

Smoking ban reduces emergency room admissions

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Workplace smoking bans are gaining ground globally, and one study has shown that they may have significant health effects. The study, conducted by researchers in Dublin, found that emergency room admissions due to respiratory illness dropped significantly in Ireland after the implementation of a workplace smoking ban, compared to admissions that took place before the ban went into effect.

The study will be presented at the ATS 2011 International Conference in Denver.

The nationwide workplace [smoking ban](#) was introduced in Ireland in March 2004. Although previous studies have shown workplace smoking bans lead to reduced [systemic inflammation](#) and improved [respiratory health](#), as well as reduced emergency admissions due to acute coronary syndromes, Imran Sulaiman, MD, pulmonology resident at Galway University Hospitals, Galway, Ireland, who led the study, said there was little data concerning the effect of such bans on respiratory illness in an adult, working-age population.

"Comparing admissions prior to and after the smoking ban in Ireland we saw a significant reduction in emergency admissions due to cardiopulmonary disease with a trend towards reduced respiratory illness admissions," said Dr. Sulaiman.

"The most pronounced reduction in admissions was in the 20- to 29-year-old age group," added Dr. Sulaiman, who completed the study while a

resident at Adelaide and Meath Hospital in Dublin.

The researchers also noted a significant reduction in asthma-related admissions as well as a reduction in admissions related to [acute coronary syndrome](#).

To conduct their study, the researchers evaluated data from the Hospital Inpatient Enquiry (HIPE), a computer-based database system designed to collect demographic, clinical and administrative data on discharges and deaths from hospitals nationwide. Admissions data relating to emergency pulmonary, cardiac and cerebrovascular hospital admissions for the two years preceding, and the two years succeeding the implementation of the smoking ban were collected, and population, weather, pollution and influenza data for the same time periods were obtained from the official sources.

The researchers used the data to evaluate any change in emergency admissions due to all pulmonary disease and combined cardio-pulmonary illness between the two periods. In addition, they examined admissions due to specific pulmonary diagnoses, acute coronary syndrome and acute cerebrovascular syndrome. The analysis was divided into age and gender groups, and restricted to the working-age population (age 20-70 years).

There was a significant reduction in emergency [hospital admissions](#) due to cardio-pulmonary disease in the two years following the smoking ban, and a trend towards reduced pulmonary admissions. The most pronounced decrease in pulmonary admissions was observed in the 20- to 29-year-old age group. A significant decrease also was seen in emergency asthma admissions, and there was a trend towards fewer admissions with acute coronary syndrome, especially among men aged 50 to 59 years and 0 to 69 years. No difference was observed in cerebrovascular disease.

"The reductions in these admissions may result from reduced exposure of vulnerable individuals to environmental tobacco smoke," Dr. Sulaiman said. "These results further emphasize the benefit of reducing secondhand smoke exposure.

"We already know the disastrous effects smoking has on our health," he continued. "This study further proves that the implementation of a workplace smoking ban improves general health and also reduces hospital burden by respiratory illness, one of the most common illnesses to present to the emergency services."

Further research should be done to confirm this study's findings, and to compile data from other countries that have implemented workplace smoking bans, he said.

Provided by American Thoracic Society

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