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An evaluation of tobacco treatment specialist counseling performance using standardized patient interviews

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Abstract

In the United States, tobacco treatment specialists are professionals from a variety of backgrounds trained to deliver moderate to intensive evidence-based tobacco treatment in a variety of settings across the country. This paper reports the results of a study that examined the extent to which specialists participating in a larger study adhered to clinical practice guidelines for tobacco dependence using standardized patient assessments. A total of 64 tobacco treatment specialists completed a survey and two audiotaped standardized patient interviews. Overall, 41% and 31% of tobacco treatment specialists demonstrated 80% or more of session content and interviewing skills assessed, respectively, when required to demonstrate the skill in both standardized patient interactions. These rates increased to 85% and 56%, respectively, when using the less stringent criteria of demonstrating the skill in at least one of the two standardized patient interactions. Tobacco treatment specialists who had attended a greater number of types of tobacco treatment training exhibited both greater coverage of session content ($p<.06$) and greater interviewing skills ($p<.02$). Those who had achieved certification as a tobacco treatment specialist exhibited greater coverage of session content ($p<.02$), and those perceiving more positive support from their agency for their services exhibited greater interviewing skills ($p=.02$). Although the tobacco treatment specialists evaluated appear to have the necessary skills to deliver guideline-based intervention, they demonstrated only moderate adherence to the guidelines when expected to do so consistently across multiple assessments. Findings suggest specific components of tobacco treatment and interviewing skills that would benefit from strengthening through training and support.

Introduction

The Centers for Disease Control and Prevention recommend in their document *Best Practices for Comprehensive Tobacco Control Programs* that health care systems identify smokers; advise them to quit; and provide brief counseling and a full range of treatment services including pharmaceutical aids, more intensive behavioral counseling, and follow-up visits (Centers for Disease Control and Prevention, 1999). In addition, the U.S. Public Health Service guideline recognizes the role of specialists in delivering moderate to intensive tobacco treatment services (Fiore et al., 2000). Demand for such tobacco treatment specialists has been increasing, with an increasing number of states seeking training for these specialists and supporting their delivery of more intensive interventions for tobacco users. As evidence of this growing profession, a new professional organization, the Association for the Treatment of Tobacco Use and Dependence (ATTUD), was recently founded to support tobacco treatment specialists in their goal of delivering evidence-based tobacco treatment services. This organization defines a tobacco treatment specialist as “a professional who possesses the skills,

knowledge and training to provide effective, evidence-based interventions for tobacco dependence across a range of intensities” (ATTUD, 2005).

Individuals pursuing this new specialty come from a wide variety of disciplines such as nursing, social work, respiratory care, health education, and substance abuse and mental health counseling. They work in settings such as hospitals, community health centers, telephone quitlines, and many types of social service environments (Ewy, Elbirt, Ford, & Pbert, 2002; Speelman, Burke, Foulds, & Order-Conners, 2005). Massachusetts was among the first states to recognize the value of tobacco treatment specialists and developed training programs and funding mechanisms to support their work. As an example of the reach of these specialists, in 2002 they served 7,559 tobacco users in individual sessions and 1,975 in group sessions (Hamilton et al., 2003). A number of other states, including Maine, New Jersey, Rhode Island, and Mississippi, require that providers who deliver state-supported tobacco treatment services complete an appropriate course of training based on current clinical practice guidelines.

National clinical practice guidelines for evidence-based tobacco dependence treatment include assessing current smoking, motivation to quit, and medical and social history, and developing a treatment plan including setting a quit date, reviewing past quitting history, developing strategies to address anticipated triggers and challenges, recommending pharmacotherapy, and offering follow-up (Fiore et al., 2000). As specialists are increasingly being relied upon to provide tobacco treatment services, it is important to understand the degree to which they are able to deliver treatment according to these guidelines. Identification of the guideline components that are adhered to less frequently can help guide training curricula and the development of systems to improve the quality of treatment that these providers deliver. Despite the rapid growth of this specialty, to date no research exists on the fidelity with which tobacco treatment specialists adhere to established clinical practice guidelines.

