

Non-Smokers' Rights Association Smoking and Health Action Foundation

March 2008

Smoke-free Outdoor Spaces

There was a time, not so long ago, when some Canadians looked upon the elimination of second-hand smoke (SHS) from enclosed public places and workplaces as a radical idea. Indeed, almost 10 years ago when the first municipalities (Victoria, BC and Kitchener-Waterloo, ON) took the bold step of passing gold-standard, 100% smoke-free bylaws, enforcement officers were physically intimidated, verbally threatened and even urinated upon. No longer. When it comes to SHS, Canadians are in the midst of a major social norm change. As people's exposure to SHS decreases, their tolerance for exposure decreases as well. There is a growing appetite for more smoke-free spaces, including outdoor public places. Many non-smokers exposed to outdoor SHS suffer immediate symptoms including breathing difficulties, eye irritation, headache, nausea and

asthma attacks. New laws are constantly being passed in communities all over Canada, creating smoke-free patios and buffer zones around doorways, operable windows and air intakes.



A small handful of municipalities now have smoke-free parks, bus stops, playgrounds and even smoke-free markets and outdoor festivals.¹

The science is still emerging on outdoor SHS exposure and broad consensus regarding the ideal

¹ Non-Smokers' Rights Association. *Compendium of smoke-free workplace and public place bylaws*. (2008). www.nusra-adnf.ca/cms/page1421.cfm.

distance for buffer zones around doorways and air intakes is premature. There are currently just a few in-depth scholarly articles published in peer-reviewed journals that measure outdoor SHS particles. The authors of one study report that outdoor SHS concentrations are highly dependent on wind conditions and source proximity (how close the smokers are). However, average fine particle levels near smokers over the course of one or more cigarettes can be comparable to indoor SHS particle levels in living rooms or bedrooms during active smoking. Average, not peak, particle concentrations can reach hundreds of micrograms per metre cubed ($\mu\text{g}/\text{m}^3$). As a reference, the U.S. Environmental Protection Agency's Air Quality Index indicates that concentrations over $150.5 \mu\text{g}/\text{m}^3$ are considered very unhealthy.²

² U.S. Environmental Protection Agency. Personal communication with Michelle Wayland, December 5, 2007.

The study's authors conclude that outdoor SHS levels approach zero at distances greater than about 2 m from a single cigarette.³

James Repace, a world renowned SHS expert, has conducted his own experiments in a variety of outdoor settings to measure SHS pollution. He has concluded that his experiments dispel the misconception that smoking outdoors can be ignored because smoke immediately dissipates. His studies, and those of others, indicate that under the conditions studied, smoke levels do not decrease to background levels for fine particles or carcinogens until about 7 m from the source.⁴ More studies on outdoor SHS in different weather conditions are needed to help clarify suitable buffer zone distances for around doorways, etc. With respect to building entrances, Repace also notes that many buildings are "air starved,"

³ Klepeis NE, Ott WR and Switzer P. Real-time measurement of outdoor tobacco smoke particles. *Journal of the Air & Waste Management Association* 2007;57:522-534.

⁴ Repace JL. *Fact sheet: Outdoor air pollution from secondhand smoke.* (2008).

and that when a door is opened, suction can drag outside air in, along with SHS from groups of smokers clustered around the entrance.⁵ This frequent phenomenon should also be taken into account when buffer zone distances are being considered.

Buffer zones vary considerably across Canada. It would be nice to have consistency, and nicer still to have consistency offering real protection from exposure. Ontario legislation has had a 9 m buffer zone around hospitals and health care facility doorways for years. Legislation in Alberta (5 m), British Columbia (3 m), the Yukon (regulations not yet announced), Northwest Territories and Nunavut (3 m) prohibits smoking in buffer zones around all workplaces and public places. Similar distances are noted in many Canadian municipality bylaws.⁶

In addition to health, there are other reasons

⁵ Repace JL. Presentation, 13th World Conference on Tobacco OR Health, July 2006.

⁶ Non-Smokers' Rights Association. *Compendium of smoke-free workplace and public place bylaws*, 2008.

for wanting a smoking ban in places like playgrounds and parks. Littering is a big one—cigarette butts are frequently cited as the most common type of litter. Proponents also cite that outdoor smoking bans remove adult role modeling and decrease the social acceptability of smoking.

Possible unintended consequences, such as children being left unattended, playground visits being eliminated or increased smoking at home need to be considered. Smokers need places to smoke, and smoking outdoors away from others is a good option. Parks with no designated smoking areas remove this opportunity. Noted tobacco control expert Simon Chapman argues that mixing aesthetics with health arguments risks infecting tobacco control with advocates accused of being intolerant, paternalistic busy-bodies.⁷

The benefits of 100% smoke-free parks need to be weighed against the risks of moving beyond health science.

⁷ Chapman S. Banning smoking outdoors is seldom ethically justifiable. *Tobacco Control* 2000;9:95-97.