Income Country: An Exploratory Study Abstract only*
Item Type: Journal Article
Authors: Malgaonkar, Neha;Ramachandran, Meena;Patel, Sefali Dushyant and Dsouza, Sebestina Anita
Publication Date: Jul 12 2021
Journal: Occupational Therapy in Health Care 1-21
This qualitative study aimed to understand occupational therapists' experiences of providing home programs to stroke survivors in India. Using an interpretative phenomenological approach, eight practicing occupational therapists were interviewed in depth about home programs for individuals recovering from stroke. Two broad themes with subthemes emerged describing the organizational factors, sociocultural and economic influences on home program provision as well as describing how the occupational therapists addressed the challenges to facilitate home program provision and adherence. The findings can inform occupational therapy practice in lower-

and middle-income countries like India and other countries where existing practice recommendations for stroke rehabilitation and core professional tenets may be challenged.

Nurses' and occupational therapists' experiences of conducting a home-based psychosocial intervention following stroke: a qualitative process evaluation
Item Type: Journal Article
Authors: Martinsen, R.;Kitzmuller, G.;Mangset, M.;Kvigne, K.;Evju, A. S.;Bronken, B. A.;Bragstad, L. K.;Hjelle, E. G.;Sveen, U. and Kirkevold, M.
Publication date: 2021
Journal: BMC Health Services Research 21(1), pp. no pagination
Background: Persons with stroke are susceptible to psychosocial problems, and express disappointment at how health care professionals fail to meet their psychosocial needs following discharge to home. The responsibility of nurses and occupational therapists in stroke rehabilitation is to assist the persons and their families during the recovery and adjustment process. A home-based dialogical intervention aiming to enhance psychosocial support was therefore developed and tested in a randomized controlled trial. This study is a part of the process evaluation conducted alongside the trial. The aim was to explore the nurses' and occupational therapists' experiences of conducting the intervention. Method(s): Eighteen nurses and four occupational therapists participated in six focus groups to explore their experiences when providing the intervention. The themes discussed in the focus groups were the aspects that facilitated the delivering of the intervention and the challenges they encountered during the study period. The interviews were analysed using qualitative content analysis. Result(s): The analysis generated two themes. The theme Developing a supportive relationship to facilitate the adjustment process following stroke had two subthemes: Getting personally involved and Handling challenges. This theme reveals how the nurses and occupational therapists experienced their relationship with the persons with stroke and potential threats which challenged them while conducting the intervention. The theme Developing professional skills in providing psychosocial support had two subthemes: Becoming confident in conducting dialogues and Integrating psychosocial topics. This theme reveals the aspects that the nurses and occupational therapists perceived as facilitating the development of their professional skills in conducting the dialogues. Conclusion(s): Delivering the psychosocial intervention was perceived as deeply meaningful and increased the nurses' and occupational therapists' understanding of how to support stroke survivors to live with the consequences of stroke. However, balancing the professional and the personal relationship was challenging. A basic educational programme, training, supervision and having dedicated time were crucial elements to instil confidence in professionals conducting theme-based dialogues to promote post-stroke psychosocial well-being. Individual clinical experience and knowledge of stroke care were considering important to enable professionals to integrate psychosocial rehabilitation into community health care. Trial registration: ClinicalTrials.gov, NCT 02338869, registered 10/04/2014.
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Occupational Therapists' Perceptions of Robotics Use for Patients With Chronic Stroke Abstract only*
Item Type: Journal Article
Authors: Mashizume, Yuki;Zenba, Yosuke and Takahashi, Kayoko
Publication Date: Nov 01 2021
Journal: American Journal of Occupational Therapy 75(6)
IMPORTANCE: The effectiveness of robotic therapy in stroke rehabilitation has been established by many studies, and occupational therapists should consider using robotics in their

clinical practice. However, little is known about occupational therapy practitioners' experience using robotics. OBJECTIVE: To explore occupational therapists' perceptions of the mechanisms and outcomes of occupational therapy using robotics with chronic stroke patients. DESIGN: Qualitative study with semistructured focus group interviews. Data were analyzed using thematic analysis. SETTING: Hospitals and institutions in Japan in which occupational therapists used robotics in their clinical practice. PARTICIPANTS: Twenty-seven occupational therapists with experience in using robotics with chronic stroke patients as a self-training method that involved repetitive movements of a paralyzed upper extremity. Participants were interviewed in nine focus groups. RESULTS: Five themes-(1) body function, (2) values, (3) performance skills, (4) occupational performance, and (5) participation-and 12 subthemes were identified on the basis of the Occupational Therapy Practice Framework: Domain and Process (3rd ed.). Participants indicated that robotics improved patients' body function and promoted a desire for independence, which resulted in improved occupational performance and participation in their desired occupations. CONCLUSIONS AND RELEVANCE: Occupational therapists regarded robotics as an adjunct to other therapy, which improved patients' body function and promoted their desire for independence. What This Article Adds: Findings from this research provide insights into using robotics to enhance occupational therapy practice. Copyright © 2021 by the American Occupational Therapy Association, Inc.

Occupational therapists' evaluation of the perceived usability and utility of wearable soft robotic exoskeleton gloves for hand function rehabilitation following a stroke Abstract only*
Item Type: Journal Article
Authors: Proulx, Camille E.;Higgins, Johanne and Gagnon, Dany H.

Publication Date: Jun 30 2021
Journal: Disability & Rehabilitation Assistive Technology 1-10
PURPOSE: To evaluate the perceived usability and utility of using a soft robotic glove to rehabilitate hand function following a stroke. METHODS: A convergent parallel mixed-methods design was used to consult a convenience sample of 14 experienced occupational therapists (OTs) practicing within a specialised stroke rehabilitation program. All OTs participated in one 60-to-90-minute individual consultation during which the attributes of a recently-developed soft robotic glove (ExoGlove) were presented before they could test it on themselves. After this consultation, OTs completed the System Usability Scale (SUS) questionnaire and answered open-ended questions focussing on the usability and utility of soft robotic gloves framed according to the Unified Theory of Acceptance and Use of Technology (UTAUT). RESULTS: The OTs perceived the glove's usability as being moderate-to-good on the SUS (median score= 63.75 on a scale of 100). Thematic analysis revealed the importance of specifically considering elements such as ease of use (e.g. simplicity and speed), cost, movement precision, durability, and safety, when developing soft robotic gloves such as the ExoGlove. CONCLUSIONS: Engagement in a continuous improvement process is essential to maximise the perceived usability and utility of soft robotic gloves, particularly of the ExoGlove, through their final development phase before pilot testing their effects and effectiveness for post-stroke hand rehabilitation.Implications for rehabilitationAll occupational therapists anticipate that a soft robotic glove such as the ExoGlove will allow them to increase treatment intensity and best aligns with principles of neuroplasticity. The clinical judgement and guidance of OTs, developed through practice, experience, and knowledge, remain essential to safely and efficiently exercise with a soft robotic glove.Achieving a balance between effort and performance expectancies is essential in developing and

improving the functionality of soft robotic gloves, as with each additional functionality comes new challenges that impact its successful transition to a clinical setting.

Protocols Used by Occupational Therapists on Shoulder Pain after Stroke: Systematic Review and Meta-Analysis
Item Type: Journal Article
Authors: Souza, Isis Gabriele De;Souza, Raphael Fabricio De;Barbosa, Felipe Douglas Silva;Scipioni, Kelly Regina Dias Da Silva;Aidar, Felipe J. and Zanona, Aristela De Freitas
Publication date: 2021
Journal: Occupational Therapy International 2021, pp. 8811721
Introduction: Shoulder pain as a consequence after a stroke has multifactorial causes and can prevent the functional return of the upper limb. In addition, the effectiveness of clinical protocols applied by occupational therapists remains uncertain. Objective: To identify the main treatments currently used by occupational therapists for pain in the shoulder after a stroke. Method: Articles in English published between 2015 and 2019, of the randomized clinical trial type, with populations that stroke survivors a stroke and sequelae of shoulder pain were selected. The terms and combinations used were "shoulder pain and stroke and occupational therapy," in the electronic databases, Directory of Open Access Journals (DOAJ), Occupational Therapy Systematic Evaluation of Evidence (OTseeker), and PubMed. Statistical Review Manager (version 5.3) established the significance level P P = 0.0004), ROM (MD 4.67; 95% CI 1.54, 7.79; P = 0.0003), and manual function (MD 1.84; 95% CI 0.52, 3.16; P = 0.006). Conclusion: Dry needling, California tripull taping (CTPT), and functional electrical stimulation controlled by brain-machine interface (BCI-FES) are proved effective in shoulder pain and functionality. Copyright © 2021 Isis Gabriele De Souza et al.

Interdisciplinary Stroke Recovery Research: The Perspective of Occupational Therapists in Acute Care
Item Type: Journal Article
Authors: Ranford, Jessica;Asiello, Jessica;Cloutier, Alison;Cortina, Kimberly;Thorne, Helena;Erler, Kimberly S.;Frazier, Natasha;Sadlak, Caitlin;Rude, Abigail and Lin, David J.
Publication date: 2019
Journal: Frontiers in Neurology [Electronic Resource] 10, pp. 1327
As acute stroke treatments advance, more people survive the initial stroke event and live with long-term neurological impairments that impact functional outcomes and quality of life. In accordance with International Classification of Functioning (ICF), living with long-term neurological impairments can limit survivors' activity performance and restrict participation in valued life roles and routines. Research focused on longitudinal analysis of functional measures and outcomes after stroke are critical for determining early indicators of long-term participation and quality of life and guiding rehabilitation resource allocation. As core members of the interdisciplinary stroke recovery treatment team throughout the post-acute care continuum, occupational therapists (OTs) directly address stroke survivors' ability to participate in meaningful daily activities to promote function and quality of life. Just as in clinical care in which multidisciplinary, team-based perspectives are vital, OTs provide invaluable perspectives for stroke recovery research. Here we describe OTs' role in a collaborative, interdisciplinary research study aimed at comprehensively understanding upper extremity motor recovery after stroke and its impact on individuals across the post-acute care continuum. This article discusses the importance of the OTs' perspectives in conducting interdisciplinary, longitudinal stroke recovery research. The challenges, strategies and recommendations for future directions of advancing the role of OTs in

multidisciplinary stroke recovery research are highlighted. We use this perspective as a call to action to the stroke recovery field to incorporate OTs as members of the research team and for OTs to provide their perspectives on ongoing stroke recovery research. Copyright © 2019 Ranford, Asiello, Cloutier, Cortina, Thorne, Erler, Frazier, Sadlak, Rude and Lin.

