Published in final edited form as:

J Behav Health Serv Res. 2014 January ; 41(1): . doi:10.1007/s11414-013-9319-1.

Clinicians' Perceptions of Implementation Extensiveness of 100% Tobacco Free Practices: A Longitudinal Study of New York State¹

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Abstract

In 2008, New York State required substance use disorder treatment organizations to be 100% tobacco-free. This longitudinal study examined clinicians' perceptions of the implementation extensiveness of the tobacco-free practices approximately 10–12 months (Time 1) and 20–24 months (Time 2) post regulation and investigated whether clinicians' commitment to change and use of provided resources at Time 1 predicts perceptions of implementation extensiveness at Time 2. Clinicians ($N = 287$) noted a mean implementation of 5.60 patient practices (0–10 scale), 2.33 visitor practices (0–8 scale), and 6.66 employee practices (0–12 scale) at Time 1. At Time 2, clinicians perceived a mean implementation of 5.95 patient practices (no increase from Time 1), 2.89 visitor practices (increase from Time 1), and 7.12 employee practices (no increase from Time 1). Commitment to change and use of resources positively predicted perceived implementation extensiveness of visitor and employee practices. The use of resources positively predicted implementation for patient practices.

Keywords

implementation; smoking cessation; evaluation; longitudinal study; substance abuse treatment

Introduction

Tobacco use poses serious health risks to patients with substance use disorders (SUDs) because of their high use of tobacco products (greater than 70%).^{1,2} Research indicates that tobacco cessation efforts can be implemented concurrently with other SUD treatments without adverse effects.^{3–5} In fact, tobacco cessation efforts are related to greater abstinence from alcohol and other drugs, lower substance use, and less risk of relapse.^{1,5,6} However, few SUD treatment organizations offer tobacco cessation services⁷ and few have

¹This study was supported by Award Number R01 DA019460 from the National Institutes on Drug Abuse awarded to Lillian T. Eby. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Drug Abuse or the National Institutes of Health. A revised version of this paper was presented at the 2012 Addiction Health Services Research (AHSR) conference.

Conflicts of Interest

The authors note no conflicts of interest.

comprehensive policies that prohibit patients and staff from smoking within their facilities and/or on facility grounds.^{8,9}

On July 24, 2008, in an unprecedented move, New York State (NYS) became the first state to put into action strict regulations that require all 1,419 state-funded or state-certified SUD treatment programs overseen by the NYS Office of Alcohol and Substance Abuse Services (OASAS) to be 100% tobacco-free.¹⁰ Tobacco-free regulations apply to patients, visitors, and employees, and they ban indoor smoking, outdoor smoking, and smoking in vehicles owned, operated, or leased by the treatment organization. The regulations also prohibit tobacco possession in pockets, purses, briefcases, etc. by patients, visitors, and employees. In addition, all SUD treatment organizations are required to offer tobacco cessation treatment.

Because NYS is the first state with such strict state-wide regulations, it provides a naturalistic setting for evaluating the implementation extensiveness of the 100% tobacco-free practices and to help guide other states, organizations, and businesses interested in implementing similar tobacco bans. Currently, little is known whether and to what extent the OASAS 100% tobacco-free practices were adopted and implemented despite wide agreement about the benefits and urgency of tobacco cessation interventions in SUD treatment programs. The present longitudinal study pursues two complementary aims. First, it investigates SUD clinicians' perceptions of implementation extensiveness of the tobacco-free practices for patients, visitors, and employees approximately 10–12 months after the regulations went into effect (Time 1) and again approximately 20–24 months post regulations (Time 2). Second, in an effort to better understand implementation over time, clinicians' commitment to this organizational change and their use of OASAS-provided resources at Time 1 are examined as predictors of perceived implementation extensiveness of tobacco-free practices at Time 2. This longitudinal design is a methodological advance over previous cross-sectional research and important because implementation of evidence-based practices (EBPs) is often painstakingly slow and may never fully materialize.^{11,12}

