Rehabilitation

Current Awareness Bulletin

March 2013

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Jason Ovens
Head of Library & Knowledge Services

Healthcare you can Trust
Title: Feasibility of assessing the needs of stroke patients after six months using the GM-SAT.

**Citation:** Clinical Rehabilitation, 01 March 2013, vol./is. 27/3(264-271), 02692155

**Author(s):** Rothwell, Katy, Boaden, Ruth, Bamford, David, Tyrrell, Pippa J

**Full Text:** Available in fulltext from *Clinical Rehabilitation* at ProQuest

Title: Experiences of poststroke fatigue: qualitative meta-synthesis.

**Citation:** Journal of Advanced Nursing, 01 March 2013, vol./is. 69/3(514-525), 03092402

**Author(s):** Eilertsen, Grethe, Ormstad, Heidi, Kirkevold, Marit

**Full Text:** Available in fulltext from *Journal of Advanced Nursing* at Wiley

Title: Does Physiotherapy Improve the Functional Ability of Patients with Parkinson's Disease?

**Citation:** American Journal of Nursing, 01 February 2013, vol./is. 113/2(65-65), 0002936X

**Author(s):** Jayasekar, Rasika

**Source:** CINAHL

**Abstract:** Purpose: Motivated by a prior successful randomized controlled trial showing that functional electrical stimulation (FES) therapy can restore voluntary arm and hand function in people with severe stroke, this study was designed to examine neuromuscular changes in the upper limb following intensive FES therapy, consisting of task-specific upper-limb movements with a combination of preprogrammed FES and manual assisted motion. Methods: The patient was a 22-year-old woman who had suffered a haemorrhagic stroke 2 years earlier. FES therapy was administered for 1 hour twice daily for 12 weeks, for a total of 108 treatment sessions. Results: While maximal voluntary contraction level of the upper-limb muscles did not show significant improvement, the ability to initiate and stop the muscle contraction voluntarily was regained in several upper-limb muscles (approx. 5%-15% of the maximum voluntary contraction of the same muscle in the less-affected arm). A reduction in arm spasticity was also observed, as indicated by the reduction of H-reflex in the wrist flexor muscle (82.1% to 45.0% in Hmax/Mmax) and decreased Modified Ashworth Scale scores (from 3 to 2 for the hand and 4 to 3 for the arm). Coordination between shoulder and elbow joints during the circle-drawing test improved considerably over the course of FES therapy: the patient was unable to draw a circle at all at baseline but was able to do so proficiently at discharge. Conclusion: Improvements in upper-limb function observed in people with severe stroke following intensive FES therapy can be attributed to (a) regained ability to voluntarily contract muscles of the affected arm, (b) reduced spasticity and improved muscle tone in the same muscles, and (c) increased range of motion of all joints.

Title: Effect of Intensive Functional Electrical Stimulation Therapy on Upper-Limb Motor Recovery after Stroke: Case Study of a Patient with Chronic Stroke.