As part of a larger National Cancer Institute (NCI)–funded study of Massachusetts Tobacco Control Program tobacco treatment policies and programs, prospective evaluations of funded programs were conducted. Standardized patient assessments were used to measure the quality of tobacco treatment provided by the specialists in these programs. Although considered the gold standard for evaluating the clinical competence of medical students and residents (e.g., Prislin, Giglio, Lewis, Ahearn, & Radecki, 2000; Schwartz et al., 1998; Sloan et al., 1996; Townsend, McLivenny, Miller, & Dunn, 2001), and to some degree for assessing smoking cessation counseling skills in medical education (Ferry, 1999; Spangler, George, Foley, & Crandall, 2002), standardized patient assessments have not been used to evaluate the level of adherence to evidence-based tobacco treatment guidelines by tobacco treatment specialists, a new and growing group of professionals.

This paper describes the results of an evaluation of tobacco treatment specialist performance with standardized patients, including the extent to which these providers adhered to established standards of practice for tobacco treatment assessment and counseling and characteristics related to their performance.

Method

Study sample

The study sample was drawn from a larger NCI-funded study of 86 programs funded by the Massachusetts Tobacco Control Program to deliver tobacco treatment services. One program was excluded from the study due to a conflict of interest. From the remaining 85 tobacco treatment programs, tobacco treatment specialists at 64 programs agreed to complete the standardized patient assessments component of the study. Of the 21 programs not participating, 4 did not have a tobacco treatment specialist at the time of the study to complete the

standardized patient assessment, and the remaining 17 refused to participate. Although reasons for refusal were not documented, anecdotally it appears that time constraints were a main factor. Programs were housed in a variety of agencies including community health centers, hospitals, substance abuse and mental health clinics, and miscellaneous other settings. Community health centers had the highest percentage of tobacco treatment specialists completing the standardized patient assessments at 86% (25/29), followed by substance abuse clinics at 80% (8/10), miscellaneous others at 75% (12/16), hospitals at 71% (15/21), and mental health clinics at 44% (4/9). Out of the 64 providers who completed the standardized patient assessment, 59 also completed the tobacco treatment specialist survey. When more than one tobacco treatment specialist provided state-funded services at an agency, the specialist identified as having primary responsibility for the funded program completed study assessments.

Measures

Standardized patient cases—Two distinct patient cases, one male who was ready to make a quit attempt and one female who was considering quitting but was not yet ready to make a quit attempt, were developed based on information from real clients whose identity had been disguised to protect confidentiality and were carefully selected to demonstrate a range of characteristics including smoking history, prior quit attempts, readiness to change, and barriers and facilitators to changing.

Checklist of standards of practice—A checklist of standards of practice as reflected by the clinical practice guideline for tobacco treatment was developed based on similar checklists used to evaluate clinical competency of medical trainees at the University of Massachusetts Medical School and other regional medical schools. The University of Massachusetts Medical School checklists have been developed, piloted, and used in formative and summative student assessments or objective structured clinical examinations (Hollingsworth, Richard, & Frye, 1994), using standardized patient assessments since the early 1980s. Such assessments are typically scored by the standardized patient, who is trained to both portray the patient and complete the evaluation checklist. However, a number of investigators have raised concerns about the ability of standardized patients to reliably score assessments for which they are serving as the standardized patient (Colliver et al., 1998; M. H. Swartz, Colliver, Robbs, & Cohen, 1999). As such, although both the standardized patients and independent raters scored assessments in the present study, we decided prior to study implementation that only the independent raters' ratings would be used for our analyses. The final checklist used in the present study consisted of two sections as described below and presented in the Appendix.

Session content items—Items were drawn from the U.S. Public Health Service clinical practice guideline (Fiore et al., 2000) and from the Massachusetts tobacco treatment specialist standards of practice (Pbert, Ockene, Ewy, Leicher, & Warner, 2000). The checklist was designed to capture session content information that is expected by practice guidelines to be covered during an initial intake and assessment session with a tobacco user. This section contained 21 yes-no items in five categories: current smoking, quitting history, motivation/readiness, medical/social history, and treatment planning. Each tobacco treatment specialist's session content score comprised the percentage of the 21 session content items completed for both standardized patient assessments.

