



Canadian Cancer Society  
Société canadienne du cancer

ALBERTA / N.W.T. DIVISION

# Smoke-Free Vehicles: Protecting Children from Exposure to Tobacco Smoke in Vehicles

July 2010

Alberta municipalities have illustrated tremendous leadership on issues related to public health and safety and continue to do so by supporting measures that focus on chronic disease and cancer prevention. In 2008, the Alberta Urban Municipalities Association approved a motion calling for a provincial ban on smoking in vehicles with children present.<sup>1</sup> Also in 2008, the Town of Okotoks became the first municipality in Alberta to adopt a bylaw prohibiting smoking in vehicles carrying youth under age 16.

The Canadian Cancer Society believes that protecting children from exposure to second-hand tobacco smoke should be a top priority for municipal governments across Alberta. Banning smoking in vehicles carrying children under the age of 18 will help protect children and youth from the harmful effects of second-hand tobacco smoke.

This brief provides background information on the health effects of second-hand tobacco smoke and its impact on children, particularly when in the confines of a vehicle. Information on public support for smoking restrictions in vehicles carrying children and information about other jurisdictions are highlighted. The brief concludes with specific policy recommendations.

## Background:

Second-hand tobacco smoke is a major, preventable contributor to acute and chronic adverse health outcomes that affect all Albertans. The predominant source of second-hand tobacco smoke among children is domestic exposure.<sup>2</sup> Infants and children are more severely affected by exposure to second-hand tobacco smoke than adults because they are smaller and have higher respiration rates.<sup>3</sup>

While levels of second-hand tobacco smoke in vehicles can be higher than levels in smoky bars, children in Alberta remain unprotected from exposure in private vehicles. The smoking of a single

<sup>1</sup> Alberta Urban Municipalities Association. *2008 Resolution: C.iii.8 – Smoke-free Vehicles for Children. Adopted.* 2008.

<sup>2</sup> Rees Vaughan W and Connolly Gregory. *Measuring Air Quality to Protect Children from Secondhand Smoke in Cars.* American Journal of Preventative Medicine. 2006

<sup>3</sup> U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the surgeon general.* 2006

cigarette in a car causes alarming increases in RSPs (respirable suspended particles or air contaminants) and carbon monoxide within five minutes.<sup>4</sup>

A 2004 report by Ontario Medical Association indicates that second-hand tobacco smoke is 23 times more toxic in a vehicle than in a house.<sup>5</sup> Even short exposure to second-hand tobacco smoke can trigger an asthma attack in children while affects on lung health have a long term impact.

### **Second-hand Tobacco Smoke:**

Second-hand tobacco smoke is the smoke from a burning cigarette, pipe or cigar. It is also the smoke exhaled by a smoker. No amount of second-hand tobacco smoke is safe. It is a complex mixture containing more than 4,000 chemicals, over 50 of which are known carcinogens.<sup>6</sup> Second-hand tobacco smoke causes premature death and disease in both adults and children. Those exposed to second-hand tobacco smoke for long periods of time are more likely to develop and die from heart disease, respiratory problems and lung cancer. It is estimated to kill more than 1,000 Canadians every year.<sup>7</sup>

### **Impact on Children:**

Children are more severely affected by exposure to second-hand tobacco smoke than adults are, so protecting them from second-hand tobacco smoke is critical. Compared to adults, children absorb more of the harmful chemicals found in tobacco smoke due to their developing lungs, higher breathing rate, and less-developed immune systems.<sup>8</sup> This is because children are smaller, have immature immune systems and higher respiratory rates. Second-hand tobacco smoke increases the risk of leukemia, brain and other childhood cancers, asthma and ear infection in children and is related to sudden infant death syndrome and poor respiratory health.<sup>9</sup>

While overall exposure to second-hand tobacco smoke in public places is decreasing, children are still at risk in private homes and vehicles. As the list of public places prohibiting smoking grows, parents and caregivers may be viewing these alternatives to be among the few places where they can smoke. Being that young people are less able to guard themselves against exposure to second-hand tobacco smoke, it is important that policy is in place to protect them.