Attributes of evidence-based occupational therapists in stroke rehabilitation Abstract only*
Item Type: Journal Article
Authors: Halle, Marie-Christine;Mylopoulos, Maria;Rochette, Annie;Vachon, Brigitte;Menon, Anita;McCluskey, Annie;Amari, Fatima and Thomas, Aliki
Publication Date: Dec 2018
Journal: Canadian Journal of Occupational Therapy - Revue Canadienne D Ergotherapie 85(5), pp. 351-364:
BACKGROUND.: A better understanding of the features characterizing expert evidence-based occupational therapists in stroke rehabilitation is needed to inform the design of educational and knowledge translation interventions aimed at addressing research-practice gaps. PURPOSE.: The study aimed to identify the attributes of evidence-based occupational therapy stroke rehabilitation experts from the perspective of their peers. METHOD.: Forty-six occupational therapy clinicians and managers completed an online questionnaire asking them to nominate "outstanding" and "expert evidence-based" occupational therapists in stroke rehabilitation and to explain their choices. A thematic analysis of respondents' statements was conducted. FINDINGS.: Both outstanding and expert evidence-based occupational therapists were perceived to be motivated self-learners; to have extensive knowledge, skills, and experience; to act as scholarly practitioners; to achieve superior client outcomes; and to work in specialized settings. IMPLICATIONS.: The development of future strategies supporting occupational therapy students and clinicians to become lifelong learners should take into account key attributes of expertise, such as motivation for continuous learning and professional development.

Client-centred ADL intervention after stroke: Occupational therapists' experiences Abstract only*
Item Type: Journal Article
Authors: Ranner, Maria;von Koch, Lena;Guidetti, Susanne and Tham, Kerstin
Publication date: 2016
Journal: Scandinavian Journal of Occupational Therapy 23(2), pp. 81-90
BACKGROUND: This study was conducted in the context of a randomized controlled trial evaluating the effect of a client-centred activities in daily living intervention (CADL). The aim of the CADL was to enable agency in daily activities and participation in everyday life among persons with stroke. OBJECTIVE: This qualitative, longitudinal study aimed to describe how occupational therapists (OTs) applied the CADL in their clinical practice by studying their experiences and reflections concerning their interaction with the clients with stroke. METHODS: Six OTs who conducted the CADL were followed through interviews and observations on four separate occasions over one year. Data were analysed using a grounded theory approach. RESULTS: Sharing was the core category showing how the OTs helped their clients to achieve agency in daily activities. Through sharing the situation the OTs strove to obtain an empathetic understanding of the clients' lived experience throughout the whole intervention process in order to enable the clients' ownership of their daily activities. CONCLUSION: The continuity of sharing seems to be the key for a gradual increase in agency. The approach of sharing should preferably be applied by all members of the interprofessional team, including the client and significant

others.

Home-based constraint-induced movement therapy for patients with upper limb dysfunction after stroke (HOMECIMT): a cluster-randomised, controlled trial
Author(s): Barzel et al.
Source: The Lancet Neurology 14(9) pp. 893-902
Publication date: September 2015
Background: Constraint-induced movement therapy (CIMT) is recommended for patients with upper limb dysfunction after stroke, yet evidence to support the implementation of CIMT in ambulatory care is insufficient. We assessed the efficacy of home CIMT, a modified form of CIMT that trains arm use in daily activities within the home environment. Methods: In this parallel, cluster-randomised controlled trial, we selected 71 therapy practices in northern Germany that treat adult patients with upper limb dysfunction after stroke. Practices were stratified by region and randomly allocated by an external biometrician (1:1, block size of four) using a computer-generated sequence. 37 practices were randomly assigned to provide 4 weeks of home CIMT and 34 practices to provide 4 weeks of standard therapy. Eligible patients had mild to moderate impairment of arm function at least 6 months after stroke and a friend or family member willing to participate as a non-professional coach. Patients of both groups received 5 h of professional therapist contact in 4 weeks. In the home CIMT group, therapists used the contact time to instruct and supervise patients and coaches in home CIMT. Patients in the standard therapy group received conventional physical or occupational therapy, but additional home training was not obligatory. All assessments were done by masked outcome assessors at baseline, after 4 weeks of intervention, and at 6 month follow-up. The primary outcomes were quality of movement, assessed by the Motor Activity Log (MAL-QOM, assessor-assisted self-reported), and performance time, assessed by the Wolf Motor Function Test (WMFT-PT, assessor-reported). Primary outcomes were tested hierarchically after 4 weeks of intervention and analysed by intention to treat, using mixed linear models. This trial is registered with ClinicalTrials.gov, NCT01343602.
Findings: Between July 11, 2011, and June 4, 2013, 85 of 156 enrolled patients were assigned home CIMT and 71 patients were assigned standard therapy. 82 (96%) patients in the home CIMT group and 71 (100%) patients in the standard therapy group completed treatment and were assessed at 4 weeks. Patients in both groups improved in quality of movement (MAL-QOM; change from baseline 0·56, 95% CI 0·41-0·71, p<0·0001 for home CIMT vs 0·31, 0·15-0·46, p=0·0003 for standard therapy). Patients in the home CIMT group improved more than patients in the standard therapy group (between-group difference 0·26, 95% CI 0·05-0·46; p=0·0156). Both groups also improved in motor function performance time (WMFT-PT; change from baseline -25·60%, 95% CI -36·75 to -12·49, p=0·0006 for home CIMT vs -27·52%, -38·94 to -13·94, p=0·0004 for standard therapy), but the extent of improvement did not differ between groups (2·65%, -17·94 to 28·40; p=0·8152). Nine adverse events (of which six were serious) were reported in the home CIMT group and ten (of which seven were serious) in the standard therapy group; however, none was deemed related to the study intervention.
Interpretation: Home-based CIMT can enhance the perceived use of the stroke-affected arm in daily activities more effectively than conventional therapy, but was not superior with respect to motor function. Further research is needed to confirm whether home CIMT leads to clinically significant improvements and if so to identify patients that are most likely to benefit.

Occupational therapists' experiences of rehabilitation of patients with limited awareness after stroke Abstract only*
Item Type: Journal Article

Authors: Lindstrom, Ann-Charlotte;Eklund, Kajsa;Billhult, Annika and Carlsson, Gunnel
Publication Date: Jul 2013
Journal: Scandinavian Journal of Occupational Therapy 20(4), pp. 264-271
AIM: The aim of this study was to describe occupational therapists' experiences of rehabilitation of patients with limited awareness after stroke. METHODS: To capture occupational therapists' experiences, a qualitative approach was chosen using five focus groups consisting of 22 participants engaged in group discussions with open-ended questions based on the aim. Discussions were taped, transcribed verbatim, and analysed according to Kreuger's method. The analysis revealed one general description, constant adjustment, with three themes emerging during the analysis: adjustments in choice of activity, adjustments in choice of environment, and therapeutic adjustments. These themes interacted and were dependent on the desired effect of the interventions. Adjustments were made continuously depending on their effect. The occupational therapists strove for patients to avoid unnecessary risks, make realistic decisions, and live as independently as possible.

Occupational therapy for care home residents with stroke
Author(s): Fletcher-Smith et al.
Source: Cochrane Database of Systematic Reviews 5(6)
Publication date: June 2013
Background: Stroke is a worldwide problem and is a leading cause of adult disability, resulting in dependency in activities of daily living (ADL) for around half of stroke survivors. It is estimated that up to 25% of all care home residents in the USA and in the UK have had a stroke. Stroke survivors who reside in care homes are likely to be more physically and cognitively impaired and therefore more dependent than those able to remain in their own home. Overall, 75% of care home residents are classified as severely disabled, and those with stroke are likely to have high levels of immobility, incontinence and confusion, as well as additional co-morbidities. It is not known whether this clinically complex population could benefit from occupational therapy in the same way as community-dwelling stroke survivors. The care home population with stroke differs from the general stroke population living at home, and a review was needed to examine the benefits of occupational therapy provided to this specific group. This review therefore focused on occupational therapy interventions for ADL for stroke survivors residing in care homes. Objectives: To measure the effects of occupational therapy interventions (provided directly by an occupational therapist or under the supervision of an occupational therapist) targeted at improving, restoring and maintaining independence in ADL among stroke survivors residing in long-term institutional care, termed collectively as 'care homes'. As a secondary objective, we aimed to evaluate occupational therapy interventions for reducing complications such as depression and low mood. Search methods: We searched the Cochrane Stroke Group Trials Register (August 2012), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library, September 2012), MEDLINE (1948 to September 2012), EMBASE (1980 to September 2012), CINAHL (1982 to September 2012) and 10 additional bibliographic databases and six trials registers. We also handsearched seven journals, checked reference lists and obtained further information from individual trialists. Selection criteria: Randomised controlled trials investigating the impact of an occupational therapy intervention for care home residents with stroke versus standard care. Data collection and analysis: The lead review author performed all searches. Two review authors then independently assessed all titles and abstracts of studies and selected trials for inclusion, with a third review author resolving any discrepancies. The same two review authors independently extracted data from all included published sources to ensure reliability. Primary outcomes were

performance in ADL at the end of scheduled follow-up and death or a poor outcome. Secondary outcomes aimed to reflect the domains targeted by an occupational therapy intervention. Main results: We included in the review one study involving 118 participants. We found one ongoing study that also met the inclusion criteria for the review, but the data were not yet available. Authors' conclusions: We found insufficient evidence to support or refute the efficacy of occupational therapy interventions for improving, restoring or maintaining independence in ADL for stroke survivors residing in care homes. The effectiveness of occupational therapy for the population of stroke survivors residing in care homes remains unclear, and further research in this area is warranted.

Aspects affecting occupational therapists' reasoning when implementing research-based evidence in stroke rehabilitation
Abstract only*
Item Type: Journal Article
Authors: Kristensen, Hanne Kaae;Borg, Tove and Hounsgaard, L.
Publication Date: Mar 2012
Journal: Scandinavian Journal of Occupational Therapy 19(2), pp. 118-131
BACKGROUND: When implementing evidence-based practice in occupational therapy the investigation of clinical reasoning provides important information on research utilization. AIM: This study investigates aspects affecting occupational therapists' reasoning when implementing research-based evidence within stroke rehabilitation. METHODS: The study was based on a phenomenological hermeneutical and an action research approach in collaboration with three occupational therapy settings including 25 occupational therapists. Data collection consisted of 41 field observations, 14 individual interviews, and six focus-group interviews. RESULTS: New knowledge concerning the substantial influence of professional values in the occupational therapists' local cultures was indicated. It was of importance that the therapists as a group are given the opportunity to explicit and critically appraise values and knowledge use in order to develop their practice knowledge and new skills. Moreover personal values and clinical experiences influenced clinical reasoning. Current knowledge of the importance of local cultures and leadership was reinforced. CONCLUSION: The influence of professional values in the occupational therapists' local cultures was a substantial factor in the implementation processes. In addition personal values and clinical experiences influenced professional decision-making. Furthermore, the study reinforced current knowledge of the importance of culture and leadership in implementation of research-based clinical guidelines.