Implementation of Tobacco Bans and the NYS 100% Tobacco-Free Regulations

Tobacco bans in public places are intended to improve public health by lowering exposure to tobacco smoke. Findings show relationships between tobacco policies and a number of positive outcomes such as reduced employee smoking,¹³ lowered hospital admissions for myocardial infarction,¹⁴ and diminished tobacco consumption in prison inmates.¹⁵ At the same time, research also suggests that tobacco bans are associated with implementation challenges, particularly in the beginning. For instance, when smoking bans were first introduced in bars in California, compliance was heavily contingent on strict law enforcement, cost of compliance, and whether competitors allowed their patrons to smoke.¹⁶ Similarly, smoking bans in taxis were at first met with resistance because many taxi drivers themselves smoked and were concerned about losing business if they prohibited smoking.¹⁷

In an effort to promote tobacco cessation efforts in the mental health care field, a panel of experts published evidence-based tobacco cessation guidelines (e.g., assess and treat tobacco dependence, use of pharmacotherapy for tobacco dependence) for use by health care workers, clinicians, administrators, and tobacco cessation specialists starting in 2000.¹⁸ However, diffusion of innovations is generally a slow process and the implementation of EBPs including tobacco cessation takes time, particularly in SUD treatment. Further, although implementation research is sorely needed in mental health services it is greatly lacking due to a gap between research and practice.^{19,20} Thus, the current implementation study makes a substantial contribution to the mental health care field, particularly SUD treatment.

The National Institute on Drug Abuse (NIDA) Treatment's Clinical Trials Network (CTN) was established for the purpose of bridging this gap between research and practice by focusing on the efficacy of EBPs in the field. Still, researchers found that EBPs, not specific to tobacco cessation treatment, endorsed by the CTN (e.g., buprenorphine, motivational incentives) were slow to diffuse over a 3-year period and were far from being widely implemented in CTN-affiliated SUD treatment programs.²¹ Findings on the diffusion of buprenorphine, which is used to treat opioid dependence, also showed that counselors had low knowledge of the effectiveness of this new pharmacology for the treatment of SUDs.²² Finally, findings illustrated low implementation of tobacco cessation counseling among SUD counselors²³ despite calls by the expert panel to integrate these EBPs for tobacco cessation into usual care.¹⁸

Multiple barriers to the implementation of EBPs in mental health care including SUD treatment programs have been identified. A small qualitative study based on administrator reports in community mental health agencies showed training costs, resistance by providers, and restrictions to accessing research and information as implementation obstacles.²⁴ Implementation of brief interventions for tobacco cessation in SUD treatment programs, one of the EBPs recommended by the expert panel on tobacco cessation,¹⁸ was also found to be lower among counselors who perceive less managerial support, lack knowledge of the brief intervention guidelines, and think less positively about the effect of tobacco cessation treatment on patients' sobriety.²⁵

In addition and more generally speaking, change of any kind creates stress for employees²⁶ and is often met with employee resistance.²⁷ Change is also frequently a source of perceived role stress (e.g., role overload, role conflict, role ambiguity), which is associated with negative attitudes and behaviors toward organizational changes.^{26,28} In the case of SUD clinicians, the mandatory NYS tobacco regulations place further time constraints on their generally high caseloads. This occurs because regulatory change requires learning new policies and adopting clinical practice behaviors, such as screening for tobacco dependence and incorporating tobacco cessation into regular treatment planning. Moreover, clinicians' own use of tobacco (between 20% and 40% of clinicians smoke)^{23,29} may hamper their confidence and/or interest in promoting tobacco cessation efforts. All of these contextual considerations have the potential to hinder the implementation and sustainability of the tobacco-free practices over time.

Because employees are the agents who implement the change and their attitudes and behaviors are vital in setting plans into action,^{30,31} researchers advocate the examination of organizational change from the individual's perspective rather than using the organization as the unit of analysis.^{32,33} An important reason for doing so is that individuals have different organizational experiences by virtue of their tenure, experience, and access to information within the organization.^{34,35} Moreover, individual differences in expertise, experience, job responsibilities, and training contribute to how engaged are at work, both psychologically and behaviorally.^{36,37} Therefore, by failing to take into account individual variability in implementation perceptions a meaningful source of variance is ignored. In the context of responding to an organizational change such as the OASAS regulation, it follows that employees may perceive the implementation process differently.

