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ABOUT THE AUTHORS

Project TEACH is an initiative under the University of Texas MD Anderson Cancer Center's (MDACC) EndTobacco,® which is focused on preventing and reducing cancer through evidence-based policies, prevention and cessation services outside the MDACC institution. Other EndTobacco® initiatives include (a) The University of Texas (UT) System Eliminate Tobacco Use in which UT academic and medical campuses come together to share best tobacco control practices for policy, prevention and treatment aimed at employees and patients; (b) Tobacco 21, a campaign aimed at raising Texas' minimum legal age for purchasing tobacco products to 21 years old, and; (c) MDACC's Certified Tobacco Treatment Training Program, which provides intensive training in evidence-based tobacco treatment practices and tobacco treatment specialist certification to practitioners across the United States. Practitioners who complete this training are extended the opportunity to join weekly Project TEACH ECHO clinics, which provides an opportunity for sustained learning and knowledge transfer.

PUBLIC INTEREST STATEMENT

Many individuals with mental health issues, such as depression, anxiety or bipolar disorder, smoke cigarettes and tend to smoke more than an average smoker. Smoking is known to cause cancer, heart disease and many other serious diseases. Because of that, helping individuals with mental health problems quit smoking will improve their overall health and help them live longer. Healthcare providers who serve these individuals can help them quit smoking by learning to deliver effective smoking cessations treatments which combine medications and counseling. This article describes a project developed to mentor and train mental health providers how to best help their patients quit smoking. The project was piloted among mental health providers in two community mental health centers, where it was well received and evaluated as useful. This project, when implemented in many community centers, has potential to help multiple mental health patients quit smoking and improve their health.

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Abstract

Smoking prevalence among individuals with mental and behavioral health needs is considerably higher compared to the general population, but evidence-based smoking cessation therapies are underutilized in mental and behavioral healthcare settings, despite the fact that these treatments are both safe and effective. The goal of this paper is to present the background, design and pilot of Project TEACH (Tobacco Education and Cessation in the Health System) developed to improve clinical practice by offering specialized training in the provision of smoking cessation interventions to care providers in community mental health centers in Texas. This is achieved through engaging the expertise of clinicians at the MD Anderson Cancer Center's Tobacco Treatment Program and disseminating this expertise to care providers by means of a novel tele-mentoring approach called Project ECHO (Extension for Community Healthcare Outcomes). Evaluation of our pilot ECHO training project demonstrated that the training was very well received and resulted in self-reported enhancement of the providers' professional practice. This is the first project to extend the collaborative ECHO model to train healthcare providers in smoking cessation. This approach has potential to reduce smoking rates among smokers with mental and behavioral health needs, and consequently contribute to the prevention of cancer and other chronic diseases in this vulnerable population.

Keywords

tele-mentoring; tobacco cessation; mental health

Subjects

Health Psychology; Counseling; Public Health Policy and Practice

1. Introduction

The goal of this paper is to present the background, design and pilot of a project developed to improve clinical practice related to smoking cessation in community mental and behavioral healthcare settings. Since the peak of smoking around the middle of the twentieth century, smoking prevalence in the United Stated has been declining and reached 15.1% in 2015 (Jamal et al., 2016), while the smoking rate in Texas, which is the site of the project to be presented, is 15.9% (TBRFSS, 2015). Because smoking accounts for the overwhelming majority of all tobacco use (Agaku et al., 2014), "smoking" and "tobacco use" will be used interchangeably hereafter. Smoking rates, while declining, are not distributed evenly across different population subgroups and are increasingly concentrated among vulnerable and underserved populations (Jamal et al., 2016). Of particular concern is the population with mental illness, whose average smoking prevalence rates have been estimated to be 36.1%

