

Jaana Paltamaa

Translation Ritva Kilpeläinen

European guideline for physiotherapy in Parkinson's disease in the offing

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Parkinson's disease and rehabilitation

Parkinson's disease (PD) is a progressive neurological condition which widely affects the patient's functional ability and well-being. Medication can today quite effectively release symptoms of Parkinson's and its impact on functional ability. However, medications don't eliminate all symptoms of the disease and their effect weaken over time. Therefore regular and comprehensive rehabilitation of those affected by Parkinson's is very important in maintaining functional activity and ability to work. (1)

According to the current care guidelines (2) rehabilitation should be focused on the main problems related to functional ability, it has to be carried out using a proven, effective method and to the extent needed to reach the realistically set goals. In addition, it is recommended that rehabilitation be planned on the basis of an initial examination so that the rehabilitee and his or her relative can commit themselves to implementation. It has to be taken into account that in a progressive disease the results of rehabilitation are not sustainable.

Parkinson's disease is a complex disorder, characterised by a wide array of motor and non-motor problems for which medical intervention alone is insufficient. Physical therapy can help prevent the weakening of functional ability (progressive model) (3-5). Choice of rehabilitation methods have to be based on the same principles as other medical treatments. One step towards evidence-based physiotherapy of Parkinson's patients was the guideline (6) published by the Royal Dutch Society for Physical Therapy, KNGF in 2004. As from 2011 the guideline has been updated by European physiotherapy associations and it will be published in 2013 under the name "1st European guideline for physiotherapy in Parkinson's disease", Updates and progress of this initiative can be followed in <http://www.appde.eu/>. Three articles of the guideline process and results from Finland have been published in the Finnish Fysioterapialehti (7-9).

European guideline for physiotherapy in Parkinson's disease

Preparation of the guideline is endorsed by the European Region of the World Confederation for Physical Therapy (ER-WCPT), Association of Physiotherapists in Parkinson's Disease Europe (APPDE) and the Royal Dutch Society for Physical Therapy (KNGF). Additionally, the process of updating the guideline is contributed by 18 member countries of ER-WCPT, one of the contributors is the Finnish Association of Physiotherapists. The European guideline for physiotherapy in Parkinson's disease is one of the guidelines to be published in the Physiotherapy best practice –initiative of the Finnish Association of Physiotherapists in order to improve effectiveness of physical therapy and to align the national physiotherapy practices.

The updating process is led by doctors Samyra H.J.Keus and Marten Munneke (Radboud University Nijmegen Medical Centre, Holland). They get support from a Writing Group, which comprises of the following six representatives from different geographical regions: Bhanu Ramaswamy (England), Jaana Paltamaa (Scandinavia), Mariella Graziano (Benelux countries), Susanne Bruhlman (German Central Europe), Elisa Pelosin (Eastern South Europe) and Josefa Domingos (Western South Europe). In addition, the Writing Group consists of two persons with Parkinson's. The other representatives of ER-WCPT belong to the Reading Group which provides comments on the guideline. The purpose of this procedure is to ensure commitment of each attending member country and consideration of national aspects.

The guideline was built step by step during 2011-2012

1. A Survey to physiotherapists

There is already quite a lot of information on the effectiveness of physical therapy, but we lack information on current physiotherapy practices and educational needs of physiotherapists. Therefore, in the early stages of the guideline process a survey was conducted among physiotherapists in order to gather information on current physiotherapy practices of people with Parkinson's and need for skills development in different European countries.

The survey was conducted in 11 languages in 17 countries in February-October 2011. The main subjects of the survey were: 1) background information on therapists and the people with Parkinson's in therapy, 2) Identifying barriers in optimal physical therapy of Parkinson's disease, 3) use of measurement tools for people with Parkinson's 4) establishing physiotherapy diagnosis of people with Parkinson's, 5) physiotherapeutic process in Parkinson's disease. In each country, 600 randomly selected members of the

national physiotherapy association were invited to participate. Therapists who did not want to fill in the survey were asked to only inform about their treatment volume of people with Parkinson's disease in the past 12 months. Therapists with a treatment volume > 4 were expected to have more PD-specific expertise ('expert') and therefore asked to fill in additional questions (e.g. on measurement tools and interventions).

In Finland 311 physiotherapists (52%) completed the survey, 233 of them had provided physiotherapy to people with Parkinson's disease during the previous year. In Finland expert survey was completed by 64 physiotherapists.

In Finland every fourth respondent was aware of no barriers in delivering optimal care to people with Parkinson's disease (8). The five most common barriers delivering optimal care were: limited experience in treating people with Parkinson's disease (37%), limited time available in each physiotherapy session (29%), limited knowledge about the possibilities of using physiotherapy in Parkinson's disease (20%), referral of patients by their doctor at too late a stage of their disease for optimal physiotherapy treatment (18%) and limited number of sessions covered by health insurance (on a yearly basis) (18%).

The barriers found in Finland are quite similar to those of other European countries. However, limited number of sessions covered by health insurance, one of the five most common hindrances in Finland, didn't appear in the European results. Hopefully these differences do not reflect limited access to physiotherapy among Finnish Parkinson's patients compared to European people with Parkinson's.

