Training in Tobacco Treatments in Psychiatry: A National Survey of Psychiatry Residency Training Directors

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Objective: *Nicotine dependence is the most prevalent substance abuse disorder among adult psychiatric patients and is a leading cause of death and disability. This study examines training in tobacco treatment in psychiatry residency programs across the United States.*

Method: *The authors recruited training directors to complete a survey of their program's curriculum related to tobacco treatment, attitudes related to treating tobacco in psychiatry, and perceptions of residents' skills for addressing nicotine dependence in psychiatric patients.*

Results: *Respondents were representative of the national pool. Half of the programs provided training in tobacco treatments for a median duration of 1 hour. Content areas covered varied greatly. Programs with tobacco-related training expressed more favorable attitudes toward addressing tobacco in psychiatry and were more likely to report confidence in their residents' skills for treating nicotine dependence. Programs without tobacco training reported a lack of faculty expertise on tobacco treatments. Most training directors reported moderate to high interest in evaluating a model tobacco curriculum for psychiatry and stated they would dedicate an average of 4 hours of curriculum time.*

Conclusions: *The findings demonstrate the need for and interest in a model tobacco treatment curriculum for psychiatry residency training. Training psychiatrists offers the potential of delivering treatment to one of the largest remaining groups of smokers: patients with mental disorders.*

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The APA's clinical guidelines for treating nicotine dependence recommend that psychiatrists "assess the smoking status of all their patients . . . discuss interest in quitting . . . [and provide] explicit advice to motivate the patient to stop smoking" (1). For patients interested in quitting, the minimal initial recommended treatment includes written materials, brief counseling, and a follow-up visit or call 1 to 3 days after the quit date. Evidence indicates the more intensive the cessation counseling, the greater its effectiveness. Pharmacotherapy is recommended for use with all smokers trying to quit, except in special circumstances, with nicotine replacement therapy and sustained release bupropion being first-line, and nortriptyline and clonidine being second-line medications (2). Integration of cessation efforts within psychiatric care is encouraged for smokers with co-occurring mental illness (1, 3, 4). The extent to which psychiatrists are trained to treat nicotine dependence, however, is unknown.

Nicotine dependence is the most prevalent substance abuse disorder among individuals with mental illness, who are estimated to account for 44% to 46% of the U.S. tobacco market (5, 6). Tobacco use adversely affects the quantity and quality of life for patients with mental illness and can have a negative impact on psychiatric treatment. Tobacco users with psychiatric and substance use disorders are at elevated risk for smoking-related deaths, including cardiovascular and respiratory diseases and cancer (7–10). Tobacco use is associated with an increased risk of suicidal behavior among adolescents and adults, independent of other substance use, depressive symptoms, and prior suicidal ideation (11, 12). Complicating pharmacological treatments, the hydrocarbons of tar in cigarettes cause in-

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creased metabolism of some antipsychotic and antidepressant medications, which may lead to inadequate dosing, subtherapeutic blood levels, increased cost, and possibly even neuroleptic side effects (13). Financially, the smoking burden may be particularly difficult for individuals with severe mental illness, who are more likely to be low-income (14). In areas where smoking is prohibited, heavy smokers may find it difficult to participate, leading to further isolation. Quitting smoking at any age provides important and immediate health benefits and greater life expectancy (15). In terms of lives saved, quality of life, and cost efficacy, treating smoking is considered one of the most important activities a clinician can do (16).

A number of randomized trials have demonstrated the significant effect of physician advice on patient smoking cessation. In a recent review of 39 trials, however, not one was conducted in a psychiatric setting (17). A study analyzing data from the 1992–1996 National Ambulatory Medical Care Survey reported on psychiatrists' counseling for smoking cessation in independent practice settings (18). Data were collected by survey and 23% of the cases had to be dropped from the analysis because the psychiatrist was unaware of the patient's smoking status. For patients identified as smokers (N = 1,610), psychiatrists reported offering cessation counseling at only 12% of visits; diagnosis of nicotine dependence was not made at any visit; and nicotine replacement therapy was never prescribed. Similarly, analysis of 1999 survey data collected from psychiatrists in the Practice Research Network reported very low rates of identification and treatment of patients' tobacco use (19).