Interviewing skills items—Items were drawn from the communication and interviewing skills sections of objective structured clinical examination checklists used at the University of Massachusetts Medical School and regional medical schools. Of the 10 items, 3 were rated on a five-point scale from 5 (consistently) to 1 (never); the remaining 7 items were rated as fully, partially, or not addressed. To have comparable summaries for session content and interviewing scores and to be able to calculate an overall score, interviewing items with a response of

“sometimes,” “rarely,” “never,” or “not addressed” were scored as no, for not occurring during the interview. Items with a response of “consistently,” “frequently,” “fully addressed,” or “partially addressed” were scored as yes, for occurring during the interview. Each treatment specialist's interviewing score comprised the percentage of the 10 interviewing items that received a yes for both standardized patient assessments.

Training of standardized patients and independent raters—Four experienced standardized patients, two men and two women, were recruited and trained for this study. The training procedures closely modeled the National Board of Medical Examiners training protocol used by the University of Massachusetts Medical School Standardized Patient Program (Dillon, Hawkins, & Whelan, 2004; King, 2004). Training sessions included detailed review of case material, a series of mock exams, and a debriefing session to review the checklists and discuss unanticipated incidents or questions. Uniform strategies were agreed upon to ensure standardized responses when the study tobacco treatment specialist standardized patient assessments were implemented.

The three independent raters recruited for the audiotape reviews went through a training process similar to the standardized patients training protocol described above. Instead of taking part in the mock exam, they independently scored tapes from the mock exam and compared checklist ratings. The raters then each independently scored five audiotapes from actual assessments with study participants. These scores were analysed for reliability, and a final session was held to reconcile any remaining discrepancies in scoring. This process was repeated 6 months later to assess ongoing reliability.

Tobacco treatment specialist survey—The self-administered survey consisted of 40 items designed to describe the tobacco treatment specialists and capture information required to address the research questions of the larger study. Domains included (a) tobacco treatment experience and training, (b) current tobacco treatment activities, (c) clinical supervision, (d) perception of Massachusetts Tobacco Control Program support and requirements, (e) perception of agency support for their treatment program, (f) referral and feedback systems, (g) self-efficacy and confidence in providing treatment, (h) barriers to providing services, and (i) demographic information. The survey was pilot tested with six tobacco treatment specialists scheduled to be assessed as part of the study approximately 1 year after the pilot date. Clarity of the questions and appropriateness of response options were reviewed, and revisions were made based on the results of the pilot.

Data collection procedures

The standardized patient interviews were conducted and audiotaped with the tobacco treatment specialist for each program at a neutral location as close as possible to his or her place of work in order to maximize participation. Because of the multiple locations of the assessments, videotaping was not logistically feasible; therefore, we decided to audiotape the sessions for the purpose of scoring. Each tobacco treatment specialist was provided a brief summary of the case to review prior to the session. We considered allowing each provider to use their usual patient assessment forms, checklists, and educational materials during their evaluation; however, we decided that such materials would not be allowed during the evaluation session both for logistical reasons (i.e., standardized patients would need to complete a wide variety of assessment forms prior to each provider's evaluation) and to ensure that all providers were evaluated on an equal basis regarding their skills, controlling for variation that would be introduced by differences in assessment forms, checklists, and materials used.

Prior to the first case the tobacco treatment specialists were reminded of the confidentiality of the audiotapes. Each provider conducted two 20-min interviews. Immediately after each case,

the standardized patient completed the checklist. The audiotapes were then sent to the three independent raters, who completed the checklists. The tobacco treatment specialist survey was completed prior to the standardized patient assessment.

This study was approved by the University of Massachusetts Medical School Institutional Review Board and received a Certificate of Confidentiality from the National Cancer Institute to further protect the individuals and agencies involved in the larger study due to the sensitive nature of tobacco control efforts.