As an illustration of why it is important to consider individual-level perceptions in the study of organizational change, Eby and colleagues found that clinician participation in the planning for the OASAS change, the receipt of change-related information, and perceptions of organizational support predicted clinicians' subsequent tobacco cessation efforts.³⁸ This is in line with research indicating that clinicians have considerable discretion regarding the use of tobacco-related EBPs,³⁹ and play an important role in advising patients on tobacco

cessation services including medications, even though they cannot prescribe medications themselves. Considering the fundamental role that clinicians play in the implementation of the tobacco-free practices, two research questions (RQs) are addressed:

RQ1: What are SUD clinicians' perceptions regarding how extensively the 100% tobacco-free practices have been implemented for (a) patients, (b) visitors, and (c) employees approximately 10–12 months post regulations (Time 1)?

RQ2: What are SUD clinicians' perceptions regarding how extensively the 100% tobacco-free practices have been implemented for (a) patients, (b) visitors, and (c) employees approximately 20–24 months post regulations (Time 2)?

Predictors of Implementation of the 100% Tobacco-Free Practices Over Time

Drawing from theory and research on organizational change, two main predictors of clinicians' perceptions of the implementation extensiveness of the 100% tobacco-free practices over time are examined—commitment to organizational change^{32,40} and use of resources that support organizational change.^{41,42}

Commitment to organizational change is considered an important predictor of employees' attitudes and behaviors that contribute to the successful implementation of change.^{27,32,40} Herscovitch and Meyer defined commitment to an organizational change event as a “force (mind-set) that binds an individual to a course of action deemed necessary for the successful implementation of a change initiative” (p. 475).³² When employees “buy-in” to change, their behavior supports the change and improves the successful implementation of the proposed initiative. Commitment to change encompasses not only a positive attitude toward the upcoming change but also employees' willingness to support, exert effort, and help implement the change.⁴³ This leads to the prediction:

H1: Clinicians' commitment to change at Time 1 is positively related to their perceptions of greater implementation extensiveness of the (a) patient, (b) visitor, and (c) employee 100% tobacco-free practices at Time 2.

Use of resources that support organizational change—During organizational change, the provision of resources can help employees cope with uncertainty, fears, and role stressors.^{41,44} Appropriate resources that are provided in a timely manner help prepare clinicians to deal with and understand upcoming changes, which can reduce stress and ambiguity. Moreover, the use of available resources by employees increases perceptions of control and self-efficacy, which also enhances employees' positive attitudes and behaviors toward organizational change.^{33,45}

Employees can also proactively seek out information in response to uncertainty.⁴¹ Accurate communication and education about upcoming changes helps employees understand the need for the changes and increases support for the implementation of change.⁴⁶ OASAS provided a number of resources for clinicians to access on their own, such as on-line tobacco training, mentoring, a tobacco recovery exchange website, “Learning Thursdays” which focused on tobacco cessation, and technical assistance and training. The extent to which clinicians took advantage of these resources may well influence their perceptions of implementation extensiveness. As such, we predict:

H2: Clinicians' use of OASAS-provided resources at Time 1 is positively related to perceptions of greater implementation extensiveness of the (a) patient, (b) visitor, and (c) employee 100% tobacco-free practices at Time 2.

Method

Study Design and Sample

Data for this study were obtained as part of a larger project—Managing Effective Relationships in Treatment Services (MERITS II)—investigating the effects of the OASAS 100% tobacco-free regulations on employees in SUD treatment programs in NYS. Project MERITS II was funded by NIDA in response to a program announcement for health services research on practice improvement utilizing community treatment programs within NIDA's CTN. All procedures were approved by the Institutional Review Board at [name withheld for blind review]. The CTN originally had two New York “nodes” (NY City and Long Island), which are partnerships between a research center and a number of Clinical Trials Providers (CTPs). Although 7 of the 10 eligible CTPs agreed to participate, the initial sample size requirements were not met. Thus, recruitment was extended to SUD treatment programs outside of the CTN.

