

## Study shows lower lung cancer rates in communities with strong smoke-free laws

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Credit: University of Kentucky

A recent study by University of Kentucky BREATHE (Bridging Research Efforts and Advocacy Toward Healthy Environments) researchers shows that fewer new cases of lung cancer were found in

communities with strong smoke-free workplace laws.

The study, "Lung Cancer Incidence and the Strength of Municipal Smoke-free Ordinances" was published in *Cancer*, an American Cancer Society journal dedicated to providing clinicians with information on diagnosis, treatment and prevention.

Ellen Hahn, Ph.D., director of BREATHE and professor in the University of Kentucky College of Nursing, and her team studied whether new cases of [lung cancer](#) in Kentucky were lower, higher, or stable in communities with smoke-free laws.

"Kentucky has one of the highest adult cigarette smoking rates and the highest rate of new lung cancer cases in the nation," said Hahn. "Only one-third of Kentuckians are protected by strong smoke-free workplace laws."

Strong smoke-free laws are known to improve public health by lowering heart attacks, stroke, asthma and emphysema. This study is the first to show that new cases of lung cancer are lower when communities enact strong smoke-free laws covering all workers and the public.

Kentucky has more cases of lung cancer than any other state, and its mortality rate is 50 percent higher than the national average. Though other environmental factors play a part in the development of lung cancer, smoking and secondhand smoke exposure are the root cause of the disease.

"The mission of the UK Markey Cancer Center is to reduce the overwhelming burden of cancer in our state," said Dr. Mark Evers, Markey director. "This new study shows that having strong smoke-free workplace laws in place to prevent exposure to secondhand smoke is one more way we can help protect our citizens from this devastating

disease."

Using data compiled from the Kentucky Cancer Registry, the Cancer Research Informatics Shared Resource Facility, and the UK Markey Cancer Center, researchers looked at 20 years of new lung cancer diagnoses among Kentuckians age 50 and over in communities with strong, moderate and weak smoke-free laws. They found that lung cancer incidence was eight percent lower in communities with strong smoke-free workplace laws in comparison to communities without smoke-free laws. Researchers did not find differences in lung cancer rates between communities with moderate or weak smoke-free laws and those without any smoke-free laws.

These findings could be used to prompt legislation to create more communities with strong smoke-free workplace laws in Kentucky.

"Local government can play a critical role in preventing [lung cancer](#)," said Hahn. "Elected officials can ensure that all workers and the public are protected from [secondhand smoke](#) by passing strong smoke-free laws with few or no exceptions."

BREATHE is a multi-disciplinary research, outreach, and practice collaborative of the UK College of Nursing. Its mission is to promote lung health and healthy environments to achieve health equity through research, community outreach and empowerment, advocacy and policy development and access to health services.

**More information:** Ellen J. Hahn et al. Lung cancer incidence and the strength of municipal smoke-free ordinances, *Cancer* (2017). [DOI: 10.1002/cncr.31142](https://doi.org/10.1002/cncr.31142)

Provided by University of Kentucky

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