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LETTER TO THE EDITOR

EFFECTIVE GERIATRIC REHABILITATION IS NOT NON-INDIVIDUALIZED GROUP HEALTH EDUCATION

The article by Kehusmaa et al. (1), entitled "Economic evaluation of a geriatric rehabilitation programme: a randomized controlled trial", explores an important area of health services research. As more effective healthcare interventions become available, comparative effectiveness research and cost-benefit analyses will be vital in determining healthcare funding strategies. Unfortunately, Kehusmaa's conclusion, that geriatric rehabilitation is not cost-effective is not supported by the research design employed. In this study, geriatric rehabilitation was operationally defined as 5 days of evaluation followed by group activities, such as coaching in motivation and coping strategies, and classes on nutrition, social activities, recreation and counselling. The classes lasted 11 days, then the patients were reviewed in the home by a team to determine whether they had other needs. Other than serving the same population, this intervention is not remotely similar to "geriatric rehabilitation" as practiced in most of the developed world.

Classically, geriatric rehabilitation includes an individualized assessment by a therapist, lasting 1–2 visits, followed by individualized, one-on-one treatment sessions with either a physical, occupational and/or speech and language therapist. The one-on-one sessions consist of individually designed and monitored activities addressing short- and long-term goals for areas of functional deficiency (e.g. balance, strength, flexibility, endurance and all aspects of performing activities of daily living). Each patient's programme is modified on an ongoing basis based on the functional improvements. If the patient is not able to make functional improvements despite modifications, the rehabilitation programme would be terminated. We agree with the authors of this study when they state "… if we had applied a more individual approach in the rehabilitation activities, the heterogeneous target group might have gained more from it." Individualization is key to effective rehabilitative interventions.

We are concerned because this article is published in the *Journal of Rehabilitation Medicine* and, as such, casual readers might mistakenly believe it addresses physical rehabilitation when, in fact, the intervention does not appear to include any physical, occupational or speech therapy. The title is also easily subject to misinterpretation. A more accurate title might be "Economic evaluation of a geriatric multidisciplinary assessment and group activities programme". While the results of this study suggest that a non-individualized group health education intervention may not be cost-effective, this study does not address the value of geriatric rehabilitation as it is practiced in most of the developing world. In conclusion, we would like to affirm that individualized, geriatric rehabilitation is an evidence-based treatment that has demonstrated its cost-effectiveness in numerous studies and, for this reason, is widely used to the benefit of older adults throughout the world (2–4).

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REPLY TO THE COMMENT ON OUR ARTICLE "ECONOMIC EVALUATION OF A GERIATRIC REHABILITATION PROGRAMME: A RANDOMIZED CONTROLLED TRIAL"

We appreciate the comments by Carole Lewis, Elizabeth Cobbs and Molly Laflin regarding our article, "Economic evaluation of a geriatric rehabilitation programme: a randomized controlled trial". The geriatric rehabilitation intervention that was evaluated in our study was intended to support elderly persons living at home. The participants were frail old persons with unspecific morbidity and high risk of institutionalization within 2 years. We agree with Lewis, Cobbs and Laflin that our study was not disease-specific rehabilitation.

Our study was designed to detect significant differences between the study groups in the rate of admission to institutional care and the need for services. Therefore, we assessed changes

in activities of daily living (ADL), functional ability (FIM), health-related quality of life (HRQoL 15D), and costs of care. In our study, balance, strength, flexibility, and endurance were assessed as secondary outcomes.

Our geriatric rehabilitation intervention began with a comprehensive geriatric assessment. Individual assessments were performed by the members of the multiprofessional team, including a physiotherapist and an occupational therapist. An individual home exercise programme was planned, and personal guidance and physical training and therapy were a part of the programme during the inpatient period.

The rehabilitation institutions reported altogether 5244 individual sessions and 1843 group meetings (the number of participants in the intervention group was 376). More than half of the individual sessions were with physiotherapists. In addition, the participants' functional ability and need for assistive devices were assessed by occupational therapists. A physical therapist made home visits, assessed home environments and made practical recommendations concerning aids for daily living.

We were able to show the effectiveness of the physical activity programme. At the 1-year follow up, there were statistically significant differences between the intervention and control groups in walking speed, 5 repetitive stand-ups, hand grip, and the Short Physical Performance Battery; all these are known risk factors for institutionalization.

In contrast, in this randomized trial we did not find any differences between groups in the ADL, FIM, or HRQoL 15D, despite the positive effects of the intervention on walking speed and other physical activities. The reason for this remained unclear. However, we concluded that if the positive effects of physical training are not reflected in the measures indicating service needs, there is no reason to assume any positive effect on the costs either.

Our results raise the question as to why the observed positive effects at the level of physical functioning are not transferred to the areas of independence in daily living in frail elderly people. If this does not happen, then the change at the level of physical functioning should not be used as a surrogate for decreased need for services. Even though various treatments are often motivated by their assumed positive effects on the service needs, their direct effects on institutionalization, service utilization, or costs of care for elderly people have not been measured. In the end, the decision-makers also require evidence about the effects of interventions on service needs, institutionalization, and costs.

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