The longitudinal data for the current study were collected in 49 locations of 16 treatment organizations approximately 10–12 months after the OASAS regulations went into effect (2009; Time 1) and again approximately 20–24 months after the OASAS regulations went into effect (2010; Time 2). In order to be eligible for participation, treatment organizations had to be located in the community (prison-based programs, Veteran's Health Administration programs, and driving-under-the-influence schools were excluded) and offer SUD counseling services. Clinicians had to have direct contact with patients in a therapeutic relationship (i.e., individual counseling, group counseling, or both). Trained research assistants traveled on-site at both times to administer paper-and-pencil surveys to SUD clinicians during regular business hours. Treatment organizations were compensated for employees' time off the clock for each completed survey. The overall response rate was 71%. A total of 287 clinicians completed usable surveys at both Time 1 and Time 2, which comprised the final longitudinal sample.

Separate surveys from administrators working in the 16 organizations at Time 1 showed that the vast majority of organizations operated as not-for-profit (81.3%), were free-standing units that were not located on a hospital-campus (75%), and were accredited (56.3%). The average organization reported 121.29 ($SD = 144.59$) full-time employees, 10.25 ($SD = 12.83$) clinical supervisors, and 43.50 ($SD = 55.33$) counselors. Because the sample of participating treatment organizations was not randomly selected, the 2006 SAMHSA facility locator and National Survey of Substance Abuse Treatment Services (N-SSATS) database was used to examine the representativeness of the sample. It was found that the sample of participating programs was similar to the aggregate characteristics of all NYS treatment programs with respect to having a primary focus on SUDs and providing detoxification services, methadone maintenance, hospital inpatient services, short-term residential services, long-term residential services, services for adolescents, functioning as a halfway house, and treating criminal justice patients (a full report is available upon request from the first author).

Clinician surveys at Time 1 indicated that on average clinicians worked at their current treatment center 6.39 years ($SD = 6.49$), had a caseload of 24.08 patients ($SD = 37.36$), were 45.88 years old ($SD = 12.91$), worked 39.22 hours per week ($SD = 7.27$), and earned \$43,106 per year ($SD = 15,078$). In addition, most clinicians were certified SUD professionals (62.14%), female (58.10%), not in recovery (59.14%), held at least a master's degree (51.06%), and considered themselves to be Caucasian (61.15%). Only 21.80% clinicians reported that they currently smoked. Clinicians also noted that an average of 67.18% ($SD = 25.40$) of their patients were current smokers.

Measures

Implementation of the tobacco-free practices for (a) patients, (b) visitors, and (c) employees was measured at both Time 1 and Time 2. Type and number of items as well as response options for each scale were developed based on the requirements listed on OASAS websites and used by OASAS auditors to determine whether organizations have a particular regulatory component in place.^{15,47,48} Response options were 0 = *no* and 1 = *yes*. Each scale was developed by summing the number of *yes* responses.

First, clinicians indicated whether 10 practices for being tobacco-free among *patients* have been implemented. Example items are, “Written policy is established for patients that bans tobacco products in the facilities, grounds, and vehicles owned, leased, or operated by the center.” and “Treatment modalities are established for patients who smoke (e.g., nicotine replacement, counseling).”

Second, clinicians reported whether 8 practices for being tobacco-free among *visitors* have been implemented. Two example items are, “Visitors are prohibited from bringing tobacco products and paraphernalia into the facility.” and “There is a strategy for monitoring outdoor grounds for smoking by visitors.”

Third, clinicians noted whether 12 practices for being tobacco-free among *employees* have been implemented. Example items include, “Information was disseminated on the tobacco-free regulations for employees (e.g., e-mail, discussion at staff meeting)” and “Information is included in the employee handbook on tobacco-free policy, enforcement, and penalty for violation.”

Commitment to change was measured at Time 1 with a 4-item scale ($\alpha = .81$) that was designed for the purpose of measuring the effects of organizational change on employee commitment.⁴⁰ The original scale demonstrated both reliability and validity.⁴⁰ Response options ranged from 1 = *strongly disagree* to 5 = *strongly agree*. An example item is, “I am doing whatever I can to help this change be successful.” The scale was developed by calculating the mean across the 4 items.

Utilization of OASAS-provided resources was measured at Time 1 with 7 items based on information provided by OASAS (0 = *no*, 1 = *yes*).⁴⁹ An example item is, “I used the OASAS on-line tobacco training.” The scale was developed by summing the number of *yes* responses.

