Barriers to Implementing Evidence-Based Smoking Cessation Practices in Nine Community Mental Health Sites

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Objective: **Guidelines strongly recommend that smokers with mental illness receive evidence-based smoking cessation interventions similar to those provided to smokers in the general population. The goal of this study was to evaluate the resources, barriers, and willingness to use these evidence-based interventions in mental health settings.** _Methods:_ **Clinicians at nine community mental health settings (five psychosocial rehabilitation programs and four community mental health clinics) in four counties in Maryland were surveyed. The questionnaire—the Evidence-Based Practice Attitude Scale−15—evaluated availability, barriers, and utilization of smoking cessation assessment and treatment, including willingness to use evidence-based practices.** _Results:_ **Ninety-five clinicians participated in the study. Most were full-time employees (84%) with master's degrees (56%). The vast majority were nonsmokers or former smokers (94%). Less than half (42%) of the clinicians reported asking their patients about smoking. Less than a third (33%) advised or assisted in smoking cessation. Very few (10%) reported referring identified smokers to telephone quitlines. About a quarter (26%) reported being confident about their ability to provide smoking cessation counseling. A major barrier to providing cessation counseling was the belief that patients were not interested in quitting (77%). On average, clinicians reported a great willingness to use evidence-based smoking cessation interventions if they received appropriate training.** _Conclusions:_ **Mental health clinicians working in community mental health settings were not consistently providing evidence-based smoking cessation interventions. Barriers appear to be modifiable through training and education.** (_Psychiatric Services_ **65:75–80, 2014; doi: 10.1176/appi.ps.201200247**)

Individuals with mental illness smoke at nearly two times the rate of the general population (1), display patterns of heavy smoking (2), and are reported to consume nearly half of the cigarettes sold in America (3). These extraordinary smoking rates among persons with mental illness are associated with greater morbidity (4) and mortality (5,6) and increased health care costs (7–9). Given the burden of nicotine dependence among those with mental illness and given that nicotine dependence remains the leading preventable cause of disease, death, and disability in the United States (10), the Public Health Service (PHS) 2008 guidelines (11), as well as the American Psychiatric Association's _Practice Guideline for the Treatment of Patients With Substance Use Disorders_ (12) and National Institutes of Health consensus statements (13), all strongly recommend that smokers with mental illness receive the same evidence-based smoking cessation interventions as smokers in the general population. This is important because research suggests that smokers with mental illness are as motivated to quit smoking as smokers in the general population (8,14). Taken together, these findings suggest that evidence-based tobacco cessation treatment is recommended and critical for improving the health of smokers with mental illness.

Because poor-quality, inconsistent medical care is strongly associated with the excess mortality observed among persons with mental illness (11,15–18), community mental health centers are increasingly being called upon to provide basic screening and preventive and medical services for the patients they serve (19–23). Unfortunately, tobacco cessation treatment is rarely implemented in mental health care systems (13,24–26). The goal of this study was to evaluate resources, barriers, and willingness to implement evidence-based smoking cessation interventions in community mental health centers in order to better understand the potential "quality gap" (27) in providing these recommended services.

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Methods

Study design and sample

Potential participants were recruited from November to December 2011. All eligible clinicians who were present on the day selected for recruitment at nine government-funded community mental health centers (five psychosocial rehabilitation programs and four community mental health clinics) in four counties in central Maryland were surveyed. The nine sites are separate facilities that fall under the auspices of four large agencies. Clinic administrators were contacted in advance and asked to provide the optimal time and setting for study recruitment. To be eligible for the study, clinicians had to be employed staff who were engaged in clinical care and present on the day of recruitment.

With these criteria, 95 participants were eligible for the study. No clinicians refused to participate. Fifty were recruited from outpatient mental health clinics, and 45 were recruited from the psychosocial rehabilitation programs. The clinicians who worked at the mental health clinics were primarily psychiatrists and master's-level therapists. Educational backgrounds varied for those who worked at the psychosocial rehabilitation programs: some clinicians had a high school degree only, and some were bachelor's- or master's-level clinicians. The study was reviewed by the University of Maryland Baltimore's Institutional Review Board and given an exempt status. Participants were paid $10 for completing the study survey.

Study questionnaire

The study evaluated availability, barriers, and utilization of evidence-based smoking cessation counseling. We used standardized questions to gather demographic information, including age, gender, education, job description, employment history, number of unique clients seen per week, and smoking status. To evaluate smoking cessation, we either created questions de novo or adapted questions that were developed by the Massachusetts General Hospital Tobacco Resource Center (28). These questions are further described below.

