

Supplementary Material

Specialized Allied Health Care for Parkinson's Disease: State of the Art and Future Directions

Supplementary Material A. Search strategy

The following search string was entered in PubMed at 2024/01/10:

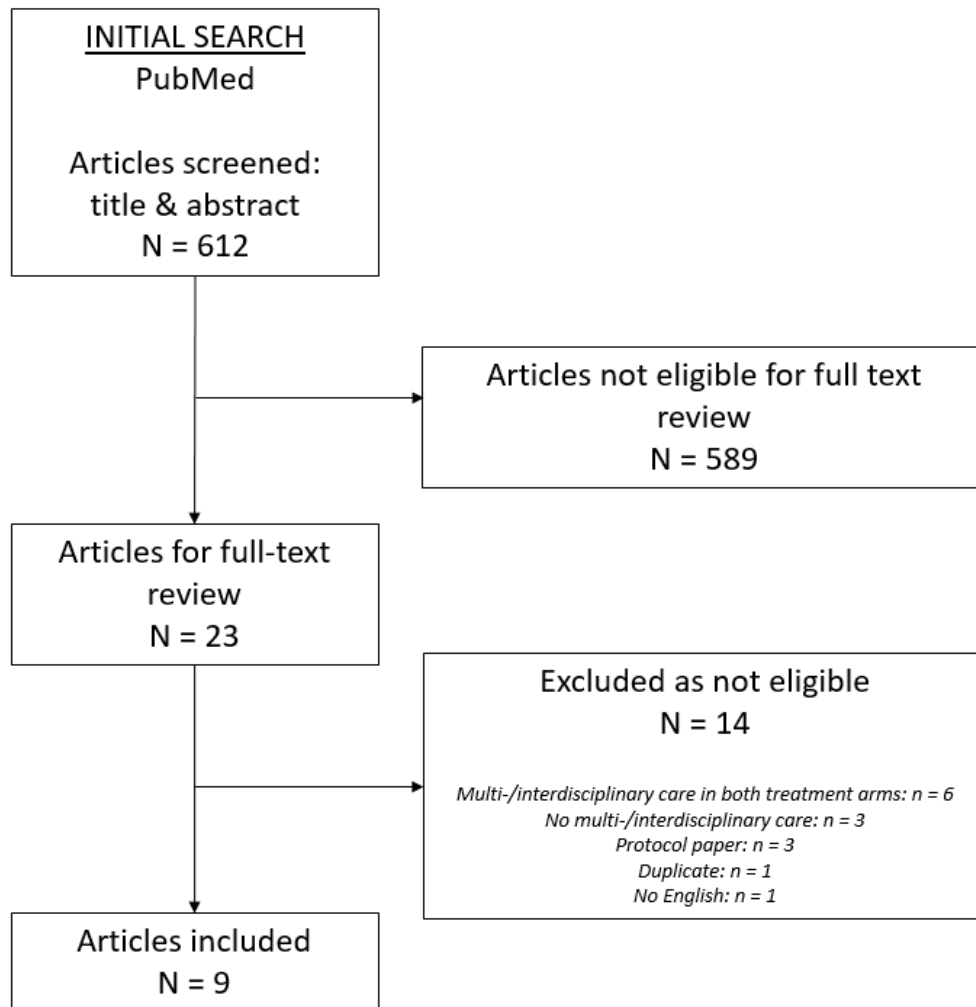
("rehabilitation"[All Fields]) OR ("allied health"[All Fields]) OR ("multidisciplinary"[All Fields]) OR ("interdisciplinary") OR ("physiotherapy"[All Fields]) OR ("occupational"[All Fields]) OR (("speech" [All Fields]) OR ("language" [All Fields]) AND ("therapy" [All Fields])) AND ("Parkinson s disease"[All Fields])

The box 'randomized controlled trial' was checked in PubMed

Inclusion criteria:

- Randomized controlled trial
- Intervention group received care from a combination of two or more allied health disciplines
- Control group did not receive care from multiple allied health disciplines

Supplementary Material B. Flowchart literature search



Supplementary Material C. Detailed assessment of meeting criteria for specialized allied health care

