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EFFECTIVENESS OF MAINE LAW BANNING SMOKING IN VEHICLES WITH MINOR PASSENGERS

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You asked about the effectiveness of a Maine law that bans smoking in cars carrying minor passengers.

SUMMARY

The Maine law, effective September 1, 2008, prohibits a driver or passenger in a motor vehicle from smoking when a child age 15 or younger is present. Violators are subject to a \$50 fine or a written warning. According to the Maine Judicial Branch, police cited nine people for violating this law in 2011 and 12 in 2012.

A study of the law conducted for a 2011 master's thesis found a 44% decrease in the prevalence of smoking in a vehicle in which a child was present between the time the law took effect and the fall of 2010.

BACKGROUND

Exposure to second-hand smoke is linked to many child health issues, including sudden infant death, lower respiratory infection, middle ear disease, wheeze, asthma, and meningitis. Children are likely to be at greater risk from exposure due to their faster breathing rates, less developed immune system, and inability to move away from the source in many home and car settings

<http://tobaccocontrol.bmj.com/content/early/2012/01/04/tobaccocon>

[trol-2011-050197](#)). Researchers say that second-hand smoke can be particularly hazardous in the relatively confined space of a car. Opening car windows or vents reduces, but does not eliminate, the danger (http://apps.nccd.cdc.gov/statesystem/common/File_Download.aspx).

Maine is one of four states that have enacted laws banning smoking in vehicles where children are present. The other states are Arkansas, California, and Louisiana. Please see OLR Report [2012-R-0541](#) for more information about these laws.

The Maine law bars smoking in a motor vehicle by an operator or a passenger when a child age 15 or younger is present, regardless of whether the windows are open or closed. Violators are subject to a \$50 fine, but a law enforcement officer may instead issue a written warning (22 Me. Rev. Stat. Ann. § 1549).

OBSERVATIONAL STUDY OF SMOKING IN VEHICLES TRANSPORTING MINORS

A 2011 thesis, written by a student in San Diego State University's Master of Public Health program, examined the effectiveness of the Maine law. According to the thesis, the study "is the first to assess the factors associated with smoking in vehicles with children" (http://sdsu-dspace.calstate.edu/bitstream/handle/10211.10/1041/Callahan_Katie.pdf?sequence=1).

The study was conducted by teams of researchers who observed vehicles during different times of day and in different seasons at seven observation sites in Farmington, Maine. The researchers watched for vehicles carrying children age 13 or younger. (The thesis author chose 13, rather than 16, as the age cut-off to reduce the likelihood of mistakenly identifying passengers age 16 or older as minors.)

Findings and Conclusion

The study recorded observations of 3,937 adults in 3,346 vehicles. Of these adults, 325 (8.26%) were smoking, or riding with a smoker. It found a significantly greater likelihood of seeing people smoking in a vehicle with children in the fall of 2008 than in the fall of 2010. Specifically, it found that the instances of adults seen smoking in vehicles with minor passengers decreased from 13.08% in the fall of 2008 to 7.4% in the fall of 2010, a decline of 44%. Among other things, the study also found that the prevalence of smoking varied by season, with more smoking taking place in colder weather.

The thesis noted that the decrease in smoking in vehicles with children present was unexpected. “Originally, it was hypothesized that there would be a minimal decrease from 2008 to 2010,” the author wrote. “The large significant decrease over time could be a representation of the effectiveness of the law and its impact on behavior change.”

While the study was the first to evaluate the Maine law, the author noted that it had some limitations. For one thing, the data was collected only by observation, and not by questioning vehicle occupants, which would have provided more reliable information. It also was possible that non-smoking vehicle occupants could have been smoking immediately before or after they were observed.

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