To evaluate smoking cessation resources, we used a 5-point Likert scale (never, rarely, sometimes, often, and always) to evaluate the extent to which smoking cessation resources were available to clinicians. The lead-in question asked, "At the time you see a patient at your clinic, how often do you have these resources readily available?" Six items followed, including preidentification of the patient's current smoking status in the patient's record, a prompt to remind the clinician to advise smokers to quit, stop-smoking handout material readily available, a convenient way to refer smokers to cessation classes or groups, a convenient way to refer smokers to telephone counseling, and on-site staff available to provide brief assistance to smokers interested in quitting.

To evaluate barriers to providing smoking cessation services, we used a 4-point Likert scale (no barrier, minor barrier, moderate barrier, and major barrier). The lead-in question asked, "In your opinion, how much of a barrier to your efforts to help smokers quit is each of the following?" Nine items followed, including lack of clinician time, lack of reimbursement for smoking counseling, low success rates in this population, lack of interest in quitting among patients who smoke, no place to refer patients for further help, inability to afford smoking counseling programs, inability to afford nicotine patches or gum, inability to afford bupropion, and inability to afford varenicline. This series of items was followed by the question, "Do you think that quitting smoking will worsen psychiatric symptoms?" Answers included yes, no, or unsure.

To evaluate utilization of smoking cessation interventions, we used a 5-point Likert scale (never, rarely, sometimes, often, and always) to examine the extent to which clinicians evaluated and utilized smoking cessation interventions. The lead-in question asked, "How often do you ask about or otherwise identify a patient's smoking status at a typical visit?" This question was followed by another question: "If your patient is a smoker, how often do you do each of the following on a typical visit?" Eight items followed, including advise patients to quit smoking, ask smokers about their interest in

quitting smoking, provide brief counseling about how to quit smoking, give out written stop-smoking materials, discuss use of medications (nicotine replacement or bupropion) to stop smoking, refer patients to a nurse or someone else in the office for more information about quitting smoking, refer patients for telephone counseling (for example, 1-800-QUIT-NOW), and suggest a follow-up visit or phone call about quitting smoking. These items were followed by a question, "How confident are you in your ability to counsel smokers who are interested in quitting smoking?" Responses were made on a 5-point Likert scale (not at all, a little bit, somewhat, a lot, and very).

Use of evidence-based practices was assessed by the Evidence-Based Practice Attitude Scale–15 (EBPAS) (29). The EBPAS is a 15-item questionnaire used to evaluate clinician attitudes toward utilizing new types of mental health interventions. Responses are on a 5-point Likert scale (0, not at all; 1, slight extent; 2, moderate extent; 3, great extent; and 4, very great extent). The EBPAS can be scored as an overall mean of all items, as well as the mean for four subscales (appeal, requirement, openness, and divergence). The lead-in question for the first eight EBPAS items asks about "your feelings using new therapy, interventions and treatments." The last seven EBPAS items are introduced by the following lead-in question: "If you received training in therapy or interventions that were new to you, how likely would you be to adopt it?" For the sake of comparison, we adapted the lead-in question to the last seven items specifically ask, "If you received training in smoking cessation interventions that were new to you, how likely would you be to adopt it?" This allowed us to compare the responses to the smoking cessation questions with responses to the more general EBPAS questions on the subscales of appeal and requirement.

Analysis

Univariate distributions included percentages for dichotomous variables and means for normally distributed continuous variables. Means were compared with two-sided t tests, and percentages

Table 1

Responses (in percentages) of 95 mental health clinicians to questions regarding the provision of smoking cessation interventions

Question	N of clinicians responding	Response				
Assessment and utilization questions		Never	Rarely	Sometimes	Often	Always
Ask about smoking status	94	4	14	40	30	12
Ask about interest in quitting	94	5	14	35	32	14
Advise to quit smoking	93	4	27	37	23	10
Provide brief counseling	94	12	23	46	18	1
Give out stop-smoking materials	92	30	37	22	10	1
Discuss use of medication	94	25	26	34	14	1
Refer to someone for more information	95	38	25	19	17	1
Refer to telephone quitline	93	59	17	14	10	0
Suggest a follow-up visit	93	48	22	19	11	0
Barrier questions		None	Minor	Moderate	Major	
Lack of clinician time	94	15	42	29	14	
Lack of reimbursement	93	31	26	26	17	
Lack of success rate	94	19	33	29	19	
They aren't interested in quitting	94	7	16	35	42	
No place to refer for help	94	19	33	36	12	
Smokers can't afford counseling	94	19	22	31	28	
Smokers can't afford patch or gum	94	8	17	32	43	
Smokers can't afford bupropion	92	17	25	34	24	
Smokers can't afford varenicline	90	13	26	32	29	
Resource questions		Never	Rarely	Sometimes	Often	Always
Smoking status preidentified	95	5	18	27	26	23
Reminder prompt to advise	94	36	27	20	11	6
Stop-smoking handouts	95	30	30	19	14	7
Convenient way to refer to classes	95	23	25	24	15	13
Convenient way to refer to quitline	95	42	33	14	8	3
On-site staff available	95	39	20	20	12	9
Confidence question		Not at all	A little bit	Somewhat	A lot	Very
How confident are you in your ability to counsel smokers who are interested in quitting smoking?	95	7	24	42	21	5
Knowledge question		Yes	Unsure	No		
Do you think that quitting smoking will worsen psychiatric symptoms?	95	23	43	34		

