

**Kenton County's
Smoke-free Ordinance:
A Five Year
Retrospective**

Prepared by
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and the
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Executive Summary

Secondhand smoke is known to be toxic. The U.S. Surgeon General has stated that there is no safe level of exposure.

Due to the known health effects associated with secondhand smoke, Kenton County ordinance 451.15 prohibits smoking in public buildings, establishments in public buildings and places of employment, with exemptions provided for private clubs and any establishment that serves alcohol and does not allow patrons under the age of 18.

Five years after implementation of the ordinance, the Tobacco Free Northern Kentucky Coalition and the Northern Kentucky Health Department have evaluated its effectiveness on three levels: changes in air quality, public opinion and enforcement costs.

Air quality in completely smoke-free environments: Air pollution was reduced to very safe levels, below the Environmental Protection Agency's outdoor air standard.

Air quality in environments that allowed smoking due to exemption: Air pollution was at dangerous levels in those establishments that allowed smoking due to an exemption in the ordinance.

Public opinion: Support for smoke-free policies in Kenton County increased almost 25% between 2007 and 2014, with more than 78% of Kenton County voters indicating in 2014 that they supported smoke-free indoor workplaces.

Enforcement: The Northern Kentucky Health Department was responsible for enforcement of the smoke-free law, including issuing exemptions, responding to complaints and issuing fines.

As of 2016, 62 of 176 eligible businesses (35%) have received an exemption.

Complaints decreased dramatically after the first year, with 48 collected in 2011 versus fewer than 5 collected in 2015.

In 2011, two businesses were issued fines in the amount of \$200, but no businesses have been issued fines since 2011.

Comprehensive smoke-free policies remain the most effective way to protect adults and children from secondhand smoke.

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Background

Secondhand smoke is a mixture of the smoke from the burning end of tobacco products and the smoke exhaled from a smoker. It contains at least 250 chemicals that are known to be toxic.

The U.S. Surgeon General has determined that there is no safe level of exposure to secondhand smoke¹. Immediate health effects of secondhand smoke exposure include eye irritation, headache, cough, sore throat and nausea. Long-term effects include lung cancer, heart disease, stroke, respiratory illnesses, sudden infant death syndrome (SIDS), and an increased risk of ear infections and severe asthma in children².

Secondhand smoke exposure is the third leading cause of preventable death and disease in the United States and it is estimated that nearly 4,100 adults die annually from complications due to secondhand smoke³.

Workers in the hospitality industry are often more adversely affected by secondhand smoke exposure. Restaurant and bar workers have the greatest risk of developing lung cancer and heart disease compared to other occupations⁴.

The most effective way to protect all workers and children from the harmful effects of secondhand smoke is through creation of smoke-free environments⁵.

Smoke-Free Policy Work in Northern Kentucky

2003

The Northern Kentucky District Board of Health, which covers Boone, Campbell, Grant and Kenton Counties, passed a resolution allowing Health Department staff to educate elected officials and members of the public in the region about the dangers of secondhand smoke and the benefits of smoke-free policies. The Health Department participated in this work as part of the Northern Kentucky Action coalition.

2004-2007

Research on public support for smoke-free policy and air quality in local establishments was conducted.

More than 400 Kenton County residents were surveyed in 2004 and, at that time, 53.3% were in favor of eliminating smoking in all worksites (places that allow the public to enter their building)⁶.

In comparison, 57.9% of Boone County residents⁷ and 59.9% of Campbell County residents⁸ were in favor of such a law. Grant County residents were not surveyed at the time.

Indoor air quality was measured inside 28 Kenton County hospitality venues in January 2007. The average level of PM_{2.5} measured in all venues was 199µg/m³. PM_{2.5} is the concentration of particulate matter in the air smaller than 2.5 microns in diameter. Particles of this size are released in significant amounts from burning cigarettes and are easily inhaled deep into the lungs and pose significant health risks to bar and restaurant patrons and workers⁹.