**Citation:** Physiotherapy Canada, 01 January 2013, vol./is. 65/1(20-28), 03000508

**Author(s):** Kawashima, Noritaka, Popovic, Milos R., Zivanovic, Vera

**Abstract:** Purpose: Motivated by a prior successful randomized controlled trial showing that functional electrical stimulation (FES) therapy can restore voluntary arm and hand function in people with severe stroke, this study was designed to examine neuromuscular changes in the upper limb following intensive FES therapy, consisting of task-specific upper-limb movements with a combination of preprogrammed FES and manual assisted motion. Methods: The patient was a 22-year-old woman who had suffered a haemorrhagic stroke 2 years earlier. FES therapy was administered for 1 hour twice daily for 12 weeks, for a total of 108 treatment sessions. Results: While maximal voluntary contraction level of the upper-limb muscles did not show significant improvement, the ability to initiate and stop the muscle contraction voluntarily was regained in several upper-limb muscles (approx. 5%-15% of the maximum voluntary contraction of the same muscle in the less-affected arm). A reduction in arm spasticity was also observed, as indicated by the reduction of H-reflex in the wrist flexor muscle (82.1% to 45.0% in Hmax/Mmax) and decreased Modified Ashworth Scale scores (from 3 to 2 for the hand and 4 to 3 for the arm). Coordination between shoulder and elbow joints during the circle-drawing test improved considerably over the course of FES therapy: the patient was unable to draw a circle at all at baseline but was able to do so proficiently at discharge. Conclusion: Improvements in upper-limb function observed in people with severe stroke following intensive FES therapy can be attributed to (a) regained ability to voluntarily contract muscles of the affected arm, (b) reduced spasticity and improved muscle tone in the same muscles, and (c) increased range of motion of all joints.

Title: Factors affecting anxiety in multiple sclerosis.

**Citation:** Disability and Rehabilitation: An International, Multidisciplinary Journal, December 2012, vol./is. 34/24(2047-2052), 0963-8288;1464-5165 (Dec 2012)

**Author(s):** Garfield, A. C, Lincoln, N. B

**Abstract:** Purpose: Anxiety is common in people with multiple sclerosis (MS). Little is known about the factors related to anxiety. The aim was to identify factors associated with the presence of anxiety. Methods: This was a cohort study. Participants were sent questionnaires to measure factors potentially related to anxiety. The factors included disability, depression, self-efficacy, locus of control, general stress, psychological distress and factors specific to MS. Participants with significant levels of anxiety, as measured by the Hospital Anxiety and Depression Scale (HADS), were compared to those who were not anxious. Results: Of the 157 participants who took part, 89 (57%) were clinically anxious. Participants who were anxious had a lower level of self-efficacy (p < 0.001), higher level of disability...
(p < 0.001), higher level of depression (p < 0.001) and higher level of stress (p < 0.001). The regression analysis showed that experiencing depression (β = 5.05, OR = 1.32, p < 0.05) was the only factor that significantly predicted whether someone was anxious or not, accounting for 46% of the variance. Conclusion: There was a high prevalence of anxiety in people with MS. Depression, low levels of self-efficacy, disability and stress increased the likelihood of experiencing anxiety. (PsycINFO Database Record (c) 2013 APA, all rights reserved) (journal abstract)

Title: A systematic review of research undertaken in vocational rehabilitation for people with multiple sclerosis.

Citation: Disability and Rehabilitation: An International, Multidisciplinary Journal, December 2012, vol./is. 34/24(2031-2038), 0963-8288:1464-5165 (Dec 2012)
Author(s): Sweetland, Joanna, Howse, Eimi, Playford, E. Diane

Abstract: Objective: The National Service Framework (NSF) for Long-Term Neurological Conditions (LTNC) highlights the need for vocational rehabilitation (VR) services in quality requirement 6. As a part of a review of this requirement, an extensive literature review was undertaken to identify, review and report on all relevant research undertaken in the area of employment for people with multiple sclerosis (MS). Data sources: A systematic review of the English language literature for studies under the headings: multiple sclerosis and employment, unemployment, vocational rehabilitation, occupational health, job and work adjustment. The following databases were systematically searched AMED (1985 to Feb 2010), CINAHL (1982 to Feb 2010), PsycINFO (1806 to Feb 2010), EMBASE (1974 to Feb 2010), Medline (1950 to Feb 2010) and PubMed (1950 to Feb 2010). Data extraction and study selection: Four hundred and sixty-two papers were identified. This number was reduced removing the duplicates, non-English, not reporting research, not primarily about MS and not primarily about work which left 89 papers reviewed. Conclusion: The body of evidence reviewed gives clear indicators as to what the barriers to working with MS are and what is required for a VR service to meet the often complex needs of people with MS. Further research is needed to identify the efficacy of different models of VR, and their cost-effectiveness, and particularly for means of identifying and measuring the effectiveness of interventions that support work retention. (PsycINFO Database Record (c) 2013 APA, all rights reserved) (journal abstract)

Title: How do comprehensive and acute stroke units differ? A critical review... ...including commentary by Chan DKYand Guidetti D.

