

## Teamwork in rehabilitation – it is effective but it must be financed

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Worldwide, musculoskeletal diseases are recognised as a major burden on individuals, health systems and social care systems, with indirect costs being predominant [1]. In Switzerland, a recent published report initiated by the Swiss Federal Office of Health on the costs of noncommunicable diseases concluded that these account for 80.0% of the total annual health expenditure. Musculoskeletal diseases, together with cardiovascular diseases, constitute the largest share of these costs, with low back pain creating highest costs among the musculoskeletal diseases [2]. The total economic burden of low back pain to Swiss society was in 2005 between 1.6 and 2.3% of the GDP [3]. In view of the predominant indirect costs of low back pain, modern treatment recommendations state that not pain relief but improvement of function, including return to work, is the primary treatment goal [4, 5].

With this background, Gantschnigg and colleagues set out to investigate the short-, medium- and long-term effect of a 12-week ambulatory rehabilitation programme for patients with chronic musculoskeletal pain, reported in *Swiss Medical Weekly* [6]. The authors have to be congratulated for their design of a rehabilitation programme containing today's recommended musculoskeletal treatment components such as multidisciplinary care, exercise, behavioural therapy, workplace interventions and patient education, and for having return to work among their rehabilitation goals.

However, today's treatment recommendations are based on the available evidence, which is often not complete. Despite the consistent recommendation of multidisciplinary care for chronic musculoskeletal pain, further research was requested by the European task force for the management of low back pain to define the optimal content of multidisciplinary treatment programmes [5]. Exercise is recommended for the treatment of chronic musculoskeletal diseases such as low back pain [5] and hip and knee osteoarthritis [7], but scientific evidence for the effectiveness of exercise remains inconclusive. Although positive effects of physical conditioning programmes on sick leave for patients with subacute and chronic back pain have been found [8, 9], both reviews demanded further research to develop more effective interventions. A better understanding of the mechanism behind physical conditioning programmes and return-to-work is needed [9], as well as an identification of the most effective types of exercises. For example, self-directed exercises seemed to be at least as

effective as supervised exercise programmes [8]. Self-directed exercises were part of the Bern Ambulatory Inter-professional Rehabilitation programme. It is known that adherence to self-directed exercises varies considerably among patients and is influenced by a range of factors [10]. Of importance is not only the content and the planned sessions of the rehabilitation programme, but also the regimen of the interventions, including the hours spent on independent self-directed exercises. Such information can be obtained by using a rehabilitation diary, and helps in establishing comparable rehabilitation programmes in other settings.

The lack of a control group, the small study sample and the lack of blinded assessors prevent final conclusions on the effectiveness of this programme, and of its particular treatment components. The authors acknowledge these shortcomings and describe the problems in designing and conducting randomised controlled trials in the field of rehabilitation of patients with chronic musculoskeletal pain. Next to the methodological challenges in the design of high quality rehabilitation trials with return to work as a main study outcome is the lack of financial resources. A closer look at today's recommended treatment components – multidisciplinary care, exercise, behavioural therapies, workplace interventions and patient education – reveals that only very few parties might have interests in financing such trials. Unfortunately, there appears to be a lack of interest of pharmaceutical companies, a fact which the authors mention specifically. One would hope for health insurers to have interest in this research topic, but in view of the predominantly indirect costs caused by musculoskeletal diseases, financing interests are rare.

The magnitude of the problem of musculoskeletal diseases is recognised by the Swiss Federal Office of Health by launching a strategy for the prevention of noncommunicable diseases. It is the vision of this strategy, that more people remain healthy or have a higher quality of life in spite of chronic illnesses, with fewer people suffering from preventable noncommunicable diseases or dying prematurely, and that people, independent of their socioeconomic status, are enabled to maintain a healthy lifestyle in a healthy environment [11]. It is hoped that this strategy will encompass the whole range of interventions from primary to tertiary prevention, including research and development of new therapeutic strategies for the treatment of pain in the musculoskeletal system. Obviously, national funding

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would be required as very few other parties will have an interest to do so.