Increasing knowledge of best practices for occupational therapists treating post-stroke unilateral spatial neglect: results of a knowledge-translation intervention study
Item Type: Journal Article
Authors: Petzold, Anita;Korner-Bitensky, Nicol;Salbach, Nancy M.;Ahmed, Sara;Menon, Anita and Ogourtsova, Tatiana
Publication Date: Feb 2012
Journal: Journal of Rehabilitation Medicine 44(2), pp. 118-124
OBJECTIVE: The aim of this study was to investigate: (i) the feasibility of delivering a multi-modal knowledge translation intervention specific to the management of acute post-stroke unilateral spatial neglect; and (ii) the impact of the knowledge translation intervention on occupational therapists' knowledge of evidence-based unilateral spatial neglect problem identification, assessment and treatment, and self-efficacy related to evidence-based practice implementation. DESIGN: A 3-period (pre-post) repeated measures design. SUBJECTS: Acute care occupational therapists treating patients with post-stroke unilateral spatial neglect were recruited from two major Canadian cities. METHODS: Participants completed two pre-

intervention assessments, took part in a day-long interactive multi-modal knowledge translation intervention and a subsequent 8-week follow-up, and completed a post-intervention assessment. Knowledge of evidence-based problem identification, assessment and treatment of unilateral spatial neglect, and self-efficacy to perform evidence-based practice activities were measured using standard scales. RESULTS: The intervention was tested on 20 occupational therapists. Results indicate a significant improvement in knowledge of best practice unilateral spatial neglect management ($p < 0.000$) and evidence-based practice self-efficacy in carrying out evidence-based practice activities ($p < 0.045$) post-intervention. CONCLUSION: Use of a multi-modal knowledge translation intervention is feasible and can significantly improve occupational therapists' knowledge of unilateral spatial neglect best practices and self-efficacy. The findings should help advance best practices specific to the management of post-stroke unilateral spatial neglect as well as informing knowledge translation studies in other areas of practice.

National survey of Canadian occupational therapists' assessment and treatment of cognitive impairment post-stroke
Item Type: Journal Article
Authors: Korner-Bitensky, Nicol;Barrett-Bernstein, Sheila;Bibas, Gabrielle and Poulin, Valerie
Publication Date: Aug 2011
Journal: Australian Occupational Therapy Journal 58(4), pp. 241-250
AIM: This study examined variations in management of cognitive impairment post-stroke among occupational therapists and factors associated with variations in practice. METHODS: Canada-wide cross-sectional telephone survey. Clinicians' practices were examined using standard patient cases (vignettes). SETTING: Acute care, inpatient rehabilitation and community-based sites providing stroke rehabilitation in all Canadian provinces. PARTICIPANTS: Occupational therapists (n=663) working in stroke rehabilitation as identified through provincial licensing bodies. MAIN OUTCOME MEASURES: Type and frequency of cognition-related problem identification, assessment and intervention use. RESULTS: Respectively, 69%, 83% and 31% of occupational therapists responding to the acute care, inpatient rehabilitation and community-based vignettes recognised cognition as a potential problem. Standardised assessment use was prevalent: 70% working in acute care, 77% in inpatient rehabilitation and 58% in community-based settings indicated using standardised assessments: 81%, 83% and 50%, respectively, indicated using general cognitive interventions. CONCLUSION: The Mini-Mental State Examination was often used incorrectly to monitor patient change. Executive function, a critical component of post-stroke assessment, was rarely addressed. Interventions were most often general (e.g. incorporated in activities of daily living) rather than specific (e.g. cueing, memory aids, computer-based retraining). Copyright © 2011 The Authors. Australian Occupational Therapy Journal © 2011 Occupational Therapy Australia.

Visual problems after stroke: a survey of current practice by occupational therapists working in UK stroke inpatient settings
Abstract only*
Item Type: Journal Article
Authors: Pollock, Alex;Hazelton, Christine and Brady, Marian
Publication Date: Oct 2011
Journal: Topics in Stroke Rehabilitation 18(Suppl 1), pp. 643-651
The primary aim of this study was to explore current practice related to assessments, protocols, referrals, and treatments for visual problems after stroke by occupational therapists (OTs) working in stroke inpatient settings in Scotland. METHODS: A

questionnaire was designed to gather information about the respondent's stroke inpatient setting, the vision assessments and protocols used, treatments administered, referrals made, and barriers experienced. One named OT was identified from each stroke inpatient setting in Scotland. Each OT was sent an introductory letter and questionnaire (sent 1 to 3 weeks after introductory letter). Nonresponders were sent a second copy of the questionnaire (2 weeks after first questionnaire). RESULTS: Sixty-one OTs in stroke inpatient settings were sent a questionnaire; 55 (90%) were returned. Only 5 (9%) respondents reported that their unit had a protocol for visual problems after stroke. Forty-nine respondents (89%) reported that they would assess visual attention and visual scanning with every patient or regularly. Other assessments were used less frequently. Forty-five (82%) OTs report delivering treatment to patients with visual neglect and 38 (69%) for visual field problems. Only 6 (11%) OTs report delivering treatment to patients with eye movement problems. OTs' choice of treatment was similar regardless of the specific visual problem of the patient. DISCUSSION: OTs play a key role in the assessment and management of visual problems in patients after stroke. Protocols or management plans, clear referral pathways, guidelines, and further research are required to avoid inconsistencies in assessment, referral, and management of these patients.

Occupational therapy for cognitive impairment in stroke patients
Author(s): Hoffmann et al.
Source: Cochrane Database of Systematic Review
Publication date: September 2010
Background: Cognitive impairment is a frequent consequence of stroke and can impact on a person's ability to perform everyday activities. There are a number of different intervention strategies that occupational therapists may use when working with people who have cognitive impairment post-stroke. Objectives: To determine whether occupational therapy improves functional performance of basic activities of daily living (ADL) and specific cognitive abilities in people who have cognitive impairment following a stroke. Search methods: We searched the Cochrane Stroke Group Trials Register (last searched May 2009), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library Issue 1, 2009), MEDLINE (1966 to April 2009), EMBASE (1980 to April 2009), CINAHL (1982 to April 2009), PsycINFO (1840 to April 2009), PsycBITE, OTseeker and Dissertation Abstracts (the latest three were searched up to April 2009). In an effort to identify further published, unpublished, and ongoing trials, we also tracked relevant references through the cited reference search in Science Citation Index (SCI) and Social Science Citation Index (SSCI), reviewed the reference lists of relevant studies and reviews, handsearched relevant occupational therapy journals, and contacted key researchers in the area. Selection criteria: Randomised and quasi-randomised controlled trials that evaluated an intervention focused on providing cognitive retraining to adults with clinically defined stroke and confirmed cognitive impairment. The intervention needed either to be provided by an occupational therapist or given under the supervision of an occupational therapist. Data collection and analysis: Two review authors independently examined the abstracts that might meet the inclusion criteria, assessed the quality and extracted data. We have presented results using mean differences. Main results: We included one trial with 33 participants in this review. We found no difference between groups for the two relevant outcomes that were measured: improvement in time judgement skills and improvement in basic ADLs on the Barthel Index.

Information provision to clients with stroke and their carers: self-reported practices of occupational therapists Abstract only*
Item Type: Journal Article

Authors: Gustafsson, Louise;Hodge, Anna;Robinson, Mia;McKenna, Kryss and Bower, Kylie
Publication Date: Jun 2010
Journal: Australian Occupational Therapy Journal 57(3), pp. 190-196
BACKGROUND: The literature promotes the use of a wide range of educational materials for teaching and training clients with chronic conditions such as stroke. Client education is a valuable tool used by occupational therapists to facilitate client and carer ability to manage the stroke-affected upper limb. The aim of this study was to identify what information was provided to clients and carers, how this information was delivered, when the information was delivered and the client factors that influenced the method of information provision. METHODS: Convenience and snowball sampling was used to recruit occupational therapists working in stroke. Twenty-eight participants completed the study questionnaire anonymously and their responses were summarised descriptively. RESULTS: There was a clinically important trend for carers to receive less information than clients. Written and/or verbal information was the favoured method for delivering information related to handling (57%), soft-tissue injury minimisation (46.4%) and oedema management (50%). Information was delivered with decreasing frequency from admission (86%) to discharge (64%). More than 90% of participants indicated that the client's cognitive ability, visual ability, level of communication, primary language and perceptual ability were considered prior to the delivery of information. DISCUSSION: Participants regularly conveyed information to clients and carers with respect to management of the stroke-affected upper limb. However, an increased emphasis on the development of practical self-management skills, awareness of the impact of personal factors and a timeline for information provision may prove useful.

Management of patients with cognitive impairment after stroke: a survey of Australian occupational therapists Abstract only*
Item Type: Journal Article
Authors: Koh, Chia-Lin;Hoffmann, Tammy;Bennett, Sally and McKenna, Kryss
Publication Date: Oct 2009
Journal: Australian Occupational Therapy Journal 56(5), pp. 324-331
BACKGROUND/AIM: Cognitive impairment is a common and often debilitating consequence of stroke. The current practice patterns of Australian occupational therapists who work in this area are not clearly known. The aim of this study was to investigate the theoretical approaches, assessments, interventions and research evidence used by Australian occupational therapists who work with patients who have cognitive impairment poststroke. METHODS: A self-administered, purpose-designed online survey was used. RESULTS: Survey responses were received from 102 occupational therapists. The client-centred approach was the most commonly used theoretical approach, with 81.3% and 72% using it often or all of the time with inpatients and outpatients, respectively. Assessments that were most frequently used were the Mini Mental State Examination (63.7% of participants), the Lowenstein Occupational Therapy Cognitive Assessment (45.1%), the Functional Independence Measure (57.8%, and the Assessment of Living Skills and Resources (10.0%). Interventions involving functional activities were used more frequently than compensatory techniques, such as diaries, alarms, or other electronic devices, and paper and pencil remedial exercises. Few (16%) participants used computer programs specifically designed for cognitive rehabilitation. Although 60.8% of the participants reported using research literature when making decisions about interventions, a higher percentage reported relying on their past experience (88.3%) and colleagues' opinions (77.4%). CONCLUSION: This

study provides an insight into the current practices of Australian occupational therapists who work with people who have cognitive impairment after stroke. Client-centredness is emphasised in current practice; however, the use of research evidence to inform practice appears to be limited.