nationally and 33.9% in Texas, in the 17.3% of the state's population that suffer from a diagnosable mental disorder (Gfroerer, Dube, King, Garrett, & Babb, 2013). Alarmingly, smoking rates increase with severity of mental illness and may be as high as 64–79% among individuals with serious mental illness (SMI), defined as a mental, behavioral or emotional disorder that meets diagnostic criteria specified in the *Diagnostic and Statistical Manual* and results in serious functional impairment (Annamalai, Singh, & O'Malley, 2015; Evins & Cather, 2015; McClave, McKnight-Eily, Davis, & Dube, 2010; Roberts, Evins, McNeill, & Robson, 2016). Persons with mental illness also smoke more cigarettes per day than those without mental disorders (McClave et al., 2010) and suffer from disproportionate smoking-related health consequences, including cancer incidence and mortality, mirroring their elevated smoking rates and higher cigarette consumption (Baughman et al., 2016; Kisely, Crowe, & Lawrence, 2013; McGinty et al., 2012; Schroeder & Morris, 2010). Consequently, individuals with mental illness, especially those with SMI, can benefit from smoking cessation even more than smokers without comorbidities.

Evidence-based smoking cessation therapies are available. The 2008 Treating Tobacco Dependence Clinical Practice Guideline (Fiore et al., 2008) recommends that all smokers, including those with comorbid psychiatric disorders, be offered treatment for tobacco use and dependence. The 5A's counseling model recommended by the Guideline applies to this population as well and all clinicians who treat individuals with mental and behavioral healthcare needs are encouraged to *Ask* the patient if he/she uses tobacco, *Advise* that he/she quit, Assess his/her willingness to quit, *Assist* in making a quit attempt and *Arrange* a follow-up (Fiore et al., 2008). Smoking cessation treatments have been proven to be both effective and safe among individuals with mental illness (Annamalai et al., 2015; Hall & Prochaska, 2009). However, the relationship between tobacco dependence and psychiatric disorders is complex (Aubin, Rollema, Svensson, & Winterer, 2012). The high co-occurrence between the two may be explained, in part, by a genetic vulnerability to addiction and mental illness (de Viron, Morré, Van Oyen, Brand, & Ouburg, 2014), and by the hypothesized self-medication to alleviate psychiatric symptoms or to relieve adverse side-effects of psychotropic medications (Annamalai et al., 2015; Aubin et al., 2012). Given this complexity as well as the significantly higher levels of tobacco dependence in this population, tobacco use treatment for smokers with mental illness, especially SMI, may necessitate more intensive and individualized pharmacological and behavioral treatment approaches (Hall & Prochaska, 2009). Smokers with mental illness may require higher doses of smoking cessation medications, combined therapies and longer duration of treatments (Annamalai et al., 2015; Evins & Cather, 2015; Fiore et al., 2008). Since nicotine influences multiple neurochemical processes as well as metabolism of psychiatric medications (Aubin et al., 2012; Wu et al., 2008), medication side effects, blood levels, and symptoms of mental illness need to be monitored closely during smoking cessation so medication dosage can be adjusted accordingly (Fiore et al., 2008). With that in mind, it is important to note the lack of evidence for exacerbation of psychiatric symptoms during the course of smoking cessation, which also holds true for patients with SMI (Annamalai et al., 2015; Aubin et al., 2012; Evins & Cather, 2015; Hall & Prochaska, 2009; Roberts et al., 2016).

Despite availability, effectiveness and safety of smoking cessation treatments for smokers with mental illness, along with evidence that these patients, including ones with SMI, are

both motivated and able to quit successfully (Annamalai et al., 2015; Dickerson et al., 2011; Hall & Prochaska, 2009), the treatment for tobacco use and dependence is generally neglected in mental and behavioral healthcare settings (Brown et al., 2015; Himelhoch, Riddle, & Goldman, 2014; Ziedonis et al., 2008). A survey of clinicians in nine community mental health centers revealed that the majority did not ask their patients about smoking, less than a third advised or assisted with smoking cessation, and very few referred identified smokers to a telephone quitline (Himelhoch et al., 2014). Further, results of a large survey of healthcare providers (Association of American Medical Colleges [AAMC], 2007) indicated that psychiatrists were considerably less likely to participate in smoking cessation practices related to the 5A's compared to primary care specialties (family, internal and ObGyn).

