



## Household and Vehicle Smoking Rules

### Introduction

Secondhand smoke includes the toxic gases and particulate matter from the burning of various tobacco products [cigarettes, cigars, hookah, etc]. Most exposure to secondhand smoke occurs in the home or workplace, and for children most exposure occurs in the home.<sup>1</sup> Children also are exposed when they ride in vehicles where smoking occurs. Smoking in vehicles under typical driving conditions, even with ventilation, produces unhealthy exposure to secondhand smoke. Studies have found that five minutes of smoking in a car or truck produces, on average, a higher amount of particles that can be breathed into the lungs than that which is found in smoky bars and restaurants.<sup>2,3</sup>

Secondhand smoke is particularly dangerous for children because they are still developing physically, are breathing at higher rates than adults, and have little control over their indoor environment.<sup>4</sup> Secondhand smoke is associated with ear infections, asthma attacks, respiratory symptoms, and respiratory infections in

children. Children exposed to secondhand smoke are more likely to have fluid in the ears and require an ear tube for drainage. Children with asthma have more frequent and severe attacks, which puts the child's life at risk. Secondhand smoke exposure also increases the risk for sudden infant death syndrome (SIDS).<sup>5,6</sup>

Toxic components and byproducts of smoke can persist indoors for a long time, even if it cannot be seen or smelled. Settings that never allow smoking are safest. The only way to protect children, as well as adults, is to eliminate smoking completely in indoor places such as homes. Separating smokers from nonsmokers and opening windows or ventilation systems does not eliminate secondhand smoke exposure.

### Methods

This report used data from the First Grade Health Survey (1GHS), which is conducted biennially on even-numbered years. The 1GHS 2012 sample was selected using a two-stage sampling design. Schools were randomly selected with probability proportional to size, then classes were randomly selected from each participating school. Among the participating classrooms, 1,361 out of 2,118 parents returned completed surveys. These data were weighted to represent all public school first graders statewide. SAS 9.2 was used to perform the analysis. SAS PROC SURVEYFREQ was used to generate descriptive and chi square statistics. Variables were considered statistically significant at  $p < 0.05$ .

### Results

When asked about smoking rules inside their first grader's home, nearly 9 out of 10 parents/guardians responded that no one is allowed to smoke anywhere inside the home. Fewer than 2% allowed smoking anywhere inside the home (Figure 1).

When asked which statement best describes the rules about smoking inside the vehicle their first grader rides in most of the time, more than three-fourths (76.4%) of parents/guardians responded that no one is allowed to smoke inside the vehicle at any time (Figure 2). Fewer than 3% of parents/guardians responded that smoking is allowed at all times inside the vehicle.

There were no associations observed for smoking rules in the vehicle or inside the home between parents of children reported to have asthma compared with parents of children without asthma (data not shown).

#### HIGHLIGHTS

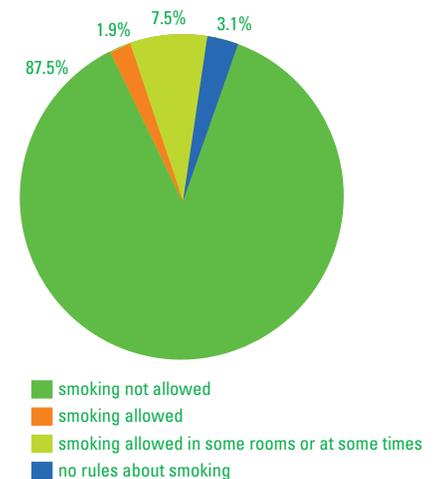
87.5% of parents/guardians did not allow smoking anywhere inside the home at any time.

7.5% allow smoking in some rooms or at some times.

