



Effective Public Health Practice Project Summary Statement

October 2006

This is a summary statement written to condense the work of the authors of a systematic review. The reference for the full review is below. The intent of this summary is to provide an overview of the findings and implications of the full review. For more information on individual studies included in the review, please see the review itself.

Reference for Review: Stead, L.F., Lancaster, T. (2005). **Group behaviour therapy programmes for smoking cessation.** *The Cochrane Database of Systematic Reviews 2005*, Issue 2. Art. No.: CD001007.pub2. DOI: 10.1002/14651858.CD001007.pub2.

Issue

Every day, approximately 50 Ontarians die as a result of tobacco use (Holowaty et al., 2002). Over the past 50 years, almost 500,000 deaths have occurred among Ontarians that can be directly attributed to tobacco. Tobacco is the single most important cause of cancer. In Ontario, one-quarter of all cancer deaths are due to tobacco (Cancer Care Ontario, 2005). Tobacco is also a major cause of death from other chronic diseases, including various cardiovascular and lung diseases. The direct health care costs associated with smoking in Ontario in 1992 were approximately \$1.1 billion; this estimate likely represents only a small portion of the real economic toll of smoking, because it does not include the costs associated with lost productivity and earnings as a result of illness, disability and death, which are estimated at another \$2.6 billion (Single et al., 1996).

The Mandatory Health Programs and Services Guidelines prepared by the Ontario Ministry of Health and Long Term Care include tobacco use interventions for youth and adults who smoke daily to meet the goal of “reducing the premature mortality and morbidity from preventable chronic diseases” (Ontario Ministry of Health and Long-Term Care, 1997). While group behavior therapy is not specifically identified in the Ontario Guidelines, it is one type of smoking cessation program that could be used to meet the chronic disease prevention goals.

Review Content Summary

This systematic review with meta-analysis was performed to determine the effectiveness of group-based behavioural interventions in achieving long-term smoking cessation. Evidence was available from a total of 55 randomized controlled trials (RCT): 28 that compared group therapy to no intervention or another cessation treatment method and 27 that compared different group programs. Group therapy was more effective than self-help or no intervention, but no better than individual counselling. Comparisons between different approaches to group therapy did not point to particular components that were more effective than others.

Comments on this Review's Methodology

Studies were identified from a register of trials assembled from searches of health and social science databases and relevant journals. Reference lists from clinical practice guidelines were also examined. Eligibility criteria were well described. Only randomized trials with at least six months follow-up were included. Randomization method was used as the main indicator of study quality. Where possible, biochemical confirmation of abstinence was used as the outcome variable. Where these data were not available, the most conservative method for determining smoking status was used and all participants lost to follow-up were counted as continuing smokers. Fixed-effects models were used to pool results across studies. For meta-analysis, studies were grouped according to type of control group. There was no statistically significant heterogeneity among these groups of studies. Sensitivity analysis based on study quality assessment could not be conducted because of the limited number of trials included in each intervention/control comparison.

Individual trial reports included insufficient information to determine if treatment allocation was concealed prior to randomization. The allocation of participants in clusters (rather than individually) and the nature of group therapy may have reduced variance within treatment groups and resulted in an overly narrow estimation of confidence intervals for effect sizes.

Evidence and Implications for Practice & Policy

Evidence points ARE NOT weighted or ranked according to strength.

What's the evidence?	Implications for practice and policy:
<p>> Group programs were more effective than no intervention (seven RCTs, N = 815, odds ratio [OR] 2.17, 95% confidence interval [CI] 1.37 to 3.45). 17% of intervention participants quit smoking versus 8% of participants allocated to control groups.</p>	<p>> Encouraging smokers to join a group will increase the likelihood of quitting.</p>
<p>> Sixteen RCTs compared a group program with a self-help program. There was an increase in cessation rates with the use of a group program, compared to self-help (N = 4395, odds ratio [OR] 2.04, 95% confidence interval [CI] 1.60 to 2.60). 10% of intervention participants quit smoking versus 6% of control group participants.</p>	<p>> In determining which interventions to promote, public health should consider that there is strong evidence that groups are better at helping people to stop smoking than self-help and other less intensive interventions.</p>
<p>> Seven RCTs compared a group program with advice from a physician or nurse. Because of significant heterogeneity among studies, data were not pooled. The majority of trials failed to detect any difference between these two approaches.</p>	<p>> Group-based programs may be no better than advice from a health care provider.</p>