There are both actual and perceived barriers to the delivery of smoking cessation treatment by mental health providers (i.e., psychiatrists, advanced-level providers, nurses, and counselors). First, considering the complex association between tobacco dependence and psychiatric disorders, many clinical providers who work in mental and behavioral healthcare settings lack the necessary training and experience in smoking assessment and cessation interventions for their target population (AAMC, 2007; Hall & Prochaska, 2009; Himelhoch et al., 2014). Consequently, these providers report low levels of confidence in their ability to counsel and help smokers to quit (Himelhoch et al., 2014). Second, many mental health providers hold certain assumptions about patients who smoke and about smoking cessation that hinder the delivery of treatment in this population. Among such barriers, the most strongly endorsed is the perceived lack of patient interest in smoking cessation (Brown et al., 2015; Hall & Prochaska, 2009; Himelhoch et al., 2014), a notion which research disproved (Annamalai et al., 2015; Dickerson et al., 2011; Hall & Prochaska, 2009).

Some mental health providers also believe that patients have more immediate diagnostic problems to address and that cessation efforts will worsen patients' psychiatric symptoms (AAMC, 2007; Himelhoch et al., 2014). The latter view is not supported by evidence, either (Annamalai et al., 2015; Aubin et al., 2012; Evins & Cather, 2015; Hall & Prochaska, 2009; Roberts et al., 2016). Finally, all of the barriers mentioned above are exacerbated by other competing practice priorities, perceived or actual lack of time to address smoking cessation, low availability or lack of knowledge of resources for referral, and issues surrounding cost and insurance coverage of smoking cessation treatment (AAMC, 2007; Hall & Prochaska, 2009; Himelhoch et al., 2014). A majority of these barriers can be overcome through training and education (Brown et al., 2015; Hall & Prochaska, 2009; Himelhoch et al., 2014).

The goal and objectives of the current project endeavor to address the problem of insufficient treatment of tobacco use and dependence in mental and behavioral healthcare settings. The goal of the project is to improve clinical practice in this area through developing and providing specialized training in intensive and personalized interventions for smokers with mental illness to mental health providers in Local Mental Health Authorities (LMHAs) in Texas. Specific objectives of the project are detailed below.

2. Community-based mental healthcare in Texas

A large proportion of mentally ill individuals in Texas are treated in community mental health centers called LMHAs. These LMHAs provide services under the auspices of the Texas Department of State Health Services (TDSHS) to patients with SMI in a specific geographic area referred to as the local service area (TDSHS, 2016; TSOS, 2016). There are 39 LMHAs in Texas that have oversight of more than 680 individual treatment clinics throughout the state and provide services to almost 500,000 patients per year. As such, the LMHAs and the associated clinics represent an ideal setting in which to intervene with Texans who have mental and behavioral healthcare needs to reduce their tobacco use. Results from two surveys administered to the LMHAs indicated that smoking status was rarely assessed in these clinics and smoking cessation interventions were seldom incorporated into the treatment plan.

3. Taking Texas Tobacco Free

The opportunity to promote tobacco cessation within LMHAs was pursued by state policymakers and TDSHS mandated that all LMHA clinics in Texas become tobacco-free campuses. At the same time, one of the LMHAs, the Austin Travis County Integral Care (ATCIC), developed a comprehensive educational and treatment-focused plan that was implemented to reduce smoking among patients. The program had a dramatic impact on beliefs and practice behaviors at ATCIC, with 81.6% of employees feeling adequately trained for the implementation of the tobacco-free campus policy and 46.4% patients screened for smoking status receiving cessation advice and taking concrete steps to quit. To capitalize on this success and to disseminate ATCIC's program to other LMHAs, two co-authors of the present paper, Drs. Lorraine Reitzel and Cho Lam, in collaboration with ATCIC, implemented a program called *Taking Texas Tobacco Free (TTTF): Expanding the Integral Care Campus and Community Model into a Statewide Cancer Prevention Program.*

