Royal United Hospitals Bath NHS
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Parkinson's Disease

Current Awareness Bulletin

October 2016

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Title: Classification and recommendation of nonpharmacological therapies for Parkinson's disease

Citation: Movement Disorders, June 2016, vol./is. 31/(S690), 1531-8257 (June 2016)
Author(s): Capato T.T.C., Fen C.H., Barbosa E.R.

Abstract: Objective: A multidisciplinary specialized treatment including physiotherapy, speech and language therapy, occupational therapy (OT) associated to the ideal pharmacological treatment and surgical is recommended to Parkinson's disease(PD). Background: Identify the most effective Rehabilitation treatment for the PD, determine the classification of the analyzed studies and the level of the recommendation of non pharmacological therapies. Methods: It was made a search in the electronic database of Medline, Cochrane Library, Lilacs. The key words Rehabilitation in Parkinson's disease, Physiotherapy, Exercises, Speech and language therapy and Occupational Therapy were used in Portuguese and English, and it has comprehended the period from 2005 to the beginning of March 2015. The research was performed separately by independent reviewers. Only the articles which reported a project of randomized controlled study (RTC) in human beings with PD were included. Studies were classified to the evidence level (class I, II, III or IV) according to the adopted classification of the American Neurology Academy. Results: It was found 83 RTC in this review involving 1729 participants. The RTC were separated by modality and criteria of evidence level (class I or II).The evidences show nonpharmacological treatment adopted by multidisciplinary team focusing on the control of the parkisoninan symptoms and on compensatory strategies. RTC of physiotherapy with sensorial cues are effective for people with PD (class I and II). The intervention in long term must be recommended (Level A) and practice physical exercises to patients with PD (Level A). The speech therapy is important to the rehabilitation program of patients with PD. The LSVT methodology is the recognized treatment in the vocal therapy. The speech and language therapy must be preconized in patients with PD because the works show an improvement of this intervention in the voice and in the dysphagia (Voice Level B and Dysphagia Level C). A recent study Class I suggests that the OT helps the patients with PD in the ADL when compared to control, however the effects of OT were not sustained in long term. This intervention is recommended to patients with PD (level B). Conclusions: The nonpharmacological therapies must be recommended to patients with PD. Future studies are necessary to establish the dosage, efficiency and long term effectiveness intervention.

Title: Underutilization of physiotherapy for Parkinson's disease in the United States

Citation: Movement Disorders, June 2016, vol./is. 31/(S142), 1531-8257 (June 2016)
Author(s): Fullard M.E., Thibault D.P., Hill A., Fox J., Willis A.W.

Abstract: Objective: To examine allied health care (AHC) utilization in older adults with Parkinson's disease in the United States. Background: Multiple studies have demonstrated the efficacy of physical, occupational and speech therapy (collectively known as allied health care) in Parkinson's disease (PD) and AAN quality guidelines advocate for regular assessment of the need for these therapies. No study to date has examined allied health care utilization for PD in the US. Methods: In this cross-sectional study of Medicare beneficiaries with Parkinson's disease, receipt of physical therapy (PT), occupational therapy (OT) or speech therapy (ST) was identified using billing claims from 2007 to 2009. Only individuals with at least 12 months of Medicare data were included. To examine the impact of increasing physician visit frequency on AHC utilization, all outpatient neurologist visits were extracted. Results: A total of 742,846 Medicare beneficiaries who met the inclusion and exclusion criteria were identified. Of these PD patients, only 11.1% had claims for PT/OT and 11.5% for ST. Asian Americans were the highest users of PT/OT (10.3%) and ST (16.6%), followed by whites (PT/OT: 7.5%, ST: 11.7%). African Americans had the lowest utilization percentage for all AHC at 3.7% and 6.5%. Regression models support the finding of racial disparities in AHC with an adjusted OR for African Americans of 0.67 (0.64-0.70). In the