Physiotherapists

Current Clinical Practices of Saudi Physiotherapists in Stroke Rehabilitation
Item Type: Journal Article
Authors: Alatawi, S. F.
Publication date: 2021
Journal: Journal of Acute Care Physical Therapy 12(4), pp. 194-204
Background and Purpose: Stroke is a major cause of disability and the third leading cause of death worldwide. Clinical practice guidelines for stroke rehabilitation identify stroke physiotherapists as an essential interdisciplinary team member to minimize residual impairments and disability, thereby improving the patient's ability to execute daily tasks. This article uses an existing American survey to compare Saudi physiotherapists' current practice and preferred interventions in stroke rehabilitation with their counterparts in other countries. Method(s): An electronic survey was sent between September and October 2020 to physiotherapists (n = 287) treating persons with stroke in Saudi Arabia. The questionnaire consisted of items related to stroke rehabilitation, including treatment approach, the goal of interventions, management of tone, facilitation of movement, function, and improved motor control. Chi-square tests (chi2) were used to test any associations between physiotherapists' responses with respect to their demographic characteristics. Quantitative data analysis was conducted using SPSS. Result(s): A total of 197 participants returned completed questionnaires (68.6%). Participants were asked which methods of stroke treatment they had practiced in their profession and which methods had been taught in school training. The Bobath/neurodevelopmental treatment (NDT) approach was the most commonly known approach in practice (77.66%), followed by the proprioceptive neuromuscular facilitation/Brunnstrom and motor relearning program (63.45%, 25.38%, respectively). The results showed a significant relationship between Saudi physiotherapists' current practice and the aim of treatment and function (P Result(s): A total of 197 participants returned completed questionnaires (68.6%). Participants were asked which methods of stroke treatment they had practiced in their profession and which methods had been taught in school training. The Bobath/neurodevelopmental treatment (NDT) approach was the most commonly known approach in practice (77.66%), followed by the proprioceptive neuromuscular facilitation/Brunnstrom and motor relearning program (63.45%, 25.38%, respectively). The results showed a significant relationship between Saudi physiotherapists' current practice and the aim of treatment and function (P Conclusion(s): Variation has been observed between therapists regarding treatment applications in stroke rehabilitation. The current findings emphasize the need to investigate how and why practitioners use or do not use evidence in this area (such as national stroke guidelines). Future studies might need to engage Saudi stroke physiotherapists to find suitable ways to close the gap between the evidence for best practice and the use of evidence within day-to-day practices. Copyright © 2021 The Author. Published by Wolters Kluwer Health, Inc. on behalf of the Academy of Acute Care Physical Therapy, APTA.

Development of a digital learning program for physiotherapists to enhance clinical implementation of aerobic exercise in stroke rehabilitation
Item Type: Journal Article

Authors: Thornton, Marianne;Harris, Jennifer;Breithaupt, Krista;Dyks, Tracey;Finestone, Hillel and MacKay-Lyons, Marilyn
Publication Date: Jun 17 2021
Journal: Archives of Physiotherapy 11(1), pp. 17
BACKGROUND: This paper describes the initial development process of an eLearning continuing professional education program primarily for post-licensure physiotherapists - "Electronic Aerobic Exercise Recommendations to Optimize Best Practices in Care after Stroke" (eAEROBICS). Our objective was to develop an evidence-based, clinically relevant, user-friendly eLearning program for online delivery tailored to facilitate prescription of aerobic exercise post-stroke by physiotherapists. The Demand Driven Learning Model guided curriculum design, delivery, and evaluation. Based on previously identified gaps in physiotherapists' knowledge of aerobic exercise, four learning modules were developed and delivered using an eLearning platform to maximize cost-effectiveness and flexibility. Five physiotherapists volunteered to pilot eAEROBICS, providing preliminary feedback on strengths and suggestions for improvement. RESULTS: Theoretical information and clinical applications addressed the learning objectives of each module in a logical manner. All technical or administrative issues encountered during program delivery were addressed. The feedback from the pilot end-users informed modifications to the eAEROBICS program. CONCLUSIONS: Processes used in developing eAEROBICS have the potential to serve as a model of electronic continuing professional education for other areas of physiotherapy practice. Further investigation of end-user perspectives and clinical impact of the program is warranted to determine the overall effectiveness of the program.

Physiotherapists' and occupational therapists' perspectives on information and communication technology in stroke rehabilitation
Item Type: Journal Article
Authors: Marwaa, Mille Nabsen;Kristensen, Hanne Kaae;Guidetti, Susanne and Ytterberg, Charlotte
Publication date: 2020
Journal: PLoS ONE [Electronic Resource] 15(8), pp. e0236831
AIM: The aim of this study was to explore the current and potential use of information and communication technology (ICT) to enhance coherent person-centred rehabilitation after stroke, from the perspectives of physiotherapists and occupational therapists. METHOD: Five occupational therapists and four physiotherapists from different phases of the Danish stroke rehabilitation process were included and two focus group interviews were carried out. A grounded theory approach was used throughout the study and a constant comparative method was used in the analysis. RESULTS: Three subcategories were identified from the analysis of interviews with participants: 1) ICT and apps as meaningful and supportive in the rehabilitation process, 2) ICT as a tool in communication and documentation and 3) Barriers to the integration of ICT and apps in the rehabilitation process. From these categories one core category emerged: The potential of a personalized app solution to facilitate coherent person-centred rehabilitation. CONCLUSION: ICT was perceived as important to integrate in stroke rehabilitation both for assessment, training and to compensate for remaining deficits. The development of a personalized app solution could accommodate stroke survivors' and significant others' need for insight into and overview over the rehabilitation process as well as access to relevant information, which would thereby empower them. Furthermore, a personalized app solution could also facilitate follow-up after discharge and was perceived to ease the communication and documentation within and between sectors, as well as communication with both

stroke survivors and significant others.

Strength training to improve walking after stroke: how physiotherapist, patient and workplace factors influence exercise prescription Abstract only*
Item Type: Journal Article
Authors: Tole, Genevieve;Raymond, Melissa J.;Williams, Gavin;Clark, Ross A. and Holland, Anne E.
Publication Date: Nov 19 2020
Journal: Physiotherapy Theory & Practice 1-9
Background: Muscle weakness is well established as the primary impairment that affects walking after stroke and strength training is an effective intervention to improve this muscle weakness. Observation of clinical practice however has highlighted an evidence-practice gap in the implementation of evidence-based strength training guidelines. Objective: To explore perceived barriers and facilitators that influence Australian physiotherapy practices when prescribing strength training with stroke survivors undergoing gait rehabilitation. Methods: Semi-structured interviews were conducted with a convenience sample of physiotherapists currently providing rehabilitation services to patients following stroke in Australia. Interviews were transcribed verbatim and line-by-line thematic analysis was undertaken to create themes and sub-themes. Results: Participants were 16 physiotherapists (12 females) with 3 months - 42 years experience working with people after stroke. Major themes identified were1) patient factors influence the approach to strength training; 2) interpretation and implementation of strength training principles is diverse; and 3) workplace context affects the treatment delivered. Physiotherapists displayed wide variation in their knowledge, interpretation and implementation of strength training principles and strength training exercise prescription was seldom evidence or guideline based. Workplace factors included the clinical preference of colleagues, and the need to modify practice to align with workforce resources. Conclusions: Implementation of strength training to improve walking after stroke was diverse. Therapist-related barriers to the implementation of effective strength training programs highlight the need for improved knowledge, training and research engagement. Limited resourcing demonstrates the need for organizational prioritization of stroke education and skill development. Narrowing the evidence-practice gap remains a challenge.

Physiotherapists' experiences of early mobilization after stroke thrombolysis in England and Wales: A qualitative study Abstract only*
Item Type: Journal Article
Authors: Turner, Nicola;Pickering, Dawn and Jones, Karen
Publication Date: Jul 31 2020
Journal: Physiotherapy Theory & Practice 1-8
INTRODUCTION: Thrombolysis with tissue plasminogen activator is a mainstream treatment for ischemic stroke. Known risks with thrombolysis include intracerebral hemorrhage and bleeding elsewhere in the body. There are no specific recommendations for the timing of commencing mobility rehabilitation after thrombolysis. Research evidence for early mobilization (within 24 hours) after thrombolysis is sparse and little is known about physiotherapy practice in the UK. Purpose: This exploratory study aimed to investigate the experiences, including clinical decision-making of physiotherapists in England and Wales regarding early mobilization after thrombolysis. METHODS: A qualitative study with interpretative paradigm using a phenomenological methodology. Semi-structured interviews were conducted with a purposive sample. Thematic analysis triangulated by participant and researcher review of resultant themes was supported by NVivo software. A reflexive diary was maintained throughout. RESULTS: Data saturation was reached after 14 interviews. All participants

reported experience of early mobilization after thrombolysis, with no reported harm or serious incident. Themes included descriptions of practice, perceived benefits and harms, and implementation of risk assessment and management strategies. CONCLUSIONS: Physiotherapists describe a variety of practices with careful implementation of any early mobilization after thrombolysis. Common factors of risk assessment reported by participants could contribute to guideline development.

Exoskeleton use in post-stroke gait rehabilitation: a qualitative study of the perspectives of persons post-stroke and physiotherapists
Item Type: Journal Article
Authors: Vaughan-Graham, Julie;Brooks, Dina;Rose, Lowell;Nejat, Goldie;Pons, Jose and Patterson, Kara
Publication Date: 09 10 2020
Journal: Journal of Neuroengineering & Rehabilitation 17(1), pp. 123
BACKGROUND: Wearable powered exoskeletons are a new and emerging technology developed to provide sensory-guided motorized lower limb assistance enabling intensive task specific locomotor training utilizing typical lower limb movement patterns for persons with gait impairments. To ensure that devices meet end-user needs it is important to understand and incorporate end-users perspectives, however research in this area is extremely limited in the post-stroke population. The purpose of this study was to explore in-depth, end-users perspectives, persons with stroke and physiotherapists, following a single-use session with a H2 exoskeleton. METHODS: We used a qualitative interpretive description approach utilizing semi-structured face to face interviews, with persons post-stroke and physiotherapists, following a 1.5 h session with a H2 exoskeleton. RESULTS: Five persons post-stroke and 6 physiotherapists volunteered to participate in the study. Both participant groups provided insightful comments on their experience with the exoskeleton. Four themes were developed from the persons with stroke participant data: (1) Adopting technology; (2) Device concerns; (3) Developing walking ability; and, (4) Integrating exoskeleton use. Five themes were developed from the physiotherapist participant data: (1) Developer-user collaboration; (2) Device specific concerns; (3) Device programming; (4) Patient characteristics requiring consideration; and, (5) Indications for use. CONCLUSIONS: This study provides an interpretive understanding of end-users perspectives, persons with stroke and neurological physiotherapists, following a single-use experience with a H2 exoskeleton. The findings from both stakeholder groups overlap such that four over-arching concepts were identified including: (i) Stakeholder participation; (ii) Augmentation vs. autonomous robot; (iii) Exoskeleton usability; and (iv) Device specific concerns. The end users provided valuable perspectives on the use and design of the H2 exoskeleton, identifying needs specific to post-stroke gait rehabilitation, the need for a robust evidence base, whilst also highlighting that there is significant interest in this technology throughout the continuum of stroke rehabilitation.

