



Family Map Captures Secondhand Smoke Exposure

Approximately two in every 5 children (40% of children aged 3 to 11 years) are exposed to secondhand smoke.¹ Previous studies show that children exposed to secondhand smoke are at an array of health risks. For example, exposed children causes acute lower respiratory infections such as bronchitis and pneumonia.^{2,3} These studies also show that children who already have asthma have more frequent and severe attacks when exposed to smoke. Other physical health problems associated with secondhand smoke include cough, phlegm, wheezing, and ear infections.⁴

In a study using data collected with Family Map Inventories (FMI) interviews, educators (N=90) from three Head Start and four Arkansas state-funded early childcare agencies reported. All programs served low-income families in a rural southern state. Interviews were conducted between 2016 and 2017 by educators who received a 6-hour training and ongoing support. Target children (N = 1613) were from 3 to 5 years of age.

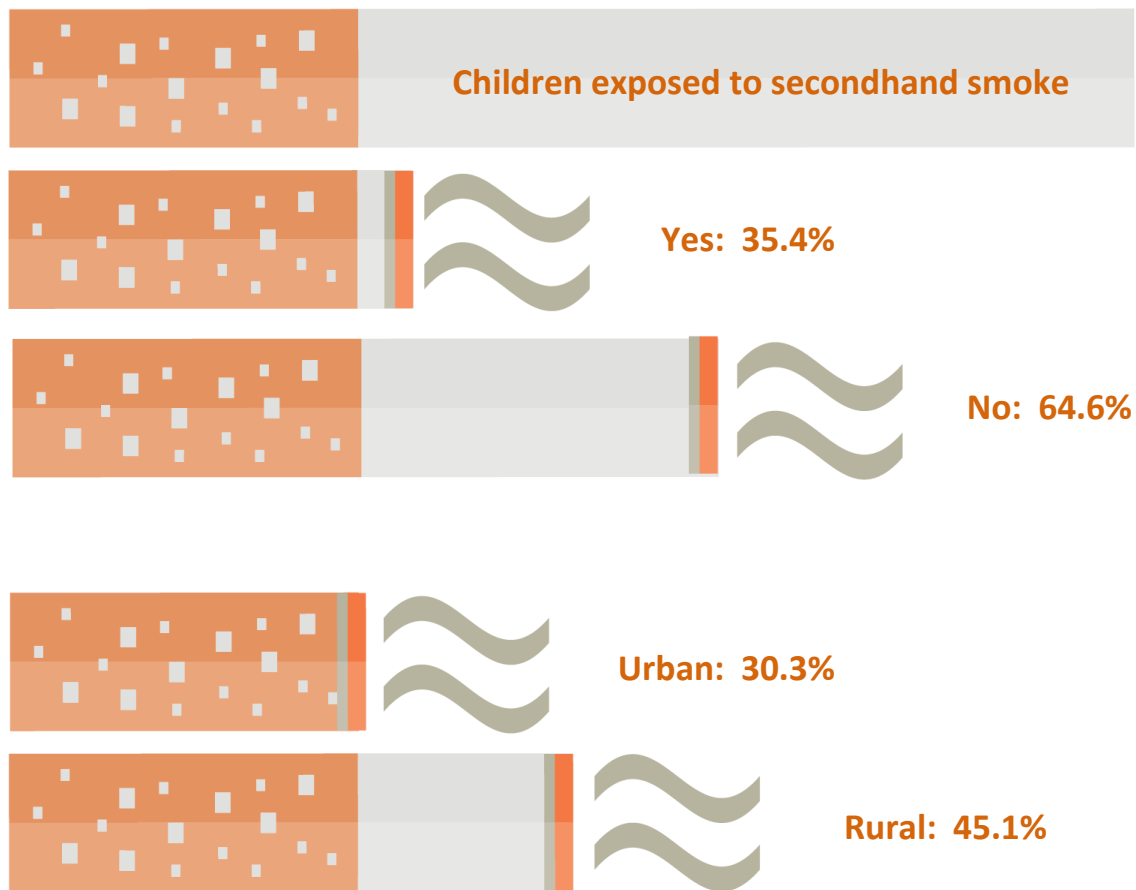
This report summarizes three questions related to secondhand smoke. The first focuses on anyone living in the home, the second on anyone (living in the home or not) smoking in the home, and the third on anyone smoking in the car.