Data analyses

For the analyses pertaining to adherence to standards of practice, tobacco treatment specialists were considered to meet standards of practice if they demonstrated 80% or more of the session content assessed on both cases. The same 80% or more criterion was used when evaluating interviewing skills and an overall score that averaged items across both the session content and interviewing skills domains. The 80% criterion was selected because it provided a conservative standard and high level of expectation for performance of the standards of practice and interviewing skills evaluated. To determine the degree to which providers were capable of demonstrating the specific skills, even if not demonstrated consistently across the two assessments, scores also were computed for demonstration of the skills in at least one of the two standardized patient assessments.

Continuous data from the independent rater scores were summarized using means and standard deviations, and discrete data were summarized with counts and percentages. Linear regression was used to estimate and test the association of rated standardized patient scores with tobacco treatment specialist characteristics. Correlations of scores were estimated to evaluate the degree of association. Mean score differences were estimated and tested with a *t* test to determine the direction of any bias. For interrater reliability, percentage agreement of individual items and corresponding kappa statistics were calculated to examine the degree of agreement among the independent raters ($n = 14$ tapes). Kappas were estimated by compiling responses for individual questions (0/1 indicators) in the respective sections (Gould, 1997). To compute kappas for the interviewing score, we collapsed the scale to 0/1 indicators. An overall kappa across the three raters and kappas for pairs of raters were estimated, as well as correlations of scores between raters.

Results

Reliability of independent ratings

For the session content score, overall agreement of approximately 85% and kappas of 0.6 were observed, which can be labeled moderate to substantial agreement (Landis & Koch, 1977). The interviewing score showed only fair agreement of approximately 71%, with kappas on the order of 0.4.

Fidelity to standards of practice

Table 1 presents the extent to which tobacco treatment specialists adhered to established standards for tobacco treatment. As seen in the table, 41% of tobacco treatment specialists met the criterion of demonstrating 80% or more of the items for the content of the session, 31% met this criterion for the interviewing skills exhibited when averaged across both assessments, and 27% met the criterion for the overall score. However, when the less stringent criterion of demonstrating the individual items in at least one of the standardized patient assessments was used, 86% of the tobacco treatment specialists met the criterion for the content of the session, 56% met the criterion for the interviewing process used, and 86% met the criterion for the overall score.

The frequency with which individual session content items were covered by the tobacco treatment specialists varied considerably (Table 2). The items most likely to be covered by the tobacco treatment specialists with both standardized patients were assessing the number of cigarettes smoked per day, assessing readiness to quit, discussing treatment options or plans, and discussing nicotine replacement therapy or Zyban use. The least frequently covered items were assessing mental health and substance abuse history, encouraging the client to self-monitor his or her smoking behavior, assessing support systems in place to assist the individual with quitting, and discussing what caused relapse when the individual had tried to quit before. This pattern was found even when applying the less stringent requirement of covering the content item in at least one session.

Tobacco treatment specialists exhibited the expected interviewing skills to a moderate degree (Table 3). Interviewing skills most frequently exhibited included exploring the individual's expectations regarding the visit and introducing himself or herself to the client. Skills exhibited to a more moderate degree included using a good balance of question types, reinforcing client statements, summarizing the assessment and treatment options and plan, closing the interview, encouraging questions from the client, and organizing the flow of the session. The interviewing skill rarely used was soliciting the client's perspective.

Relationship between tobacco treatment specialist characteristics and tobacco treatment performance

Tobacco treatment specialist characteristics are presented in Table 4. Attending three versus two types of tobacco treatment training was associated with higher session content (78.6% vs 73.0%; $p=.06$), interviewing (75.2% vs 67.7%; $p=.02$), and overall scores (77.4% vs 71.5%; $p=.01$). Having achieved the Massachusetts Tobacco Treatment Specialist Certification was associated with greater session content (78.5% vs 72.1%; $p=.02$) and overall scores (75.9% vs 70.8%; $p=.06$). Six items reflecting the tobacco treatment specialist's perception of positive support from his or her agency for the tobacco treatment program and services were summarized into a rating scale of 1–6. Higher ratings of positive agency support were associated with higher interviewing scores. Specialists reporting the lowest rating (2) had a mean interviewing score of 58.3%, whereas specialists reporting the highest rating (6) had a mean interviewing score of 74.3% (slope=3%, $p=.02$).