Levels found in Kenton County in the 2007 testing were more than five times higher than the Environmental Protection Agency's exposure limit for particulate matter in outdoor air. The 2007 readings in Kenton County, where smoking was allowed, were also 11 times higher than the PM_{2.5} levels measured in Lexington after that city/county adopted a smoke-free ordinance⁹.

Similarly high levels of PM_{2.5} were also measured in Boone and Campbell Counties during this time period. The average level in Boone County was 157µg/m³¹⁰. In Campbell County, the average was 287µg/m³¹¹. Grant County was not measured at this time.

2007-2010

Grassroots efforts to educate and advocate for smoke-free policy throughout Northern Kentucky continued.

2010

On September 15, 2010, the Northern Kentucky District Board of Health agreed that its staff could provide enforcement of local smoke-free ordinances.

On December 21, 2010, the Kenton County Fiscal Court approved ordinance 451.15, prohibiting smoking in public buildings, establishments in public buildings and places of employment. The law does not apply to houses (unless used as licensed child care, adult day care or health care facility), private clubs, hotel rooms or drinking establishments that have been approved for an exemption by the Health Department.

The Northern Kentucky Health Department was designated with implementing and enforcing the ordinance.

The ordinance went into effect on April 15, 2011.

A comprehensive smoke-free ordinance was enacted by the Campbell County Fiscal Court on December 15, 2010; however, that ordinance was repealed on February 16, 2011, before implementation.

While there was discussion of a smoke-free law in Boone County, a measure was not brought before elected officials.

Implementation of the Kenton County Smoke-Free Workplace Law

From January through April of 2011, the Health Department worked to educate Kenton County businesses that would be affected by the ordinance. Topics covered included the specifics of the law, the enforcement date, enforcement procedures, and information for employees about cessation. This work reached the 3,000 businesses affected by the ordinance.

The Health Department also educated the public about the ordinance, with development of window decals, frequently asked questions and pages on the Health Department website. Besides spelling out the requirements of the law, the materials also provided details on how to report a violation.

Enforcement of the Kenton County Smoke-Free Workplace Law

Health Department staff who already inspect local bars and restaurants for food safety were tasked with enforcement of the smoke-free ordinance.

Health Department staff developed policies and procedures for issuing exemptions to establishments who met the criteria, accepting complaints from the public and investigating complaints.

Exemptions

Businesses that meet the following criteria are eligible for an exemption:

The establishment has a liquor license AND

- No one under 18 is admitted or employed at the establishment.
- Spilt shift: Prior to 4p.m., the establishment is smoke-free and all ages may enter. After 4 p.m., no one under 18 is admitted or employed at the establishment and smoking is allowed.
- Smoking is permitted in an enclosed area within the establishment that has a separate entrance and ventilation system and does not allow anyone under 18.

OR

- The establishment is a private club.

Number of businesses with approved exemptions	
April 2011	62
April 2012	78
April 2016	62

As of 2016, 62 of 176 eligible businesses (35%) have received an exemption. In order to be approved as an exempted business, the business must apply and be approved.

Complaints

The Health Department set up a system to accept smoke-free complaints via phone and email. Complaints received are investigated within three business days. Establishments are provided education on compliance with the ordinance and warned or cited accordingly.

Based on experiences with implementation of smoke-free ordinances in Lexington and Louisville, when the law passed, it was expected that the Health Department would receive approximately 600 complaints in the first year of the ordinance. The number of actual complaints in the first year fell far below this estimate, at only 48. That number has continued to decrease dramatically in the years after implementation, as seen in Figure 1.