were compared with chi square tests. We chose to collapse the five-item categorical variable (never, rarely, sometimes, often, and always) into a three-item categorical variable (never or rarely, sometimes, and often or always) when comparing our planned stratified analyses based on clinic type (psychosocial rehabilitation program versus outpatient mental health clinic), clinician smoking status (current smoker versus never or former smoker) and clinician type (physician versus other). We did this because the never-rarely and always-often choices tracked closely together, and combining these choices gave us increased power to detect differences. Data were analyzed using Stata, version 10.0. All reported p values are two-sided.

Results

Participant characteristics

Ninety-five clinicians participated in the study. On average participants were 40 years old (mean±SD= 39.5±12.7). Most of the participants were women (N=68, 72%), and most reported being full-time employees (N=80, 84%) with master's degrees (N=53, 56%). The participants reported nearly 11 years (mean±SD=10.9 ±9.4) of experience in mental health clinical work. Most reported being nonsmokers (N=60, 63%). A few were current smokers (N=6, 6%), and some were former smokers (N=29, 31%).

Assessment of smoking status

Table 1 summarizes the clinicians' responses to the survey questions. Fewer than half (42%) reported always or often asking patients about their smoking status. One in four (33%) reported always or often advising identified smokers to quit, and one in five (19%) reported always or often providing brief counseling to identified smokers about how to quit smoking. Very few reported always or often referring identified smokers to a telephone quitline (10%) or suggesting a follow-up phone call or visit (11%). Stratified results based on clinic type, clinician smoking status, and clinician type did not detect statistically significant differences in assessment of smoking status.

Perceived barriers

Many barriers were identified. The perception that patients were not

interested in quitting was reported as the greatest barrier, with 77% of participants reporting it as a major or moderate barrier. The second most frequently cited barrier involved concerns regarding the expense of pharmacotherapy. Three-quarters (75%) reported that affordability of nicotine replacement (patch or gum) was a major or moderate barrier, and 58% reported that the affordability of bupropion was a major or moderate barrier. The perceived expense associated with counseling was also considered a major or moderate barrier (59%). Approximately half (48%) perceived lack of success in this population as a major or moderate barrier, and approximately four in ten (43%) perceived lack of clinician time to be a major or moderate barrier. Finally, 23% reported that smoking cessation interventions would lead to worsening of psychiatric symptoms, and 43% reported being unsure about this outcome. Stratified results based on clinic type, clinician smoking status, and clinician type did not detect statistically significant differences in assessment of barriers to quitting smoking.

Availability of smoking cessation resources

About half of the participating clinicians (49%) reported that the smoking status of their patients had already been identified. However, the vast majority reported that the other resources were not adequate. For example, 75% reported never or rarely having a way to refer patients to a telephone quitline, 63% reported never or rarely receiving a reminder prompt to advise smokers to quit, and 59% reported never or rarely having on-site referral for smoking cessation counseling. About a quarter of participants (26%) evaluated themselves as being confident to provide smoking cessation counseling. Stratified results based on clinic type, clinician smoking status, and clinician type did not detect any statistically significant differences in assessment of availability of resources.

Willingness to adopt evidence-based practices

Overall, participants reported being very willing (response of great or very

great extent) to adopt an evidence-based mental health practice. The mean total EBPAS score was 2.98± .48 (possible mean scores range from 0 to 4, with higher scores indicating greater willingness). Participants also reported being very willing to adopt evidence-based smoking cessation interventions (mean subscale scores: appeal, 3.14±.79; requirement, 3.10±.99).

Discussion

Our study found that among clinicians working in publicly funded mental health outpatient settings, the vast majority reported not having appropriate resources or training to provide smoking cessation interventions to their clients who smoke. This finding is concerning for several reasons. First, guideline and consensus statements all strongly recommend that smokers with mental illness receive the same evidence-based cessation interventions as smokers in the general population (11–13). Second, smoking screening and treatment interventions are strongly recommended in the mental health setting. Third, the clinical skill set of mental health clinicians may be ideally suited to provide concurrent evidence-based smoking cessation treatment to clients who smoke.