What's the evidence?	Implications for practice and policy:
<p>> There was no evidence that group therapy was more effective than individual counselling at a similar level of intensity (five RCTs, N = 1409, OR 0.86, 95% CI 0.66 to 1.12).</p>	<p>> Providers need to make a judgement about the cost effectiveness of group therapy relative to other types of intervention given the relative probability of success and uptake.</p>
<p>> There was no evidence that the addition of group therapy to other forms of treatment (such as nicotine replacement) resulted in increased success rates (two RCTs, N = 454, OR 1.05, 95% CI 0.69 to 1.60).</p>	<p>> Group-based programs may not increase the effectiveness of nicotine replacement therapy.</p>
<p>General Implications: The general effectiveness of multi-component programs, which include problem-solving and social support elements, has been established. Demonstrating the effectiveness of specific components or procedures requires large sample sizes, which can be difficult to achieve given the difficulty of attracting smokers to participate in intensive cessation programs. It may be possible to identify subgroups of smokers who are helped by particular components and as a result develop more targeted interventions.</p>	

Cost Benefit or Cost-Effectiveness Information: Not included in the review.

References Used to Outline Issue

Cancer Care Ontario. (2005). Submission to the Standing Committee on Finance and Economic Development: In Support of Bill 164, An Act to Rename the Tobacco Control Act, 1994, repeal the Smoking in the Workplace Act, and make complementary amendments to other Acts.

Holowaty E., Chin Cheong S., Di Cori S., Garcia J., Luk R., Lyons C., &Thériault M.E. (2002). Tobacco or Health in Ontario. Toronto, ON: Surveillance Unit and Prevention Unit, Division of Preventive Oncology, Cancer Care Ontario and the Ontario Tobacco Research Unit.

Ontario Ministry of Health and Long-Term Care. Mandatory Health Programs and Services Guidelines. Retrieved October 19, 2006 from:
<http://www.health.gov.on.ca/english/providers/pub/pubhealth/manprog/mhp.pdf>

Single E., Robison L., Xie X., et al. (1996). The costs of substance abuse in Canada : A cost estimation study. Ottawa: Canadian Centre on Substance Abuse.

Related EPHPP Summary Statements

The Effective Public Health Practice Project is producing or has completed summary statements for the following systematic reviews on smoking cessation:

Hey, K., Perera, R. (2005). Competitions and incentives for smoking cessation. *The Cochrane Database of Systematic Reviews 2005* (2). Art. No.: CD004307.pub2. DOI: 10.1002/14651858.CD004307.pub2.

- Lancaster, T., & Stead, L.F. (2005). Individual behavioural counselling for smoking cessation. *The Cochrane Database of Systematic Reviews 2005 (2)*. Art. No.: CD001292.pub2. DOI: 10.1002/14651858.CD001292.pub2.
- Lancaster, T., & Stead, L.F. (2004). Physician advice for smoking cessation. *The Cochrane Database of Systematic Reviews 2004 (4)*. Art. No.: CD000165.pub2. DOI: 10.1002/14651858.CD000165.pub2.
- Lancaster, T., Stead, L., Silagy, C., & Sowden, A. (2000). Effectiveness of interventions to help people stop smoking: findings from the Cochrane Library. *British Medical Journal*, 321(7257),355-358.
- Moher, M., Hey, K., Lancaster, T. (2005). Workplace interventions for smoking cessation. *The Cochrane Database of Systematic Reviews 2005 (2)*. Art. No.: CD003440.pub2. DOI: 10.1002/14651858.CD003440.pub2.
- Murphy-Hoefer, R., Griffith, R., Pederson, L.L., Crossett, L., Iyer, S.R., Hiller, M.D. (2005). A review of interventions to reduce tobacco use in colleges and universities. *American Journal of Preventive Medicine*, 28, 188-200.
- Park, E.W., Schultz, J.K., Tudiver, F., Campbell, T., Becker L. (2005) Enhancing partner support to improve smoking cessation. *The Cochrane Database of Systematic Reviews 2004 (3)*. Art. No.: CD002928.pub2. DOI: 10.1002/14651858.CD002928.pub2.
- Usher, M.H., Taylor, A.H., West, R. & McEwen, A. (2000). Does exercise aid in smoking cessation? A systematic review. *Addiction*, 95(2):199-208.

Summary Statement Author: Lisa Ashley, RN, BScN, MEd, Clinical Nurse Specialist, Ottawa Public Health, Ottawa, Ontario

Contact Information for the Effective Public Health Practice Project (EPHPP)

Hamilton Public Health Services
Epidemiology and Evaluation
Effective Public Health Practice Project
2 King Street West, 3rd Floor
Dundas, Ontario Canada L9H 6Z1

Phone: 905-546-2424, Ext. 1578
Fax: 905-628-6465
Email: ephpp@hamilton.ca
Website: www.hamilton.ca/ephpp

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