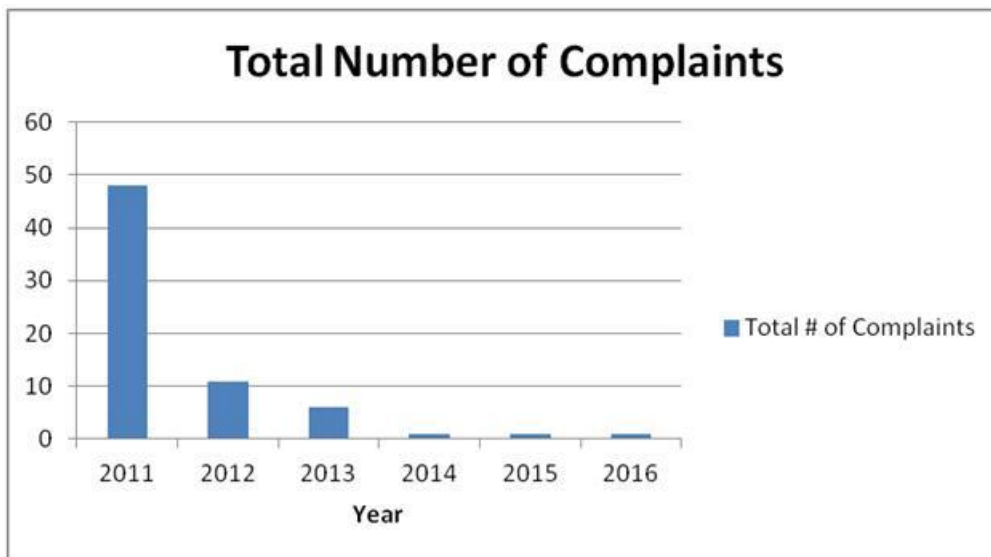


Figure 1

Violations

Violations of the law have also been minimal, as seen in Figure 2.

As outlined in the ordinance, the penalties for a violation are a warning for the first offense, a \$100 fine for the next offense in the same calendar year, and a \$250 fine for each subsequent offense in the same year.

In 2011, two businesses were issued fines in the amount of \$200, but no businesses have been issued fines since.

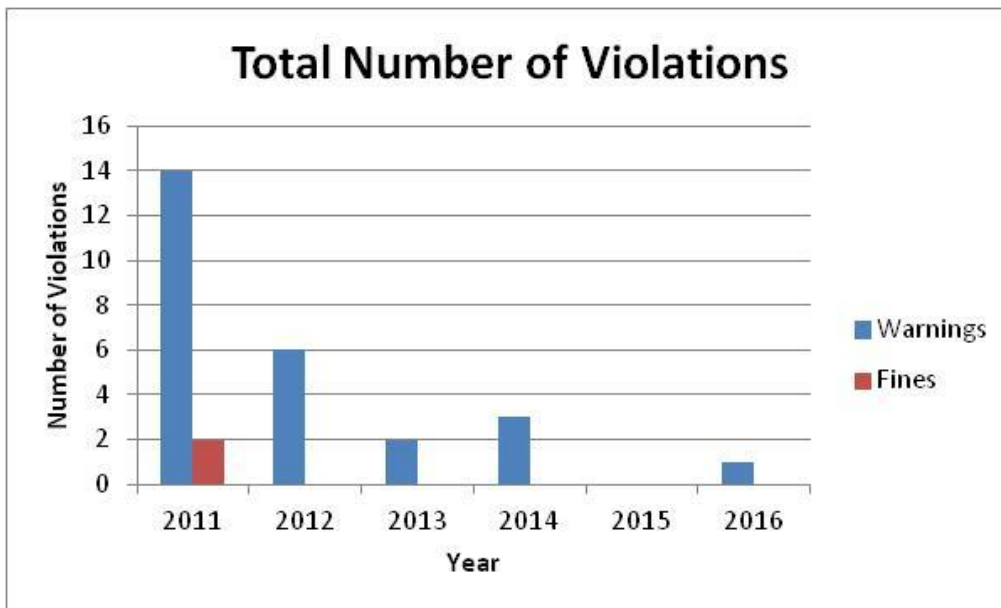


Figure 2

Cost of enforcement

As shown by the low number of complaints and violations issued, Kenton County businesses and their patrons are largely compliant with the smoke-free law. Costs to enforce the ordinance have been minimal.

