



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: 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.

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 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 [MOHLTC], 1997). While the types of interventions evaluated in this review are not specifically identified in the Ontario Guidelines, they examine mechanisms currently being used in high schools and workplace settings that could be applied within colleges and universities in order to help meet the chronic disease prevention goals in those environments.

Review Content Summary

This systematic review summarized studies of interventions to reduce tobacco use among post-secondary students. The reviewers described results from 14 studies of smoking cessation programs administered at the individual or institutional level. It is difficult to reach conclusions from the evidence presented because of variation among studies in terms of interventions and outcome measures, as well as design flaws in many of the studies. Three controlled studies with ‘satisfactory’ quality ratings found that: i) education based on diffusion-of-innovation theory did not reduce smoking rates; ii) a program aimed at college athletes (comprising counselling by a dental hygienist, a self-help guide and nicotine gum) resulted in a reduction in the use of

smokeless tobacco; and iii) implementation of a smoke-free policy in some buildings at one university did not reduce the prevalence of smoking compared to control buildings.

Comments on this Review's Methodology

The reviewers searched a comprehensive set of health, social science and educational databases. Only peer-reviewed papers published in English were included. Comparative studies were assessed for quality by two reviewers using eight criteria related to design, execution and analysis; single-arm studies were not assessed for quality. No meta-analysis was performed. Characteristics and results for individual studies were presented in tables. Narrative synthesis was provided separately for individual- and institutional-level interventions, categorized further into those aimed at tobacco smoking and those at smokeless tobacco use. Six studies did not include a control group. Only five of eight comparative studies used random allocation.

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:
<ul style="list-style-type: none"> > Only 14 studies published in the last 20 years were found, and the methods used varied widely. As a result, no firm conclusions could be reached regarding some of the interventions. > Most studies took place in the United States. The evidence available may not be generalizable to the Ontario population. For example, the institutional-level interventions may not be relevant to Ontario, which has different policies about smoking in public places and cigarette taxes than the United States. 	<ul style="list-style-type: none"> > Further research, in the form of randomized controlled trials, is needed. Ideally, evidence should come from RCTs conducted in Canada
<ul style="list-style-type: none"> > In studies that used comparison groups and examined cessation, the abstinence rates tended to be higher in the intervention groups than in the non-intervention groups, but none of the differences reached statistical significance. 	<ul style="list-style-type: none"> > Perception and attitudes of college and university students and the factors that might motivate them to quit need to be considered when designing programs for evaluation in future studies. > The role of college/university staff members, the prevalence of smoking among faculty and administrative staff, and the relationship of these factors to levels of tobacco use among students should be also be considered.
<ul style="list-style-type: none"> > Two studies reported reductions in the amount smoked at post-intervention compared to pre-intervention use. The amount of the reduction was statistically significant in both studies, but the follow- 	<ul style="list-style-type: none"> > Future studies should include long-term follow-up.

up period was only 3 weeks, and the sample sizes were small in both studies.	
General Implications: There is insufficient evidence on which to base practices or policies for smoking cessation programs specific to the university/college setting in Ontario.	

Cost Benefit or Cost-Effectiveness Information: Not included in 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. (1997). Mandatory Health Programs and Services Guidelines. Retrieved October 16, 2006 from:
<http://www.health.gov.on.ca/english/providers/pub/pubhealth/manprog/mhp.pdf>

Single E., Robison L., Xie X., & Rehm, J. (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.

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.

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

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