A primary barrier to delivering smoking cessation counseling may be lack of training. The extent to which psychiatry residency programs prepare their residents for identifying and treating nicotine dependence is largely unknown. A recent survey of 105 residents at psychiatry residency training programs in Northern California indicated poor tobacco-related knowledge, low confidence for delivering tobacco treatments, infrequent attention to patients' tobacco use in clinical care, and perceptions of inadequate tobacco-related training in medical school and psychiatry residency training (20). Nearly all respondents (94%) reported moderate to high interest in learning more about helping their patients quit smoking. The response rate (68%) and respondent characteristics suggested the sample was representative of the participating residency programs, but it is unknown how the findings generalize beyond northern California.

The purpose of the current study was to evaluate, in a national survey of residency training directors, the need for and interest in tobacco cessation training in psychiatry residency programs.

Method

Participants

Training directors of psychiatry residency training programs across the United States were identified from the online American Medical Association's Fellowship and Residency Electronic Interactive Database (FREIDA) (http://www.ama-assn.org/vapp/freida/srch/). Surveys were emailed and/or mailed to the 181 identified psychiatry residency training directors. A cover letter explained the purpose of the survey and requested voluntary participation. Survey completion was considered consent to participate. The study was approved by the University of California, San Francisco, Institutional Review Board.

Measures

A six-page self-report survey assessed: a) the training program's tobacco-related curricula, including hours of training, clinical experiences, content areas, faculty expertise, and training materials (7 items); b) perceptions of residents' skills for advising patients who smoke to quit, enhancing patients' motivation for cessation, assisting patients through the quit attempt, and providing appropriate referrals (6 items); c) attitudes, both positive and negative, related to addressing tobacco dependence in psychiatry (9 items); d) interest in evaluating a model tobacco treatment curriculum for psychiatry (3 items); e) program characteristics, including the number of residents, residency location, and affiliated clinical settings (3 items); and f) respondent characteristics, such as position, years in position, years out of medical school, gender, and professional areas of interest (5 items). The measure was piloted with tobacco researchers, psychiatry faculty, and assistant psychiatry residency training directors prior to use. Items were revised for clarity. The full measure is available upon request.

Procedures

Participants were instructed to refer to the 2004–2005 academic year and to consult as needed with faculty in their department who may teach tobacco-related content in their courses. The survey was estimated to take less than 15 minutes to complete. Respondents were provided $50 gift certificates to national bookstores for personal or professional use. The recruitment strategy included direct e-mail messages to training directors with an active link to

a secure online survey system, repeat e-mails for nonresponders, and mailed surveys to nonresponders and training directors with unlisted e-mail addresses. The mailed surveys included self-addressed, stamped return envelopes. A few training directors delegated faculty who specialize in the addictions or their chief residents to complete the survey.

Analyses

Descriptive analyses (means, frequencies) were used to summarize survey responses. Correlations, chi-square, and independent sample t tests were used to evaluate associations among the constructs.

Results

Respondents

Respondents from 114 residency training programs (63% response rate) in 40 U.S. states, Washington, D.C., and Puerto Rico completed the surveys. States with the greatest number of respondents were New York (13%) and California (11%), the two states with the largest number of training programs. The residency programs were affiliated with academic medical centers (81%), veterans hospitals (48%), private hospitals (46%), city or county hospitals (41%), and other sites (26%) (the sum exceeds 100% because programs were affiliated with multiple clinical sites). Across the 4 years of training, the programs had a mean of 29 residents (SD = 14, range = 1 to 70).

Respondents comprised 105 training directors, seven faculty or department chairs, and two chief residents. The sample was 72% male with a mean of 7 years (SD = 6, range = 0 to 30) in their current position and 23 years (SD = 9, range = 2 to 41) since graduating from medical school. Respondents' identified areas of professional interest were biological psychiatry (51%), psychotherapy (44%), geriatrics (13%), forensics (13%), child/adolescent psychiatry (14%), the addictions (11%), psychoanalysis (11%), psychosomatic medicine (6%), and other (29%) (the sum exceeds 100% because respondents reported multiple professional interests).