Citation: International Journal of Therapy & Rehabilitation, 01 January 2013, vol./is. 20/1(41- 53), 17411645
Author(s): West, Tanya, Langhorne, Peter, Bernhardt, Julie, Chan, Daniel Kam Yin, Guidetti, Donata

Full Text: Available in fulltext from International Journal of Therapy and Rehabilitation at EBSCOhost

Title: Effects of different focus of attention rehabilitative training on gait performance in Multiple Sclerosis patients.

Citation: Journal of Bodywork & Movement Therapies, 01 January 2013, vol./is. 17/1(28-34), 13608592
Author(s): Shafizadeh, Mohsen, Platt, Geoffrey K., Mohammadi, Baharak

Title: Physical rehabilitation interventions in nonambulatory people with multiple sclerosis: a systematic review.

Citation: International Journal of Rehabilitation Research, 01 December 2012, vol./is. 35/4(281-291), 03425282
Author(s): Toomey, Elaine, Coote, Susan B.

Abstract: There is an expanding body of research on exercise intervention for multidisciplinary rehabilitation of people with multiple sclerosis (PwMS). Most of this research focuses on people with mild/moderate MS who are ambulatory. As the costs of care increases with increasing disability, it is important to evaluate the evidence for interventions in nonambulatory PwMS. The aim of this study was to evaluate the evidence regarding physical rehabilitation interventions in nonambulatory PwMS. The databases AMED, CINAHL, MEDLINE, EMBASE and PSYCHARTICLES were searched up to 31 May 2011. Reference lists, Google Scholar and PEDro were also searched. Trials of physical rehabilitation interventions in nonambulatory PwMS that analysed nonambulatory results separately were included. Pharmacological, surgical, medical and assistive device interventions were excluded. Risk of bias was assessed and the GRADE approach was used to classify the quality of evidence. Sixteen low-grade studies, only three of which were randomized controlled trials (RCTs), were found. There are trends of improvement following some interventions
such as cooling suits, respiratory training and multidisciplinary rehabilitation, but there is no high-grade evidence in terms of the benefits of interventions in this population. The effectiveness of physical rehabilitation interventions in nonambulatory PwMS remains unclear. Although trends in the results suggest positive benefits, conclusions cannot be drawn about the effectiveness of interventions in this population because of the small number and poor quality of studies. As approximately 25% of PwMS are nonambulatory and considerable costs are associated with their care, it is imperative that efforts be to increase the quality of evidence for nonambulatory PwMS.

Title: Accessing inpatient rehabilitation after acute severe stroke: age, mobility, prestroke function and hospital unit are associated with discharge to inpatient rehabilitation.

Citation: International Journal of Rehabilitation Research, 01 December 2012, vol./is. 35/4(323-329), 03425282
Author(s): Hakkenes, Sharon, Hill, Keith D., Brock, Kim, Bernhardt, Julie, Churilov, Leonid

