

Economic evaluation of a health behaviour intervention for musculoskeletal conditions.

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Introduction and purpose: Musculoskeletal conditions and associated health behaviour risks are both costly and burdensome. Owing to their growing costs and burden, economic evaluations which estimate cost implications and cost-effectiveness of potential treatments facilitates decision about real world application. The purpose of this study was to perform economic evaluation of a health behaviour intervention focused on healthy lifestyle (weight loss, physical activity and diet) for musculoskeletal conditions.

Methods: We analysed data from two randomised controlled trials; a trial of 160 patients with low back pain, and a trial of 120 patients with knee osteoarthritis, which compared a six-month healthy lifestyle intervention with usual care. We compared total costs between groups and performed cost-effectiveness analyses. The primary effectiveness outcome was quality-adjusted life years (QALYs). Secondary effectiveness outcomes included pain intensity, disability, weight, and body mass index (BMI). Costs included intervention costs, healthcare utilisation costs (healthcare services and medication use) and absenteeism costs from low back pain. We conducted a primary analysis from the societal perspective (including all cost measures).

Results: In the back pain trial, the mean total costs were lower in the intervention group than in the control group (-\$614; 95%CI: -3133 to 255). From the societal perspective, for all outcomes, the intervention was on average less expensive and more effective than usual care and the probability of the intervention being cost-effective compared to usual care was relatively high (i.e. 0.81) at a willingness-to-pay of \$0/unit of effect. For QALYs, this probability increased to 0.90 at a willingness-to-pay of \$17,000/QALY and reached a maximum of 0.96 at \$67,000/QALY. For the knee osteoarthritis trial, there were no differences between groups for total costs. For all outcomes, the probability of the intervention being cost-effective compared with usual care was less than 0.33 at all willingness-to-pay values.

Conclusions: The healthy lifestyle intervention, appeared to be cost-effective compared to usual care for low back pain, however the intervention was not cost-effective for knee osteoarthritis.