

Video-based smoking cessation program found to help HIV-positive smokers quit tobacco

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Nearly 40% of participants in a pilot study quit tobacco after completing a video-based smoking cessation intervention developed by a University

of Massachusetts Amherst community health researcher for HIV-positive smokers in Nepal.

"I am blown away with the findings," published in the journal *AIDS and Behavior*, says lead author Krishna Poudel, associate professor of community health education in the School of Public Health and Health Sciences. "I was confident that a lot of people would quit, but I was not expecting 40%."

HIV-positive people who are receiving highly active antiretroviral therapy (HAART) have a greater risk of death from tobacco than from HIV-related factors. In [previous research](#), Poudel and UMass Amherst colleagues showed a link between intensity, duration and pack-years of smoking and inflammation in HIV-positive people in Nepal.

Those findings, which suggested that people living with HIV would benefit not just from quitting smoking but from smoking less, inspired Poudel to develop a [smoking cessation](#) program that could be streamed or downloaded by participants in Nepal and, ultimately, other low- and middle-income countries.

Poudel, director of the UMass Amherst Institute for Global Health, was on sabbatical during the pandemic lockdown when he decided to create the video program himself, which included 11 video sessions, each lasting between three and eight minutes. "I started from scratch," he says. "I knew nothing about video making."

Before traveling to Nepal to get the project rolling, Poudel adapted an English-language smoking cessation intervention for HIV-positive people into a culturally relevant program he wrote and narrated in the Nepali language. The videos feature pictures, animation and graphics that educate participants about the consequences of smoking tobacco. They also help the viewer set a quit date, quit, deal with urges and,

finally, maintain abstinence.

Using the Vidyard software platform, Poudel and his team sent participants links to the video clips and monitored their watching behaviors using a password-protected account.

Of the 48 participants, 46 (96%) watched all the video clips. One participant watched nine of the videos and one watched seven. The study retention at three months, when a post-intervention assessment took place, was 100%.

At that point, 19 participants' (40%) smoking abstinence was confirmed by their expired carbon monoxide levels, measured using the Bedfond Smokerlyzer. Those with levels over >5ppm (parts per million) were considered smokers even if they self-reported abstinence. Of the participants who said they did not quit or whose smoking cessation was not biochemically confirmed, 24 (83%) reported making at least one quit attempt since participating in the intervention.

Poudel was eager for feedback. "I wanted to know if it was feasible to send video clips to the participants. And what did they think about these videos—is this a good approach to reach out to more HIV-positive smokers?"

The answer was a resounding yes. In fact, Poudel received nothing but positive feedback from the participants. Most watched the videos on their smartphone or used an Internet connection in a café or clinic and none reported any connection issues. They said the videos were easy to understand and relevant to their lives.

One man who quit told Poudel he saves the money he once used on cigarettes to buy gifts for his young daughter. Others said having the videos on hand helped them quit successfully when they had been unable

to during previous attempts.

"I learned that smoking can harm [the] liver, lungs, heart and every other organ," one participant said. "Importantly, I learned very useful strategies to be successful."

Poudel is eager to scale up the program and is already developing a smartphone app toward that end. "There is a need," he says. "The number of smartphone users has greatly increased, including in low- and middle-income countries, so we should be able to reach out to a large number of HIV-positive smokers in Nepal, even outside the capital city."

The [smoking](#) cessation intervention is Poudel's latest project among HIV-positive individuals in Nepal. In 2010, Poudel and co-author Kalpana Poudel-Tandukar, a UMass Amherst associate professor of nursing, established the Positive Living with HIV (POLH) cohort in a collaboration with five non-governmental organizations (NGOs). They recruited 322 HIV-positive people living in Nepal's Kathmandu Valley to learn ways to improve the health and well-being of HIV-positive people in low- and [middle-income countries](#). The UMass Amherst research team has published some 20 papers related to the POHL cohort.

More information: Krishna C. Poudel et al, Feasibility, Acceptability, and Preliminary Effects of a Video-Based Intervention for Smoking Cessation Among People with HIV in Kathmandu, Nepal: A Single-Armed Pilot Study, *AIDS and Behavior* (2023). [DOI: 10.1007/s10461-023-04062-8](#)

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