The overarching goal of TTTF was to disseminate and implement a comprehensive tobacco-free workplace program to select LMHAs across Texas (Samaha et al., 2017). Specifically, TTTF set out to provide assistance to LMHAs with implementation of the tobacco-free policy, educate LMHAs' employees about the hazards of smoking, and increase the frequency of smoking assessments of all patients as well as the delivery of basic smoking cessation advice and brief interventions to LMHAs' patients who smoke. To date, TTTF has assisted with the implementation of the tobacco-free policy and the integration of smoking assessment and cessation into clinical practice across 19 LMHAs. However, considering the complexity of the association of smoking and smoking cessation with mental illness, the LMHA providers were in need of on-going training in more intensive and personalized approaches that are essential to assist patients with mental illness who smoke. From this need came the idea of the current project.

4. Project TEACH

In 2014, faculty members at MD Anderson Cancer Center (MD Anderson) at Houston, Texas, Drs. Paul Cinciripini and Janice Blalock, in collaboration with Dr Maher Karam-

Hage and partners at Rice University, the University of Houston and ATCIC, obtained funding from the MD Anderson Moon Shot Program to develop *Project TEACH: Tobacco Education and Cessation in the Health System.* The goal of Project TEACH, to offer specialized smoking cessation training to LMHA providers, is realized through the following objectives: (1) to increase LMHA providers' knowledge and self-efficacy to treat smoking cessation, especially with regards to complex, specialized treatments tailored for the individual needs of smokers with mental illness; (2) to improve LMHA providers' practice behaviors with regards to the full spectrum of the recommended evidence-based smoking cessation practices (the 5A's; Fiore et al., 2008), and (3) to increase the proportion of LMHAs' patients who succeed in abstaining from smoking. It is important to note that Project TEACH, including the pilot described below, is a quality improvement project approved by the MD Anderson Quality Improvement Assessment Board. It does not require Institutional Review Board approval, because it is not intended as hypotheses-testing research and does not contribute to generalizable knowledge. It can collect relevant data anonymously and report it only in aggregate as it pertains to the entire project and its pilot.

Project TEACH operates with oversight from two components of the MD Anderson Moon Shot Program, the Lung Moon Shot and the Cancer Prevention and Control Platform. There are two pillars which support Project TEACH: the MD Anderson Tobacco Treatment Program and Project ECHO. The former provides the science-based knowledge and clinical expertise for the development and delivery of the specialized smoking cessation training and the latter provides a collaborative model and framework for the delivery of the training.

MD Anderson's Tobacco Treatment Program (TTP) was established in 2006 with the mission to provide free of charge, comprehensive, individually tailored tobacco cessation support to cancer patients, employees, and their families who self-report as current tobacco users or recent quitters (Rabius, Karam-Hage, Blalock, & Cinciripini, 2014). The TTP is staffed by a clinical team including an addiction psychiatrist, a clinical psychologist, two physician assistants, a nurse, and four smoking cessation counselors. The program provides a range of services. The standard course of treatment consists of an intensive, 12-week, individualized behavioral and pharmacological intervention which offers evidence-based counseling (e.g., motivational interviewing) and pharmacotherapies (e.g., nicotine replacement therapy (NRT), varenicline, and bupropion) to assist in smoking cessation and to treat patients' psychiatric comorbidity. In 2013, 40% of cancer patients treated by the TTP met criteria for current psychiatric diagnoses. The TTP has been very successful in helping this difficult group of patients to quit smoking. For example, in 2013, the program helped 48.4% of the patients with none or one comorbid psychiatric disorder and 41.5% of the patients with two comorbid psychiatric disorders to achieve and maintain abstinence at the nine month follow-up point. Therefore, the TTP is uniquely positioned to provide support for the development and delivery of the specialized tobacco treatment training for mental health providers in LMHAs. Project TEACH draws on the vast expertise of the TTP clinical team including the use of advanced pharmacotherapy techniques for treating comorbid tobacco dependence and psychiatric disorders, and expertise in behavioral counseling for smoking cessation. This expertise is shared with the LMHAs' mental health providers by means of a novel tele-mentoring approach called Project ECHO.

