

Improving Apps to Help Cancer Patients Quit Smoking

A Fred Hutch cancer prevention researcher was awarded a \$3.5M NCI grant to run a randomized trial of smartphone health apps.

July 17, 2020 By Diana Mapes

Smoking cessation expert Jonathan Bricker, PhD, of Fred Hutchinson Cancer Research Center just received a \$3.5 million grant from the National Cancer Institute to run a randomized controlled trial pitting two smartphone apps head-to-head to see which is better at helping cancer patients to stop smoking.

The trial will compare two evidence-based digital health contenders. In one corner, Bricker's Quit2Heal, the first smartphone app specifically designed to help cancer patients quit smoking. In the other, the NCI's QuitGuide, a widely used smoking cessation app designed for the general population. QuitGuide is designed to help people understand their smoking patterns and build skills needed to become smoke-free. Quit2Heal provides skills training and stories from cancer survivors focusing on coping with shame, stigma, depression and anxiety that can be core triggers of smoking.

In both an initial seven-day beta test and a subsequent [pilot study](#) that compared the two apps, Quit2Heal participants were more satisfied and found the patient-tailored app a better fit. Quit2Heal users also had a higher quit rate at the two-month follow-up than QuitGuide, 20% versus 7%.

"Now," Bricker said, "a larger sample, longer-term, 12-month follow-up is needed."

A full professor and director of the Hutch's HABIT Lab (Health and Behavioral Innovations in Technology), Bricker and his team design, develop and test the effectiveness of smartphone apps aimed at achieving behavioral change in people with cancer.

Currently, up to 80% of [smokers continue to smoke after a cancer diagnosis](#), an addiction which can severely compromise cancer treatment, slow healing and lower the chance at survival.

This new project, a collaboration between Bricker's lab at the Hutch, Jamie Ostroff, PhD, of Memorial Sloan Kettering Cancer Center and J. Lee Westmaas, PhD, of the American Cancer Society, will be the first full-scale randomized controlled trial of a smoking cessation app designed

with cancer patients in mind.

Each arm of the trial will enroll 211 patients from around the U.S. Participants will engage in regular follow-ups, and quit rates will be measured at three, six and 12-month follow-ups.

Carrying on During COVID-19

Fortunately for this trial, the ongoing coronavirus pandemic is not a concern. Bricker said the study operations and the trial recruitment can all be done remotely.

“We actually have been doing this with our team’s studies since 2007,” he said. “COVID-19 has forced medicine to be remote, a move it has resisted for a long time. Our intervention is fully prepared for this new age. We’ve been providing remote treatments for a very long time.”

The researchers hope to determine which app has a better verified quit rate and whether Quit2Heal’s tailored design specifically helped to reduce cancer patients’ feelings of stigma, depression and cancer-related shame.

“Cancer patients feel very alone in the process of trying to quit,” Bricker said. “Our app provides tools on how to cope with shame and teaches self-compassion and how to be kind to yourself. That’s just one piece of it. We’re also developing tools to help these people cope with anxiety and depressed thoughts and help guide them towards activities that are appropriate for cancer patients, like mild exercise and walking.”

Their findings will help with future iterations of this app and others designed to help both cancer patients — and the general public — avoid cancer or recurrence through the power of evidence-based science and technology.

“If our aims are achieved, this project will advance scientific knowledge about the effectiveness of apps for helping cancer patients quit smoking,” Bricker said. “Positive results would provide an effective and highly accessible public health intervention for cancer patients.”

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