

## ABSTRACT

### *A Randomized Trial Evaluating the Effectiveness of Massage for Chronic Low Back Pain: The Story Behind the Results*

Daniel C. Cherkin and Karen Sherman, Group Health Center for Health Studies, Seattle, Washington; David Eisenberg, Ted Kaptchuk, Richard A. Deyo, Janet H. Street, William E. Barlow

**Background:** Massage is often used for low back pain but, until recently, little has been known about its effectiveness. We conducted the first large randomized trial evaluating the effectiveness of massage for chronic low back pain. This presentation will present the methods and results of this trial, highlighting the methodological challenges in this new area of research.

**Methods:** Two-hundred sixty-two adults between 20 and 70 years of age whose low back pain persisted six weeks after a physician visit, were randomly allocated to receive therapeutic massage (N=78), acupuncture (N=94), or self-care education materials (N=90). Subjects in the massage and acupuncture groups were permitted up to 10 visits over a 10 week period. Symptoms, function, disability, satisfaction, health care utilization, and costs were assessed 4, 10, and 52 weeks after randomization (95% follow-up rate).

**Results:** Subjects made a mean of 8.3 visits to massage therapists and 8.0 visits to acupuncturists, representing mean treatment costs per subject of \$377 and \$352, respectively. At the end of the treatment period, subjects receiving massage and acupuncture were more likely to be very or extremely satisfied with their care than those receiving self-care education (e.g., 50%, 37% and 13%, respectively,  $P < 0.0001$ ). At 4 weeks, analyses adjusting for baseline values of the outcome measures and for other covariates found no significant treatment effects on either symptoms ( $P = 0.21$ ) or function ( $P = 0.07$ ). At 10 weeks, differences among the treatments were significant for both symptoms ( $P = 0.015$ ) and function ( $P = 0.0004$ ). Pairwise comparisons revealed differences favoring massage over self-care ( $P = 0.012$  for symptoms;  $P = 0.0004$  for function) and favoring massage over acupuncture ( $P = 0.01$  for function). After one year, symptoms and function in the massage group were similar to that for self-care ( $P > 0.4$ ) but better than for the acupuncture group ( $P = 0.002$  for symptoms and  $P = 0.051$  for function). The cost of outpatient care for low back pain during the year after randomization was 30-45% lower in the massage group than in the self-care and acupuncture groups, but the differences among the groups were not significant ( $P = 0.15$ ). The main challenges conducting this research---obtaining funding, deciding on the treatment protocol, and selecting appropriate comparison groups---will be discussed.

**Conclusions:** We believe that we were able to effectively address the challenges facing all pioneers in clinical research on massage. These findings suggest that therapeutic massage is an effective treatment for persistent low back pain both in the short-term and long-term and may reduce the costs of future back care.