Abstract: The objective of this study was to identify the variables associated with discharge to inpatient rehabilitation following acute severe stroke and to determine whether hospital unit contributed to access. Five acute hospitals in Victoria, Australia participated in this study. Patients were eligible for inclusion if they had suffered an acute severe stroke (Mobility Scale for Acute Stroke<=15). Physiotherapists assessed patients on day 3 poststroke, collecting demographic information and information relating to their prestroke status, social status and current status. Stepwise logistic-regression modelling was used to examine the association between age, type of stroke, prestroke living situation, comorbidities, availability of carer on discharge, current mobility, bladder continence, bowel continence, cognition and communication and the dependent variable, discharge destination (rehabilitation/other). The resulting model was analysed using hierarchical logistic regression with hospital unit as the clustering variable. Of the 108 patients fulfilling the inclusion criteria, 70 (64.8%) were discharged to rehabilitation. The variables independently associated with discharge to rehabilitation were younger age [odds ratio (OR)=0.89, 95% confidence interval (CI)=0.83-0.95, P=0.001], independent premorbid functional status (OR=14.92, 95% CI=2.43-91.60, P=0.004) and higher level of current mobility (OR=1.31, 95% CI=1.02-1.66, P<0.03). The multilevel model estimated that 12% of the total variability in discharge destination was explained by differences between the hospital units ([rho]=0.12, 95% CI=0.02-0.55, P=0.048). The results indicate that the variables associated with discharge to rehabilitation following severe stroke are younger age, independent prestroke functional status and higher level of current mobility. In addition, organizational factors play a role in selection for rehabilitation, suggesting inequity in access for this patient group.

Title: The impact of occupational therapy in Parkinson’s disease: a randomized controlled feasibility study.

Citation: Clinical Rehabilitation, 01 February 2013, vol./is. 27/2(99-112), 02692155
Author(s): Sturkenboom, Ingrid H, Graff, Maud J, Borm, George F, Veenhuizen, Yvonne, Bloem, Bastiaan R, Munneke, Marten, Nijhuis-van der Sanden, Maria W

Full Text: Available in fulltext from Clinical Rehabilitation at ProQuest

Title: Trial participants’ experiences of early enhanced speech and language therapy after stroke compared with employed visitor support: a qualitative study nested within a randomized controlled trial.

Citation: Clinical Rehabilitation, 01 February 2013, vol./is. 27/2(174-182), 02692155
Author(s): Young, Alys, Gomersall, Timothy, Bowen, Audrey

Full Text: Available in fulltext from Clinical Rehabilitation at ProQuest

Title: How is nursing care for stroke patients organised? Nurses’ views on best practices.

Citation: Journal of Nursing Management, 01 January 2013, vol./is. 21/1(141-151), 09660429
Author(s): Struwe, Jytte H., Baernholdt, Marianne, Noerholm, Vibeke, Lind, Jette

Title: A feasibility study to investigate the clinical application of functional electrical stimulation (FES), for dropped foot, during the sub-acute phase of stroke -- A randomized controlled trial.

Citation: Physiotherapy Theory & Practice, 01 January 2013, vol./is. 29/1(31-40), 09593985
Author(s): Salisbury, Lisa, Shiels, Jane, Todd, Iain, Dennis, Martin
Title: Stroke-specific executive function assessment: A literature review of performance-based tools.

Citation: Australian Occupational Therapy Journal, 01 February 2013, vol./is. 60/1(3-19), 00450766
Author(s): Poulin, Valérie, Korner-Bitensky, Nicol, Dawson, Deirdre R.

Abstract: Background/aim Executive function should be an integral component of post-stroke assessment. However, a Canada-wide survey of occupational therapists on stroke rehabilitation practices found a rare use of executive function assessments. Performance-based executive function assessments that closely reflect real-world activities are useful in identifying individuals who will face difficulties when returning to home and community activities. To increase clinicians’ awareness of these tools, a literature review was conducted to identify performance-based measures of executive function and their stroke-specific psychometric properties. Methods The review identified 17 performance-based tools and 41 studies that reported their psychometric properties specific to stroke. Each tool was critically appraised according to the executive function components assessed, the level of functioning assessed (i.e. impairment, activity or participation), the environment within which the assessment is conducted and the tool’s psychometric properties and clinical utility. Standard criteria were used to evaluate the tools’ psychometric properties. The findings were compiled in a Stroke-Specific Executive Function Toolkit. Results The assessments that demonstrated the strongest evidence of reliability and validity were the Executive Function Performance Test, the Multiple Errands Test and the Assessment of Motor and Process Skills. Only the Assessment of Motor and Process Skills has been adequately evaluated for its ability to detect change. In terms of clinical utility, the Kettle Test has the shortest administration time (i.e. less than 20 minutes) and requires limited equipment. Conclusions and significance of the study The Stroke-Specific Executive Function Toolkit provides clinicians with useful information that should facilitate identification of appropriate executive function tools for use across the continuum of stroke care.

