

## Fewer fatal heart attacks may be linked to Massachusetts smoking ban

October 8 2010, By Randy Dotinga

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A new study finds that the number of deadly heart attacks in Massachusetts fell by more than 7 percent after the state outlawed smoking in workplaces, a possible sign that the ban contributed to better health as fewer people found themselves around smoke.

After adjusting the numbers so that factors like [demographics](#) would not throw them off, researchers found that the number of deaths dipped much more in cities and towns that did not have a workplace ban in place previously.

“These results suggest that smoke-free air laws are working,” said study co-author Melanie Dove, a post-doctoral researcher at the University of California at Irvine.

The study does not confirm that the ban led directly to fewer heart attack deaths, however, and a researcher familiar with the study questioned whether the findings actually reveal anything about the smoking ban's effects.

Other studies have looked at the effects of workplace smoking bans, but this one is unique because it compared places that had previous bans to those that did not, said Dove, who worked on the study while at the Harvard School of Public Health.

The study authors compared fatal heart attack rates in Massachusetts's cities and towns from 1999 to 2006, focusing on deaths among those

ages 35 and older. The state banned smoking in workplaces, including restaurants and bars, in 2004.

The researchers found that 26,982 people died of heart attacks during the period. After the ban went into effect, the number of heart attacks fell by 26 percent in cities and towns that did not have previous bans while it went down by 21 percent in those that did.

After the study authors adjusted the numbers, they found that the heart attack rates went down by 9 percent in cities and towns without bans, while rising by 1 percent among the others.

The study appears online and in the November issue of the *American Journal of Public Health*.

Dove acknowledged that the study has limitations. For example, it does not look at the numbers of heart attacks in other states to see if they went up or down during that time. For that and other reasons, she said, it is difficult to tell if the decrease could be the result of better overall medical care.

Dr. Michael Siegel, a professor at Boston University School of Public Health, said the major differences between the initial and adjusted fatal heart attack statistics raise questions about whether the adjustment threw off the results. He has no affiliation with the study.

Siegel said the study's lack of an overall perspective on heart attack deaths is a major problem. "We don't know what the decline would have been with the absence of the state [smoking ban](#)," he said. The lower [heart attack](#) death rate "could have had to do with better treatments, increased rate of statin drug use, advanced techniques for heart disease control. That's the biggest limitation of the study, and because of that the conclusions have to be viewed with great caution."

**More information:** Dove M, et al. The impact of Massachusetts' smoke-free workplace laws on acute myocardial infarction deaths. *Am J Public Health* 100(12), 2010.

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