Discussion

Using independent ratings of audiotaped assessments of the performance of tobacco treatment specialists with standardized patients, we found that almost half met or exceeded predetermined criteria for covering 80% or more of the intervention steps (session content) recommended by current clinical practice guidelines with both standardized patients. When evaluating treatment specialists' ability to demonstrate the skills in at least one of the two standardized patient assessments, we found that the majority (86%) met this criterion. This finding suggests that the tobacco treatment specialists had the skills necessary to deliver the majority of the standards of practice for tobacco treatment but were not doing so consistently across assessments. The best measure of performance is consistent demonstration of standards of practice. In the absence of consistent performance, it is helpful to know whether providers have the necessary skills. If the skills are present, consideration needs to be given to the design and implementation of systems and practice tools to enhance consistency in the delivery of the standards of practice. The intervention steps consistently covered most frequently with both cases were assessing the number of cigarettes smoked and the client's readiness to quit, and discussing treatment options and medications. The least frequently reported steps exhibited consistently were discussing what caused relapse in prior quit attempts, assessing available support for quitting, encouraging self-monitoring, and assessing mental health and substance abuse conditions. These latter steps

may not be as ingrained in the specialists' practice as the former, and hence their performance may have suffered without the usual prompts available in their practice setting.

Regarding the interviewing skills assessed, only a third of the specialists consistently demonstrated the skills with both cases. Unfortunately, their performance did not improve as significantly as it did on the session content items when requiring demonstration of the skills in at least one session but not both. This finding suggests that either the providers did not have the interviewing skills assessed or the measures we selected did not appropriately capture important interviewing skills. We would recommend that future studies include a wider array of interviewing skills in the assessments and that more extensive pretesting be conducted to ensure these skills are evaluated adequately.

Only a few characteristics of the tobacco treatment specialists were found to be associated with performance on the standardized patient assessments. First, successful completion of the requirements to become a Massachusetts Certified Tobacco Treatment Specialist was related to significantly greater session content scores compared with not having achieved certification. These findings suggest that, for the delivery of moderate to intensive tobacco treatment as was assessed in the present study, going through the rigors of advanced training and the certification process may be warranted.

In addition, tobacco treatment specialists attending three versus two types of tobacco treatment training scored significantly higher on session content scores, suggesting that obtaining a greater number of different types of training has a significant impact on tobacco treatment specialists' ability to deliver treatment consistent with clinical practice guidelines. Although these associations were statistically significant, the differences in scores were modest, ranging from 5% to 7%, and whether these differences are strong enough to persist over time is unclear.

Greater interviewing skills also were associated with greater number of types of training received. One possible explanation for this finding is that exposure to a variety of training programs builds providers' interviewing skills. Another possibility is that individuals with greater interviewing skills seek opportunities to further improve their tobacco treatment abilities through training. However, the interviewing skills assessed have room for improvement, which could be addressed in training curricula. Providers coming from a professional background that does not emphasize basic interviewing process skills (e.g., respiratory therapy, health education) might benefit from separate, specialized training and clinical supervision to augment their interviewing ability.

Perception of more positive agency support for the treatment program also was associated with greater demonstration of interviewing skills. At least two possible explanations for this finding can be suggested. First, tobacco treatment specialists with strong interviewing skills may be better able to work with the individuals in their agency to develop and maintain their agency's support for their program and services. Alternatively, agencies that strongly support tobacco treatment may have done a better job of hiring tobacco treatment specialists with strong interviewing skills. Regardless of the reason, the data suggest that agency support is an important factor in the performance of tobacco treatment specialists.