Title: Sexuality after traumatic brain injury: A critical review.

Citation: NeuroRehabilitation, 01 January 2013, vol./is. 32/1(69-85), 10538135
Author(s): Moreno, Jhon Alexander, Arango Lasprilla, Juan Carlos, Gan, Caron, McKerral, Michelle

Abstract: Brain injury can directly and indirectly affect important aspects related to sexuality and sexual function. In this critical review of the literature, traumatic brain injury (TBI) and sexuality are examined. A general review of the concept of sexuality and the neurological correlates of sexual function are proposed as a framework to understand the cognitive, behavioral and physical effects of TBI on sexuality and sexual function. Studies are then classified according to the participants enrolled and findings are presented from the professional’s, the survivor’s, the patient/partner’s, and the non-injured spouse’s perspectives. Results are discussed taking into account methodological limitations and knowledge gaps. Next, implications for sexual rehabilitation for individuals with TBI are discussed. Finally, suggestions for future research and their pertinence for improving rehabilitation outcomes are considered.

Title: Community-based group exercise for persons with Parkinson disease: A randomized controlled trial.

Citation: NeuroRehabilitation, 01 January 2013, vol./is. 32/1(117-124), 10538135
Author(s): Combs, Stephanie A., Diehl, M. Dyer, Chrzastowski, Casey, Didrick, Nora, Mcoin, Brittany, Mox, Nicholas, Staples, William H., Wayman, Jessica

Abstract: The purpose of this study was to compare group boxing training to traditional group exercise on function and quality of life in persons with Parkinson disease (PD). A convenience sample of adults with PD (n = 31) were randomly assigned to boxing training or traditional exercise for 44-36 sessions, each lasting 90 minutes, over 12 weeks. Boxing training included: stretching, boxing (e.g. lateral foot work, punching bags), resistance exercises, and aerobic training. Traditional exercise included: stretching, resistance exercises, aerobic training, and balance activities. Participants were tested before and after completion of training on balance, balance confidence, mobility, gait velocity, gait endurance, and quality of life. The traditional exercise group demonstrated significantly greater gains in balance confidence than the boxing group (p < 0.025). Only the boxing group demonstrated significant improvements in gait velocity and endurance over time with a medium between-group effect size for the gait endurance (d = 0.65). Both groups demonstrated significant improvements with the balance, mobility, and quality of life with large within-group effect sizes (d ≥ 0.80). While groups significantly differed in balance confidence after training, both groups demonstrated improvements in most outcome measures. Supporting options for long-term community-based group exercise for persons with PD will be an important future consideration for rehabilitation professionals.

Title: Mirror therapy for improving motor function after stroke.