The sample was representative of U.S. psychiatry residency programs with respect to training director gender ($\chi^2 = 1.15$, df = 1, p = 0.284), U.S. region ($\chi^2 = 8.35$, df = 6, p = 0.214), residency size (t test = 0.49, df = 153, p = 0.626), and clinical training sites ($\chi^2 = 1.82$, df = 4, p = 0.769).

Training in Tobacco Treatment

All respondents reported their residency program provided training in the addictions. Half of the programs addressed treatment of nicotine dependence in their curricula and 43% provided clinical experiences specifically in treating nicotine dependence with psychiatric or substance abusing populations, such as by leading smoking cessation groups, for example. Dedicated curriculum time was a median of 1 hour duration. Most programs (89.5%) with training in tobacco treatments stated the training was required; 10.5% stated it was elective. Content areas covered and materials used in the tobacco trainings are summarized in Table 1. Most of the faculty (79%) providing training in tobacco treatments held expertise in both smoking cessation and working with the mentally ill (5% smoking cessation only; 16% mental illness only). Whether or not a program provided tobacco training did not differ by residency size, U.S. region, site affiliation, or respondents' identified areas of professional interest.

Attitudes Toward Addressing Tobacco in Psychiatry

Table 2 summarizes respondents' positive and negative attitudes toward addressing tobacco in psychiatry training and practice. Means are reported for the full sample and by whether or not the program provided tobacco training. Programs without training in tobacco were more likely to report a lack of tobacco-related expertise among faculty, a belief that smoking cessation treatment may detract from

TABLE 1. Frequency of Content Areas Addressed and Materials Provided by Psychiatry Residency Programs with Tobacco Treatment Training (N = 57)

Content Area Addressed	%
Assessment	74%
National Cancer Institute's 5 A's: Ask, Advise, Assess, Assist, Arrange	18%
Motivational approaches (i.e., stages of change and/or motivational interviewing)	65%
Behavioral/psychological treatments	61%
Pharmacological treatments (e.g., nicotine replacement, Zyban)	95%
Relapse prevention	35%
Treating smoking in the mentally ill	75%
Materials Provided	**%**
Standardized curriculum	21%
APA or national treatment guidelines for nicotine dependence	28%
Treatment manuals or counseling tools	19%
Patient cessation materials	37%
Nicotine replacement samples	30%

the management of a patient's psychiatric symptoms, and that tobacco cessation interventions are a low priority for psychiatry residency training ($p<0.05$). Respondents at programs with tobacco training were more likely to believe that treating nicotine dependence is one of the most important interventions a psychiatrist can make and that psychiatrists are well positioned to intervene on tobacco use with the mentally ill ($p\leq0.05$).

Perceptions of Residents' Skills for Treating Tobacco Dependence

Table 3 summarizes mean ratings of respondents' perceptions of their residents' skills for treating tobacco dependence. Means are reported for the full sample and by whether or not the program provided tobacco training. Programs without training gave significantly lower ratings of confidence in their residents' skills for addressing tobacco dependence across all levels of intervention ($p<0.05$). Even for programs with tobacco training, mean ratings were still fairly low, especially for assisting with quit attempts and relapse prevention.

Interest in a Model Tobacco Treatment Curriculum

Most respondents (89%) reported moderate to high interest in evaluating a model tobacco cessation curriculum for use in psychiatry residency programs. Respondents indicated they would be willing to dedicate 4.0 hours ($SD=3.2$) of curriculum time to a nicotine dependence training module. Most (85%) said they would make it a course requirement; 15% said an elective.