5. Project ECHO

The Extension for Community Healthcare Outcomes (ECHO) model was developed by Dr Sanjeev Arora at the Health Sciences Center at the University of New Mexico to improve access to complex chronic disease and specialty care in rural and underserved communities (Arora et al., 2010).

First piloted for the treatment of hepatitis C virus, Project ECHO is now applied to a variety of chronic, complex diseases and allows academic medical centers to share the specialized knowledge and skills with community-based healthcare providers. ECHO training consists of a series of web-based ECHO meetings which rely on tele-health technology for participation and combine didactic presentations by specialty clinicians, case presentations by community-based clinicians and expert-facilitated discussion of the cases (Arora et al., 2010). Healthcare providers in the community learn about best practices and treatment for complex diseases through the "one-to-many" tele-mentoring approach in which an academic expert shares specialized knowledge with local providers and the "many-to-many" co-learning approach where local providers learn from each other's experience. This model is very different both from traditional didactic training and from traditional telemedicine where the specialist assumes the care of the patient (Arora et al., 2010).

Project ECHO lends itself exceptionally well to the dissemination of evidence-based best practices for the treatment of tobacco use and dependence among individuals with mental illness. As mentioned earlier, community-based mental health providers may not be familiar with the individualized approaches needed to treat smoking cessation among smokers with SMI. Optimal treatment and management of smoking cessation in this patient population is achieved through consultation with specialists from several areas including addiction psychiatry, clinical psychology, and nursing. Such consultation would be costly and logistically difficult to deliver using traditional means, but the innovative ECHO model provides this ongoing relationship in an easy, accessible way.

6. ECHO Training with Project TEACH

To our knowledge, Project TEACH is the first to extend the ECHO model to train providers in smoking cessation. Under Project TEACH, clinical staff at MD Anderson offers specialized training to LMHAs' providers using the ECHO tele-mentoring approach which consists of a series of ECHO meetings. The training is free of charge to the clinics and convenient, as it uses video-teleconferencing technology and does not require travel. Participants can join ECHO meetings from their own office or from anywhere else by a computer, telephone or other mobile device. The training is approved for credits in Continuing Medical Education (CME) and Continuing Nursing Education (CNE) as well as for Continuing Education Units (CEU) for licensed non-medical personnel.

6.1. ECHO meetings

Each of a series of ECHO meetings starts with a brief didactic presentation on a specific topic presented by one of the TTP clinicians who is an expert in the content area. Next, one of the LMHA clinicians presents a tobacco-related case of his or her choice. The case is then

discussed by other LMHA providers and project team members in attendance, and the discussion is facilitated by an MD Anderson clinician. Thus, ECHO training with Project TEACH creates an opportunity for LMHA providers to develop both content knowledge by means of traditional didactic learning from content experts and self-efficacy through expert-facilitated, case-based learning from other LMHA providers in similar settings. Case-based discussion with peers provides a forum for professional growth and facilitates sharing tobacco cessation experiences across the participating LMHAs.

Each ECHO meeting lasts one hour and is delivered from an MD Anderson teleconferencing facility. Participants join via Zoom video/web conferencing. The invitees include MD Anderson clinicians, collaborators of Project TEACH, and LMHA clinicians including physicians, physician assistants, advance practice nurses, registered and licensed vocational nurses, licensed counselors, qualified mental health providers, certified peer specialists and providers of other specialties. Each meeting is initiated by an MD Anderson ECHO representative who reads the introduction and the presenter conflict of interest disclaimer. The meetings are recorded and available for viewing from the Project TEACH website.

6.2. Didactic curriculum

The MD Anderson clinicians at TTP developed a series of 35 presentations for the didactic curriculum. The topics are listed in Table 1 and are grouped into two categories: Medical and Counseling. This arbitrary grouping is based on the focus of each presentation, which may be more appropriate and interesting for the medical personnel including physicians, physician assistants and nurses (e.g., smoking cessation medications and their side effects) versus non-medical personnel such as licensed counselors or qualified mental health providers (e.g., motivational interviewing). The Medical and Counseling topics are meant to be presented in alternating order; however, both categories of LMHAs providers are encouraged to attend all presentations. The presentations are prepared in PowerPoint and last approximately 15–20 minutes. Each presentation is tailored to smokers with mental illness, including SMI, and the providers who serve them. Importantly, the presentations address known barriers to the delivery of smoking cessation treatment in mental and behavioral health settings.