Specific components of the tobacco treatment guideline adhered to least frequently and in need of further attention in training curricula and treatment program supports were identified. Assessment of mental health and substance abuse history was found to be the least frequently performed standard of practice. Given the high comorbidity of smoking among those with mental health and substance abuse concerns (Lasser et al., 2000), and the decreased likelihood of successful quitting among certain groups (Humfleet, Munoz, Sees, Reus, & Hall, 1999; John, Meyer, Rumpf, & Hapke, 2004), this finding highlights the need for training programs to prepare specialists more fully to address this important component of tobacco treatment and

for prompts and assessment tools to be incorporated into treatment programs to ensure consistent assessment and follow-up. Other intervention activities exhibited infrequently, such as encouraging self-monitoring of smoking behavior, assessing support systems for quitting, and discussing what caused prior relapse, also would benefit from increased attention in training curricula. These activities may be facilitated by program guidelines and materials that prompt and support the provider in carrying out these activities.

A number of limitations of this study deserve mention. First, the standardized patient assessments were conducted outside of the tobacco treatment specialists' natural clinical environment, which may have affected their performance. Anecdotally, they reported forgetting the artificial nature of the environment and interaction as they began working with the standardized patient. However, specialists were fully aware that they were being evaluated, which may have enhanced their performance beyond their general clinical practice. In addition, in practice many specialists routinely have clients complete an assessment form prior to their first visit to familiarize themselves with the patient and to structure the visit, and they use tools to guide their assessment and treatment planning. These assessments and tools were not available during the evaluation, which may account in part for the lack of adherence to some of the clinical practice guidelines and may explain in part why they were able to demonstrate the skills assessed but did not do so consistently across the two cases. Second, the use of audiotape versus videotape did not allow for the assessment of nonverbal skills. Third, achieving reliability among audiotape raters was very good for session content scores but much less so for interviewing scores. The presence or absence of a specific intervention step may have been less ambiguous for the raters to identify and score, whereas scoring the degree to which an interviewing skill was exhibited over the entire clinical encounter may have proved much more challenging for raters, resulting in greater variability in perception of interviewing skills delivered. Therefore, the results of the interviewing scores need to be interpreted cautiously. Finally, the results are limited in generalizability due to the small sample size and the unique nature of the study sample, given that these were among the first providers identified as tobacco treatment specialists in the nation. However, they do represent a new and growing group of professionals delivering moderate to intensive tobacco treatment and are from a wide variety of professional backgrounds. In this regard, the results of this study are relevant to this growing specialty.

In conclusion, tobacco treatment specialists in the present study demonstrated moderate adherence to tobacco treatment clinical practice guidelines. Training and certification appeared to be related to adherence, whereas factors such as age, gender, education level, and ethnicity were not. This finding is encouraging because it suggests that providers from a variety of backgrounds, including those caring for underserved populations, can be trained to deliver evidence-based treatment. Although Massachusetts no longer funds community-based treatment programs, these specialists continue to deliver services in many settings in Massachusetts (LaPelle, Zapka, & Ockene, 2006). Most important, other states and countries are increasingly implementing integrated cessation services, including telephone and face-to-face moderate to intensive counseling using tobacco treatment specialists, resulting in a steady demand for tobacco treatment specialists, high-quality training programs, and clear standards of practice (Jolicoeur, Payne, Ewy, Burke, & Pbert, 2005; S. Swartz & Wassum, 2005).

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Appendix

Standardized patient assessments.

			Section A. Session content
	Yes	No	
	☐	☐	<i>Current smoking</i>
	☐	☐	Assessed number of cigarettes/day
	☐	☐	Assessed situations that currently trigger smoking
	☐	☐	<i>Quitting history</i>
	☐	☐	Discussed past attempts – how many times quit and how long quit for
	☐	☐	Discussed problems experienced during quit attempts (<i>Problems</i> are defined as withdrawal symptoms or situations or issues that occurred when quitting, including consequences of withdrawal symptoms.)
	☐	☐	Discussed what helped with past attempt(s)
	☐	☐	Assessed if NRT or Zyban was used with past attempt(s)
	☐	☐	Discussed what caused relapse
	☐	☐	<i>Motivation/readiness</i>
	☐	☐	Assessed reasons for wanting to quit (now or in the future)
	☐	☐	Assessed readiness to quit
	☐	☐	Assessed barriers to current or future quit attempts
	☐	☐	<i>Medical/social history</i>
	☐	☐	Assessed medical history; conditions