More Rural Children are exposed to Secondhand Smoke than Urban Children

FMI Interview Question	Percent Yes ^b	Percent No ^b	% Rural Smoke	% Urban Smoke
Someone living in home smokes cigarettes	34.1%	65.9%	44.7% **	28.5%
Anyone smoke inside home	9.0%	91.0%	11.5%*	7.8%
Anyone smoke in car	7.1%	92.9%	8.9%	6.2%
Children exposed to secondhand smoke ^a	35.4%	64.6%	45.1%	30.3%

* p< .05, ** p< .01 when comparing rates in rural programs and urban programs

^a From any of the three questions; ^b Total Number reporting = 1605 to 1613



Results show that in this sample, rate (34.1%) is lower than the national averages (40%). However, children in rural homes are more often exposed (44.7% compared to 28.5% urban) to smoke. In follow up analyses, we found that in all the questions, the smoker was most often the primary caregiver. For example, of the 34.1% of person living in the home, 24.7% of these were the primary caregiver. Many of the parents have likely received educational material regarding the impact of smoking; however, the data suggest that this has had a minimal impact.

Most respondents were women (92.7%), but parent gender was not related to smoking. Smoking parents were more likely to have not completed high school or have a GED compared to parents with a high school degree or more education ($\chi^2(5) = 4.38, p = .000$). While children of smokers were not identified as having chronic health problems more often than non-smokers, the respondent was more likely to have an ongoing health problem than non-smokers ($\chi^2(1) = 15.67, p = .000$). Adults in secondhand smoke homes were less likely to participate in any exercise ($\chi^2(3) = 9.52, p = .023$) and more likely to have close friends abusing alcohol or drugs ($\chi^2(1) = 9.75, p = .002$). Finally, parents in homes with secondhand smoke reported depressive symptoms more often than non-smoking homes ($\chi^2(1) = 21.6, p = .000$). These links to smoking and exposure to secondhand smoke exposure are consistent with expectations.⁵⁻⁷

REFERENCES

1. Secondhand Smoke | VitalSigns | CDC. <https://www.cdc.gov/vitalsigns/tobacco/index.html>.
2. General S-, Atlanta G], Dept US. The Health Consequences of Involuntary Exposure to Tobacco Smoke National Library of Medicine Cataloging in Publication. *Heal Hum Serv Centers Dis Control Prev Centers Dis Control Prev*. 2006.
3. (US) C for DC and P, (US) NC for CDP and HP, (US) O on S and H. *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease*. Centers for Disease Control and Prevention (US); 2010. <http://www.ncbi.nlm.nih.gov/pubmed/21452462>.
4. Health CO on S and. Smoking and Tobacco Use; Fact Sheet; Health Effects of Secondhand Smoke. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/health_effects/index.htm.
5. King TK, Marcus BH, Pinto BM, Emmons KM, Abrams DB. Cognitive–Behavioral Mediators of Changing Multiple Behaviors: Smoking and a Sedentary Lifestyle. *Prev Med (Baltim)*. 1996;25(6):684-691.
6. Friend KB, Pagano ME. Smoking cessation and alcohol consumption in individuals in treatment for alcohol use disorders. *J Addict Dis*. 2005;24(2):61-75.
7. Luger TM, Suls J, Vander Weg MW. How robust is the association between smoking and depression in adults? A meta-analysis using linear mixed-effects models. *Addict Behav*. 2014;39(10):1418-1429.