



ASH Scotland

Second-hand smoke in cars

April 2009
(amended April 2010)

Key points:

- second-hand smoke (SHS) exposure is associated with a number of serious health risks
- children are particularly vulnerable to the effects of SHS
- SHS can reach high levels in cars
- currently twelve jurisdictions have smoke-free car laws to protect children.

Health risks associated with second-hand smoke exposure

There is clear evidence that SHS causes lung cancer and ischaemic heart disease as well as a strong link to adverse effects in children.¹ Exposure to SHS in childhood is associated with reduced lung function, middle ear disease, an increased risk of a range of respiratory symptoms and a higher incidence of respiratory tract infections.² SHS exposure is a cause of Sudden Infant Death Syndrome.³ Children are more vulnerable to the effects of second-hand smoke than adults because of their smaller size, less developed immune systems and faster breathing rates.⁴

Second-hand smoke exposure in cars

There is emerging evidence on the levels of second-hand smoke present in cars and of the serious health hazard this represents for both adults and children.⁵ Studies have shown that levels of particulate matter in cars where smokers were smoking were similar to those in a smoky pub.^{6 7}

A Scottish study looking at smoking in the home after the smoke-free public places legislation had come into force found that respondents had more robust restrictions on smoking in their cars than in their homes.⁸ However, smoking in cars occurs at a higher rate in deprived populations so may contribute to health inequalities.⁹

Public support for smoke-free car laws

A review of studies into public attitudes found high levels of public support for smoke-free car laws designed to protect children. The researchers found that in six surveys carried out since 2005 there were high levels of public support for laws banning smoking in cars carrying children, with 90% or more support in four of the studies.¹⁰

Overview of smoke-free car laws

Over recent years a number of states, provinces and territories have adopted laws banning smoking in vehicles carrying children. The age at which smoke-free car laws apply differs between jurisdictions. As yet there is no available evidence on the enforcement of smoke-free car laws or levels of compliance.

Australia

Laws requiring cars to be smoke-free when children are present have already been adopted in South Australia, Tasmania and most recently New South Wales. The governments of Queensland, Victoria and Australian Capital Territory are considering introducing similar legislation.

Place	Details	Date enacted
South Australia ¹¹	Smoking prohibited in motor vehicles if a child under the age of 16 is present	31 May 2007
Tasmania ¹²	Smoking is not permitted in a vehicle if a child under the age of 18 is present	1 January 2008
New South Wales ¹³	Smoking prohibited in vehicles if there is a person under the age of 16 present	1 July 2009

Canada

Currently four of Canada's thirteen provinces and territories have laws in force which prohibit smoking in vehicles carrying children. Similar measures are presently being considered in Manitoba, New Brunswick, Quebec and Prince Edward Island.

Place	Details	Date enacted
Nova Scotia ¹⁴	Smoking prohibited in any vehicle carrying anyone under the age of 19	1 April 2008
Yukon ¹⁵	Smoking is not permitted in a vehicle in which occupants are under the age of 18 years	15 May 2008
Ontario ¹⁶	It is illegal to smoke in vehicles carrying passengers under age 16	21 January 2009
British Columbia ¹⁷	Smoking not permitted in motor vehicles carrying children under age of 16	7 April 2009

USA states and territories

Four states have laws requiring vehicles carrying children to be smoke-free and bills are currently before several other U.S. state legislatures.

Place	Details	Date enacted
Arkansas ¹⁸	Smoking not permitted in vehicles that require child car seats. A car seat is required when a child is less than 6 years of age and weighs less than 60lbs	21 July 2006
Louisiana ¹⁹	Smoking is prohibited in motor vehicles carrying children who are required to be restrained in a child safety seat, booster seat or seat belt, which applies to all children under the age of 13	15 August 2006
California ²⁰	Smoking is not permitted in a vehicle carrying youths under the age of 18	1 January 2008
Maine ²¹	Smoking is not permitted in cars carrying those under the age of 16	1 September 2008

Puerto Rico ²²	Smoking prohibited in private cars carrying children under the age of 13	2 March 2007
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United Kingdom

Reducing exposure to SHS in cars has been raised as an issue for future tobacco control strategy in the United Kingdom. In 2008 the Department of Health asked for views on whether the Government should do more to reduce exposure to second-hand smoke within private dwellings or vehicles.²³ Around two thirds of respondents said the government should take no further legislative action although fifty-three respondents supported smoking being made illegal in moving cars and several respondents suggested there should be no smoking in cars carrying children.²⁴

NB: Citation to an Ontario Medical Association paper (*Exposure to second-hand smoke: are we protecting our kids? Ontario Medical Association, [2004] Available from: www.oma.org/Health/tobacco/smoke2004.pdf*) has been removed.