Interest in evaluating a model tobacco cessation curriculum did not differ by whether or not the program already provided tobacco training, size of the residency program, U.S. region, site affiliation, or years since the respondent completed his or her medical degree. Interest was higher among respondents who believed nicotine dependence is one of the most important interventions a psychiatrist can make ($r=0.46$, $p<0.001$) and that training in nicotine dependence would strengthen their residency program ($r=0.34$, $p<0.001$). Reported interest also was higher among respondents who identified a professional interest in the addictions ($r=0.18$, $p=0.056$). Interest was lower among respondents believing that tobacco interventions may detract from management of patients' psychiatric symptoms ($r=-0.30$, $p=0.001$) or that faculty would resist efforts to address tobacco as part of routine clinical care ($r=-0.23$, $p=0.014$). Lack of tobacco-related expertise in program faculty ($r=-0.25$, $p=0.008$), lack of perceived time in the curriculum ($r=-0.22$, $p=0.020$), and beliefs that tobacco treatments are a low priority for psy-

TABLE 2. Respondents' Attitudes Related to Treating Nicotine Dependence in Psychiatry Training and Practice

	Program Provides Tobacco Training		Full Sample
	Yes (N = 57) Mean (SD)	No (N = 57) Mean (SD)	(N = 114) Mean (SD)
A focus on smoking cessation would detract from management of patients' psychiatric symptoms*	1.68 (0.66)	2.16 (1.01)	1.92 (0.88)
We don't have the expertise in our faculty to provide training on nicotine dependence*	1.88 (0.97)	3.11 (1.19)	2.49 (1.24)
Tobacco cessation interventions are a low priority for psychiatry residency training*	2.91 (1.21)	3.60 (1.05)	3.25 (1.18)
There is not enough time in the curriculum to include training on treating nicotine dependence	2.09 (1.17)	2.46 (1.00)	2.27 (1.10)
Our faculty would resist efforts to include treatment of nicotine dependence as a routine part of clinical care	1.98 (0.92)	2.23 (0.96)	2.11 (0.94)
Discussing tobacco use and the health risks of smoking may make patients angry or defensive	2.47 (1.10)	2.70 (1.13)	2.59 (1.12)
Psychiatrists are well positioned to intervene on tobacco use with the mentally ill*	4.28 (0.96)	3.93 (0.96)	4.11 (0.97)
Treating nicotine dependence is one of the most important interventions a psychiatrist can make in terms of life expectancy, quality of life, and cost efficacy*	3.96 (1.09)	3.38 (1.04)	3.67 (1.10)
Providing training in the treatment of nicotine dependence among the mentally ill would strengthen our residency program	4.00 (1.03)	3.75 (0.89)	3.88 (0.97)

Rating scale: 1 = strongly disagree to 5 = strongly agree
* Group comparison, $p\leq0.05$

chiatry residency training ($r = -0.26$, $p = 0.005$) also were associated with less interest.

Discussion

The current study examined training in treatments for nicotine dependence in psychiatry residency programs across the United States. While all programs provided training in the addictions, only half provided training in nicotine dependence, and 43% offered residents clinical experiences specific to treating nicotine dependence with mentally ill smokers. It is largely unknown how the findings compare to residency training for other medical specialties, as little has been reported in the literature. One study (21), a survey of pediatric residency programs, reported that 62% provided some type of training or supervision in tobacco prevention and control. Identified barriers to training included lack of training resources, lack of faculty expertise, and competing time demands. Similarly, in the current study, lack of faculty expertise and competing curricula time demands appeared to be barriers to providing tobacco training in psychiatry residency programs.

Negative attitudes toward addressing patients' tobacco use in psychiatry were infrequently endorsed overall but were more highly endorsed by psychiatry residency programs not providing tobacco training. Specifically, programs without tobacco training were more likely to consider tobacco cessation interventions a low priority for psychiatry residency training. While this association may be somewhat self-evident, it may alternatively reflect a response bias in that a program without training in this area may justify not having it by stating that such training is not important. Overall, respondents tended to disagree with the statement that efforts to address tobacco use may detract from the management of a patient's psychiatric symptoms; programs with tobacco training were more emphatic in disagreeing with this statement. Programs with tobacco training were more likely to view psychiatrists as well positioned to intervene on tobacco use with the mentally ill and identified nicotine dependence treatments as one of the most important and effective interventions a psychiatrist can make. Attitudes also were associated with respondents' degree of interest in evaluating a model tobacco cessation curriculum for use in psychiatry residency training. Raising greater awareness of the deadly health effects and psychiatric treatment complications of tobacco use and the potential for successful cessation treatment may be critical for establishing training in psychiatry residency programs nationally. A growing evidence base has demonstrated the efficacy of treating nicotine dependence in smokers with co-occurring mental illness (22, 23).

