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RESEARCH ARTICLE

Proactive Tobacco Treatment for Smokers Using Veterans Administration Mental Health Clinics

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Introduction: Veterans with a mental health diagnosis have high rates of tobacco use but encounter low rates of treatment from providers. This study tested whether a proactive tobacco treatment approach increases treatment engagement and abstinence rates in Department of Veterans Affairs mental health patients.

Study design: RCT.

Setting/participants: The study was performed from 2013 to 2017 and analyses were conducted in 2017. Investigators used the electronic medical record at four Veterans Administration facilities to identify patients documented as current smokers and who had a mental health clinic visit in the past 12 months.

Intervention: Patients were mailed an introductory letter and baseline survey. Survey respondents were enrolled and randomized to intervention (n=969) or control (n=969). Control participants received a list of usual Veterans Administration smoking services. Intervention participants received a motivational outreach call, multisession telephone counseling, and assistance with obtaining nicotine replacement therapy.

Main outcome measures: Participants completed surveys at baseline, 6 months, and 12 months after randomization. The primary outcome was self-reported 7-day abstinence from cigarettes at 12-month follow-up. Secondary outcomes included use of cessation treatment, self-reported 7-day abstinence at 6-month follow-up, and 6-month prolonged abstinence at 12-month follow-up.

Results: At 12 months, intervention participants were more likely to report using telephone counseling (19% vs 3%, OR=7.34, 95% CI=4.59, 11.74), nicotine replacement therapy (47% vs 35%, OR=1.63, 95% CI=1.31, 2.03), or both counseling and nicotine replacement therapy (16% vs 2%, OR=11.93, 95% CI=6.34, 22.47). Intervention participants were more likely to report 7-day abstinence (19% vs 14%, OR=1.50, 95% CI=1.12, 2.01) and prolonged 6-month abstinence (16% vs 9%, OR=1.87, 95% CI=1.34, 2.61). After adjusting for non-ignorable missingness at follow-up, the intervention effects on 7-day and prolonged abstinence remained significant ($p<0.05$).

Conclusions: Proactive outreach was more effective than usual Veterans Administration care at increasing treatment engagement and long-term abstinence in mental health patients.

Trial registration: This study is registered at www.clinicaltrials.gov NCT01737281.

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INTRODUCTION

Smoking remains the leading preventable cause of death in the U.S.[1] People with a mental health diagnosis have particularly high rates of tobacco use and consume 40% of cigarettes sold in the U.S. annually.[2] Most mental health patients who smoke are interested in quitting, but face a number of unique barriers that increase the difficulty of quitting—namely higher nicotine dependency, use of smoking for symptom management, higher levels of stress, and greater susceptibility to relapse.[3–8] Previous research has found that that intensive, multisession telephone counseling combined with cessation medications improves quit rates in smokers with mental health conditions.[9]

However, even when evidence-based treatments exist, mental health patients face barriers to accessing treatment including limited support and tobacco treatment from providers.[8,10–13] In the U.S., outpatient psychiatrists have been screening their patients for smoking at declining rates, counsel or refer only about 20% of patients they know to be smokers to treatment, and provide cessation medications to only 1% of smokers.[12] In a prior study that implemented a telephone care coordination program for smokers using Veterans Administration (VA) mental health services,[9] mental health clinic providers could refer their patients to the program using an easy consult in the electronic medical record (EMR). Despite this easy referral mechanism, most providers made no referrals, and among those who did, 45% referred only one patient.

Prior research has found that providing tobacco treatment proactively (i.e., without relying on provider referral) increases population-level abstinence in primary care and socioeconomically disadvantaged populations.[14,15] There have been no previous trials testing this approach in a mental health population. The current study tests the reach and effectiveness of a proactive, intensive tobacco intervention for smokers using VA mental health services.[16] It is hypothesized that the proactive intervention will increase the proportion of smokers who are abstinent at 12-month follow-up compared with usual VA care.

METHODS

Study Population

The study was conducted from 2013 to 2017. The study used a two-group RCT design at four VA facilities: (1) the VA New York Harbor Healthcare System in New York City; (2) the VA Minneapolis Healthcare System in Minneapolis, Minnesota; (3) the Michael E. DeBakey VA Medical Center in Houston, Texas; and (4) the James A. Haley Veterans' Hospital in Tampa, Florida. The research activities were approved by the VA Central IRB (protocol 12-42). The study was registered at clinicaltrials.gov (NCT01737281).

Patients were eligible for inclusion if they (1) had smoked even a cigarette puff in the past 30 days and (2) had a VA mental health clinic visit in past 12 months. Exclusion criteria included (1) ICD-9 diagnosis of dementia (determined using EMR data); (2) did not speak English; and (3) did not have a telephone number and mailing address.

Potential participants were identified using data contained in the VA's EMR. Step 1 was selecting current smokers. Current smokers were identified using tobacco use clinical reminder codes indicating a positive tobacco use screening in the previous 6 months. Patients were excluded if they had an ICD-9 diagnosis of dementia (i.e., 290.XX or 331.XX). Step 2 was identifying mental health patients. Within the list of eligible smokers, programmers identified patients treated in the previous 12 months in a VA mental health clinic using clinic stop codes. Step 3 was selecting the recruitment sample. From the group of current smokers with a recent mental health visit, programmers selected all women and a random sample of men to total 1,600 potential participants from each site (n=6,400) as the initial recruitment pool. Each month, the list of patients was updated until the study reached its target sample size of 1,940 participants.

Each patient on the recruitment list was mailed a letter from the Chief of Staff, facility Behavioral Health Coordinator or other facility leader stating the patients would be contacted about a research study with the goal of helping Veterans who use mental health services stop smoking. The letter included information on how to stop receiving further study materials or if the patient had been erroneously contacted (e.g., not a current smoker, had not used mental health services). One week later, study staff sent an information packet to patients, including a cover letter, a sheet of study Frequently Asked Questions that contained all elements of informed consent, and a baseline survey. The cover letter and Frequently Asked Questions sheet informed patients that they would receive $10 for returning the survey. The survey asked patients if they had smoked a cigarette in the prior 30 days. Patients who returned a baseline survey and had smoked in the past 30 days were enrolled in the study.

When study staff received a baseline survey, the project director entered the patient's status into a tracking system that randomized participants 1:1, stratified by site, using a randomization list created by the study's statistician. Research assistants conducting patient follow-up surveys remained blind to randomization.

Participants randomized to the control group were mailed a list of local VA and non-VA smoking-cessation services. In addition, patients in the control group may have received treatment or referrals to treatment from their regular VA providers as part of usual care. Pharmacotherapy was available at all sites in the form of nicotine replacement therapy (NRT; patches, gum, and lozenges), bupropion, and varenicline.

Within 1 week of randomization, a study counselor began outreach calls to participants in the intervention group to offer tobacco treatment. The purpose of the outreach call was to (1) deliver motivational enhancement to quit smoking; (2) promote self-efficacy in quitting; and (3) encourage participation in smoking-cessation treatment. Counselors made up to six attempts over 1 month to reach participants. Participants who scheduled a counseling session received a course of telephone counseling that was previously found to be more effective with VA mental health patients than state quitline counseling.[9,17] The protocol