6.3. Case presentations and discussion

Before each ECHO meeting, MD Anderson staff solicits cases to be presented by participating LMHA providers. There is time to present and discuss one or two cases per ECHO meeting. Based on the pilot described below, a typical case features a middle-aged male or female smoker or recent quitter with several mental health diagnoses including SMI and comorbid or past addictions (usually alcohol). These disorders typically occur in the context of serious problems related to unemployment, unstable housing, abusive relationships, poor general health and/or lack of health insurance. Regarding the smoking status, the patient may be unmotivated to quit, going through unsuccessful quit attempts or struggling to maintain abstinence. Discussion following case presentation is moderated by one of the TTP clinicians, with content experts and other LMHAs' providers contributing to the discussion.

6.4. Project TEACH evaluation

The plan to evaluate outcomes of Project TEACH draws from expertise in evaluation of other healthcare ECHO programs (Arora et al., 2010) as well as evaluation of community-based tobacco programs including tobacco-related training for healthcare providers (Prokhorov et al., 2010; Starr et al., 2005). Outcomes include (1) provider participation in ECHO training (number of sites, meetings and providers attending the meetings), (2) provider knowledge, self-efficacy and self-reported practice behaviors related to the 5A's of tobacco counseling, (3) provider feedback and experience with participation in the ECHO meetings, and (4) provider and patient tobacco-related outcomes based on the medical record. Outcomes (2) and (3) are assessed by means of a provider survey developed by the Evaluation Subcommittee of Project TEACH and based on best practices in evaluation of ECHO and tobacco programs (Arora et al., 2010; Prokhorov et al., 2010; Starr et al., 2005). Outcomes (2) and (4) are planned to be assessed at baseline, while all four categories of outcomes will be assessed 6 months after the completion of ECHO training.

7. Project TEACH pilot

The goal of Project TEACH pilot was to conduct a small-scale test of the overall program. The objectives were to (1) test the program and its evaluation survey at two community centers, (2) collect and summarize descriptive data on participating providers' self-reported relevant knowledge, practice behaviors, experiences with and opinions about the program, and (3) apply the data to the improvement of Project TEACH before the full-scale implementation. This pilot is a descriptive quality improvement project rather than a research study, because it is not hypothesis-driven and is not intended to contribute to generalizable knowledge.

Project TEACH completed a pilot project at two community centers, ATCIC and Spindletop Center. During the pilot ECHO training, 16 ECHO meetings were offered with presentation topics # 1–7 and 11–20 (Table 1). Meetings occurred weekly between April 27, 2015 and July 13, 2015, and biweekly from September 15, 2015 to December 1, 2015 with a break in August 2015, during which the interim pilot survey for providers was administered. Twenty three LMHAs providers attended at least one meeting of Project TEACH pilot ECHO (Table 2) and brought a total of 12 de-identified cases to the ECHO meetings.

The pilot has been followed by refinement of the evaluation strategy, development of additional didactic presentations and relationship building as part of the recruitment of LMHA clinics into the main phase of the project which focuses on the provision of ECHO training with Project TEACH to the 19 LMHAs that participated in the TTTF project. For relationship building, Project TEACH relies on the experience of ATCIC team which has developed and maintained excellent relationships with leadership and staff of all LMHAs.