Control variable—We controlled for clinician smoking status (0 = *non-smoker*, 1 = *current smoker*) at Time 1 when testing the hypotheses, because previous research finds a relationship between clinician tobacco use and tobacco cessation service delivery.^{50,51}

Data Analyses

Descriptive statistics were used to calculate clinician and organization characteristics, and determine clinicians’ perceptions of the implementation extensiveness of the tobacco-free practices at Time 1 (RQ1). Correlations were computed to examine relationships among all study variables (see Table 1). Results showed that commitment to change and use of OASAS-provided resources are significantly positively related to the implementation of the patient, visitor, and employee practices at both Time 1 and Time 2. Coefficients did not suggest multicollinearity, which was further confirmed using statistical tests.

Next, intraclass correlation coefficients (ICCs) were calculated due to the nested structure of the data (clinicians within locations within organizations) to ascertain whether statistical analyses for nested data were needed. ICCs ranged from .12 to .22 for clinicians nested

within locations and from .10 to .23 for clinicians nested within organizations. These high ICCs confirmed the need for statistical methods that account for the nested data structure. Thus, mixed models with repeated measures were run to identify clinicians' perceptions of the implementation extensiveness of the tobacco-free practices between Time 1 and Time 2 (RQ2) (see Table 2). In order to address the hypotheses, mixed models were run to calculate whether commitment to organizational change (H1) and use of OASAS-provided resources (H2) at Time 1 predict clinicians' perceptions of implementation extensiveness of the patient, visitor, and employee practices at Time 2 (see Table 3). All data were analyzed using SAS 9.2

Results

RQ1: What are SUD clinicians' perceptions regarding how extensively the 100% tobacco-free practices have been implemented for (a) patients, (b) visitors, and (c) employees approximately 10–12 months (Time 1) post regulations?

Table 1 indicates that at Time 1, counselors perceived that a mean of 5.60 patient practices (0–10 scale), a mean of 2.33 visitor practices (0–8 scale), and a mean of 6.66 employee practices (0–12 scale) were implemented approximately 1 year after the OASAS regulations went into effect.

RQ2: What are SUD clinicians' perceptions regarding how extensively the 100% tobacco-free practices have been implemented for (a) patients, (b) visitors, and (c) employees approximately 20–24 months (Time 2) post regulations?

Table 1 also indicates that at Time 2, counselors perceived that a mean of 5.95 patient practices (0–10 scale), a mean of 2.89 visitor practices (0–8 scale), and a mean of 7.12 employee practices (0–12 scale) were implemented approximately 2 years post regulations. Table 2 further shows that there were no significant differences in clinicians' perceptions of the implementation extensiveness of patient regulations and employee regulations between Time 1 and Time 2, although for both regulations, the least squares means were slightly higher at Time 2 compared to Time 1. In contrast, significant differences in least squares means were found for implementation of visitor regulations. More visitor regulations were implemented at Time 2 than at Time 1 ($lsmeans = 2.82$ and $lsmeans = 2.27$, respectively, $p < .01$).

H1: Clinicians' commitment to change at Time 1 is positively related to their perceptions of the implementation extensiveness of the (a) patient, (b) visitor, and (c) employee 100% tobacco-free practices at Time 2

Hypothesis 1 was generally supported. As shown in Table 3, clinicians reporting greater commitment to change at Time 1 perceived significantly greater implementation of visitor practices ($B = .81$, $SE = .26$, $p < .01$) and employee practices ($B = .90$, $SE = .36$, $p < .01$) at Time 2. No significant differences were found for patient practices ($B = .48$, $SE = .28$, n.s.). The control variable, clinician smoking status, was not statistically significant ($p > .05$) in the three analyses (not shown).

H2: Clinicians' use of OASAS-provided resources at Time 1 is positively related to their perceptions of the implementation extensiveness of the (a) patient, (b) visitor, and (c) employee 100% tobacco-free practices at Time 2

Hypothesis 2 was fully supported. As indicated in Table 3, clinicians who reported greater use of OASAS-provided resources at Time 1 perceived significantly greater implementation of patient practices ($B = .21$, $SE = .10$, $p < .05$), visitor practices ($B = .23$, $SE = .10$, $p < .05$),

and employee practices ($B = .41$, $SE = .13$, $p < .01$) at Time 2. The control variable, clinician smoking status, was not statistically significant ($p > .05$) in the three analyses (not shown).