Covered content areas varied greatly among programs that provided tobacco training. Only about a third of programs with training covered relapse prevention strategies, 65% addressed motivational approaches, and 61% included instruction on behavioral treatments. In contrast,

TABLE 3. Respondents' Perceptions of Residents' Abilities to Address Tobacco Use With Their Patients

	Program Provides Tobacco Training		Full Sample
	Yes (N = 57) Mean (SD)	No (N = 57) Mean (SD)	(N = 114) Mean (SD)
Residents can sensitively suggest tobacco cessation to patients who use tobacco*	3.54 (0.87)	3.11 (0.96)	3.32 (0.94)
Residents can enhance motivation of patients who are trying to quit*	3.23 (0.93)	2.86 (0.82)	3.04 (0.89)
Residents have sufficient knowledge of the pharmaceutical products for tobacco cessation*	3.61 (0.86)	2.88 (0.83)	3.25 (0.92)
Residents have the skills to monitor and assist patients through their quit attempt*	2.93 (0.90)	2.46 (0.73)	2.69 (0.85)
Residents can refer patients to appropriate smoking cessation programs*	3.35 (1.04)	2.75 (0.97)	3.05 (1.05)
Residents can help recent quitters learn how to identify and cope with situations or triggers that might lead them to relapse back to smoking*	3.00 (0.73)	2.51 (0.74)	2.75 (0.77)

Rating scale: 1 = not at all confident; 5 = extremely confident
* Group comparison, $p < 0.05$

95% provided training on pharmacological treatments for nicotine dependence. Enhanced attention to motivational and behavioral treatments for nicotine dependence would provide the added benefit of helping programs meet the Accreditation Council for Graduate Medical Education (ACGME) (24) requirement to provide training in a number of evidence-based psychotherapy models including cognitive and behavioral treatments (CBT). Recent evidence suggests that less than half of psychiatry residency programs have a requirement for resident-performed CBT (25).

In terms of training materials, less than a third of programs provided residents with nicotine replacement therapy samples or APA tobacco treatment guidelines; 19% provided treatment manuals or counseling tools. Developing a standardized curriculum may help in facilitating delivery of evidence-based training in tobacco treatments. The training directors in the current study reported a high level of interest and a commitment on average of 4 hours of curriculum time for such a training module.

Limitations of the current study were the reliance on a self-report survey and not having full representation of the psychiatry residency training programs. Representativeness of the study sample, however, was supported by participation from all regions of the United States, comparability to the national recruitment pool, and the 63% response rate, which is good for a physician survey. In the literature, response rates for mailed physician surveys average 54% to 61% (26, 27). For mailed surveys with psychiatry residency training directors, response rates have ranged from 27% to 70% (28–31).

The findings of the current study demonstrate the need for and interest in tobacco cessation curricula in psychiatry residency training programs. Smokers with psychiatric disorders have been identified as a priority population (1, 2, 32), and psychiatric treatment encounters provide an ideal but, as yet, untapped opportunity for treating this deadly addiction. Integration of smoking cessation services within psychiatric care is recommended, given the specialized needs of mentally ill smokers (1, 3, 4). The high rates of tobacco use among the mentally ill and the resulting negative health, social, financial, and treatment consequences cannot be ignored. Without clinical intervention, however, levels of tobacco use are unlikely to change. A focus on training the next generation of psychiatrists may help ensure achievement of changes in clinical practice and delivery of tobacco interventions to this high risk group of smokers.

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