An exploration of physiotherapists' experiences of robotic therapy in upper limb rehabilitation within a stroke rehabilitation centre Abstract only*
Item Type: Journal Article
Authors: Stephenson, Andrew and Stephens, John
Publication Date: Apr 2018
Journal: Disability & Rehabilitation Assistive Technology 13(3), pp. 245-252
PURPOSE: Strokes are the world's leading cause of adult disability, with movement impairment being more common in the upper limb (UL). Robotic therapy (RT) is identified as an effective adjunct to promote movement but with limited effect on

functional capabilities. There is currently limited research in user experience of RT, specifically that of physiotherapists. This study sought to explore physiotherapists' experience of using RT in rehabilitation of the UL, within a stroke rehabilitation centre in the north of England. METHOD: Physiotherapists (n = 6) shared their experiences of working with the InMotion2 robot through semi-structured interviews. Thematic analysis was employed to interpret data, identify emergent themes and interdependent relationships between them. FINDINGS: Five interdependent themes were identified focused around individualized care, influenced by evidence for practice, human relationships, skill mix, and resources and resource management. All physiotherapists valued the use of RT as an adjunct to conventional therapy, although barriers to successful implementation seemed to dominate the views of some. CONCLUSIONS: RT was perceived positively by physiotherapists, regarded as an adjunct to conventional therapy. A framework to summarize the relationships of participants' views and experiences is proposed in an attempt to understand the influences on the clinical use of RT. Implications for Rehabilitation Robotic therapy (RT) is valued as an adjunct to (conventional) person-centred rehabilitation. Resource management and skill mix are viewed as two key challenges to the successful implementation of RT. The production of evidence-based guidelines would be a useful development in the advancement.

Exploring stroke survivors' and physiotherapists' views of self-management after stroke: a qualitative study in the UK
Item Type: Journal Article
Authors: Sadler, Euan;Wolfe, Charles D. A.;Jones, Fiona and McKevitt, Christopher
Publication Date: 03 10 2017
Journal: BMJ Open 7(3), pp. e011631
OBJECTIVES: Stroke is a sudden-onset condition with long-term consequences. Self-management could help address long-term consequences of stroke. Stroke survivors' and health professionals' views of self-management may vary, limiting the successful introduction of self-management strategies. This paper explores stroke survivors' and physiotherapists' views of self-management, focusing on what self-management means, and factors perceived to enable and hinder self-management after stroke, to draw out implications for policy, practice and future research. DESIGN: Qualitative study using semistructured interviews and a thematic analysis approach. SETTING: Stroke unit and community stroke-rehabilitation services in London, UK. PARTICIPANTS: 13 stroke survivors (8 men and 5 women; aged 53-89 years) admitted to a London stroke unit. 13 physiotherapists: 8 working in an inpatient stroke unit and 5 in community rehabilitation. RESULTS: Key differences were evident in how self-management was understood between these groups. Stroke survivors were unfamiliar with the term self-management, but most could provide their own definition and relate to the term, and understood it as care of the self: 'doing things for yourself' and 'looking after yourself'. They did not recognise self-management as part of their care, but valued therapists as encouraging experts in supporting their recovery after stroke. Physiotherapists commonly understood self-management as a process in which stroke survivors were expected to take an active role in their rehabilitation and manage their recovery and health, with different understandings of self-management among physiotherapists shaped by the context in which they worked. They reported that individual, social and organisational factors enable and hinder self-management after stroke, with individual and organisational barriers particularly evident in the early stages. CONCLUSIONS: If self-management support approaches are to be used, further work is required to explore the language and strategies used by professionals to support self-management, and the barriers to supporting self-

management at different time points after stroke. Copyright Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to http://www.bmj.com/company/products-services/rights-and-licensing/.

Boosting the traditional physiotherapist approach for stroke spasticity using a sensorized ankle foot orthosis: a pilot study
Abstract only*
Item Type: Journal Article
Authors: Tamburella, Federica;Moreno, Juan C.;Iosa, Marco;Pisotta, Iolanda;Cincotti, Febo;Mattia, Donatella;Pons, Jose L. and Molinari, Marco
Publication date: 2017
Journal: Topics in Stroke Rehabilitation 24(6), pp. 447-456
BACKGROUND: Spasticity is a motor disorder that is commonly treated manually by a physical therapist (PhT) stretching the muscles. Recent data on learning have demonstrated the importance of human-to-human interaction in improving rehabilitation: cooperative motor behavior engages specific areas of the motor system compared with execution of a task alone. OBJECTIVES: We hypothesize that PhT-guided therapy that involves active collaboration with the patient (Pt) through shared biomechanical visual biofeedback (vBFB) positively impacts learning and performance by the Pt during ankle spasticity treatment. A sensorized ankle foot orthosis (AFO) was developed to provide online quantitative data of joint range of motion (ROM), angular velocity, and electromyographic activity to the PhT and Pt during the treatment of ankle spasticity. METHODS: Randomized controlled clinical trial. Ten subacute stroke inpatients, randomized into experimental (EXP) and control (CTRL) groups, underwent six weeks of daily treatment. The EXP group was treated with an active AFO, and the CTRL group was given an inactive AFO. Spasticity, ankle ROM, ankle active and passive joint speed, and coactivation index (CI) were assessed at enrollment and after 15-30 sessions. RESULTS: Spasticity and CI ($p < 0.005$) decreased significantly after training only in the EXP group, in association with a significant rise in active joint speed and active ROM ($p < 0.05$). Improvements in spasticity ($p < 0.05$), active joint speed ($p < 0.001$), and CI ($p < 0.001$) after treatment differed between the EXP and CTRL groups. CONCLUSIONS: PhT-Pt sharing of exercise information, provided by joint sensorization and vBFB, improved the efficacy of the conventional approach for treating ankle spasticity in subacute stroke Pts.

Basic Body Awareness Therapy for patients with stroke: Experiences among participating patients and physiotherapists
Item Type: Journal Article
Authors: Lindvall, Mialinn Arvidsson;Anderzen Carlsson, Agneta and Forsberg, Anette
Publication Date: Jan 2016
Journal: Journal of Bodywork & Movement Therapies 20(1), pp. 83-89
BACKGROUND: After a stroke many patients have muscle weakness, spasticity and compromised sensation leading to decreased postural stability. Basic Body Awareness Therapy includes slow movements that challenge postural control. AIM: The aim was to describe experiences of 8 weeks of Basic Body Awareness Therapy from the perspective of both patients with stroke and physiotherapists. METHOD: This study had a qualitative design. Twenty-one patients and four physiotherapists were interviewed. The interviews were analysed using manifest and latent content analysis. RESULTS: One overall theme emerged "Simple yet challenging" which was based on six categories: "Facing one's limitations", "Individualized movements", "A feeling of harmony", "Improved balance", "Integrated knowledge" and "Frustration and doubt". The patients described improvement in balance and stability, as

well as increased wellbeing. CONCLUSION: The patients and physiotherapists related that Basic Body Awareness Therapy challenges balance but also provides an opportunity to reflect on the body. Copyright © 2015 The Authors. Published by Elsevier Ltd.. All rights reserved.

Three different points of view in stroke rehabilitation: patient, caregiver, and physiotherapist Abstract only*
Item Type: Journal Article
Authors: Demir, Yasemin Parlak;Balci, Nilay Comuk;Unluer, Nezehat Ozgul;Ulug, Naime;Dogru, Esra;Kilinc, Muhammed;Yildirim, Sibel Aksu and Yilmaz, Oznur
Publication Date: Oct 2015
Journal: Topics in Stroke Rehabilitation 22(5), pp. 377-385
BACKGROUND: The similarities or differences of the three some (physiotherapists, patients, and caregivers) thought about the process of stroke rehabilitation can play a key role in the success of rehabilitation. OBJECTIVE: The aim of this qualitative study was to investigate the perspectives of the three some, with regard to the two themes of the study: (1) What are the problems faced by the patients after stroke?; and (2) What does recovery after stroke mean to you? METHODS: The qualitative questions and possible answers were prepared by four physiotherapists. The answers were matched to International Classification of Functioning (ICF) components. Seventy patients who were having treatment as in-patient rehabilitation centers, their caregivers, and physiotherapists were invited to the study. After the questions were asked and the possible response choices were presented, subjects were asked to prioritize these response choices. RESULTS: One hundred and fifty-nine subjects, including 53 patients, 53 caregivers, and 53 physiotherapists, were included to the study. When the theme 1 were examined, we found that the patients' first priority was functional abilities (ICF: body function and structure) such as using the hands and feet while the caregivers and physiotherapists prioritized self-care problems (ICF: activity and participation). The most common response to the theme 2 was "being in same health condition before the disease" (ICF: activity and participation) among the patients and caregivers and "being able to move arm and leg on the affected side" (body function and structure) among the physiotherapists. CONCLUSION: As a conclusion, problems faced by the patients, caregivers, and physiotherapists were perceived under the same ICF domain and that caregivers' and physiotherapists' priorities were the same.

From physical and functional to continuity with pre-stroke self and participation in valued activities: a qualitative exploration of stroke survivors', carers' and physiotherapists' perceptions of physical activity after stroke Abstract only*
Item Type: Journal Article
Authors: Morris, Jacqui H.;Oliver, Tracey;Kroll, Thilo;Joice, Sara and Williams, Brian
Publication date: 2015
Journal: Disability & Rehabilitation 37(1), pp. 64-77
PURPOSE: Physical activity (PA) improves fitness, functioning, health and wellbeing after stroke. However, many survivors are inactive. This study explored survivors', carers' and physiotherapists' beliefs about PA to identify how these support or hinder PA participation. METHODS: Semi-structured in-depth interviews with community dwelling stroke survivors (n = 38); two focus groups involving six carers each; two focus groups, respectively, involving seven and eight stroke rehabilitation physiotherapists from clinical and community settings. Data were audio-recorded and transcribed. Analysis was structured using the Framework Approach to identify themes and a dynamic, conceptual model. FINDINGS: Desired outcomes and control over outcome achievement were key concepts. For survivors and carers, PA supported participation in valued activities, providing continuity with pre-stroke sense of self.

