

Tobacco cessation medication may reduce hospitalization for heart attacks

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The use of tobacco cessation medication in a population may lead to reduced hospital admissions for heart attacks and for coronary atherosclerosis within the two years after use according to a study by Thomas Land and colleagues from the Massachusetts Tobacco Cessation and Prevention Program, Massachusetts General Hospital and Harvard Medical School Boston, USA, and published in this week's *PLoS Medicine*. The study found no reduction in hospitalizations for other diseases, in the same two year period.

In July 2006, the Massachusetts Medicaid program (MassHealth) adopted comprehensive coverage of tobacco cessation medications. By the end of 2008, more than 75,000 MassHealth subscribers had used the tobacco cessation medication benefit and smoking prevalence among subscribers had declined by approximately 10%. In this study, the authors analysed MassHealth claims data to see if use of tobacco cessation medications had reduced [hospital admissions](#) for tobacco-related diseases.

After adjusting for other factors that might have affected hospitalization, such as [influenza](#) outbreaks, the authors found that among MassHealth beneficiaries, the annual rate of hospital admissions for people with heart attacks was 46% lower after use of tobacco cessation medications. In addition, there was a 49% annual decline in admissions for people with coronary atherosclerosis—another smoking-related disease. Studies show that hospitalizations for coronary heart disease are among the first diagnostic groups to show a decrease

following smoking cessation, while diagnoses for cancers and smoking-related lung diseases typically improve beyond the two year time frame of this study. Accordingly, this study found no significant changes in hospital admission rates for people with lung diseases associated with smoking, such as asthma, pneumonia, and chronic airway obstruction. However, these findings cannot show if the reduced claims for hospital admissions were associated with a reduction in smoking, because smoking cessation was not recorded by MassHealth.

The results of this study suggest that removing financial barriers to the use of smoking cessation medications has the potential to produce short-term decreases in the use of hospital services that could outweigh the costs of comprehensive tobacco cessation medication benefits. However, as these findings might be unique to Massachusetts, similar studies need to be done in other US states to see whether the clinical benefits of tobacco cessation medication found in this study, can be repeated.

The authors conclude: "For low-income smokers, removing the barriers to the use of smoking cessation pharmacotherapy has the potential to decrease short-term utilization of hospital services."

More information: Land T, Rigotti NA, Levy DE, Paskowsky M, Warner D, et al. (2010) A Longitudinal Study of Medicaid Coverage for Tobacco Dependence Treatments in Massachusetts and Associated Decreases in Hospitalizations for Cardiovascular Disease. PLoS Med 7(12): e1000375. [doi:10.1371/journal.pmed.1000375](https://doi.org/10.1371/journal.pmed.1000375)

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