<sup>4</sup>Rees Vaughan W and Connolly Gregory. *Measuring Air Quality to Protect Children from Secondhand Smoke in Cars*. American Journal of Preventative Medicine. 2006.

<sup>5</sup> Ontario Medical Association *Exposure to Second-hand smoke: Are we protecting our kids - An OMA Position Paper*. 2004

<sup>6</sup> www.cancer.ca. *Second-hand Smoke is dangerous*. [http://www.cancer.ca/Alberta-NWT/Prevention/Quit%20smoking/Second-hand%20smoke.aspx?sc\\_lang=en&r=1](http://www.cancer.ca/Alberta-NWT/Prevention/Quit%20smoking/Second-hand%20smoke.aspx?sc_lang=en&r=1). Access July 2010

<sup>7</sup> www.cancer.ca. *Second-hand Smoke is dangerous*. [http://www.cancer.ca/Alberta-NWT/Prevention/Quit%20smoking/Second-hand%20smoke.aspx?sc\\_lang=en&r=1](http://www.cancer.ca/Alberta-NWT/Prevention/Quit%20smoking/Second-hand%20smoke.aspx?sc_lang=en&r=1). Access July 2010

<sup>8</sup> Health Canada. *It's Your Health: Second-hand Smoke* [http://www.hc-sc.gc.ca/iyh-vsv/life-vie/shs-fs\\_e.html](http://www.hc-sc.gc.ca/iyh-vsv/life-vie/shs-fs_e.html).

<sup>9</sup> U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the surgeon general*.2006.

## Smoking and Motor Vehicle Collisions:

Children, as passengers within a vehicle operated by a driver who smokes, are exposed to dangerous concentrations of second-hand tobacco smoke. They may also be at risk of more immediate physical harm. This is because smokers are 50% more likely to be involved in a serious motor vehicle collision than non-smokers.<sup>10,11</sup> A 2003 study reveals that smokers have an increased risk of being involved in motor vehicle collisions and identifies the actual distraction caused by the act of smoking as a likely factor.<sup>12</sup> In an analysis of smoking and its relation to distracted driving, it was also found that smokers are more likely to die from injuries sustained in motor vehicle crashes.<sup>13</sup>

## Support for Smoke-free Vehicles when Children are Occupants:<sup>14</sup>

- 81% of Albertans agreed that smoking should be prohibited in cars transporting children and youth under the age of 18.
- 82% of Canadians agreed that smoking should be prohibited in cars transporting children and teenagers under the age of 18.
- Among smokers who responded to the telephone survey, 69% supported the idea.
- A total of 2,032 Canadians took part in the poll. It is considered accurate to within plus or minus 2.2 percentage points, 19 times out of 20.

## Other Jurisdictions:

Laws prohibiting smoking in cars carrying children have been adopted in the Yukon and in the provinces of British Columbia, Saskatchewan, Manitoba, New Brunswick, PEI, Ontario and Nova Scotia. In Alberta, the Town of Okotoks has a smoke-free vehicle bylaw to protect youth under age 16. Canadian provinces currently considering legislation include Newfoundland & Labrador and Quebec.

In the US, Monroe County Indiana, as well as the states of California, Arkansas, Louisiana and Maine all have smoke-free vehicle laws while another 18 states and several municipalities are considering legislation. In Australia, 5 of 7 states have implemented smoke-free vehicle legislation

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<sup>10</sup> Safer Motoring (UK). *Eating and Smoking when Driving*. <http://www.safermotoring.co.uk/DrinkingEatingSmokingWhenDriving.html>. Access July 18, 2010