Carers adopted motivating strategies for PA to support recovery and participation in shared activities. In contrast, physiotherapists prioritised physical and functional outcomes and viewed survivors' control of outcomes as limited which was reflected by the support they provided. CONCLUSIONS: Individualised interventions that account for social and environmental influences on behaviour appear vital to enabling survivors to participate in meaningful physical activities. Such interventions should facilitate development of shared perspectives among physiotherapists, carers and survivors of PA and related outcomes and provide tailored strategies to facilitate PA participation. Implications for Rehabilitation Physical activity after stroke rehabilitation is important for fitness, health, functioning and well-being. Reasons for survivors participating or not in physical activity after stroke are complex and varied. Physiotherapists and carers influence survivors' participation in physical activity but their views about how to do this do not always match, or do they always complement the views of survivors. Integrated approaches to supporting physical activity that account for survivors' preferences and recognise the carers' role should be developed and applied by physiotherapists and other health professionals.

Clinical guideline adherence by physiotherapists working in acute stroke care Abstract only*
Item Type: Journal Article
Authors: Donohue, A.;McLaughlin, C.;Crowe, M. and Horgan, F.
Publication Date: Oct 2014
Journal: Irish Medical Journal 107(9), pp. 287-289
The publication of the Irish Clinical Guidelines for Stroke in 2009 provided healthcare professionals with an essential tool for improving stroke services. The aim of this study was to identify the degree to which Senior Physiotherapists in acute stroke care adhered to the Irish Clinical Guidelines for Stroke. This was a cross-sectional study, a postal or online survey was distributed to 31 Senior Physiotherapists working in acute stroke care, 23 responded, achieving a 74% response rate. There was excellent compliance with guidelines for the completion and documentation of full assessment within 5 working days of admission 19 respondents (82.6%), and the involvement of the patient in goal setting 19 (82.6%). Poor compliance was reported in relation to the provision of early assessment 10 (43.5%) and adequate rehabilitation intensity 9 (39%). The main barriers to compliance in these areas were organisational in nature.

Physiotherapists systematically overestimate the amount of time stroke survivors spend engaged in active therapy rehabilitation: an observational study
Item Type: Journal Article
Authors: Kaur, Gurpreet;English, Coralie and Hillier, Susan
Publication Date: Mar 2013
Journal: Journal of Physiotherapy 59(1), pp. 45-51
QUESTIONS: How accurately do physiotherapists estimate how long stroke survivors spend in physiotherapy sessions and the amount of time stroke survivors are engaged in physical activity during physiotherapy sessions? Does the mode of therapy (individual sessions or group circuit classes) affect the accuracy of therapists' estimates? DESIGN: Observational study embedded within a randomised trial. PARTICIPANTS: People who participated in the CIRCIT trial after having a stroke. INTERVENTION: 47 therapy sessions scheduled and supervised by physiotherapists (n = 8) and physiotherapy assistants (n = 4) for trial participants were video-recorded. OUTCOME MEASURES: Therapists' estimations of therapy time were compared to the video-recorded times. RESULTS: The agreement between therapist-estimated and video-recorded data for total therapy time and active time was excellent, with intraclass correlation coefficients (ICC) of 0.90 (95% CI 0.83 to 0.95) and 0.83 (95% CI 0.73 to 0.93)

respectively. Agreement between therapist-estimated and video-recorded data for inactive time was good (ICC score 0.62, 95% CI 0.40 to 0.77). The mean (SD) difference between therapist-estimated and video-recorded total therapy time, active time, and inactive time for all sessions was 7.7 (10.5), 14.1 (10.3) and -6.9 (9.5) minutes respectively. Bland-Altman analyses revealed a systematic bias of overestimation of total therapy time and total active time, and underestimation of inactive time by therapists. Compared to individual therapy sessions, therapists estimated total circuit class therapy duration more accurately, but estimated active time within circuit classes less accurately. CONCLUSION: Therapists are inaccurate in their estimation of the amount of time stroke survivors are active during therapy sessions. When accurate therapy data are required, use of objective measures is recommended. Copyright © 2013 Australian Physiotherapy Association. Published by .. All rights reserved.

Physiotherapy after stroke in Ireland: a qualitative insight into the patients' and physiotherapists' experience Abstract only*
Item Type: Journal Article
Authors: Galvin, Rose;Cusack, Tara and Stokes, Emma
Publication Date: Sep 2009
Journal: International Journal of Rehabilitation Research 32(3), pp. 238-244
The study aimed to examine the experience of inpatient physiotherapy intervention delivered after stroke in Ireland from two different perspectives: that of the person with stroke and that of the physiotherapist. A qualitative study was conducted involving semi-structured interviews with 10 people with stroke and two focus groups with 10 senior physiotherapists working in the area of neurology. All transcriptions were analysed using the grounded theory approach. People with stroke and physiotherapists agreed that people with stroke could benefit from more physiotherapy than is routinely provided in the rehabilitation setting. However, the timing of the intervention was disputed. Family-mediated exercise therapy was identified as an acceptable adjunct to routine physiotherapy after stroke. People with stroke identified walking and lower-extremity exercises as the most important components of their programme. Furthermore, they identified honesty and encouragement as two important traits in a physiotherapist working with people with stroke. Obtaining the perspective of patients is an important and valuable way of evaluating healthcare services. Physiotherapists need to be cognizant of the elements of rehabilitation that are important to people with stroke. Methods of delivery of stroke care need to evolve and incorporate families not only for practical purposes but also from a psychological aspect. Family-assisted exercise therapy after stroke may enhance the carry-over outside formal physiotherapy, giving patients and their families the opportunity to maximize recovery.

Optimising long-term participation in physical activities after stroke: Exploring new ways of working for physiotherapists
Abstract only*
Item Type: Journal Article
Authors: Morris, J. H. and Williams, B.
Publication date: 2009
Journal: Physiotherapy 95(3), pp. 227-233
There is now good empirical evidence of physical and functional benefits for individuals with stroke from long-term engagement in a range of physical activities. However, long-term participation of stroke survivors in physical activity after rehabilitation is low, and maximum benefits are not being achieved. This article reviews relevant literature and evidence, and suggests that physiotherapists are ideally placed to support patients in long-term participation in activity as they prepare patients for the end of physical rehabilitation. However, this requires the development, testing and application of stroke-

specific evidence-based behavioural and motivational interventions that are feasible in clinical practice, take account of the role of carers, and seek to address the barriers to activity faced by stroke survivors at the end of rehabilitation. It also requires physiotherapists to take a leading role in developing appropriate policies and strategies with other exercise professionals and services to address the transition from rehabilitation to an active lifestyle following stroke. © 2008 Chartered Society of Physiotherapy.

What treatment packages do UK physiotherapists use to treat postural control and mobility problems after stroke? Abstract only*
Item Type: Journal Article
Authors: Tyson, S. F.;Connell, L. A.;Lennon, S. and Busse, M. E.
Publication date: 2009
Journal: Disability & Rehabilitation 31(18), pp. 1494-1500
OBJECTIVE: The aim of this study was to identify the treatment packages (combinations of interventions) used to treat postural control and mobility problems for patients with stroke. METHOD: A convenience sample of 74 physiotherapists from 34 National Health Service hospitals recorded the interventions used to treat postural control and mobility problems for 251 patients with stroke in 1156 treatment sessions using the Stroke Physiotherapy Intervention Recording Tool (Tyson and Selley, Disabil Rehabil 2004;26:1184 - 1188). Descriptive statistics assessed the frequency with which the interventions were used and geometric coding identified treatment packages. RESULTS: The most frequently used interventions involved facilitation, practice of activities and their components and mobilisations. The least frequently used interventions involved the provision of equipment, teaching carers or professionals and exercise. Two treatment packages were identified; one involving the facilitation (of activities and their components) and the other involving whole activities (facilitation and practice). CONCLUSIONS: Interventions are often combined in two treatment packages to treat postural control and mobility problems after stroke. One involved facilitation (of whole and component activities) and the other involved practice and facilitation of whole activities. Future research in which conventional or standard UK stroke physiotherapy is delivered should focus on these interventions and exclude atypically used interventions.

What do acute stroke physiotherapists do to treat postural control and mobility? An exploration of the content of therapy in the UK Abstract only*
Item Type: Journal Article
Authors: Tyson, Sarah F.;Connell, Louise;Busse, Monica and Lennon, Sheila
Publication Date: Nov 2009
Journal: Clinical Rehabilitation 23(11), pp. 1051-1055
OBJECTIVE: To investigate the content of acute stroke physiotherapy to treat postural control and mobility problems. DESIGN: Stroke physiotherapists recorded the interventions used to treat postural control and mobility during treatment sessions. They recorded five sessions for at least five patients each. Descriptive statistics assessed the frequency with which the interventions were used. SETTING: Hospital-based acute stroke care. SUBJECTS: Thirty-six acute stroke physiotherapists recorded 2374 interventions in 364 treatment sessions for 76 patients. MAIN MEASURES: The Stroke Physiotherapy Intervention Recording Tool. RESULTS: Facilitation techniques were the most frequently used interventions (n = 1258, 53%) with exercise (n = 115, 5%), teaching others how to help the patient (n = 99, 4%) and provision of equipment (n = 63, 3%) the least frequently used. CONCLUSIONS: Acute stroke physiotherapists primarily use therapist-led 'hands-on' interventions to treat postural control

and mobility problems. Interventions to promote activity or practice outside the treatment session are infrequently used.

Promoting the use of outcome measures by an educational programme for physiotherapists in stroke rehabilitation: a pilot randomized controlled trial Abstract only*
Item Type: Journal Article
Authors: Van Peppen, R P S.;Schuurmans, M. J.;Stutterheim, E. C.;Lindeman, E. and Van Meeteren, N L U.
Publication Date: Nov 2009
Journal: Clinical Rehabilitation 23(11), pp. 1005-1017
OBJECTIVE: To determine the influence of tutor expertise on the uptake of a physiotherapists' educational programme intended to promote the use of outcome measures in the management of patients with stroke. DESIGN: Pilot randomized controlled trial. METHODS: Thirty physiotherapists involved in stroke management were randomized into two groups and participated in five tutor-guided educational sessions (the Physiotherapists' Educational Programme on Clinimetrics in Stroke, PEPCiS). Groups differed from each other with respect to tutors: one experienced and one inexperienced in stroke care. Primary outcome was 'actual use' (the frequencies of data of seven recommended outcome measures in the patient records of the participating physiotherapists). RESULTS: The actual use of instruments shifted from a median of 3 to 6 in the expert tutor group and from 3 to 4 in the non-expert tutor group (P = 0.07). Physiotherapists educated by the expert tutor used a broader variety of instruments and appreciated the educational programme, their own knowledge gain and all three scales of tutor style aspects significantly more than their colleagues of the non-expert tutor group (all P<0.05). Univariate analysis on the entire set of data revealed eight factors, including tutors' performance, that were associated with a change score of the use of two or more outcome measures by individual physiotherapists after the educational programme. CONCLUSION: In this pilot trial it was not proven that tutor expertise in stroke care influences the actual use of outcome measures, but it warrants a future study with sufficient power to investigate the influence of the tutor.