Impact of Smoke-Free Workplace Laws

Public opinion

In a 2014 survey of 200 Kenton County residents, 78% indicated that they supported smoke-free indoor workplaces, an increase of almost 25% since 2007¹².

Support was regional, with 74% in Boone County, 63% in Campbell County and 64% in Grant County favoring smoke-free workplace policies¹². Survey data are represented in Figure 3.

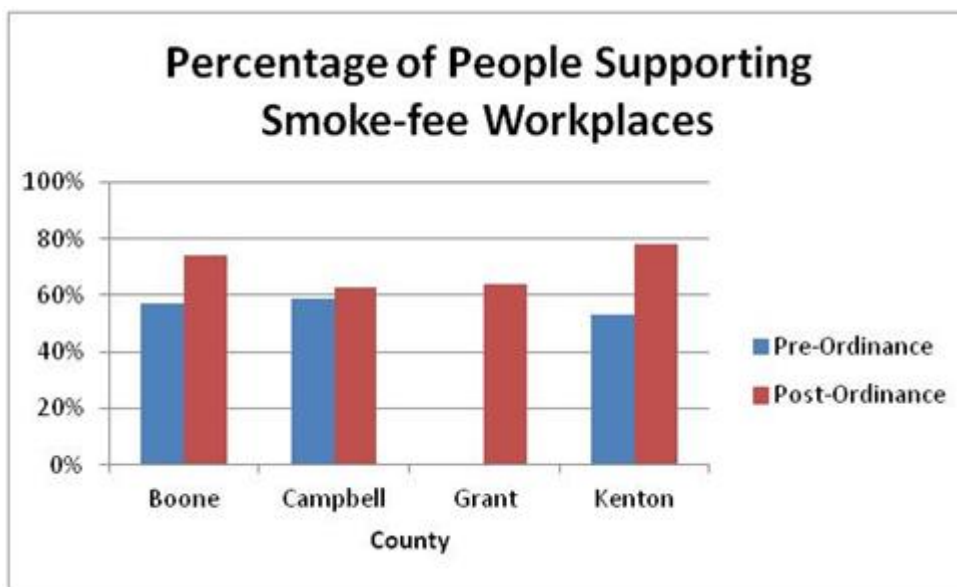


Figure 3

Air quality

2011

Soon after implementation of the ordinance, the Health Department measured air quality in smoking and non-smoking venues in Kenton County to assess the effect the ordinance had on indoor air quality.

Nineteen venues were tested from May to June 2011. Eleven of these venues were non-smoking and had an

PM_{2.5}: The concentration of particulate matter in the air smaller than 2.5 microns in diameter. Particles of this size are released in significant amounts from burning cigarettes and are easily inhaled deep into the lungs and pose significant health risks⁹

average $PM_{2.5}$ of $13\mu g/m^3$, showing an 89.4% decrease in particulate matter only two months after the ordinance was implemented¹³.

Air quality readings also showed that split-shift operation, where smoking is permitted during certain times and prohibited at others, had an impact on air quality. The $PM_{2.5}$ levels in three split shift venues averaged $63\mu g/m^3$ ($37\mu g/m^3$ when smoking was not allowed and $104\mu g/m^3$ when smoking allowed)¹².

In the five establishments allowing smoking at all times, the $PM_{2.5}$ was $147\mu g/m^3$ ¹².

2013-2015

Air quality was also measured in 2013 in Boone, Grant and Campbell Counties. All three counties continued to display the trend of lower $PM_{2.5}$ levels in non-smoking venues compared to venues that allow smoking¹⁴. Details of the air quality monitoring can be seen in Figure 4.

To assess the impact of the Kenton County ordinance, air quality was measured in 18 establishments in Kenton County from July to November 2015, with nine allowing smoking and nine non-smoking. The data showed that the average $PM_{2.5}$ level in non-smoking venues was $13\mu g/m^3$, well below the EPA standard for outdoor air pollution. In contrast, the $PM_{2.5}$ level in venues that allowed smoking was 15.9 times higher, at $207\mu g/m^3$, than the non-smoking venues¹⁵.