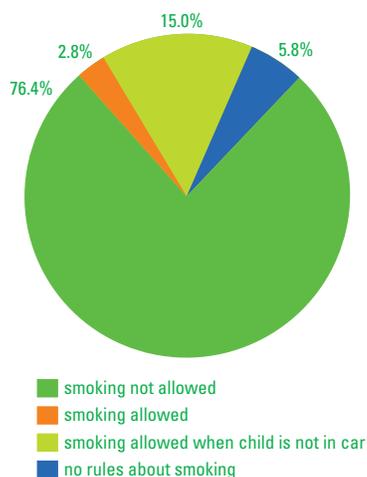
76.4% of parents/guardians did not allow smoking inside the vehicle at any time.

15% of parents/guardians allowed smoking in the vehicle when the child was not in the vehicle.

Figure 1. Smoking Rules Inside the Home (1GHS 2012)



**Figure 2. Smoking Rules Inside the Vehicle**  
(1GHS 2012)



## Limitations

The 1GHS is a cross-sectional study and, therefore, reflects only a snapshot in time. The 2012 1GHS data were weighted to be representative of public school students in the first grade in Oklahoma. First graders who attended private institutions, were home-schooled, or did not attend any school were not represented in this study. Self-reported information may be inaccurate, as some behaviors may be under-reported and other behaviors may be over-reported. Additionally, smoking is predominantly viewed as a negative social behavior; therefore, some parents/guardians may give a more socially desirable response.

## Conclusions

As parents have become increasingly aware of the potential health hazards associated with exposure to secondhand smoke, smoke-free homes and cars have become more common in Oklahoma. However, one out of eight homes in Oklahoma with a first grader in the household allows smoking indoors or has no rules about smoking. For vehicles in which these first graders ride, one in five allows smoking or has no rules about smoking.

Although no associations were observed between asthma status of the child and smoking rules at home or in the vehicle, this may be due to the fact that the majority of

parents/guardians allowed no smoking or restricted smoking in the home (95%) and in the vehicle (91.4%).

There is no safe level of exposure to these toxins.<sup>7</sup> These exposures in homes and vehicles are preventable.

## Recommendations

Parents can help protect their children from secondhand smoke by taking the following actions:

- Do not allow anyone to smoke near your child.
- Do not smoke or allow others to smoke inside the home or car. Opening a window does not protect children from smoke.
- Use a child care center that is smoke free 24/7.<sup>8</sup> Be aware that smoking may be permitted inside some child care centers in private residences during hours when children are not present, but the smoke can remain in the air for some time and becomes more toxic. The toxic particles settle on surfaces where children may play. This can result in exposure of children to harmful secondhand and thirdhand smoke (residue leftover from secondhand smoke).
- Do not take children to restaurants or other indoor public places that allow smoking, even if smoking is permitted only in smoking rooms. Escaped smoke will expose children to secondhand smoke.
- In multi-unit housing, be alert that smoke from one part of the building can spread throughout the structure. Landlords can establish nonsmoking policies for apartment buildings.
- Teach children to stay away from secondhand smoke.

## References

- 1 US Department of Health and Human Services. A Report of the Surgeon General: How Tobacco Smoke Causes Disease: What It Means To You. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010.
- 2 Rees VW, Connolly GN, "Measuring Air Quality to Protect Children from Secondhand Smoke in Cars,"

American Journal of Preventive Medicine 31(5):363-8, October 2006.

- 3 Sendzik, T, et al., "An experimental investigation of tobacco smoke pollution in cars," Toronto, ON: Ontario Tobacco Research Unit, March 2008.
- 4 Environmental Protection Agency. "Health Effects of Exposure to Secondhand Smoke." 1 page. www.epa.gov/smokefre/healtheffects.html. Accessed 7/2/2013.
- 5 US Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General; Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006).
- 6 Jessica Guilfoyle. "Secondhand Smoke, Kids and Cars. Campaign for Tobacco-Free Kids. February 3, 2012. 4 pages
- 7 U.S. Dept. of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General. - [Atlanta, Ga.]: [2006].
- 8 Smoke-free childcare is the law in Oklahoma. However, licensed childcare outside the home must be nonsmoking 24/7. Licensed childcare in private residences must be nonsmoking only during hours that children are present. Harmful components and byproducts of smoke persist, even if not obvious, so childcare settings that never allow smoking inside are safer.

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