Multidisciplinary teams

Knowledge and application of upper limb prediction models and attitude toward prognosis among physiotherapists and occupational therapists in the clinical stroke setting Abstract only*
Item Type: Journal Article
Authors: Kiaer, Camilla;Lundquist, Camilla Biering and Brunner, Iris
Publication date: 2021
Journal: Topics in Stroke Rehabilitation 28(2), pp. 135-141
BACKGROUND: A substantial body of research on prediction models for upper limb (UL) function after stroke has emerged during recent years. Despite considerable evidence supporting the use of prediction models, their implementation into clinical practice has not been examined. OBJECTIVES: To investigate whether physiotherapists (PTs) and occupational therapists (OTs) who evaluate and rehabilitate stroke patients know about and apply prediction models for the recovery of UL function. Furthermore, to examine their attitudes toward prognosis for UL function in clinical practice. METHODS: The authors developed an online survey using REDCap R, specifically aimed to investigate this study's objectives. Physiotherapists and occupational therapists from Danish hospitals with acute stroke or rehabilitation wards were invited to participate. Data were analyzed using STATA 15.1. RESULTS: Of the 380 therapists invited, 58% responded to the survey. Among those, 35% reported that they knew of prediction models for UL function after stroke. More physiotherapists than occupational therapists were familiar with prediction models (p = .03). Of all

respondents, 9% confirmed the use of prediction models for UL function in clinical practice. Most therapists (89%) stated that it was important to know how UL function will develop after stroke. CONCLUSIONS: Results from this study indicate that prediction models for UL function after stroke are not yet a part of daily practice in Danish stroke rehabilitation. At the same time, knowledge of prognosis seems to be relevant for most therapists in their clinical work.

Increasing the uptake of stroke upper limb guideline recommendations with occupational therapists and physiotherapists. A qualitative study using the Theoretical Domains Framework Abstract only*
Item Type: Journal Article
Authors: Jolliffe, Laura;Hoffmann, Tammy and Lannin, Natasha A.
Publication date: 2019
Journal: Australian Occupational Therapy Journal 66(5), pp. 603-616
INTRODUCTION: Despite the availability of stroke clinical practice guidelines and acceptance by therapists that guidelines contain 'best practice' recommendations, compliance remains low. While previous studies have explored barriers associated with implementing rehabilitation guidelines in general, it remains unknown if these barriers are applicable to upper limb rehabilitation specifically. To plan effective implementation activities, key motivators and barriers to use should be identified. METHOD: To investigate occupational and physiotherapists' perceptions of motivators and barriers to using upper limb clinical practice guideline recommendations in stroke rehabilitation, a mixed-method study was conducted. Using an online survey and semi-structured focus groups, physiotherapists and occupational therapists working in one of six stroke rehabilitation teams in Melbourne, Australia were invited to participate. Survey data were analysed using descriptive statistics, and thematic coding of free-text responses. Focus groups were transcribed, thematically coded and mapped against the Theoretical Domains Framework. RESULTS: Forty-six participants completed the survey and 29 participated in the focus groups. Key motivators to use guideline recommendations included past experience with specific interventions, availability of required resources and an enabling workplace culture. Barriers included: limited training/skills in specific interventions, the complexity of intervention protocols, and beliefs about intervention effectiveness. Lack of accountability was highlighted and therapists perceived they are rarely checked for quality assurance purposes regarding guideline adherence. CONCLUSION: Therapists identified that both motivators and barriers to implementing best-practice upper limb rehabilitation occur largely at the levels of the individual and the environment. As such, intervention efforts should focus at both these levels to facilitate change. Copyright © 2019 Occupational Therapy Australia.

Conceptualising post-stroke fatigue: a cross-sectional survey of UK-based physiotherapists and occupational therapists
Item Type: Journal Article
Authors: Thomas, Karen;Hjalmarsson, Clarissa;Mullis, Ricky and Mant, Jonathan
Publication Date: 12 10 2019
Journal: BMJ Open 9(12), pp. e033066
With survival after stroke improving, more people are discharged into the community with multiple and persistent deficits. Fatigue is a common unmet need for stroke survivors, but there are no evidence-based guidelines for its assessment and management. This study explored how UK-based therapists conceptualise post-stroke fatigue (PSF) in current practice. OBJECTIVE: To describe current understanding of PSF among physiotherapists (PT) and occupational therapists

(OT). DESIGN: A cross-sectional online survey using Qualtrics software (a survey creation and analysis programme) was sent to therapists working with stroke survivors in 2019. Responses to the open ended question, 'How would you describe PSF if approached by another healthcare professional?' were analysed thematically by two independent researchers. PARTICIPANTS: 137 survey respondents (71 PT and 66 OT) from a range of clinical settings (25 acute care, 24 sub-acute rehabilitation care, 3 primary care and 85 community care) with 7 months-36 years of experience working with stroke survivors completed the survey. RESULTS: Respondents stated that PSF should be regarded as an important medical condition because it is common and can be associated with severe symptoms. Symptoms were perceived to be highly variable and the syndrome was difficult to define objectively. It was felt to have both physical and cognitive components. A variety of different opinions were expressed with regard to causation, conceptualisation and best management. CONCLUSION: Therapists working with stroke survivors conceptualise and manage PSF in different ways. Clinical practice is hampered by a lack of a widely adopted definition, and a small evidence base. Research into causes and management of PSF is a priority. Copyright © Author(s) (or their employer(s)) 2019. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

Boosting the traditional physiotherapist approach for stroke spasticity using a sensorized ankle foot orthosis: a pilot study
Abstract only*
Author(s): Tamburella et al.
Source: Topics in Stroke Rehabilitation 6
Publication date: 2017
Background: Spasticity is a motor disorder that is commonly treated manually by a physical therapist (PhT) stretching the muscles. Recent data on learning have demonstrated the importance of human-to-human interaction in improving rehabilitation: cooperative motor behavior engages specific areas of the motor system compared with execution of a task alone. Objectives: We hypothesize that PhT-guided therapy that involves active collaboration with the patient (Pt) through shared biomechanical visual biofeedback (vBFB) positively impacts learning and performance by the Pt during ankle spasticity treatment. A sensorized ankle foot orthosis (AFO) was developed to provide online quantitative data of joint range of motion (ROM), angular velocity, and electromyographic activity to the PhT and Pt during the treatment of ankle spasticity. Methods: Randomized controlled clinical trial. Ten subacute stroke inpatients, randomized into experimental (EXP) and control (CTRL) groups, underwent six weeks of daily treatment. The EXP group was treated with an active AFO, and the CTRL group was given an inactive AFO. Spasticity, ankle ROM, ankle active and passive joint speed, and coactivation index (CI) were assessed at enrollment and after 15–30 sessions. Results: Spasticity and CI ($p < 0.005$) decreased significantly after training only in the EXP group, in association with a significant rise in active joint speed and active ROM ($p < 0.05$). Improvements in spasticity ($p < 0.05$), active joint speed ($p < 0.001$), and CI ($p < 0.001$) after treatment differed between the EXP and CTRL groups. Conclusions: PhT–Pt sharing of exercise information, provided by joint sensorization and vBFB, improved the efficacy of the conventional approach for treating ankle spasticity in subacute stroke Pts.

Reported use of technology in stroke rehabilitation by physical and occupational therapists Abstract only*
Item Type: Journal Article
Authors: Langan, J.;Subryan, H.;Nwogu, I. and Cavuoto, L.
Publication date: 2017
Journal: Disability and Rehabilitation: Assistive Technology , pp. 1-7

Purpose: With the patient care experience being a healthcare priority, it is concerning that patients with stroke reported boredom and a desire for greater fostering of autonomy, when evaluating their rehabilitation experience. Technology has the potential to reduce these shortcomings by engaging patients through entertainment and objective feedback. Providing objective feedback has resulted in improved outcomes and may assist the patient in learning how to self-manage rehabilitation. Our goal was to examine the extent to which physical and occupational therapists use technology in clinical stroke rehabilitation home exercise programs. Material(s) and Method(s): Surveys were sent via mail, email and online postings to over 500 therapists, 107 responded. Result(s): Conventional equipment such as stopwatches are more frequently used compared to newer technology like Wii and Kinect games. Still, less than 25% of therapists' report using a stopwatch five or more times per week. Notably, feedback to patients is based upon objective data less than 50% of the time by most therapists. At the end of clinical rehabilitation, patients typically receive a written home exercise program and non-technological equipment, like theraband and/or theraputty to continue rehabilitation efforts independently. Conclusion(s): The use of technology is not pervasive in the continuum of stroke rehabilitation.Implications for RehabilitationThe patient care experience is a priority in healthcare, so when patients report feeling bored and desiring greater fostering of autonomy in stroke rehabilitation, it is troubling.Research examining the use of technology has shown positive results for improving motor performance and engaging patients through entertainment and use of objective feedback.Physical and occupational therapists do not widely use technology in stroke rehabilitation.Therapists should consider using technology in stroke rehabilitation to better meet the needs of the patient. Copyright © 2017 Informa UK Limited, trading as Taylor & Francis Group

Effectiveness of allied health therapy in the symptomatic management of progressive supranuclear palsy: a systematic review Abstract only*
Author(s): Erica et al.
Source: JBI Evidence Synthesis 14(6) pp. 148-195
Publication date: June 2016
Background: Progressive supranuclear palsy (PSP) is an adult onset neurodegenerative condition associated with mobility, balance, speech, swallowing, vision and cognitive changes. The condition is diagnosed using the National Institute for Neurological Disorders and Stroke (NINDS) and the Society of Progressive Supranuclear Palsy (SPSP) criteria. Therapeutic interventions for PSP are important, and a healthcare team should include a physiotherapist, occupational therapist and speech therapist. Mobility, speech and swallowing problems are commonly experienced, and aspiration pneumonia is the leading cause of death. A preliminary search of the literature has indicated that beyond small case series, there is very little evidence to guide specific allied health therapies in PSP. Many strategies for optimizing independence and function for PSP predominately rely on data extrapolated from the study of Parkinson's disease. Objectives: The objective of this review was to examine the effectiveness of physical, occupational and speech therapy interventions in the symptomatic management of PSP. Inclusion criteria Types of participants: This review included participants with PSP as per the NINDS and the SPSP criteria, aged over 40 years of age from all community and clinical settings. Types of interventions: This review included studies evaluating any allied health therapy that addressed mobility, vision, swallowing, communication or cognitive/neuropsychiatric difficulties experienced by patients with PSP. Studies examining interventions within the current scope of practice, and emerging interventions (non-invasive brain stimulation therapy) were eligible for inclusion. Types of comparator: The effectiveness of interventions of interest was