A comparison of air quality in smoking venues in all four counties from 2004-2015 can be seen in Figure 5. Kenton County air quality in non smoking and smoking venues can be seen in Figure 6.

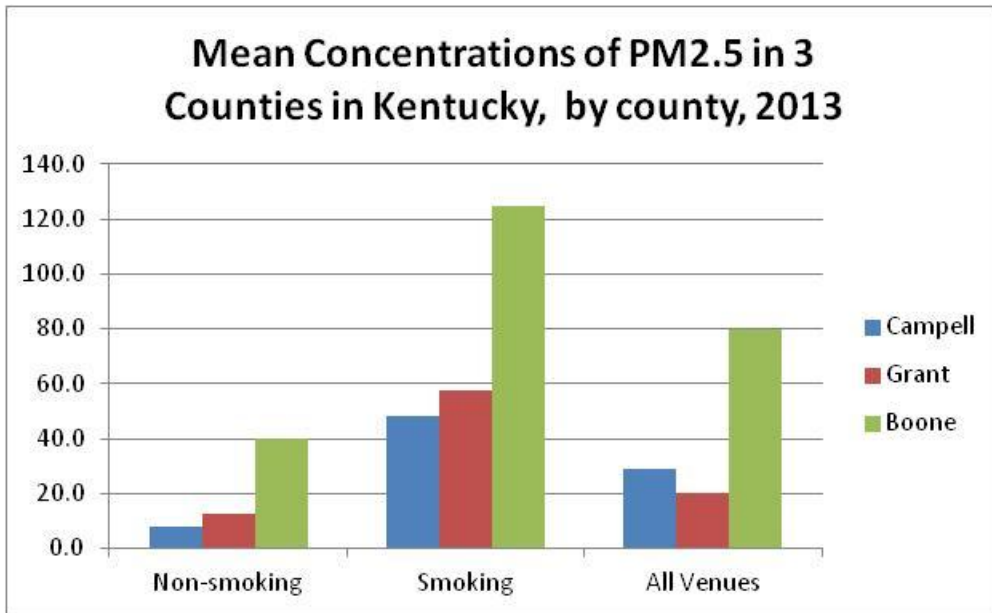


Figure 4

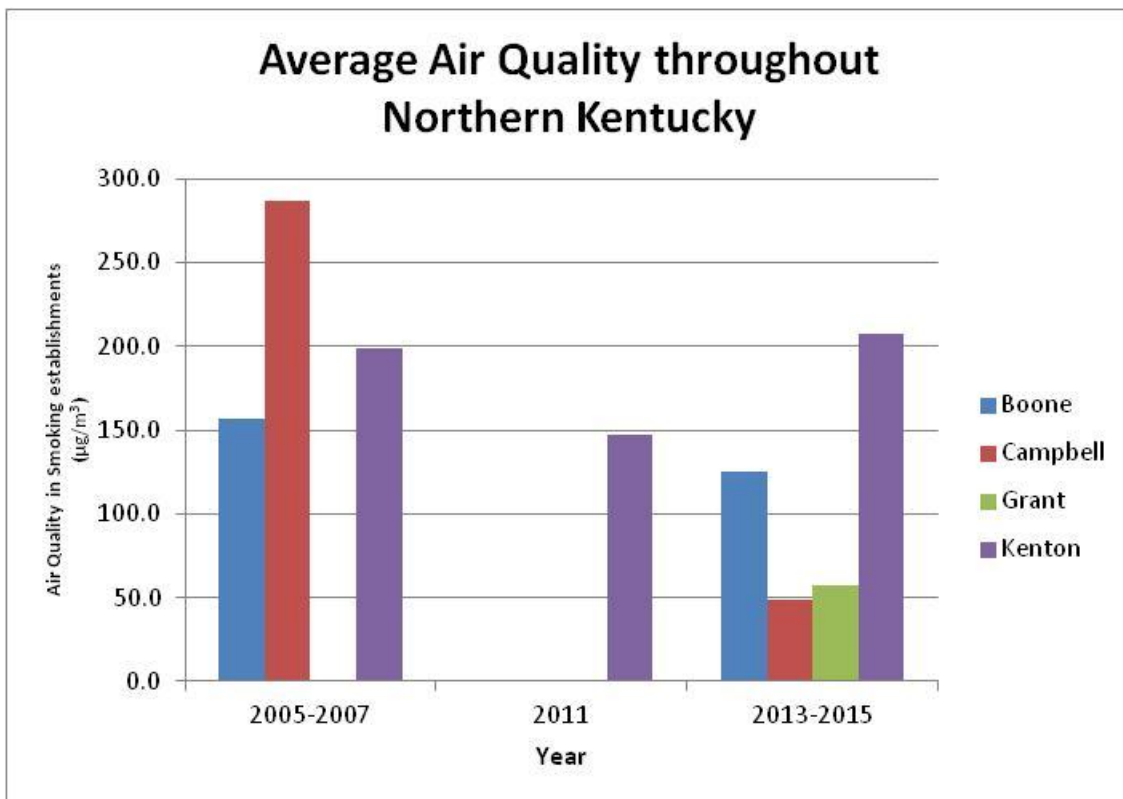


Figure 5

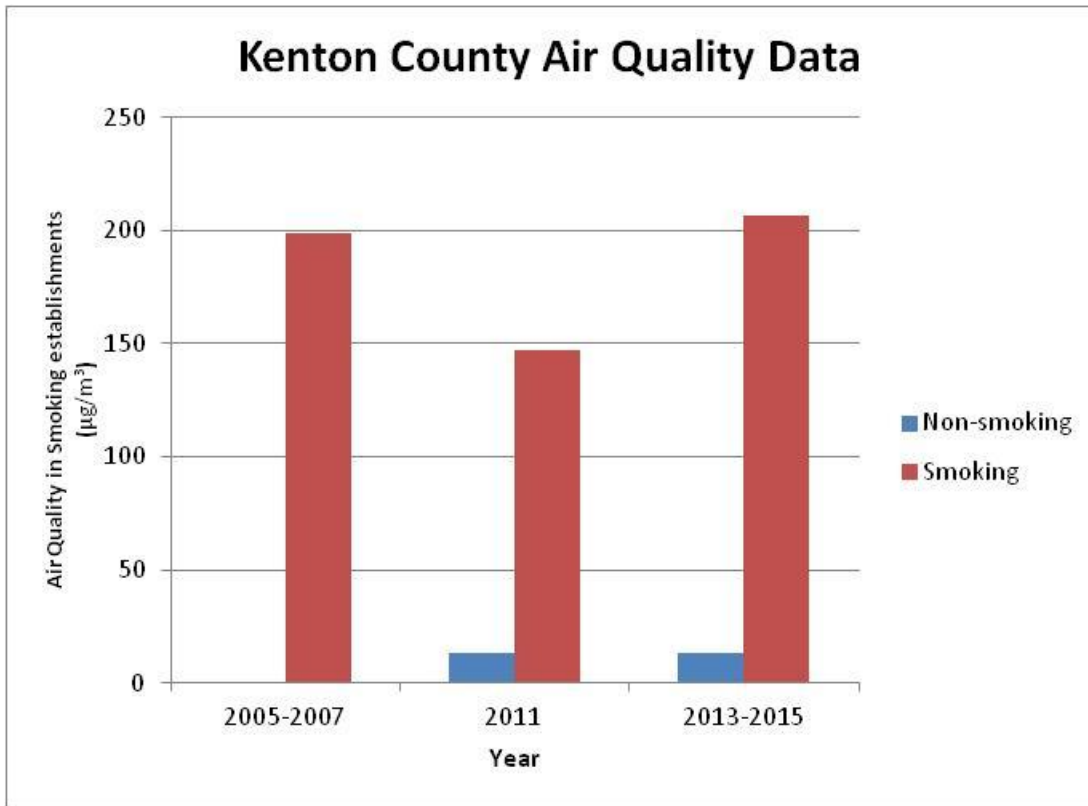


Figure 6

Conclusions

As the data from five years in Kenton County have proven, air pollution due to secondhand smoke can be reduced immediately after passage of an ordinance in those establishments that are completely smoke-free. These results indicate the near immediate health and environmental benefits that can be seen when smoke-free environments are created.