Previous studies have reported that psychiatrists are less likely than primary care clinicians to assist and offer smoking cessation counseling to their patients who smoke (30,31). Our study provides additional evidence that a broader group of mental health clinicians (clinicians who may, in fact, be the most likely to provide mental health services in the community mental health setting) also struggle with assessing smoking status and providing smoking cessation services to their clients who smoke. Most clinicians surveyed were not consistently asking about or assessing their patients' smoking status or advising those who smoke to quit. Furthermore, less than a quarter of clinicians reported consistently providing smoking cessation counseling or referring their patient to a quitline. The most commonly reported barrier to providing smoking cessation treatment was the belief that smokers with

mental illness are not interested in quitting. Although this may be a commonly held belief among mental health clinicians, it is at odds with several studies suggesting that individuals with mental illness are in fact as interested in quitting smoking as those in the general population (14,32).

In addition, most clinicians reported being unsure whether smoking cessation would worsen psychiatric symptoms. Clearly, this uncertainty may provide a further disincentive for referral to treatment, especially if clinicians believe that smokers are not interested in smoking cessation treatment. Bridging this gap in knowledge may be particularly important because smoking cessation does not seem to be associated with worsening of psychiatric symptoms and may in fact improve overall health and well-being (8,13).

Although concerns regarding the expense associated with paying for nicotine replacement may be justified for patients who need to buy these products over the counter, it is important to note that nicotine replacement is free for patients who access smoking quitlines. The combination of free counseling and free nicotine replacement offered by telephone quitline may be an important tool for many clinicians, who may not have the skills to provide smoking cessation counseling to patients who smoke. This may be the case for the vast majority of clinicians surveyed in this study who reported that they were not confident in their skills to provide smoking cessation interventions. Given that smoking quitlines have been available free of charge in the State of Maryland for more than a decade (33), it is striking that nearly three-quarters of the surveyed clinicians reported never or rarely having a method to refer patients to telephone quitlines—few had ever used them. Clearly, further clinician training and education regarding how to access and utilize telephone quitlines may be an efficient way to ensure that these free and accessible services are available to smokers who attend these clinics.

Our results are also in keeping with those of other studies that evaluated

barriers to smoking cessation in methadone maintenance and other substance abuse treatment programs. Similar to our findings, the results of these studies indicate that substance abuse counselors infrequently offer smoking cessation treatment and have similar concerns that patients are not interested in quitting (34–39).

Our results also suggest that mental health clinicians may be less likely than primary care clinicians to ask, advise, and assess in regard to smoking. Primary care clinicians self-reported very high percentages of asking (95%), advising (95%), and assessing (91%) among patients who smoke (28). However, this may not be surprising because primary care clinicians may be more likely to view smoking assessment as a part of the usual clinical encounter.

Our study found some areas of success. For instance, smoking cessation appears to be preidentified at most clinical encounters, and less than half of the clinicians reported lack of time as a major or moderate barrier. Perhaps the most important positive finding was the willingness to learn more about evidence-based smoking cessation interventions. This willingness may provide an opportunity to bridge both the education and the resource gaps identified by this study.

Clearly, more can be done to improve access to and provision of smoking cessation treatment in the mental health setting. In the U.S. Department of Veterans Affairs system of care, 80% of veterans with mental illness who described themselves as being current or former smokers reported receiving advice from their primary care physician to quit smoking (40) and were generally as likely as veterans without mental illness to report receiving advice to quit smoking. How can similar benchmarks be reached in the community mental health system of care? Models of intervention implementation can provide needed guidance. For example, the Promoting Action on Research Implementation in Health Services framework (41) focuses on three interrelated elements—evidence, context, and facilitation—with the goal of promoting successful implementation of evidence-based practices.

Evidence refers to "codified and noncodified sources of knowledge as perceived by multiple stakeholders" (15). Context refers to "quality of the environment or setting in which the research in implemented" (15). Facilitation refers to "a technique by which one person makes things easier for others that is achieved through support to help people change their attitudes, habits, skills, ways of thinking and working" (15). Implementing smoking cessation assessment and treatment according to this model will require a tailored and concerted effort, not only to emphasize the need for additional training (evidence) but also to maximize clinician and system-level receptivity (context) utilizing all tools necessary to make a compelling case for implementation (facilitation).

The study had several limitations. First, the findings may not generalize to sites beyond those evaluated. Second, although we think it is appropriate to inquire how frequently clinicians discuss the use of over-the-counter products (nicotine patches or gum) with smokers, we acknowledge that inquiring how frequently clinicians discuss the use of a prescription medication (bupropion) may not be appropriate for all clinicians that we surveyed. Finally, we note that future studies should be directed to addressing what factors might contribute to the mismatch between consumer desires to quit smoking and provider assessments that lack of interest is a significant barrier.

Conclusions

Our findings suggest that mental health clinicians working in community mental health settings may not be consistently providing evidence-based smoking cessation interventions to their patients who smoke. The barriers we report appear to be modifiable through training and education. Studies that evaluate feasible and effective ways of implementing smoking cessation in community mental health settings are necessary and clearly warranted.

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