Citation: Stroke (00392499), 01 January 2013, vol./is. 44/1(0-), 00392499
Author(s): Thieme H, Mehrholz J, Pohl M, Behrens J, Dohle C
Abstract: OBJECTIVES: This systematic review summarizes the effectiveness of mirror therapy for improving motor function, activities of daily living, pain, and visuospatial neglect in patients after stroke. METHODS: We searched the Cochrane Stroke Group's Trials Register (June 2011), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2011, Issue 2), MEDLINE (1950 to June 2011), EMBASE (1980 to June 2011), CINAHL (1982 to June 2011), AMED (1985 to June 2011), PsycINFO (1806 to June 2011), and PEDro (June 2011). We also handsearched relevant conference proceedings, trials, and research registers; checked reference lists; and contacted trialists, researchers, and experts in our field of study. We included randomized controlled trials and randomized crossover trials comparing mirror therapy with any control intervention for patients after stroke. Two review authors independently selected trials based on the inclusion criteria, documented the methodological quality of studies, and extracted data. The primary outcome was motor function. We analyzed the results as standardized mean differences (SMDs) for continuous variables. RESULTS: We included 14 studies with a total of 567 participants, which compared mirror therapy with other interventions. When compared with all other interventions, mirror therapy was found to have a significant effect on motor function (postintervention data: SMD 0.61; 95% CI 0.22 to 1.0; P=0.002; change scores: SMD 1.04; 95% CI 0.57 to 1.51; P<0.0001) (Figure). However, effects on motor function are influenced by the type of control intervention. Additionally, mirror therapy was found to improve activities of daily living (SMD 0.33; 95% CI 0.05 to 0.60; P=0.02). We found a significant positive effect on pain (SMD -1.10; 95% CI -2.10 to -0.09; P=0.03), which is influenced by patient population. We found limited evidence for improving visuospatial neglect (SMD 1.22; 95% CI 0.24 to 2.19; P=0.01). The effects on motor function were stable at follow-up assessment after 6 months.

Full Text: Available in fulltext from Cerebrovascular Diseases at ProQuest

Title: Postal and Face-to-Face Administration of Stroke Outcome Measures: Can Mixed Modes Be Used?

Citation: Stroke (00392499), 01 January 2013, vol./is. 44/1(217-219), 00392499

Author(s): Sutton CJ, Watkins CL, Cook N, Leathley MJ, McAdam J, Dey P

Abstract: BACKGROUND AND PURPOSE: Different modes of administration are used to collect stroke outcomes, even within the same study, potentially leading to different results. We investigated the effect of administration mode (postal questionnaire; face-to-face interview) on self-reports of activities of daily living and mood. METHODS: The study was nested within a poststroke motivational interviewing trial. Activities of daily living (Barthel; Nottingham Extended) and mood (General Health Questionnaire; Yale) were collected at 3 and 12 months via postal questionnaire. Participants were approached to respond again via face-to-face interview. Paired t tests (McNemar test) and intraclass correlation coefficients (Cohen [kappa]) were used, with 95% CI, to compare scores (items). RESULTS: Forty-four participants consented. Only Barthel scores were significantly different; they were 1.0 (95% CI, 0.5-1.6) higher face-to-face. The intraclass correlation coefficient for the Barthel was 0.90; for the other scales it was between 0.83 and 0.87. The Yale [kappa] was 0.72. CONCLUSIONS: Modes of administration might be used interchangeably, albeit in conjunction with corrections for the Barthel.

Full Text: Available in fulltext from Stroke at Ovid

Title: Evidence-based community stroke rehabilitation.

Citation: Stroke (00392499), 01 January 2013, vol./is. 44/1(293-297), 00392499

Author(s): Walker MF, Sunnerhagen KS, Fisher RJ

Full Text: Available in fulltext from Stroke at Ovid

Title: Stroke-specific executive function assessment: A literature review of performance-based tools.

Citation: Australian Occupational Therapy Journal, 01 February 2013, vol./is. 60/1(3-19), 00450766

Author(s): Poulin, Valérie, Korner-Bitensky, Nicol, Dawson, Deirdre R.

Abstract: Background/aim Executive function should be an integral component of post-stroke assessment. However, a Canada-wide survey of occupational therapists on stroke rehabilitation practices found a rare use of executive function assessments. Performance-based executive function assessments that closely reflect real-world activities are useful in identifying individuals who will face difficulties when returning to home and community activities. To increase clinicians’ awareness of these tools, a literature review was conducted to identify performance-based measures of
executive function and their stroke-specific psychometric properties. Methods The review identified 17 performance-based tools and 41 studies that reported their psychometric properties specific to stroke. Each tool was critically appraised according to the executive function components assessed, the level of functioning assessed (i.e. impairment, activity or participation), the environment within which the assessment is conducted and the tool’s psychometric properties and clinical utility. Standard criteria were used to evaluate the tools’ psychometric properties. The findings were compiled in a Stroke- Specific Executive Function Toolkit. Results The assessments that demonstrated the strongest evidence of reliability and validity were the Executive Function Performance Test, the Multiple Errands Test and the Assessment of Motor and Process Skills. Only the Assessment of Motor and Process Skills has been adequately evaluated for its ability to detect change. In terms of clinical utility, the Kettle Test has the shortest administration time (i.e. less than 20 minutes) and requires limited equipment. Conclusions and significance of the study The Stroke- Specific Executive Function Toolkit provides clinicians with useful information that should facilitate identification of appropriate executive function tools for use across the continuum of stroke care.