Discussion

The current study pursues two overarching aims. First, it longitudinally investigates NYS SUD clinicians' perceptions of how extensively the 100% tobacco-free practices have been implemented for patients, visitors, and employees approximately 10–12 months and again 20–24 months after the passage of the OASAS regulations. Second, it assesses two clinician-level predictors of perceived implementation extensiveness over time, including their commitment to regulatory change effort and their use of OASAS-provided resources. Two main conclusions can be reached from the findings. First, perceived implementation extensiveness of the tobacco-free practices for patients, visitors, and employees at Time 1 is limited and only perceptions of visitor practices increase significantly at Time 2. Additionally, clinicians' commitment to change predicts unique variance in perceptions of implementation extensiveness over time for visitor and employee practices but not patient practices. By contrast, clinicians' use of OASAS-provided resources consistently is a unique predictor of perceived implementation extensiveness of patient, visitor, and employee practices over time.

Implementation of the 100% Tobacco-Free Practices

Implementation extensiveness perceptions of the tobacco-free practices for patients, visitors, and employees at both 10–12 months and 20–24 months after the OASAS regulation passage is limited and falls short of full implementation perceptions, based on clinician reports. The relatively low perceptions of implementation levels support previous research noting the difficulties that are entailed in implementing EBPs,^{19,29,21–23,24–28} and the time it takes to set changes into motion.^{11,12} A recent qualitative study also found numerous unintended negative consequences of the OASAS regulations, such as enforcement problems, “addict behaviors” by patients (e.g., underground tobacco economy, sneakiness), and negative emotional reactions by staff and patients.⁵² This may partly explain why the tobacco-free practices are not perceived to be fully implemented. While speculative, this may be another reason for why perceived implementation of practices is not as extensive as mandated by the OASAS regulations.

Implementation extensiveness perceptions at Time 1 reach only about 50% of both the patient practices ($M = 5.60$ on 0–10 scale) and employee practices ($M = 6.66$ on 0–12 scale), and only about 33% of the visitor practices ($M = 2.33$ on 0–8 scale). One explanation is that clinicians are more cognizant of regulatory changes that affect them personally and the work that they do with patients, such as written policies that are established for employees banning tobacco products in the treatment facility, on the grounds, and in facility vehicles or the type and frequency of information that was disseminated by the facility to employees on the OASAS regulations. In contrast, the limited implementation extensiveness perceptions of visitor practices may reflect less direct contact with visitors, lower investment in visitor behavior, and/or greater difficulty monitoring and enforcing non-smoking practices for visitors because the organization has no direct authority over them. It may also suggest that treatment organizations are placing less emphasis on this aspect of the state-mandated OASAS regulations.

With the exception of visitor practices (which increased significantly over time), perceptions of low implementation levels remain constant over time. The lack of significant differences between Time 1 and Time 2 implementation extensiveness perceptions for both employee and patient practices can be interpreted in one of two ways. On the one hand, clinicians perceive that the practices are sustained over time. Considering the high failure rates of

organizational change and difficulty sustaining change, this could be interpreted as a positive finding. On the other hand, additional time for clinicians to get used to and buy-in to the changes does not improve perceptions of the implementation process. This highlights the important role that front-line employees (clinicians) play in implementing change, which has been noted in previous research using other employee samples.^{30,31}

Predictors of Implementation of the 100% Tobacco-Free Practices Over Time

Consistent with research in other change contexts,^{27,32,40} findings show that SUD clinicians' commitment to organizational change is a predictor of perceived implementation extensiveness of the 100% tobacco-free practices, for visitors and employees. This suggests that when clinicians' mind-set is aligned with the mission of an organizational change initiative, some of their behaviors are likely to support the successful implementation of that change over time. The non-significant findings regarding gains in the implementation perceptions of patient practices over time may reflect clinician beliefs and myths that concurrent SUD and tobacco cessation treatment has negative effects on patients' sobriety. It might also reflect the greater difficulty associated with implementing the tobacco-free practices with patients, which requires strict enforcement of a zero-smoking policy, integrating tobacco treatment into treatment as usual, and dealing with a wide range of negative patient reactions to the change.⁵²

By contrast, although clinicians' use of OASAS-provided resources is generally low, it is significantly related to perceived implementation extensiveness of all three practices. This is consistent with the finding that employees who seek out information to help them understand and cope with organizational changes.^{41,44} In fact, the significant positive correlation between commitment to change and the use of OASAS-provided resources (see Table 1) suggests that either taking advantage of these resources helped foster more positive attitudes toward the OASAS regulations or those with more positive attitudes were more likely to proactively use these resources.

