



Tobacco *Free* Kansas Coalition, Inc.

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News Release

Emporia Indoor Air Quality Testing Shows Unsafe Levels of Air Pollution in Smoking Establishments

Emporia, KS. April 3, 2009: A pilot study last month involving five restaurant and bar locations in Emporia showed unsafe levels of fine particle air pollution in establishments that allowed indoor smoking. The air quality testing included two restaurants, one of which was smoke free, and three bars. The testing in Emporia found that fine particle pollution from smoking fell into the hazardous range as defined by the EPA. Combustion from cigarette smoking is a major source of indoor particulate matter pollution.

“Studies show that exposures for an employee working an eight hour shift in a smoky bar is the equivalent of smoking 16 cigarettes,” said Mary Jayne Hellebust of Tobacco Free Kansas, the organization that coordinated the study. Emporia is the first of several Kansas communities that will be tested on indoor air quality this year.

The air quality testing was conducted in March of this year during the hours between 6 pm and 11 pm. The Emporia results were compared to EPA outdoor standards since the US does not regulate indoor air quality for particulate matter. When compared to the outdoor air quality standards, the smoking establishments fell into the hazardous air quality category. One Emporia bar had particulate ratings of 752, approximately three times the hazardous level.

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“This measurement is consistent with the US Surgeon General and published studies that indicate indoor smoking causes exposure to harmful levels of indoor air pollution,” Hellebust said. “The only effective means to eliminate the health risks from these exposures are comprehensive smoke free indoor air policies.”

Using industry standard instruments, the testing measured 2.5 microns particulate matter known as PM2.5 which is believed to pose the greatest health risks because of the small size which can lodge deeply into the lungs. The testing protocol and process were developed by nationally recognized experts in air quality testing at the Roswell Park Cancer Institute in New York

Studies show that particles less than 2.5 microns in diameter that are released in significant amounts from burning cigarettes are easily inhaled and cause a variety of adverse health effects including cardiovascular and respiratory disease and death.

“The bottom line for Emporia residents exposed to indoor second hand smoke in public places and workplaces is increased risk of heart attacks, asthma attacks, cardiac arrhythmias, bronchitis, and respiratory symptoms that translate into increased hospital admissions, emergency room visits, and absences from school or work.” Hellebust said.

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City of Emporia Indoor Air Quality Measurement

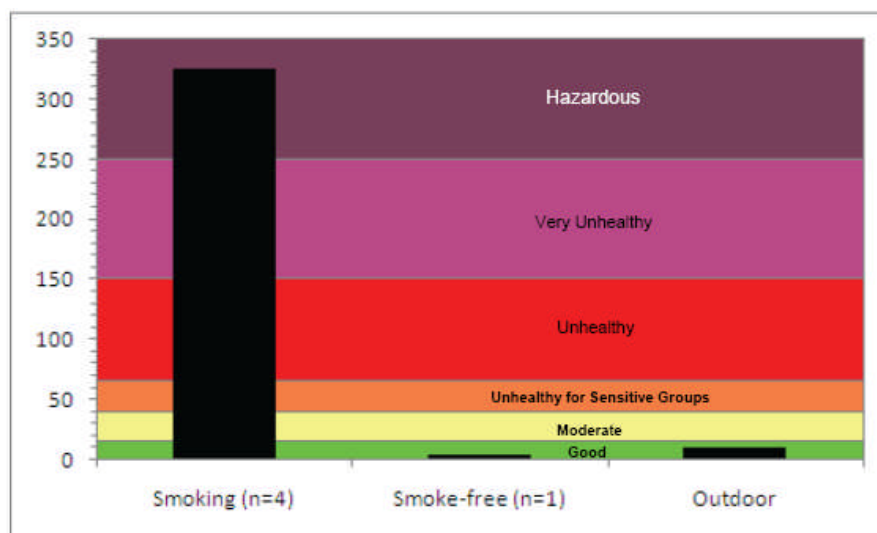
EXECUTIVE SUMMARY

As a pilot study for a long-term, statewide investigation, indoor air quality was assessed in a convenience sample of 5 hospitality locations in Emporia, KS in March 2009; four locations permitted smoking, and the fifth did not. The concentration of fine particle air pollution, PM_{2.5}, was measured with a TSI SidePak AM510 Personal Aerosol Monitor. PM_{2.5} is particulate matter in the air smaller than 2.5 microns in diameter. Particles of this size are released in significant amounts from burning cigarettes, are easily inhaled deep into the lungs, and cause a variety of adverse health effects including cardiovascular and respiratory disease and death.

Key findings of the pilot study include:

- The average level of fine particle indoor air pollution in sampled Emporia businesses that allow smoking was 72 times higher than the observed smoke-free restaurant, and 32 times higher compared to the average outdoor air monitored on the same evening. (Mean PM_{2.5} concentration in Emporia smoking venues 325.1 µg/m³ versus 4.5 µg/m³ in the nonsmoking establishment and 10.3 µg/m³ outdoors).
- Employees working full-time in the establishments permitting smoking would be exposed, on nights like the one sampled, to fine particle air pollution levels 9.3 times higher than the average 24-hour safe limit established by the U.S. Environmental Protection Agency (EPA).^a
- The PM_{2.5} level in the non-smoking section of a smoking-allowed restaurant was five times higher than that measured in the comparable non-smoking restaurant. (Mean PM_{2.5} concentration 22.5 µg/m³ versus 4.5 µg/m³).

Consistent with US Surgeon General and published studies on the subject,^{b,c,d} this pilot study indicates that indoor smoking permits exposure to harmful levels of indoor air pollution and that a comprehensive smoke-free air policy prohibiting indoor smoking is the only effective means to eliminate the health risks from this exposure.



^a http://www.epa.gov/air/particlepollution/pdfs/20060921_factsheet.pdf, Accessed 3/30/2009

^b Travers MJ, Cummings KM, Hyland A, Repace J, Babb S, Pechacek T, Caraballo R. Indoor air quality in hospitality venues before and after implementation of a clean indoor air law - Western New York, 2003. *Morbidity Mortality Weekly Report*. 2004;53(44):1038-1041.

^c Repace JL, Hyde JN, Brugge D. Air pollution in Boston bars before and after a smoking ban. *BMC Public Health* 2006;6(266)

^d Hyland A, Travers MJ, Dresler C, Higbee C, Cummings KM. A 32-country comparison of tobacco smoke derived particle levels in indoor public places. *Tobacco Control* 2008;17:159-165

Provided by:

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