cohort, only 31% of PD patients received neurologist care in a given year. Patients with at least one neurologist visit per year were 50% more likely to receive an evaluation for PT than those without neurologist care (AOR: 1.50, 1.47-1.53). This relationship was similar for OT evaluation (AOR: 1.48, 1.41-1.55), PT/OT (AOR: 1.31, 1.29-1.33), and ST (AOR: 1.52, 1.50-1.55). There were incremental increases in the odds of receiving AHC by levels of neurologist participation in PD care. For patients with more than three neurologist visits, the odds of ST evaluation was the highest (AOR: 1.80, 1.76-1.84), followed by OT evaluation (AOR: 1.78, 1.67-1.89), and PT evaluation (AOR: 1.73, 1.68-1.77). Conclusions: Allied health care is highly underutilized among US Medicare beneficiaries with PD. Neurologist care is associated with increased use. Further studies are needed to identify barriers to guideline adherent care in PD.

Title: Effectiveness of occupational therapy multi-domain group therapy program for Parkinson's disease

Citation: Movement Disorders, June 2016, vol./is. 31/(S159), 1531-8257 (June 2016)
Author(s): Wong R.K.M., Tsang D.S.W., Lau C.K.Y., Chan A.Y.Y., Chan D.T.M., Zhu X., Poon W., Mok V.C.T.

Abstract: Objective: This pilot study investigated the effectiveness of an Occupational Therapy (OT) multi-domain group program on preventing fall, improving non-motor symptoms & reducing carers' stress of Parkinson's disease (PD) patients. Background: PD patients commonly suffer from motor (e.g. recurrent falls) & non-motor symptoms (e.g. depression, anxiety & cognitive impairments). We explored the effectiveness of a multi-domain program for PD patients & their carers. Methods: Patients with recurrent falls or persistent high fall risks despite regular out-patient training were recruited to the program. We conducted 2 separate therapeutic groups from July to December 2015, each included 4 patients & their carers. This multi-domain program had 8 consecutive-weekly-sessions on education on PD & fall prevention, relaxation technique, home exercises on balance & body integration, art/ craft, and dance movement sessions. Patients were evaluated by occupational therapists before & after program with Unified Parkinson's disease Rating Scale (UPDRS), Barthel Index (BI), Mini-Mental State Examination (MMSE), Montreal Cognitive Assessment (MoCA), Mattis Dementia Rating Scale (MDRS), FRQ, Geriatric Depression Scale (GDS), Beck's Anxiety Inventory (BAI), Parkinson's disease Quality of Life Questionnaire 8 (PDQ8), Life Functioning Assessment Inventory (LFAI); while carers were evaluated using Relative Stress Scale (RSS) & Caregiver Burden Inventory (CBI). Results: 15 subjects (8 patients & 7 carers) participated in this study. Despite there was no statistically significant difference in various outcomes between pre & post treatment, apparent improvements were seen in fall measures (FRQ, 13.5%; UPDRS item on falling), non-motor symptoms (UPDRS part I, 31%), quality of life (PDQ8, 17%), and carers' stress (RSS, 30%). Conclusions: Findings of this pilot OT multi-domain group therapy program suggested that program might reduce fall, non-motor symptoms, carers' stress and improve quality of life.

Title: Increased access to training in a Parkinson-specific rehabilitation approach through online learning

Citation: Movement Disorders, June 2016, vol./is. 31/(S138), 1531-8257 (June 2016)
Author(s): Fox C., Guse L., Ramig L.