Yes	No	Section A. Session content
☐	☐	OR medications Assessed mental health substance abuse history: conditions
☐	☐	OR medications Assess social environment: other smokers in family/ coworkers/ friends
☐	☐	Assess support systems in place to assist with quitting
☐	☐	<i>Treatment planning</i> Addressed choosing a quit date
☐	☐	Brainstormed strategies to deal with high risk situations/ triggers
☐	☐	Encouraged client to self- monitor smoking behavior
☐	☐	Discussed NRT or Zyban
☐	☐	Encouraged client to enlist support of family, friends, and others
☐	☐	Discussed treatment options or plan
☐	☐	Offered a follow-up visit

Section B. Interviewing skills

	<i>Consistently</i>
	5
Organization	☐
Good balance of open ended, specific, and direct questions	☐
Verbal reinforcement	☐
Introduction/counselor role	
Explored client expectations for visit	
Solicited client's perspective	
Encouragement of questions	
Summarized initial assessment	

Section B. Interviewing skills

Consistently

5

Summarized treatment options/
plan
Closure of the interview

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Table 1

Extent to which tobacco treatment specialists adhere to established standards of practice for tobacco treatment ($n=64$).

	Both standardized patient assessments ^a		At least one standardized patient assessment ^b	
	Mean (SD) Range	Percent covering at least 80% of items ^c	Mean (SD) Range	Percent covering at least 80% of items ^c
Session content score	0.75 (0.12) 0.29–0.95	40.6	0.87 (0.11) 0.38–1.00	85.9
Interviewing score	0.71 (0.12) 0.35–0.90	31.2	0.85 (0.12) 0.60–1.00	56.2
Overall score ^d	0.74 (0.10) 0.39–0.90	26.6	0.87 (0.09) 0.48–1.00	85.9

Note.

^aData are from independent ratings averaged across two standardized patient assessments.

^bData are from independent ratings of items covered in at least one standardized patient assessment.

^cTobacco treatment specialists were considered to “meet standard of practice” if they demonstrated 80% or more of the expected items.

^dAverage score for all items combined.

Table 2

Frequency of tobacco treatment specialist coverage of session content by domain.

Checklist item by domain (response=yes or no)	Covered in both assessments, percent (number of subjects)	Covered in at least one assessment, percent (number of subjects)
Current smoking		
Assessed number of cigarettes/day	93.8 (60)	100 (64)
Assessed situations which currently trigger smoking	71.9 (46)	95.3 (61)
Quitting history		
Discussed what helped with past quit attempt(s)	70.3 (45)	92.2 (59)
Assessed if NRT or Zyban was used with past quit attempt(s)	57.8 (37)	93.7 (60)
Discussed problems experienced during quit attempts	54.7 (35)	82.8 (53)
Discussed past quit attempts—how many times quit and how long quit	50.0 (32)	87.5 (56)
Discussed what caused relapse	34.4 (22)	75.0 (48)
Motivation/readiness		
Assessed readiness to quit	87.5 (56)	100 (64)
Assessed reasons for wanting to quit (now or in the future)	59.4 (38)	90.6 (58)
Assessed barriers to current or future quit attempts	56.3 (36)	87.5 (56)
Medical/social history		
Assessed social environment: other smokers in family/coworkers/friends	73.4 (47)	92.2 (59)
Assessed medical history: conditions or medications	62.5 (40)	90.6 (58)
Assessed support systems in place to assist with quitting	26.6 (17)	68.7 (44)
Assessed mental health/substance abuse history: conditions or medications	23.4 (15)	54.7 (35)
Treatment planning		
Discussed treatment options or plan	87.5 (56)	100 (64)
Discussed NRT or Zyban	81.3 (52)	100 (64)
Offered a follow-up visit	59.4 (38)	95.3 (61)
Addressed choosing a quit date	53.1 (34)	92.2 (59)
Encouraged client to enlist support of family, friends, and others	40.6 (26)	85.9 (55)
Brainstormed strategies to deal with high-risk situations/triggers	34.4 (22)	87.5 (56)
Encouraged client to self-monitor smoking behaviour	26.6 (17)	65.6 (42)

