

Millions of lives saved since surgeon general's tobacco warning 50 years ago

January 21 2014



An estimated 8 million lives have been saved in the United States as a result of smoking measures that began 50 years ago this month, according to a Yale-led study co-authored by three University of Michigan School of Public Health researchers.

The researchers measured the impact of the groundbreaking report from



the U.S. surgeon general outlining the deadly consequences of tobacco use and the era of <u>tobacco control</u> that ensued. The analysis is published in the *Journal of the American Medical Association*.

The study used mathematical models to calculate the long-term effect of the seminal report, and subsequent anti-smoking measures, over the past half-century. These cumulative efforts have significantly reshaped public attitudes and behaviors concerning cigarettes and other forms of tobacco, the researchers note.

First author Theodore Holford, professor of biostatistics and member of the Yale Cancer Center, and six other researchers—five affiliated with the National Cancer Institute Cancer Intervention and Surveillance Modeling Network (CISNET)—found that while some 17.6 million Americans have died since 1964 due to smoking-related causes, 8 million lives have been saved as a result of increasingly stringent tobacco-control measures that commenced after the report's Jan. 11, 1964, release.

Of the lives saved, approximately 5.3 million were men and 2.7 million were women. The total number of saved lives translates into an estimated 157 million years of life, a mean of 19.6 years for each beneficiary, report the researchers.

"An estimated 31 percent of premature deaths were avoided by this effort, but even more encouraging is the steady progress that was achieved over the past half-century, beginning with a modest 11 percent in the first decade to 48 percent of the estimate of what we would have seen from 2004 to 2012 in the absence of tobacco control," Holford said.

"Today, a 40-year-old man can expect on average to live 7.8 years longer than he would have in 1964, and 30 percent of that improvement can be attributed to tobacco control. The gains for women have been slightly



less, 5.4 years, but tobacco control accounts for 29 percent of that benefit."

Using data collected by the National Center for Health Statistics from 1965 to 2009, the team recreated smoking life history summaries for groups born each year starting in 1864. These were used along with national mortality statistics and studies that followed large populations to calculate mortality rates by smoking status. This allowed them to estimate the impact of alternative scenarios for what might have occurred had the era of tobacco control never happened.

Rafael Meza, assistant professor of epidemiology at the U-M School of Public Health and coordinating principal investigator of the CISNET Lung Group, said that although previous studies also have tried to quantify the benefits of tobacco control, this is the most comprehensive and up-to-date examination of the gains in life expectancy and deaths prevented due to tobacco control in the U.S. since 1964.

"We carefully recreated the changes in smoking prevalence and mortality rates by gender, age and smoking status for all U.S. birth-cohorts going back to 1864, and then explored what would have happened in the absence of tobacco control," Meza said.

The 1964 tobacco warning was released by then-U.S. Surgeon General Luther Terry. It is seen by many as a pivotal moment in American public health and as the opening salvo in an ongoing effort to convince people to stop smoking.

Terry convened a committee of specialists who reviewed some 7,000 scientific articles and worked with more than 150 consultants to formulate the report's findings. It was released on a Saturday in order to generate maximum media coverage in Sunday's newspapers. Years after its publication, Terry referred to the report's release as a "bombshell."



The report has since spawned numerous other efforts at various levels of government to curb smoking. This has included the now-familiar surgeon general's warning on the side of cigarette packages, as well as increased taxation, restrictions on advertising and limiting public areas where people can smoke, along with programs and products to help people kick their smoking habits.

While the percentage of smokers in the U.S. has decreased significantly over the past several decades, there are still an estimated 44 million Americans who smoke, or about 20 percent of the U.S. population.

"Tobacco control represents one of the greatest <u>public health</u> success stories of the past half century," said co-author Kenneth Warner, the Avedis Donabedian Distinguished University Professor of Public Health at U-M. "At the same time, smoking—the source of one of every five deaths in the United States—remains the single most important cause of avoidable premature mortality in our society. We have to attack the problem with renewed commitment, utilizing both the interventions documented to reduce smoking and perhaps new regulatory approaches.

"The job of tobacco control is far from done."

Provided by University of Michigan

Citation: Millions of lives saved since surgeon general's tobacco warning 50 years ago (2014, January 21) retrieved 9 April 2024 from https://medicalxpress.com/news/2014-01-millions-surgeon-tobacco-years.html

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