



EEA and Norway grants - CZ07

Project **NF-CZ07-ICP-4-4292015** Scientific workshops
“DIFFERENT APPROACHES IN NEUROREHABILITATION”

Description of the whole project

Preparatory visit in Oslo 1

Principi investigator met with Dr. Frank Becker from Sunnaas Rehabilitation Hospital and Oslo University and other experts who could be interested in research co-operation; visited workplaces where potential research could take place (Sunnaas Rehabilitation Hospital, Oslo University Hospital, MS-centre Hakadal, Akershus University College) and had a presentation concerning planned project and research questions for experts from Sunnaas Rehabilitation Hospital. (page 5)

Preparatory visit in Oslo 2

Co-ordination meeting, where Dr. Frank Becker, prof. Antonie Beiske, prof. Elisabeth Gulowsen Celius and other professionals met and discussed organisation of workshops and potential co-operation. (page 6)

Workshop in Prague

Representative residence of the Academy of Sciences of the Czech Republic, Villa Lanna, hosted the workshop. The term of the workshop was chosen on World MS Day 2016 to provide the public and professionals with information about neurorehabilitation in MS. The project guaranteed prof. Michal Anděl, the dean of Third Medical Faculty, Charles University, and Dr. Jaroslav Krákora from Parliament of the Czech Republic. The aim of the workshop was to present organisational and therapeutic approach in neurorehabilitation, especially in multiple sclerosis. First day, Czech experts presented Czech therapeutic approach. Second day, Norway experts presented Norway therapeutic approach. Third day, research projects realised at Department of rehabilitation, Third Medical Faculty, Charles University were presented.

Presentation of results from workshop was organised for staff of Department of neurology and Department of Rehabilitation. (page 7-8)

Workshop in Oslo

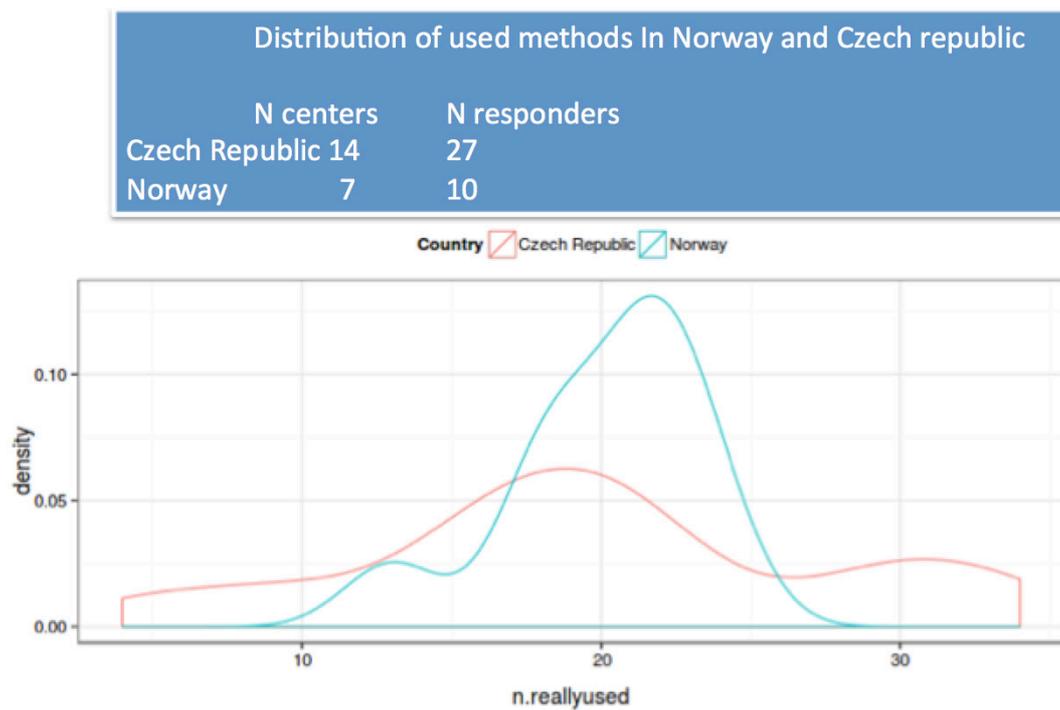
This workshop had aim to work on concrete research aims. First day, expert met at Akershus University College and discussed potential problems that should be avoided in planned multi-centre study. We spoke about non-consensus in terminology, about mismatching in using therapeutic approaches. Prof. Elisabeth Gulowsen Celius aware about difficulties of evaluation an effect of physiotherapy, because parallel pharmacotherapy treatment. Prof. Birgitta Langhammer presented her Experience with



comparative studies of neurorehabilitation in different countries. Associate professor Kamila Rasova and Dr. Patricia Martinkova presented results from international questionnaire survey and according them put first hypotheses for planned multi-center comparative study. Discussion continued second day in MS-centre Hakadal. Moreover, we had possibility to see how this centre specialised in neurorehabilitation in multiple sclerosis work and see how therapist clinically work with this patients. (page 9)

We can summarise that there is a great variety of techniques and conceptual treatment methods applied in the clinical field of neurorehabilitation. All methods have in common that they apply internal and external stimuli to achieve better movement, with the aim of improving activities of daily living.