7.1. Pilot survey results

The interim pilot survey was created in Research Electronic Data Capture (REDCap), a web-based application for building and managing online surveys. It was sent to 23 LMHA providers who had participated in ECHO meetings as of August 2015 (Table 2). Twenty two

providers responded to the survey (96% response rate), although the number of respondents to individual survey questions varied. The survey was anonymous and did not include any unique participant identifiers. According to the survey, 77% of respondents had received previous tobacco training. Not surprisingly, all respondents reported moderate or high ability and confidence to address tobacco use and dependence among their patients who smoke, although 7% reported low intention to do so. The majority of the knowledge questions yielded between 69%–85% correct answers, and 54% of respondents reported that only up to one fourth of the knowledge presented during the pilot ECHO training was new to them. Almost 60% believed that the training enhanced at least one aspect of their professional practice, such as knowledge, competence, performance, patient outcomes or their professional satisfaction, and 77% agreed or strongly agreed that the overall content, organization and quality of the program were satisfactory.

Sixty two percent of respondents reported not having cases to present, but an overwhelming majority (92%) felt that they learned from others who presented or discussed cases during ECHO meetings, thus supporting the importance and value of co-learning as part of ECHO training. Similarly, all respondents agreed that the didactic presentations added to their knowledge of how to treat tobacco use and dependence among their patients, with 77% endorsing the statement that the didactics provided enhanced knowledge always or most of the time. In response to the important question whether they intended to make changes or apply learning to their practice as a result of the program, 17% of the participating providers reported already practicing the recommendations, 58% expressed that they plan to make changes, but 25% were not sure and were only considering changes. No one reported not planning to make any changes. Responses to questions about practice behaviors related to the 5A's were not analyzed due to the fact that some respondents entered verbal instead of numeric responses, which interfered with data extraction from REDCap software. This has been resolved for subsequent surveys by designing coded multiple choice response options for these important outcomes.

The survey generated 21 qualitative comments. Six comments (29%) described practice changes that the respondents intended to make (e.g., incorporate Motivational Interviewing techniques, allow more time for delivering tobacco cessation education to smokers during clinic visits), 6 (29%) recommended changes to the program to make it more useful (e.g., more case studies, more didactics), 6 (29%) suggested topics for future presentations (e.g., resistance to cessation, more information about e-cigarettes), and 3 (13%) were general comments (e.g., program well organized, new knowledge appreciated).

Overall, this was a highly motivated sample of providers, with the majority well versed in the tobacco-related topics. This was most likely a reflection of high participation of tobacco specialists already trained in smoking cessation.

7.2. Barriers and next steps

Project TEACH subsequently offered ECHO training to other LMHAs in 2016 and 2017. Based on the pilot data, several barriers were identified prior to the full-scale implementation of Project TEACH. How these barriers were addressed will be described in a separate paper (in preparation). Among the barriers, participation of medical prescribers in

Project TEACH pilot ECHO training was not optimal. This may have been due in part to LMHAs investing in tobacco specialists who are exclusively dedicated to counseling smokers. This model may reinforce the perception among the medical personnel that smoking cessation among their patients can be addressed without their participation. However, the main issue related to participation by medical personnel is the heavy load of clinical work. As one of the survey respondents put it, "clinicians should have dedicated time to attend" the ECHO training. This cannot possibly happen without buy-in and support from the leadership of LMHA clinics.

An important barrier to effective tobacco cessation treatment was the need to provide NRT and other smoking cessation medications to LMHA patients free of charge as the majority have limited or no insurance coverage. The TTTF project provided NRT free of charge to participating LMHAs, but the supply was quickly exhausted at numerous clinics.

Another set of barriers identified in the pilot was related to evaluation data collection. Evaluation objectives included collecting data on patient smoking abstinence outcomes via the medical record. However, a closer examination by Project TEACH Evaluation Subcommittee revealed some obstacles. While most LMHAs do assess tobacco use among their patients, they each have their own medical record and their tobacco use assessment forms may differ, resulting in differences in data obtained from different LMHAs. Also, extraction of any data from the medical record would impose excessive burden on staff in the clinics. In working with community partners in real-life settings, their primary mandate, which in this case is service to their patients, always comes first and any objectives of a collaborative project that are not feasible in this context need to be revised. As a result, plans to collect medical record data were deferred, to be revisited if any of the proposed measures are feasible to collect in any of the participating clinics.