Author (date)	PD trained AHPs	Personalized intervention	PD-specific intervention	Appropriate treatment context	Appropriate intervention dose	Appropriate multidisciplinary care
Clarke et al. (2016) ¹	Not reported	Yes Therapy was tailored to an individual patient's requirements using a patient-centered joint goal-setting approach	Uncertain A framework for therapy content was developed and agreed on by expert therapist groups based on previous work on standards of NHS PT and OT and European guidelines However, logs showed few use PD-specific exercise, strategies or task related practice.	Yes In community: home-based (mostly OT) and outpatient clinic (mostly PT).	No Median number of therapy sessions was 4 (range, 1-21) over 8 weeks for OT and PT together.	Yes PT and OT appropriate for focus on daily activities. Joint goal setting approach
Frazzitta et al. (2012) ²	Not reported	Not fully reported Intervention protocolized, tailoring not reported	Not fully reported Designed for Parkinson. PT focused on exercise programs. Exercise was augmented with cues, but no strategy training reported for functional mobility. OT focused on autonomy in transfers, dressing and arm-hand function. Not described how.	Partly For exercise appropriate, for training of autonomy in activities questionable. Patients were given (unsupervised) exercise program for use at home	Yes Focus on motor exercise and skill training- high intensity. Repeated after a year. Not too burdensome?	Yes PT and OT appropriate to target motor functioning and ADL. However, collaboration not described.
Frazzitta et al. (2015) ³	Not reported	Not fully reported Intervention protocolized, tailoring partly reported (max heart rate)	Not fully reported Designed for Parkinson. PT focused on exercise programs. Exercise was augmented with cues, but no strategy training reported. OT focused on autonomy in transfers, dressing and arm-hand function. Not described how.	Partly For exercise appropriate, for training of autonomy in activities questionable Patients were given (unsupervised)	Yes Focus on motor exercise and skill training- high intensity. Repeated after a year. Not too burdensome?	Yes PT and OT appropriate to target motor functioning and ADL. However, collaboration not described.

				exercise program for use at home		
Ferrazzoli et al. (2018) ⁴	Not reported	Not fully reported Intervention protocolized, "goal-based", tailoring partly reported	Partly PT: Focused only on capacity (exercise). OT: yes. Dexterity, writing and ADLS with PD-specific strategies. No reference to guidelines/evidence for this. ST: Does not seem to include evidence-based interventions for speech.	Partly For exercise appropriate. For training of autonomy in activities questionable, but people were early stage. Patients were given (unsupervised) exercise program for use at home	Yes Focus on motor exercise and skill training- high intensity: 21 sessions per week for 4 weeks. Not too burdensome?	Yes PT and OT appropriate to target motor functioning and ADL. However, collaboration not described.
Ferrazzoli et al. (2018) ⁵	not reported	Yes Therapy was tailored to an individual patient by team	Partly PT: focused only on capacity (exercise). No strategies or functional mobility OT, yes. Dexterity, writing and ADLS with strategies. No reference to guidelines/evidence ST: Does not seem to include evidence-based interventions for speech.	Partly For exercise appropriate, for training of autonomy in activities questionable. For ST? Patients were given (unsupervised) exercise program for use at home.	Yes Focus on motor exercise and skill training- high intensity. 21 sessions per week for 4 weeks. Repeated after a year. Too burdensome?	Yes OT, PT and ST appropriate to target motor functioning, ADL and speech. However, collaboration not described.
Tickle-Degnen et al. (2010) ⁶	Yes AHPs trained and supervised for consistency in the standardized, manualized, and	Yes Focus on own valued domains and self-management.	Yes Following evidence based guidelines, exercise and strategies and self-management.	IG1: Partly IG2: Yes IG2 was combination of outpatient and home-based therapy.	IG1: Uncertain IG2: Yes Either a total of 18 hrs. (2 times a week) or 27 hrs. (3 times a week) over 6 weeks. Focus on self- management. Uncertain whether	Yes Combination of OT, PT and ST, worked interdisciplinary

	interdisciplinary intervention.				people practiced at home.	
Wade et al. (2003) ⁷	Uncertain A 'specialist team', but not specified	Yes Individual treatment plan	Not reported	No Outpatient rehab program; no mention of working towards transfer to home context	No Once a week x 6: insufficient for training skills	Yes Combination of individual treatment and group intervention within a multidisciplinary team
Stożek et al. (2016) ⁸	Not reported	Not fully reported Only described that number of repetition depended on individual capacity	Not fully reported For functional mobility: yes; for speech no mention of evidence based guidelines	No Outpatient rehab program; no mention of working towards transfer to home context	Yes 4 weeks, 28 sessions	Uncertain Involvement of PT, but not clear what discipline provided speech therapy. No mention of a speech therapist.
Monticone et al. (2015) ⁹	Not fully reported 'equally experienced'	Not fully reported Not clearly reported. Treatment was individually delivered.	Yes PT: combination of task oriented training of functional mobility, also using PD-specific strategies and training physical capacity; OT: functional practice and adaptation, focus on home.	Partly Inpatient program, but attention for home. Exercise program was given for after discharge.	Partly 8 weeks, PT: daily 90 min, adequate; OT 1x a week 30 min, insufficient for skills practice	Yes Combination of PT and OT appropriate for improving daily functioning

PD, Parkinson's disease; AHPs, allied health professionals; OT, Occupational therapy; PT, physical therapy; ST, speech-language therapy; ADL, Activities of Daily Living

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8. Stożek J, Rudzińska M, Pustułka-Piwnik U and Szczudlik A. The effect of the rehabilitation program on balance, gait, physical performance and trunk rotation in Parkinson's disease. *Aging Clin Exp Res* 2016; 28: 1169-1177.
9. Monticone M, Ambrosini E, Laurini A, et al. In-patient multidisciplinary rehabilitation for Parkinson's disease: A randomized controlled trial. *Mov Disord* 2015; 30: 1050-1058.