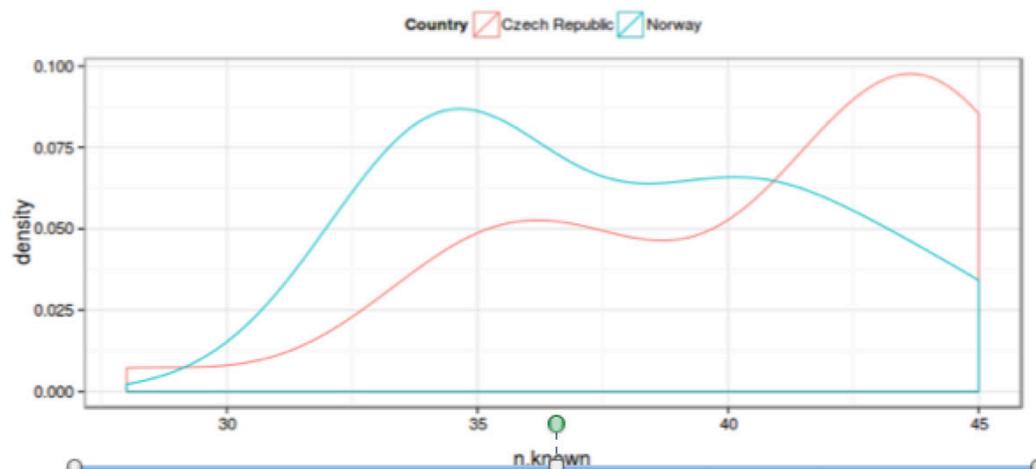
We were working on analyses of questionnaire survey. Norway respondents knew slightly smaller number of methods from the list (not significant, Wilcoxon test p-value = 0.0820).





Norway respondents used between 20 and 30 methods while Czech respondents declared usage of approx. 15 to 35 methods - their responses were much more variable (significant, Ansari test p-value = 0.0167).

Distribution of known methods In Norway and Czech republic			
	N centers	N responders	
Czech Republic	14	27	
Norway	7	10	



We are working on publication of these data.

The workshop allowed us to get an overview of the organizations providing rehabilitative care across Europe. This care naturally varies depending on the system of health care and health policy of a given country. It turned out that the therapy of MS patients makes use of different therapeutic methods, in the Czech Republic as well as in Norway.

It follows from both the existing research and the discussion of the workshop participants that there is no unequivocal consensus about which therapeutic concept or methodology is most effective or optimal to reach the best results and about how to proceed in the different forms of MS or phases of the disease.

The participants of the workshop agreed on the initiation of the multi-centric international study which will try to compare the effectivity of the most often applied therapeutic approaches. Another aim of the study was to clarify the use or application of basic neurophysiologic, kinesiologic and biomechanic knowledge in the rehabilitation/physiotherapeutic practice. The final output will be an implementation of our ideas in a general agreement on the neurorehabilitative treatment of MS



patients that should provide a proposal of the therapeutic standard based on evidence-based medicine and in the future it should serve in the rehabilitation of MS patients in all the European countries. In other words, the result of the common document would demonstrate an integrated approach to neurophysiotherapy in MS which would not be based on individual therapeutic methods but 'on the state of patient's functions', on reliable theoretical fundamentals and if possible on scientific proofs from practice.

Research outputs.

Rasova et al. (2016). "Different approaches in neurorehabilitation and their impact on clinical improvements of neurological patients." *Czech and Slovak Neurology and Neurosurgery* 79/4(112): 463 - 470.

Rasova K.; Freeman F.; Martinkova P.; Pavlikova M.; Cattaneo D.; Jonsdottir J.; Henze T.; Baert I.; Asch P. V.; Santoyo C.; Smedal T.; Beiske A. G.; Małgorzata S.; Kovalewski M.; Nedeljkovic U.; Bakalidou D.; Alves-Guerreiro J.; Nilsagård Y.; Dimitrova E. N.; Habek M.; Armutlu K.; Donzé C.; Ilie A. M.; Martić A.; Romberg A.; Feys P. (2016). "The organisation of physiotherapy for people with multiple sclerosis across Europe: a multicentre questionnaire survey." *BMC Health Services Research* 16: 552.

DIFFERENT APPROACHES IN NEUROREHABILITATION AND THEIR IMPACT ON CLINICAL IMPROVEMENTS OF NEUROLOGICAL PATIENTS

– Preparatory visit in Oslo 1



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– Scientific workshop, Prague, May 2016



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– Social Event, Prague, May 2016



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DIFFERENT APPROACHES IN NEUROREHABILITATION AND THEIR IMPACT ON CLINICAL IMPROVEMENTS OF NEUROLOGICAL PATIENTS

– Workshop in Oslo and Hakadal, September 2016



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