Finally, although clinician smoking status was used as a control variable, which is traditionally not extensively discussed, it is worth noting that smoking status was not statistically significantly related to the implementation extensiveness perceptions. This finding appears contrary to some research showing a connection between clinician tobacco use and the delivery of tobacco cessation services.^{50,51} In addition, clinician smoking status is often thought of as a barrier to the implementation of tobacco cessation services because clinicians who smoke (ranging from 20% to 40%)^{23,29} may be more reluctant to promote and less interested in tobacco cessation services. The relatively low (22%) percentage of clinicians who are current smokers in this study may account for the lack of significant findings between clinician tobacco use and predictors of perceived implementation extensiveness of the tobacco-free practices.

Limitations and Conclusion

There are limitations of this study that should be taken into consideration when drawing conclusions. First, all treatment organizations in this study were located in NYS. As such, findings may not apply to SUD treatment programs in other states or to programs in states that have less restrictive policies. For instance, treatment programs that only ban indoor tobacco use may be perceived to have higher implementation levels than found in the present study. Second, a variety of factors not examined in this study may predict the success of a change intervention such that even if an individual employee is personally committed to change, other factors in the work environment may reduce the likelihood that change will be implemented (e.g., other changes that have recently occurred in the organization, previously successful change efforts, employee confidence that they can do

their jobs effectively after the changes are implemented, how fairly they are treated during the change process).

Third, despite the wide-ranging restrictions associated with the OASAS regulations, this study focused only on counselors' perceptions of the implementation extensiveness regarding patient, visitor, and employee practices about 10–12 months and 20–24 months after the regulations took place. Other associated changes, such as patient screening and the use of pharmacotherapy were not examined and may have been perceived as more (or less) extensively implemented. For instance, a report published by OASAS in 2010 shows that since the OASAS regulations went into effect, 96% of treatment programs address tobacco use in patients' treatment plans.⁵³ However, the use of pharmacotherapy for tobacco (nicotine replacement therapies) has only increased in 52% of all programs. In addition, considering that the mean implementation values increased between Time 1 and Time 2, although there were no statistical differences, it will be important to further track changes in implementation extensiveness perceptions to ascertain whether perceptions increase, decrease, or remain the same after 24 months post regulations effectiveness.

In conclusion, the NYS OASAS 100% tobacco-free regulations in SUD treatment programs provide a unique opportunity to study clinicians' perceptions of the implementation extensiveness of various practices of the regulations over time. Considering the wide-ranging scope of the OASAS restrictions and the generally high failure rates pertaining to organizational change, perhaps it is not a surprise that clinicians did not perceive 100% implementation extensiveness regarding patient, visitor, and employee practices. Moreover, considering that implementation of EBPs is difficult, lengthy, and associated with many barriers, the tobacco-free practices have neither been a total success nor a total failure. There are also lessons to be learned for other states that are planning on making similar changes for the health benefits of patients, visitors, and employees such as the importance of evaluating whether they want to pursue 100% tobacco-free regulations or a more moderate type of harm reduction, ensuring clinician buy-in, and disseminating information on the need for change and availability of resources to garner clinician support.

Implications for Behavioral Health

There are a number of behavioral health implications that are relevant to policy makers and program administrators. For policy makers, there needs to be a keen awareness of the important role that employees play in organizational change, and in particular, the successful implementation of new policies and practices. Developing programs to promote good health and positive behavioral changes by addressing tobacco use is relevant to a range of settings (e.g., bars, taxis, workplace, entrances to public buildings), including medical (e.g., hospitals) and mental health contexts. Moreover, as SUD treatment moves further in the direction of mainstream health care, industry-wide tobacco bans in medical settings may become standard in SUD treatment. OASAS-related findings can be used to provide valuable insights into barriers and successes to implementing similar EBPs related to curing or eliminating tobacco use.