8. Summary

The importance of Project TEACH lies in the dissemination and implementation of evidence-based clinical practice for smoking cessation which had already been researched elsewhere and proven to be effective. Dissemination and implementation of this practice among healthcare providers who serve persons with mental and behavioral healthcare needs helps alleviate the disproportionate burden of smoking and the resulting diseases in this population. Project TEACH partners with mental health community centers to build new and sustainable capacities, which will help the clinical providers to better serve their patients who smoke by becoming better skilled in smoking cessation intervention. Results of Project TEACH pilot survey conducted in two community centers confirmed usefulness and acceptability of the program. By equipping healthcare providers with specialized knowledge and self-efficacy to use tailored smoking cessation treatments with their patients, Project TEACH intends to reduce smoking prevalence among Texans with mental and behavioral healthcare needs and ultimately prevent cancer and other chronic diseases in this vulnerable population.

Acknowledgments

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Table 1

Summary of didactic presentations created for ECHO training with Project TEACH

	Medical Didactic Presentations
1	Neurobiology of Nicotine Dependence
2	Selecting the Optimal Tobacco Cessation Medication
3	Overview of First-Line Tobacco Cessation Medications
4	Common Beliefs About Smoking Cessation in Psychiatric Patients
5	E-cigarettes: What are They and Their Impact on Mental Health?
6	Varenicline (Chantix): The Evolving Understanding of its Psychiatric and Cardiovascular Effects
7	Tobacco Control Among Youth: Emphasis on Mental Disorders
8	First Line Smoking Cessation Medications: Recognizing and Managing Side Effects
9	Cardiovascular and Psychiatric Adverse Events Associated with NRT and Bupropion
10	Pathways for Treating Tobacco Use in the Clinic
11	Benefits of Quitting Tobacco
12	Addressing Tobacco Treatment for Pregnant Women
13	Tobacco Treatment with People Receiving Substance Abuse Treatment
14	Ethics
15	Tobacco Cessation Among People with Schizophrenia and Bipolar Disorder
16	Tobacco Cessation Among People with Depression
	Counseling Didactic Presentations
17	Intake Assessment
18	Introduction to the Importance of Tobacco Cessation in Psychiatric Patients
19	Motivational Interviewing: A Brief Overview
20	Motivational Interviewing: A Brief Overview Part 2
21	Motivational Interviewing: A Brief Overview Part 3—Open-Ended Questions
22	Managing Anxiety Associated with Withdrawal
23	Motivational Interviewing: A Brief Overview Part 4—Affirmations
24	Motivational Interviewing: A Brief Overview Part 5—Reflections
25	Motivational Interviewing: A Brief Overview Part 6—Summaries
26	Motivational Interviewing: A Brief Overview Part 7—Four Oars: Putting it Together
27	Motivational Interviewing: A Brief Overview Part 8—Internal vs. External Motivation and the Rulers - Skills for Use in MI
28	Motivational Interviewing: A Brief Overview Part 9—Change Talk vs. Sustain Talk
29	Interdisciplinary Coordination of Medication Management
30	Behavioral Strategies in Tobacco Treatment: Stages of Change
31	Coping Strategies for Tobacco Cessation Part I
32	Coping Strategies for Tobacco Cessation Part II
33	Behavioral Strategies in Tobacco Treatment: Identifying Triggers
34	Relapse Prevention for Tobacco Cessation
35	Group Counseling

Table 2

Sample of LMHA providers participating in ECHO meetings and receiving Project TEACH pilot survey

Provider Type and Related Data	Number (%)
Medical Prescriber (Physician, Physician Assistant, Advanced Practice Nurse)	5 (22)
Nurse (Licensed Vocational Nurse, Registered Nurse)	7 (30)
Licensed Counselor (Licensed Professional Counselor, Licensed Clinical Social Worker, Licensed Marriage and Family Therapist)	5 (22)
Certified Peer Specialist	2 (8.7)
Clinical Administrator	2 (8.7)
Other (Chief Medical Officer, Forensic Program Supervisor)	2 (8.7)
Total	23 (100)
Responded to Pilot Survey	22 (96)