Title: Effectiveness of PhysioDirect telephone assessment and advice services for patients with musculoskeletal problems: Pragmatic randomised controlled trial

Citation: BMJ (Online), February 2013, vol./is. 346/7893, 1756-1833 (02 Feb 2013)
Author(s): Salisbury C., Montgomery A.A., Hollinghurst S., Hopper C., Bishop A., Franchini A., Coast J., Grove S.

Abstract: Objectives To assess the clinical effectiveness, effect on waiting times, and patient acceptability of PhysioDirect services in patients with musculoskeletal problems, compared with usual care. Design Pragmatic randomised controlled trial to assess equivalence in clinical effectiveness. Patients were individually randomised in a 2:1 ratio to PhysioDirect or usual care. Setting Four physiotherapy services in England. Participants Adults (aged ≥18 years) referred by general practitioners or self referred for musculoskeletal physiotherapy. Interventions PhysioDirect services invited patients to telephone a physiotherapist for initial assessment and advice, followed by face-to-face physiotherapy if necessary. Usual care involved patients joining a waiting list for face-to-face treatment. Main outcome measures Numbers of appointments, waiting time for treatment, and non-attendance rates. Primary outcome was physical health (SF-36v2 physical component score) at six months. Secondary outcomes included four other measures of health outcome, mental component score and scales from the SF-36v2, time lost from work, and patient satisfaction and preference. Participants were not blind to allocation, but outcome data were collected blind to allocation. Results Of 1506 patients allocated to PhysioDirect and 743 to usual care, 95% provided primary outcome data at six months (1283 and 629 patients, respectively). PhysioDirect patients had fewer face-to-face appointments than usual care patients (mean 1.91 v 3.11; incidence rate ratio 0.59 (95% confidence interval 0.53 to 0.65)), a shorter waiting time (median 7 days v 34 days; arm time ratio 0.32 (0.29 to 0.35)), and lower rates of non-attendance (incidence rate ratio 0.55 (0.41 to 0.73)). After six months’ follow-up, the SF-36v2 physical component score was equivalent between groups (adjusted difference in means -0.01 (-0.80 to 0.79)). Health outcome measures suggested a trend towards slightly greater improvement in the PhysioDirect arm at six week follow-up and no difference at six months. There was no difference in time lost from work. PhysioDirect patients were no more satisfied with access to physiotherapy than usual care patients, but had slightly lower satisfaction overall at six months (difference in satisfaction -3.8% (-7.3% to -0.3%); P=0.031). PhysioDirect patients were more likely than usual care patients to prefer PhysioDirect in future. No adverse events were detected. Conclusions PhysioDirect is equally as clinically effective compared with usual care, provides faster access to physiotherapy, and seems to be safe. However, it could be associated with slightly lower patient satisfaction. BMJ Publishing Group Ltd 2013.

Title: A pragmatic randomised controlled trial of the effectiveness and cost-effectiveness of 'PhysioDirect' telephone assessment and advice services for physiotherapy

Citation: Health Technology Assessment, 2013, vol./is. 17/2(1-157), 1366-5278;2046-4924 (2013)
Author(s): Salisbury C., Foster N.E., Hopper C., Bishop A., Hollinghurst S., Coast J., Kaur S., Pearson J., Franchini A., Hall J., Grove S., Calnan M., Busby J., Montgomery A.A.