Convincing employees of the importance of any proposed change, soliciting their feedback, and getting their buy-in may be key to garnering commitment to change and implementing tobacco-free practices. Major organizational change events should also solicit clinician feedback regarding attitudes toward proposed changes and to build on clinicians' expertise in determining how to implement change locally. Clinicians could be solicited to complete brief on-line surveys during the development stage, in an effort to increase their sense of involvement in the change process. Focus groups can be conducted to receive feedback, address reluctance, and garner clinician buy-in for supporting the proposed change.

Moreover, social-media sites such as Facebook and Twitter can involve clinicians and be used to gather information, stay informed, and voice concerns about a change initiative.

Clinical administrators can play a role in promoting the successful implementation of tobacco-free practices by involving stakeholders (i.e., clinicians) in the change effort. In addition, administrators should provide on-going, timely, honest, and accurate information about the implementation requirements, the role that clinicians play in the process, and the organization's vision of how to successfully implement tobacco-free practices. Administrators can also reach out to opinion leaders who can be champions for change, such as well-respected supervisors or long-tenured clinicians. In addition, administrators might consider offering easily accessible resources to clinicians such as how to support the changes (e.g., websites, educational lunches, journal articles) and training that is available regarding tobacco cessation (e.g., health benefits, use and benefits of pharmacotherapy).

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Table 1

Descriptive Statistics and Intercorrelations Among Study Variables

Variable	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Patient Practices (Time 1; 0–10)	5.60	2.82	1.00	.65***	.55***	.43***	.50***	.26***	.23***	.18**	
2. Visitor Practices (Time 1; 0–8)	2.33	2.50	1.00	.58***	.43***	.45***	.41***	.23***	.17**	.14*	
3. Employee Practices (Time 1; 0–12)		3.64			1.00	.50***	.38***	.60***	.29***	.23***	.08
4. Patient Practices (Time 2; 0–10)		5.95				1.00	.67***	.69***	.19**	.16**	.01
5. Visitor Practices (Time 2; 0–8)		2.89					1.00	.63***	.19**	.16**	-.01
6. Employee Practices (Time 2; 0–12)		7.12						1.00	.16**	.18**	.08
7. Commitment to Change (Time 1; 1–5)		3.71							1.00	.16**	-.17***
8. Use of Resources (Time 1; 0–7)		1.44								1.00	.03
9. Smoking Status (Time 1; 1=smoker)		.22									1.00

 $p < .01$;

 $p < .001$.

Table 2

Mixed Model Results with Repeated Measures Analyses and Nested Data: Clinicians' Perceived Implementation Extensiveness of Tobacco-Free Practices 10–12 Months (Time 1) and 20–24 Months (Time 2) Post Regulation Effectiveness

Variables	Time 1	Time 2	<i>F</i>
	<i>M^I</i> (<i>SE</i>)	<i>M^I</i> (<i>SE</i>)	
Patient Practices	5.46 (.36)	5.80 (.36)	2.68
Visitor Practices	2.27 (.24)	2.82 (.24)	7.50**
Employee Practices	6.53 (.40)	6.99 (.40)	2.64

Note.

^I Refers to least squares means

**
p < .01;

Table 3

Mixed Model Results with Nested Data: Time 1 Predictors of Clinicians' Perceived Implementation Extensiveness of Tobacco-Free Practices 20–24 Months Post Regulation Effectiveness

Variable	Patient Practices		Visitor Practices		Employee Practices	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Commitment to Change ^{<i>I</i>}	.48	.28	.81**	.26	.90*	.36
AIC Fit Statistic	1283.3		1256.3		1408.9	
<i>N</i>	260		260		260	
Use of OASAS Resources ^{<i>I</i>}	.21*	.10	.23*	.10	.41**	.13
AIC Fit Statistic	1301.9		1282.1		1427.4	
<i>N</i>	264		264		264	

Note

^{*I*} Controlling for clinician smoking status.

* $p < .05$;

** $p < .01$.