While the air quality in non-smoking venues has remained stable over the last five years, air quality in venues that allow smoking has remained poor. This phenomenon was seen in Louisville, where a smoke-free law with exemptions was enacted in 2005. Air pollution levels in smoking establishments (granted an exemption) rose slightly after the partial law went into effect. In 2007, the Louisville law was amended to contain no exemptions and indoor air pollution levels reduced to very safe levels¹⁶.

Creating 100% smoke-free environments is the best way to protect workers from being exposed to high levels of toxic chemicals which can have serious health effects.

Kenton County's smoke-free ordinance has been largely self enforcing and has not placed undue financial strain on the agency tasked with enforcement. Therefore, it is reasonable to expect that if smoke-free laws were expanded in Kenton County or other counties throughout the region, enforcement could be successfully accomplished without major financial burden to the public.

Finally, support for such policies is increasing, with eight out of 10 Kenton County voters agreeing that smoking should never be allowed indoors in workplaces¹².

Looking forward

The benefits of smoke-free laws are numerous. Such policies reduce exposure to secondhand smoke, reduce rates of tobacco use by making it easier for smokers to quit, and create a social norm for future generations that tobacco use is dangerous and should be avoided¹.

These effects are best felt when laws are comprehensive, meaning all workplaces and indoor public places are covered by the law with no exceptions. In Lexington, a comprehensive city wide smoke-free ordinance was seen to have a 22% decline in emergency department visits for asthma in the first 32 months after the ordinance was implemented.

Studies have also shown that people with chronic lung disease living in Kentucky communities with comprehensive smoke-free policies are 22% less likely to be hospitalized for Chronic Obstructive Pulmonary Disease than those in places with partial or no laws¹⁴. Those living in areas with a comprehensive smoke-free law are less likely to be hospitalized for serious heart problems than those with a partial law¹⁴.

Workers living in areas with partial or no smoke-free laws are vulnerable to the effects of secondhand smoke. Working a 6-8 hour shift in a smoky bar or restaurant is the equivalent to smoking nearly a pack of cigarettes¹⁷. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate exposure to secondhand smoke¹. All workers are deserving of equal protection.

Eliminating secondhand smoke in the workplace would save healthcare costs, cleaning and maintenance costs, and improve worker productivity¹⁸.

As of February 2016, 25 municipalities in Kentucky have 100% smoke-free workplace laws, protecting 32.7% of the population¹⁴. If these protections were extended to the rest of the state, the American Cancer Society estimates that in the first five years, a total of 50,080 Kentucky adults would quit smoking, 20,000 youth would never start smoking, and 3,400 fewer non smokers would die due to secondhand smoke exposure¹⁹.

Smoke-free laws also have many cost saving benefits. Kentucky spends \$1.92 billion a year in health care costs treating smoking-related illnesses, with \$487 million of that spent through Medicaid. Smoking related illness and death also costs Kentucky \$2.3 billion a year in lost productivity²⁰.

The American Cancer Society predicts that more than \$52 million will be saved in lung cancer, heart attack and stroke costs if 100% of workplaces in Kentucky were smoke-free¹⁹.

Comprehensive smoke-free policies are common nationwide, with an estimated 1,275 municipalities in 41 states implementing such laws²¹.

Health organizations have endorsed such policies, too. Comprehensive secondhand smoke policies covering 100% of the population are a strategy recommended by the Centers for Disease Control and Prevention, the American Cancer Society, the American Lung Association, and several other health care organizations.

Expanding secondhand smoke protections policies to 100% of Kentuckians is a simple and cost effective way to save thousands of lives.

Acknowledgements

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