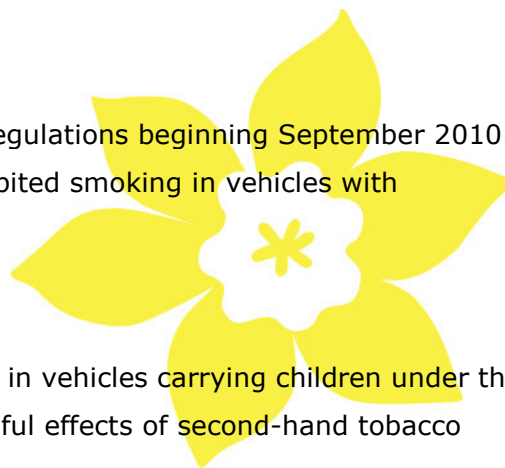
<sup>11</sup> Brisson RJ. *Risk of automobile accidents in cigarette smokers*. Division of Emergency Medicine, Queen's University, Kingston, Ontario. Canadian Journal of Public Health, 1990 Mar-Apr;81(2):102-6.

<sup>12</sup> Sacks, JJ., Nelson. *Smoking and injuries: an overview*. Division of Unintentional Injury Prevention, Centers for Disease Control and Prevention. Preventive Medicine, 1994 Jul;23(4):515-20.

<sup>13</sup> DE. Young, K. & Regan, M. *Driver distraction: A review of the literature*. In: Distracted driving. Sydney, NSW: Australasian College of Road Safety. Pages 379-405. 2007.

<sup>14</sup> Enviroinics Research Group, Canadian Cancer Society. *Attitudes Toward Banning Smoking in Cars*. January 2008.

and a sixth state, Western Australia, will be enforcing new regulations beginning September 2010. Worldwide, South Africa, Cyprus and Puerto Rico have prohibited smoking in vehicles with minors.<sup>15</sup>



### **Policy Recommendations:**

The Canadian Cancer Society believes that banning smoking in vehicles carrying children under the age of 18 will help protect children and youth from the harmful effects of second-hand tobacco smoke.

***The Canadian Cancer Society recommends that Alberta municipalities pass bylaws to prohibit smoking in vehicles transporting children under the age of 18.***

### **Tobacco Facts:**

- Tobacco use is the number one cause of preventable disease, disability and death in Alberta.
- Seven million Canadians have a pre-existing health condition that is aggravated by second-hand tobacco smoke.
- Each year, more than 1000 non-smoking Canadians die from second-hand tobacco smoke.
- Cigarette smoking causes about 30 per cent of cancer deaths in Canada and more than 85 per cent of lung cancers.
- Lung cancer is the leading cause of cancer death for both men and women.
- In 2009 an estimated 23,400 Canadians were diagnosed with lung cancer and approximately 20,500 died from the disease.<sup>16</sup>
- Smokers' Helpline is a free, confidential service offering support, advice and information about quitting smoking and tobacco use. For more information call the Society's Cancer Information Service at 1-888-939-3333 or visit [www.cancer.ca](http://www.cancer.ca)

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The Canadian Cancer Society is a national community-based organization of volunteers and staff whose mission is to eradicate cancer and to enhance the quality of life of people living with cancer. When you want to know more about cancer, visit our website [www.cancer.ca](http://www.cancer.ca) or call our toll-free, bilingual Cancer Information Service at 1 888 939-3333.



<sup>15</sup> Karen Blumenfel. *Smoke-free Vehicles When Children are Present*. GASP, [http://www.njgasp.org/d\\_legis.htm](http://www.njgasp.org/d_legis.htm). Accessed July 2010.

<sup>16</sup> Canadian Cancer Society. *Canadian Cancer Statistics*, [http://www.cancer.ca/Alberta-NWT/About%20cancer/Cancer%20statistics/Canadian%20Cancer%20Statistics.aspx?sc\\_lang=en](http://www.cancer.ca/Alberta-NWT/About%20cancer/Cancer%20statistics/Canadian%20Cancer%20Statistics.aspx?sc_lang=en). Accessed July 2010.