Cf: Mackenzie, M A, Freeman, B, *Second-hand smoke in cars: How did the "23 times more toxic" myth turn into fact? Canadian Medical Association Journal, CMAJ 10.1503/cmaj.090993, April 2010 www.ecmaj.ca/cqi/content/citation/cmaj.090993v1* [accessed 13 April 2010]

¹ Scientific Committee on Tobacco and Health (SCOTH). *Secondhand smoke: review of the evidence since 1998. Update of evidence on health effects of secondhand smoke.*[online] London: Department of Health, 2004. Available from:

<http://www.advisorybodies.doh.gov.uk/scoth/PDFS/scothnov2004.pdf> [accessed 7 April 2009]

² Ibid

³ Ibid

⁴ Bearer CF. Environmental health hazards: How children are different from adults. *The Future of Children* 5(2):11-26, 2005. Available from: http://www.futureofchildren.org/usr_doc/vol5no2ART2.pdf [accessed 7 April 2009]

⁵ Sendzik, T., et al. *An experimental investigation of tobacco smoke pollution in cars.* Canadian Council for Tobacco Control, March 2008. Available from: <http://www.cctc.ca/cctc/EN/tcrc/books/tcmonograph.2008-03-20.7099398434> [accessed 20 April 2009]

⁶ Rees, V.W. and Connolly, G.N. Measuring air quality to protect children from secondhand smoke in cars. *American Journal of Preventive Medicine* [online] 31(5): pp.363-8, 2006. Available from: [http://www.ajpm-online.net/article/S0749-3797\(06\)00277-7/abstract](http://www.ajpm-online.net/article/S0749-3797(06)00277-7/abstract) [accessed 20 April 2009]

⁷ Edwards, R. and Wilson, N. Highly hazardous air quality associated with smoking in cars: New Zealand pilot study. *New Zealand Medical Journal* [online] 119 (1244), 2006. Available from: <http://www.nzma.org.nz/journal/119-1244/> [accessed 6 May 2009]

⁸ Phillips, R., et al. Smoking in the home after the smoke-free legislation in Scotland: qualitative study. *BMJ* [online] 10 September, 2007. Available from: <http://dx.doi.org/10.1136/bmj.39301.497593.55> [accessed 21 April 2009]

⁹ Martin J., et al. Observed smoking in cars: a methodology and differences by socio-economic area. *Tobacco Control* 15(5):409-11, 2006.

¹⁰ Thomson, G. and Wilson, N. Public attitudes to laws for smokefree private vehicles: a brief review. *Tobacco Control* [online] 3 December, 2008. Available from: <http://dx.doi.org/10.1136/tc.2008.027672> [accessed 20 April 2009]

¹¹ Department of Health, Government of South Australia. *Smoke-free cars* [online] Adelaide: Department of Health. Available from: <http://www.tobaccolaws.sa.gov.au/Default.aspx?tabid=163> [Accessed 14 April 2009]

¹² Department of Health and Human Services Tasmania. *Smoke free areas* [online] Hobart: Department of Health and Human Services. Available from: http://www.dhhs.tas.gov.au/about_the_department/structure/groups/chief_health_officer/population_h

[ealth/units/public_and_environmental_health/functions/environmental_health/programs_and_strategies/tobacco_control/smoke_free_areas2](#) [accessed 14 April 2009]

¹³ Department of Health, New South Wales Government. *The Public Health Tobacco Act 2008* [online] North Sydney: Department of Health. Available from: <http://www.health.nsw.gov.au/public-health/health-promotion/tobacco/quitting/index.html> [accessed 14 April 2009]

¹⁴ Health Promotion and Protection, Nova Scotia. *Smoke-free Places Act - In-vehicle Amendment* [online] Halifax: Health Promotion and Protection. Available from: <http://www.gov.ns.ca/hpp/cdip/smoke-free-vehicles.asp> [accessed 14 April 2009]

¹⁵ Yukon Health & Social Services. *Smoke-free places Act* [online] Yukon: Health & Social Services. Available from: http://www.hss.gov.yk.ca/programs/health_promotion/smokefree_places_act/ [accessed 14 April 2009]

¹⁶ Ministry of Health Promotion. *Smoke-free Ontario: smoking in cars* [online] Toronto: Ministry of Health Promotion. Available from: http://www.mhp.gov.on.ca/english/health/smoke_free/smoking_in_cars/default.asp [accessed 14 April 2009]

¹⁷ Ministry of Healthy Living and Sport, British Columbia. B.C. sets fine amount for second-hand smoke in vehicles. *News release* [online] 18 March 2009. Available from: http://www2.news.gov.bc.ca/news_releases_2005-2009/2009HLS0024-000385.htm [accessed 14 April 2009]

¹⁸ *The Arkansas Protection from Secondhand Smoke for Children Act 2006* [online] Available from: <http://www.arkleg.state.ar.us/ftproot/acts/2006S1/public/act13.pdf> [accessed 14 April 2009]

¹⁹ *Act 838 2006* [online] Available from: <http://www.latobaccocontrol.com/documents/pdf/Act%20838%20Law.pdf> [accessed 24 April 2009]

²⁰ California Department of Public Health. *Smoke-free cars* [online] Tobacco Free California. Available from: <http://www.tobaccofreeca.com/Cars-Fact-Sheet.pdf> [accessed 14 April 2009]

²¹ Partnership for a tobacco-free Maine. Another legislative achievement in protecting children. *The Link* [online] Spring, 2008. Available from: http://www.maine.gov/dhhs/boh/hmp/ptm/_documents/Link_Spring_08_000.pdf [accessed 14 April 2009]

²² Canadian Cancer Society. *Laws banning smoking in vehicles carrying children – international overview* [online] 19 August, 2008. Available from: <http://member.globalink.org/files/file-141676-1.pdf> [accessed 14 April 2008]

²³ Department of Health. *Consultation on the future of tobacco control* [online] London: Department of Health. 2008. Available from: http://www.dh.gov.uk/en/Consultations/Liveconsultations/DH_085120 [accessed 6 May 2009]

²⁴ Department of Health. *Consultation on the future of tobacco control: consultation report* [online] London: Department of Health. 2008. Available from: http://www.dh.gov.uk/en/Consultations/Responsestoconsultations/DH_091382 [accessed 6 May 2009]

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