

Smoking cessation through a healthcare system model is shown more effective than telephone 'quitlines' in the short term

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A healthcare system model that offered tobacco cessation treatment to smokers being discharged from a hospital produced a higher rate of tobacco abstinence during the three-month program than referral to a state-based telephone quitline, but the advantage disappeared at six months when both treatments produced comparable quit rates, researchers from Massachusetts General Hospital (MGH) have found. In a study in *JAMA Internal Medicine*, the team suggested that extension beyond three months of the health system approach, which includes cessation medication and telephone-based behavioral support, could potentially keep individuals tobacco-free.

"Hospital admission is a great opportunity for smokers to begin tobacco cessation treatment," says lead author Nancy Rigotti, MD, director of the MGH Tobacco Research and Treatment Center. "That treatment is only effective, however, if it continues after discharge. How to best meet that ongoing need is the question our study was

designed to address."

Cigarette smoking is responsible for around 480,000 deaths annually, the leading cause of preventable deaths in the United States. In 2020, an estimated 13 percent of adults were regular smokers, and more than 3.2 million of them were admitted to a hospital. Researchers from MGH, Vanderbilt University Medical Center, and University of Pittsburgh Medical Center conducted a study of 1,409 adults who smoked and received brief in-hospital tobacco treatment at one of these medical centers to determine the most effective post-discharge model for cessation.

Participants were randomized to one of two models, each offering tobacco cessation medication and counseling by telephone for up to three months. One model used the national system of state-based telephone quitlines, which provides cessation counseling and free samples of nicotine patches, gum, or lozenges. The medical center model provided people who smoked with nicotine medications at hospital discharge and continued counseling with a series of automated and live phone calls.

The study found that three months after discharge, more participants in the healthcare system model were tobacco-free for at least seven days (which was biochemically verified), compared to the quitline model. But at six months—three months after healthcare system intervention ended—the difference in smoking abstinence rates between the two models had narrowed and was not statistically significant.

"Our findings prompt the question of whether continuing smoking cessation past three months—the standard duration of treatment—would sustain the superior results of the healthcare

system model," says senior author Hilary Tindle, MD, MPH, founding director of the Vanderbilt Center for Tobacco Addiction and Lifestyle. "It's possible that more counseling or medication, or both, could generate more engagement with the program and thus better results over time."

That thought was echoed by co-author Esa Davis, MD, MPH, director of the University of Pittsburgh Medical Center Tobacco Treatment Service. "We found that keeping [smoking cessation](#) within the healthcare system where it could be managed like other chronic medical conditions could be an effective form of treatment," she remarked. "This approach presents a challenge for healthcare systems, however, which future research needs to address."

Rigotti is professor of Medicine, Harvard Medical School (HMS) and associate chief for academic advancement, Division of General Internal Medicine, MGH. Tindle is associate professor of Medicine, HMS. Davis is associate professor of Medicine, University of Pittsburgh Medical Center.

More information: Comparative Effectiveness of Postdischarge Smoking Cessation Interventions for Hospital Patients, *JAMA Internal Medicine* (2022). [DOI: 10.1001/jamainternmed.2022.2300](https://doi.org/10.1001/jamainternmed.2022.2300)

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