Differing from the Finnish results the main five barriers in other European countries were: limited availability of Parkinson's disease exercise groups close to the patient's home and limited opportunity to discuss issues with other health care professionals. On the basis of this the supply of physiotherapy for specific patient groups in Finland seems to be at a good level as well as chance to multi-professional collaboration.

It seemed that in Finland experienced therapists did not use published guidelines when making decisions on implementation of physical therapy. Only three of the respondents knew the evidence-based guideline published by the Royal Dutch Society for Physical Therapy (6) and two of them had used it partly. They felt it difficult to use, because some areas could not be applied to their work and the guideline was not translated into Finnish. Nobody mentioned other references, such as the recommendation of the Finnish Parkinson Association (1) or the current care guidelines for rehabilitation of Parkinson's (2).

Assessment methods were in active use in Finland (9,10). Seven of the respondents (21 %) did not use assessment methods whereas the corresponding share in Europe was 40% (11). In Finland the five most widely used assessment methods were Berg Balance Scale (74%), 10-meter walk test (74 %), Timed Up and Go –test (60 %), 6 minutes walk test (46%) and Borg RPE-scale (46%). The first four were also among the five most widely used methods in Europe. In Europe Tinetti Balance and Gait evaluation was also widely used (11).

In Europe the most common barriers to use of assessment methods were lack of time (32%), inadequate education and skills (29%), difficulty of interpreting results (25%) and poor availability of assessment methods (23%) (4). The Finnish physiotherapists have clearly fewer barriers (12% in each) in these points in question. In Finland the most common barrier was difficulty of evaluating the quality of an assessment method (34%).

The respondents of the survey wished easy, applicable, and widely acceptable Finnish recommendations and guidelines as well as therapy hints and reasonably-priced trainings. The need is greater in particular when a volume of treated people with Parkinson's is low, and the care relationship is rather short and will not be repeated.

2) Key questions

The identified barriers in current care and points for improvement as perceived by respondents to the questionnaire, users of the KNGF guideline, and people with Parkinsons' were transformed into key questions. The key questions were divided into three areas (background information, establishing a physical therapy diagnosis, therapy process).

3) Systematic literature review

Key questions were addressed with a systematic literature search conducted by the project leader *Samyra Keus* from Holland. The members of the Reading group checked assessment of quality and participated in building of an evidence-based physiotherapy review.

4) Conclusions and the guideline

The recommendations in the guideline were accordingly formulated based on evidence from literature and the perspectives of physiotherapists and people with Parkinson's. The guideline will include recommendation for a good physiotherapy practice, systematic literature review on the scale of evidence, appendixes (e.g. results of survey, medication, functional ability indicators, cognitive strategies and remittance criteria) and Quick reference cards (QRC). Additionally, information will be published about quality indicators and patient information as well as instructions for national implementation of the guideline. The frame of reference is the International Classification of Functioning, Disability and Health (ICF) provided by the World Health Organization (WHO).

The core areas in physiotherapy of people with Parkinson's are walking, balance, movement, hand function and staying power. For these areas there were chosen potential assessment methods based on the Dutch guideline (3) and expertise of the Writing and Reading groups of the European guideline update project.

Overall 32 assessment methods were proposed and their psychometric properties (validity, repeatability and sensitivity to change) were collected. 16 of them were accepted in the guideline. Assessment of a people with Parkinson's should not be routine use of assessment methods. The therapist should use methods from the guideline on a case by case basis selecting the most appropriate assessment methods depending on the patient's need.

While gathering background information and using individual assessment methods physiotherapists collect information related to decision-making and based on this information the goals for rehabilitation are set together with the patient. Targets are to be set using the Goal Attainment Scaling (GAS) –method. When providing therapy evidence-based information should be used.

Guideline in Finnish

The guideline will be translated into Finnish by Finnish Association of Physiotherapists. In Finland implementation of the guideline is accelerated in the collaboration between the Finnish Association of Physiotherapists and the Finnish Parkinson Association. There will be collaboration also in assessment of functional ability with the national network of experts in research and clinical institutions (http://www.toimia.fi/index_en.html). The guideline of assessment methods will be published in the TOIMIA database (<http://www.thl.fi/toimia/tietokanta/>).

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Research evidence alone is not enough

The choice of rehabilitation methods should be based on the same principles as other medical interventions. These principles are identification of a person's needs, setting of individual goals and choice of an effective, available method appropriate to the patient's needs (12).

Research evidence indicates the effectiveness of the method in an optimal patient group and in an optimal situation conducted by skilled professionals. Even if choice of a method is based on strong research evidence, the therapist should always compare the situation of the current patient with the participants in researches.

I'm confident that people with Parkinson's will benefit from the new guideline. The goal is to align use of assessment methods and implementation of physical therapy. However, active collaboration, communication and training will be needed.

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Jaana Paltamaa, PhD, PT, Planning specialist

jaana.paltamaa@jamk.fi

Jjamk University of Applied Sciences, Jyväskylä, Finland and Peurunka Rehabilitation centre, Laukaa, Finland

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