

Summary of Research on Smoke-free Laws in Kentucky

Smoke-free laws dramatically improve air quality.^{1,2}

- Indoor air pollution in restaurants, bars, and other entertainment venues dropped 91% after Lexington's smoke-free law went into effect.
- Lexington's air quality after the law took effect was 17 times better than Louisville's air quality before their partial law took effect.

Smoke-free laws improve workers' health.³

- Hair nicotine levels declined by 56% among smokers and nonsmokers working in restaurants and bars after Lexington's smoke-free ordinance took effect. Bar workers showed a larger decline in hair nicotine levels than restaurant workers.
- Restaurant and bar workers were less likely to report breathing problems after the law took effect, whether or not they smoked.

Smoke-free laws decrease emergency visits for asthma.⁴

- There was a 22% decline in emergency department visits for asthma in the 32 months after Lexington's smoke-free law.

Comprehensive smoke-free laws reduce hospitalizations for COPD.⁵

- People with emphysema living in communities with comprehensive smoke-free policies are 22% less likely to be hospitalized for chronic obstructive pulmonary disease (COPD) compared to those in communities with moderate-weak smoke-free laws or no law.

Comprehensive smoke-free laws reduce heart attacks.⁶

- Among women, heart attacks declined 23% after Lexington's initial law took effect in April 2004. Men were not as likely to be protected by the law since manufacturing facilities and government worksites were not mandated to be smoke-free at that time.
- Lexington strengthened the law to include all workplaces in November 2008.

Comprehensive smoke-free laws reduce new cases of lung cancer.⁷

- Individuals who live in communities with comprehensive smoke-free laws were 7.9% less likely to be diagnosed with lung cancer.
- Moderate or weak laws did not confer the same benefit.

Smoke-free laws decrease smoking rates.⁸⁻¹⁰

- The smoking rate in Fayette county declined nearly 32% (from 25.7% before the smoke-free law to 17.5% after), while smoking rates remained stable in other similar Kentucky counties without smoke-free ordinances.
- Lexington's law resulted in 16,500 fewer smokers for an estimated annual healthcare cost savings of \$21 million.
- The longer smoke-free laws are in effect, the more likely smokers are to reduce cigarette consumption and quit smoking.

Smoke-free laws appeal to the public.¹¹

- There was a significant increase in public support for Lexington's smoke-free law (from 56.7% to 64.0%) six months afterwards.
- Since the smoke-free law took effect, there was a significant jump in perceived importance of smoke-free environments and concern about the harmful effects of exposure to secondhand smoke.

Smoke-free laws do not hurt business.¹²⁻¹⁵

- Restaurant employment increased by about 3% and bar employment remained stable in the 14 months after Lexington's smoke-free ordinance took effect.
- Bingo revenues did not decline after implementation of local smoke-free laws in Kentucky.
- Smoke-free laws did not hurt business in rural or urban areas of KY, with local laws, or Ohio, with a statewide law.
- Ohio's smoke-free law did not help or hurt business in Northern Kentucky restaurants and bars.

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³Hahn E, Rayens M, York N, Okoli C, Zhang M, & Al-Delaimy W. Effects of a smoke-free law on hair nicotine and respiratory symptoms in restaurant and bar workers. *Journal of Occupational and Environmental Medicine*, 2006;48(9):906-913.

⁴Rayens, M.K., Burkhardt, P.V., Zhang, M., Lee, S., Moser, D.K., Mannino, D., & Hahn, E.J. Reduction in asthma-related emergency department visits after implementation of a smoke-free law. *Journal of Allergy and Clinical Immunology*, 2008;122(3):537-541.e533.

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⁷Hahn, E.J., Rayens, M.K., Wiggins, A.T., Gan, W., Brown, H.M., & Mullett, T.W. Lung cancer incidence and the strength of municipal smoke-free ordinances. *Cancer*. 2018;124(2):374-380.

⁸Hahn, E.J., Rayens, M.K., Butler, K.M., Zhang, M., Durbin, E., & Steinke, D. Smoke-free laws and adult smoking prevalence. *Preventive Medicine*, 2008;47:206-209.

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¹⁰Hahn, E.J., Rayens, M.K., Ridner, S.L., Butler, K.M., Zhang, M., & Staten, R.R. Smoke-free laws and smoking and drinking among college students. *Journal of Community Health*, 2010; 35(5):503-511.

¹¹Rayens, M.K., Hahn, E.J., Langley, R.E., Hedgecock, S., Butler, K.M., & Maggio, L. Public opinion and smoke-free laws. *Policy, Politics, & Nursing Practice*, 2007; 8(4): 262-270.

¹²Pyles M, Mullineaux D, Okoli C, & Hahn E. Economic impact of a smoke-free law in a tobacco-growing community. *Tobacco Control*, 2007;16(1):66-68.

¹³Pyles, M.K. & Hahn, E.J. Smoke-free legislation and charitable gaming in Kentucky. *Tobacco Control*, 2009;18:60-62.

¹⁴Pyles, M., & Hahn, E.J. Economic effects of smoke-free laws on rural and urban counties in Kentucky and Ohio. *Nicotine & Tobacco Research*, 2011;14(1):111-115.

¹⁵Pyles, M., & Hahn, E.J. Economic effects of Ohio's smoke-free law on Kentucky and Ohio border counties. *Tobacco Control*, 2011;20(1):73-76.