Although the present study of the innovative Ambulatory Interprofessional Rehabilitation programme for patients with chronic musculoskeletal pain may not comply to every standard of scientific rigour (as the authors acknowledge themselves), the urgent need for further research and development in the fields of musculoskeletal rehabilitation become obvious. Funding resources for such work are needed, and specific research and development programmes need to be implemented.

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#### References

- 1 Woolf AD, Pfleger B. Burden of major musculoskeletal conditions. *Bull World Health Organ.* 2003;(9):646–56. [PubMed](#).
- 2 Wieser S, Tomonaga Y, Riguzzi M, Fischer B, Telsler H, Pletscher M, et al., eds. Die Kosten der nichtübertragbaren Krankheiten in der Schweiz. Vertragsnummer 13.006625. Bern: Bundesamt für Gesundheit; 2014.
- 3 Wieser S, Horisberger B, Schmidhauser S, Eisenring C, Brügger U, Ruckstuhl A, et al. Cost of low back pain in Switzerland in 2005. *Eur J Health Econ.* 2011;(5):455–67. <http://dx.doi.org/10.1007/s10198-010-0258-y>. [PubMed](#).
- 4 Koes BW, van Tulder M, Lin CW, Macedo LG, McAuley J, Maher C. An updated overview of clinical guidelines for the management of non-specific low back pain in primary care. *Eur Spine J.* 2010;(12):2075–94. <http://dx.doi.org/10.1007/s00586-010-1502-y>. [PubMed](#).
- 5 Airaksinen O, Brox JJ, Cedraschi C, Hildebrandt J, Klüber-Moffett J, Kovacs F, et al.; COST B13 Working Group on Guidelines for Chronic Low Back Pain. Chapter 4. European guidelines for the management of chronic nonspecific low back pain. *Eur Spine J.* 2006;(S2, Suppl 2):S192–300. <http://dx.doi.org/10.1007/s00586-006-1072-1>. [PubMed](#).
- 6 Gantschnig AB, Heigl F, Widmer Leu C, Bütikofer L, Reichenbach S, Villiger PM. Effectiveness of the Bern Ambulatory Interprofessional Rehabilitation (BAI-Reha) programme for patients with chronic musculoskeletal pain: a cohort study. *Swiss Med Wkly.* 2017;:w14433.
- 7 Fernandes L, Hagen KB, Bijlsma JW, Andreassen O, Christensen P, Conaghan PG, et al.; European League Against Rheumatism (EULAR). EULAR recommendations for the non-pharmacological core management of hip and knee osteoarthritis. *Ann Rheum Dis.* 2013;(7):1125–35. <http://dx.doi.org/10.1136/annrheumdis-2012-202745>. [PubMed](#).
- 8 Oesch P, Kool J, Hagen KB, Bachmann S. Effectiveness of exercise on work disability in patients with non-acute non-specific low back pain: Systematic review and meta-analysis of randomised controlled trials. *J Rehabil Med.* 2010;(3):193–205. <http://dx.doi.org/10.2340/16501977-0524>. [PubMed](#).
- 9 Schaafsma F, Schonstein E, Whelan KM, Ulvestad E, Kenny DT, Verbeek JH. Physical conditioning programs for improving work outcomes in workers with back pain. *Cochrane Database Syst Rev.* 2010;(1):CD001822. [PubMed](#).
- 10 Essery R, Geraghty AW, Kirby S, Yardley L. Predictors of adherence to home-based physical therapies: a systematic review. *Disabil Rehabil.* 2017;(6):519–34. <http://dx.doi.org/10.3109/09638288.2016.1153160>. [PubMed](#).
- 11 Bundesamt für Gesundheit. Nationale Strategie zur Prävention nichtübertragbarer Krankheiten. Bern: Bundesamt für Gesundheit; 2013 [30. Januar 2017]; Available from: <https://www.bag.admin.ch/bag/de/home/themen/strategien-politik/nationale-gesundheitsstrategien/strategie-nicht-uebertragbare-krankheiten.html>.