Table 3

Frequency of tobacco treatment specialist coverage of interviewing skills.

Checklist Scale=5 (consistently)–1 (never)	Consistently or frequently; percent (number of subjects)	Sometimes, rarely, or never; percent (number of subjects)
Good balance of open ended, specific, and direct questions	68.8 (44)	31.2 (20)
Verbal reinforcement	65.6 (42)	34.4 (22)
Organization	48.4 (31)	51.6 (33)
Checklist items Scale=3 (fully addressed), 2 (partially addressed), 1 (not addressed)	Partially or fully addressed, percent (number of subjects)	Not addressed, percent (number of subjects)
Explored client expectations for visit	81.2 (52)	18.8 (12)
Introduction/counselor role	81.2 (52)	18.8 (12)
Summarized initial assessment	67.2 (43)	32.8 (21)
Closure of the interview	67.2 (43)	32.8 (21)
Encouragement of questions	65.6 (42)	34.4 (22)
Summarized treatment options/plan	57.8 (37)	42.2 (27)
Solicited client's perspective	7.8 (5)	92.2 (59)

Table 4Tobacco treatment specialist characteristics.^a

Tobacco treatment specialist characteristic	Percent (number of subjects) or mean (SD)
Gender	
Female	74.1% (40)
Education	
Post high school	10.7% (6)
1-3 years of college	21.4% (12)
College graduate	28.6% (16)
Graduate work	39.3% (22)
Race/ethnic heritage	
White	72.3% (40)
Black	10.9% (6)
Hispanic/Latino	10.9% (6)
Asian/Pacific Islander	1.8% (1)
Other	3.6% (2)
Age (years)	44.3 (10.7)
Professional background	
Respiratory therapist	5.1% (3)
Social worker	3.4% (2)
Registered nurse	8.5% (5)
Certified alcohol counselor	8.5% (5)
Certified health education specialist	3.4% (2)
Licensed mental health counselor	1.7% (1)
Other certification or license	22.0% (13)
Overall experience in tobacco/addictions treatment	3.4 yrs (3.7 yrs)
Overall experience in any tobacco control work	3.8 yrs (3.9 yrs)
Number of different types of tobacco treatment training (two types vs three types) ^b	
Two types	59.3% (35)
Three types	37.3% (22)
Massachusetts certified tobacco treatment specialist	
Yes	45.8% (27)
Number of hours/week counseling: tobacco treatment activities	17.6 (7.2)
Receive clinical supervision for tobacco treatment work	
Yes	71.2% (42)
Provide clinical supervision to other TTSs	
Yes	30.0% (15)
TTS perception of positive agency support	4.3 (1.0) ^c
TTS perception of effectiveness of treatment program	2.2 (0.5) ^d
TTS perception of barriers to providing treatment services	0.8 (0.4) ^e

Note. TTS=tobacco treatment specialist.

^aTTS survey response rate was 89%.

^bTypes of training included a 2-day basic skills course, 6-day core certification training course, American Cancer Society Training, American Lung Association training, and other tobacco treatment training program (the latter three collapsed to "other"). Analysis was conducted using only subjects that had two or three types of training (basic, core, other). Only 3 TTSs did not report receiving core training. Only 2 subjects reported having received only 1 type of training and were excluded.

^cSum of 6 items, score ranging from 0 to 6 methods of support.

^dAverage of 5 items, score ranging from 0 (poor) to 3 (excellent).

^eAverage of 11 items, score ranging from 0 (no barrier) to 3 (major barrier).