Language: English

Abstract: Background: As a result of long delays for physiotherapy for musculoskeletal problems, several areas in the UK have introduced PhysioDirect services in which patients telephone a physiotherapist for initial assessment and treatment advice. However, there is no robust evidence about the effectiveness, costeffectiveness or acceptability to patients of PhysioDirect. Objective: To investigate whether or not PhysioDirect is equally as clinically effective as and more costeffective than usual care for patients with musculoskeletal (MSK) problems in primary care. Design: Pragmatic randomised controlled trial to assess equivalence, incorporating economic evaluation and nested qualitative research. Patients were randomised in 2: 1 ratio to PhysioDirect or usual care using a remote automated allocation system at the level of the individual, stratifying by physiotherapy site and minimising by sex, age group and site of MSK problem. For the economic analysis, cost consequences included NHS and patient costs, and the cost of lost production. Cost-effectiveness analysis was carried out from the perspective of the NHS. Interviews were
conducted with patients, physiotherapists and their managers. Setting: Four community physiotherapy services in
England. Participants: Adults referred by general practitioners or self-referred for physiotherapy for a MSK problem.
Interventions: Patients allocated to PhysioDirect were invited to telephone a senior physiotherapist for initial
assessment and advice using a computerised template, followed by face-to-face care when necessary. Patients
allocated to usual care were put on to a waiting list for face-to-face care. Main outcome measures: Primary outcome
was the Short Form questionnaire-36 items, version 2 (SF-36v2) Physical Component Score (PCS) at 6 months after
randomisation. Secondary outcomes included other measures of health outcome [Measure Yourself Medical
Outcomes Profile, European Quality of Life-5 Dimensions (EuroQol health utility measure, EQ-5D), global
improvement, response to treatment], wait for treatment, time lost from work and usual activities, patient satisfaction.
Data were collected by postal questionnaires at baseline, 6 weeks and 6 months, and from routine records by
researchers blind to allocation. Results: A total of 1506 patients were allocated to PhysioDirect and 743 to usual care.
Patients allocated to PhysioDirect had a shorter wait for treatment than those allocated to usual care [median 7 days
vs 34 days; arm-time ratio 0.32, 95% confidence interval (CI) 0.29 to 0.35] and had fewer non-attended face-to-face
appointments [incidence rate ratio 0.55 (95% CI 0.41 to 0.73)]. The primary outcome at 6 months' follow-up was
equivalent between PhysioDirect and usual care [mean PCS 43.50 vs 44.18, adjusted difference in means -0.01 (95%
CI -0.80 to 0.79)]. The secondary measures of health outcome all demonstrated equivalence at 6 months, with slightly
greater improvement in the PhysioDirect arm at 6 weeks' follow-up. Patients were equally satisfied with access to care
but slightly less satisfied overall with PhysioDirect compared with usual care. NHS costs (physiotherapy plus other
relevant NHS costs) per patient were similar in the two arms [PhysioDirect 198.98 vs usual care 179.68, difference in
means 19.30 (95% CI -37.60 to 76.19)], while QALYs gained were also similar [difference in means 0.007 (95% CI -
0.003 to 0.016)]. Incremental cost per QALY gained was 2889. The probability that PhysioDirect was cost-effective at
a 20,000 willingness-to-pay threshold was 88%. These conclusions about cost-effectiveness were robust to sensitivity
analyses. There was no evidence of difference between trial arms in cost to patients or value of lost production. No
adverse events were detected. Conclusions: Providing physiotherapy via PhysioDirect is equally clinically effective
compared with usual waiting list-based care, provides faster access to treatment, appears to be safe, and is broadly
acceptable to patients. PhysioDirect is probably cost-effective compared with usual care. Queen’s Printer and
Controller of HMSO 2013.

Sources Used:

The following databases are used in the creation of this bulletin: British Nursing Index, Cinahl & Medline.

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