

# Automated Telephone Monitoring for Relapse Risk among Recent Quitters Enrolled in Quitline Services

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## Abstract

This study is part of a randomized controlled trial to test the efficacy of interactive voice response (IVR) technology for enhancing existing quitline services (Free & Clear's Quit for Life<sup>®</sup> program) to prevent smoking relapse and achieve abstinence. The IVR system screens for six indicators of risk for relapse including smoking lapse, physical withdrawal symptoms, depressive symptoms, perceived stress, decreased self-efficacy for quitting, and decreased motivation to quit. Participants can screen positive on any one or more risks, resulting in a rollover call to a telephone counselor. There are two intervention arms that differ in timing and frequency of IVR screening. In the Technology Enhanced Quitline arm (TEQ-10), 10 automated calls are placed at decreasing frequency for 8 weeks post-quit (twice a week for the first two weeks, then weekly). The High Intensity Technology-Enhanced Quitline arm (TEQ-20) includes 20 IVR calls (daily for the first 2 weeks, then weekly). This preliminary analysis includes IVR data collected on calls from 4/12/2010 to 10/31/2010. 2620 calls were made to 98 participants in the two intervention arms, TEQ-10 (n=44) and TEQ-20 (n=54). The two arms did not differ significantly on demographics or comorbid conditions. Three outcomes were analyzed: completed screening assessments, positive screen for relapse risk, and smoking lapse (i.e., smoking even a puff since the last call). 136 of the 736 (18.5%) completed assessments were positive for relapse risk: 66 for smoking lapse (49%), 42 craving (31%), 32 depressive symptoms (24%), 27 lack of confidence (20%), 8 stress (6%), and 8 lack of motivation (6%). Logistic regression models (adjusted for age and gender), with GEE estimation to account for within-person correlation, showed that compared to the TEQ-10 study group, participants in the TEQ-20 study group were more likely to complete assessments (OR=1.7; 95% CI=1.2-2.4), less likely to screen positive for relapse risk (OR=.3; 95% CI=.2-.6), and less likely to have smoked (OR=.2; 95% CI=.09-.4). These results indicate that frequent IVR monitoring during the immediate post-quit period may have a positive effect on relapse risk.