compared with usual care and/or baseline measurements. Outcomes: Outcomes of interest included the degree of change, or no change, in the symptoms experienced by patients with PSP relevant to allied health. These included difficulties with mobility, vision, swallowing, communication and cognition. Types of studies: All types of quantitative study designs published in English from the time of development of the NINDS and the SPSP criteria in 1996–2014 were considered for inclusion. Search strategy: A broad range of synonyms for PSP and a three-step search strategy was utilized to identify possible published and unpublished studies from 11 different databases. An initial limited search via MEDLINE (PubMed), CINAHL, Health Informit, PsycINFO, PEDRO, OTSeeker and SpeechBite was undertaken followed by analysis of the text words contained in the title and abstract, and of the index terms used to describe the article. A second search using all identified keywords and index terms was then undertaken across all included databases. Third, hand-searching was conducted and the reference list of all identified reports and articles was searched for additional studies. Methodological quality: Critical appraisal was conducted by two independent reviewers using standardized instruments. Data extraction: Quantitative data were extracted from articles included in the review using standardized data extraction tools. Data synthesis: As the quantitative articles examined different interventions, pooling of data was not appropriate. Instead, the findings were presented in narrative summary and tabular form. Results: Following methodological appraisal, six studies were included in the review. Aside from one small quasi-randomized control study, most studies were small case series and one was a case report. Five of the six studies examined the effectiveness of a range of different physiotherapy rehabilitation programs targeting gait, balance and physical capability, with one study also targeting gaze control. The sixth study examined non-invasive brain stimulation in improving gait and midline symptoms in PSP. No studies examined the effectiveness of occupational therapy or speech therapy interventions in PSP. Conclusions: Research into the effectiveness of allied health therapeutic interventions for PSP symptoms is in its infancy. This review found preliminary evidence to support the use of various physiotherapy rehabilitation programs to improve balance, gait and gaze control in people affected by PSP. Further research is urgently required to identify effective interventions to manage mobility, vision, swallowing, communication and cognitive/neuropsychiatric symptoms associated with this devastating condition.

Research-based evidence in stroke rehabilitation: an investigation of its implementation by physiotherapists and occupational therapists Abstract only*
Item Type: Journal Article
Authors: Kristensen, Hanne Kaae;Ytterberg, Charlotte;Jones, Dorrie Lee and Lund, Hans
Publication date: 2016
Journal: Disability & Rehabilitation 38(26), pp. 2564-2574
PURPOSE: Stroke rehabilitation is a multidimensional process that is designed to facilitate restoration of and/or adaptation to loss of functioning. The use of research-based evidence in informed decision-making is insufficient. Occupational therapy and physiotherapy constitute important contributions to rehabilitation. The study aim was to investigate characteristics of the implementation of research-based evidence in stroke rehabilitation by occupational therapists and physiotherapists, using the International Classification of Functioning, Disability and Health as a conceptual framework. METHOD: A prospective cohort study, including all service levels within stroke rehabilitation. Consecutive patients with stroke admitted to a university hospital between May and December 2012 were enrolled by 13 therapists. Documentation of daily practice was collected from medical records. Analysis compared the

therapists' documentation with the national clinical guidelines for physiotherapy and occupational therapy in the rehabilitation of adults with brain injury. RESULTS: The study included 131 patients. The therapists' praxis was seen to be in agreement with the majority of the national clinical guidelines. However, joint goal-setting and evaluation using standardized measures were seldom documented. CONCLUSIONS: Although the therapists recognize evidence-based practice as a framework for achieving quality in rehabilitation, findings suggest that they do not employ research-based evidence to the fullest extent. Implications for Rehabilitation In order to individualize the rehabilitation offered, more attention and focus on involving and giving words to patients' expectations, perceptions, experiences, and perspectives is needed. With the intention of enabling meaningful participation the health professionals need to pay more attention to the importance of environmental factors. Both guidelines and clinical practice should consider all components of the International Classification of Functioning, Disability and Health when formulating, and implementing, recommendations in rehabilitation praxis in order to aim for rehabilitation that is based both on evidence and a holistic approach.

What influences the implementation of the New Zealand stroke guidelines for physiotherapists and occupational therapists?
Abstract only*
Item Type: Journal Article
Authors: Mudge, S.;Hart, A.;Murugan, S. and Kersten, P.
Publication date: 2016
Journal: Disability and Rehabilitation , pp. 1-8
Purpose To explore perceived barriers and facilitators to the use of the New Zealand (NZ) stroke guidelines by occupational therapists and physiotherapists. Methods A qualitative descriptive methodology was used. Eligible physiotherapists and occupational therapists (NZ registered, working in one of two hospitals, treating at least 10 patients with stroke in the previous year) were invited to participate in semi-structured interviews to elicit their perceptions of the utility and feasibility of the NZ stroke guidelines and identify barriers and facilitators to their implementation. All interviews were audio-recorded and transcribed. Conventional content analysis with constant comparative methods was used for coding and analysis. Results The main themes influencing guideline implementation were resources and characteristics of the guidelines, the organization, the patient and family and the therapist. Insufficient resources were a major barrier that crossed many of the themes. Participants suggested a range of strategies relating to the organization to improve therapists' alignment to the guidelines. Conclusion Alignment to the guidelines in NZ is influenced both positively and negatively by a range of interacting factors, consistent with other studies. Alignment might be improved by the introduction of some relatively simple strategies, such as ring-fencing time for access to resources and training in the use of the guidelines. Many of the barriers and related interventions are likely to be more complex.Implications for rehabilitationAlignment with stroke guidelines has been shown to improve patient outcomes.Therapist alignment with the implementation of the New Zealand stroke guidelines is influenced by guideline characteristics, organizational characteristics, resources, patient and family characteristics and therapist characteristics.Frequently encountered barriers related to limited resources, particularly time.Ring-fencing regular time for access to resources and training in the use of guidelines are examples of simple strategies that may reduce barriers.
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Stroke rehabilitation in Europe: what do physiotherapists and occupational therapists actually do?
Item Type: Journal Article

Authors: De Wit, Liesbet;Putman, Koen;Lincoln, Nadina;Baert, Ilse;Berman, Peter;Beyens, Hilde;Bogaerts, Kris;Brinkmann, Nadine;Connell, Louise;Dejaeger, Eddy;De Weerdt, Willy;Jenni, Walter;Lesaffre, Emmanuel;Leys, Mark;Louckx, Fred;Schuback, Birgit;Schupp, Wilfried;Smith, Bozena and Feys, Hilde
Publication Date: Jun 2006
Journal: Stroke 37(6), pp. 1483-1489
BACKGROUND AND PURPOSE: Physiotherapy (PT) and occupational therapy (OT) are key components of stroke rehabilitation. Little is known about their content. This study aimed to define and compare the content of PT and OT for stroke patients between 4 European rehabilitation centers. METHODS: In each center, 15 individual PT and 15 OT sessions of patients fitting predetermined criteria were videotaped. The content was recorded using a list comprising 12 therapeutic categories. A generalized estimating equation model was fitted to the relative frequency of each category resulting in odds ratios. RESULTS: Comparison of PT and OT between centers revealed significant differences for only 2 of the 12 categories: ambulatory exercises and selective movements. Comparison of the 2 therapeutic disciplines on the pooled data of the 4 centers revealed that ambulatory exercises, transfers, exercises, and balance in standing and lying occurred significantly more often in PT sessions. Activities of daily living, domestic activities, leisure activities, and sensory, perceptual training, and cognition occurred significantly more often in OT sessions. CONCLUSIONS: This study revealed that the content of each therapeutic discipline was consistent between the 4 centers. PT and OT proved to be distinct professions with clear demarcation of roles.

Use of time by physiotherapists and occupational therapists in a stroke rehabilitation unit: A comparison between four European rehabilitation centres Abstract only*
Item Type: Journal Article

Authors: Putman, K.;de Wit, L.;Schupp, W.;Ilse, B.;Berman, P.;Connell, L.;Dejaeger, E.;de Meyer, A. M.;de Weerdt, W.;Feys, H.;Walter, J.;Lincoln, N.;Louckx, F.;Anneleen, M.;Birgit, S.;Smith, B. and Leys, M.
Publication date: 2006
Journal: Disability and Rehabilitation 28(22), pp. 1417-1424
Purpose. The aim of this study was to compare the time allocated to therapeutic activities (TA) and non-therapeutic activities (NTA) of physiotherapists (PT) and occupational therapists (OT) in stroke rehabilitation units in four European countries. Method. Therapists documented their activities in 15-min periods for two weeks. They recorded: activity, number of patients, number of stroke patients, involvement of other people, location and frequency of each activity. Kruskal-Wallis tests and negative binomial regression models were used to compare activities between professional groups and between units. Results. The average proportion of TA per day ranged between 32.9% and 66.1% and was higher for PT than for OT in each unit. For OT, significant differences emerged between the units in the proportion of time allocated to TA compared to NTA with British OTs spending significantly less time in TA. In the Belgian unit, three times less time was spent on patient-related co-ordination activities (e.g., administration, ward rounds) compared to the British and Swiss units. Conclusions. Time allocation differed between PT and OT and between units, affecting the time available for TA. Further investigation is necessary to study the effect of work organization in stroke rehabilitation units on the efficiency of rehabilitation regimes.

Competency Frameworks

Stroke Competency Toolkit: Specialising competencies for occupational therapists working in stroke care n.d., NHS Scotland
The SCoT Specialising Competencies for Occupational Therapists are a progression from core level of the Stroke Competency Toolkit. While following the model of the Core Competency Framework (2005), the specialising competencies have been written to address specific knowledge & skills in stroke care for the Occupational Therapist. The competencies are designed for Occupational Therapists who have demonstrated core competency in stroke care, who work independently (or are working towards independent practice) and wish to progress in their clinical professional development (CPD) All of the specialising competencies are aligned to dimensions within the NHS Knowledge and Skills Framework (KSF) to assist the user in achieving KSF indicators in their personal development plan. Once the toolkit is completed it can also be submitted for evidence for Health Care Professions Council (HCPC) portfolio requirements.

Allied Health Professionals' competency framework for progressive neurological conditions September 2018, MNDS, IMS, BDA and Royal College of Occupational Therapists
This competency framework was developed in consultation with allied health professionals. It aims to recognise the activities and responsibilities of allied health professionals working with patients with progressive neurological conditions. It has additional sections which focus specifically on Parkinson's disease, multiple sclerosis and motor neurone disease. Competence may be defined as the ability to do something safely, well or effectively. A competency framework therefore is a collection of the knowledge, skills and personal traits necessary to be effective in a role: a collection of competencies central to effective performance1 . The framework provides a standard list of the knowledge and skills required within each level of practice. It sets out a clear career progression pathway. It may also be used to inform effective commissioning of specialist Allied Health Professional (AHP) services.

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