Abstract: Objective: Compare online versus live training of physical and occupational therapists in an evidence-based, Parkinson-specific rehabilitation approach. Background: LSVT BIG is an effective physical/occupational therapy for people with PD (Ebersbach et al, 2010). A challenge is that many people with PD who could benefit from this treatment do not have access to therapists trained to administer it. Online learning is an effective way to increase access to educational

content (Anderson & Elloumi, 2004). Our previous NIH-funded work documented that online and live training of a PD-specific speech treatment (LSVT LOUD) was comparable across learners. If we can demonstrate that online and live LSVT BIG training for physical and occupational therapists are comparable, it may expand access to this effective treatment for people with PD. Methods: The online LSVT BIG training was developed to rigorously parallel the live course. It consists of 40 modules of content (including 99 videos), 142 review questions, a 40 question exam (85% required to pass), and a 90 day period for completion. After a pilot launch in 2014, the first year of implementation of online training was 2015. Data from the total number of online and live LSVT BIG learners in 2015 were analysed. Measures included number of clinicians trained, exam scores, course evaluations, and a post-completion practice survey. Results: A total of 1133 therapists from 18 countries and 2227 therapists from 12 countries completed the online and live training, respectively. Preliminary data analysis revealed comparable outcomes in exam results for both groups (99% pass; 1% fail). Course evaluations were also comparable with 100% of online and live learners reporting they "received effective training" and 98% online and 100% live learners reporting they "were well-prepared to deliver LSVT BIG." Online users identified technical issues as the greatest challenge and convenience as the greatest benefit of online learning. Additional data from the postcompletion practice survey will be presented. Conclusions: Online training for physical and occupational therapists in LSVT BIG appears to be comparable to live training, and may be a more effective format for some learners. Utilizing online learning can increase access to PD-specialty training for rehabilitation professionals globally, thus improving patient care.

Title: Music Therapy for Motor and Nonmotor Symptoms of Parkinson's Disease: A Prospective, Randomized, Controlled, Single-Blinded Study.

Citation: Journal of the American Geriatrics Society, 2016, vol./is. 64/9(0-3), 00028614
Author(s): Spina, Emanuele, Barone, Paolo, Mosca, Lucia Luciana, Forges Davanzati, Rosanna, Lombardi, Agnese, Longo, Katia, Iavarone, Alessandro, Amboni, Marianna

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Title: Impulse control disorders in Parkinson’s disease: Predominant role of psychological determinants.

Citation: Psychology & Health, 2016, vol./is. 31/12(1391-1414), 08870446
Author(s): Garlovsky, Jack K., Simpson, Jane, Grünewald, Richard A., Overton, Paul G.

Impulse Control Disorders (ICDs) in Parkinson's disease (PD) have previously almost exclusively been considered to result from anti-parkinsonian medication. However, this biomedical perspective has failed to achieve a full understanding of the phenomenon and it is argued that a failure to consider psychological factors is a critical omission. The present study examined the predictive relationship between ICDs in PD and a range of psychological measures, whilst controlling for a number of biomedical determinants. One hundred participants with idiopathic PD completed questionnaires that assessed demographic and clinical characteristics, psychological measures and the presence of ICDs (QUIP-RS). Increased use of a 'negative' coping strategy, stronger illness identity, more emotional illness representations and stress were found to be significant predictors of ICDs, and different psychological predictors were associated with different ICDs. Medication was not found to predict ICDs in the presence of psychological factors, either when total treatment levels were considered or when agonist dose was considered alone. This study provides the first quantitative evidence of a predominant predictive relationship between psychological factors and ICDs in PD. The results suggest that psychological interventions may have a useful therapeutic role to play for ICDs in PD.

Title: Factors associated with limited exercise capacity and feasibility of high intensity interval training in people with mild to moderate Parkinson's disease.

Citation: International Journal of Therapy & Rehabilitation, 2016, vol./is. 23/9(414-422), 17411645
Author(s): Haas, Bernhard, Cinnamond, Sally, Hunter, Heather, Marsden, Jonathan

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Title: Promoting excellence in Parkinson's disease.

Citation: British Journal of Neuroscience Nursing, 2016, vol./is. 12/4(172-174), 17470307
Author(s): French, Katherine

Title: New drug calculator to improve Parkinson's hospital care.

Citation: British Journal of Neuroscience Nursing, 2016, vol./is. 12/4(184-), 17470307
Author(s): Mehta, Sarah

Sources Used
The following databases are searched on a regular basis in the development of this bulletin: Amed, British Nursing Index, Cinahl, Medline

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