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Regular Article

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Abstract

In the United States, state governments legally authorize outpatient substance abuse treatment programs. In some states, programs are certified or accredited (ideal standards). Other states license programs (minimal standards). Additionally, some states authorize programs through "deemed status", which is afforded to programs attaining accreditation from a national accrediting body. Primary legal research and the National Survey of Substance Abuse Treatment Services' (N-SSATS) data were used to examine the relationships between state authorization type (certification/accreditation vs licensure with and without deemed status) and outpatient treatment program practices. Programs in certification/accreditation (vs licensure) states had significantly higher odds of offering wrap-around and continuing care/after care services associated with better long-term treatment outcome. Programs in states that allowed for certification/accreditation with deemed status had significantly lower odds of infectious disease testing, but higher odds of providing group and family counseling. Results suggest that state authorization type may impact services offered by outpatient treatment programs.

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Introduction

Most health care sectors in the United States utilize a combination of federal and state policies to govern the organization, delivery, and, in some cases, the quality of health care services through legal mechanisms such as licensure or certification, inspections, and safety standards.[1,2] State authority to protect the public's health is granted under the powers reserved for the states by the Tenth Amendment to the Constitution.[2] Whereas substance abuse treatment programs that receive federal funds from their state as part of the federal substance abuse prevention and treatment (SAPT) block grant are subject to specific program requirements based on a condition of federal funding, the federal government does not directly regulate such programs with the exception of opioid treatment programs that are certified by the Substance Abuse and Mental Health Services Administration (SAMHSA) (reported to be 8% of treatment programs in 2005).[3] Rather, many substance abuse treatment programs are governed by a patchwork of state and, in some cases, national licensing or accrediting body policies (e.g., the Joint Commission on the Accreditation of Health Care Organizations [JCAHO], the Commission on the Accreditation of Rehabilitation Facilities [CARF] or the Council on Accreditation [COA]). As with other health care and drug policy issues, state policy approaches to authorizing and regulating substance abuse treatment programs vary greatly.[4,5]

The Institute of Medicine's (IOM) *Committee on Crossing the Quality Chasm: Adaptation to Mental Health and Addictive Disorders* recently recommended that federal and state governments use their statutory, regulatory, treatment program approval authority, and purchasing power to ensure access to treatment programs that include proven treatment practices and necessary wrap-around and continuing care/after care services that have been demonstrated to facilitate access to and/or retention in treatment.[4] Yet, the behavioral health services and substance abuse treatment literature has rarely examined the relationship between state policy context and treatment program practices. These relationships may be important for several reasons. For example, organizational factors have been shown to play an important role in treatment service patterns when controlling for client characteristics.[6] In addition, research indicates that policymakers are well-positioned to affect a minimum level of availability of such organizational resources (e.g., budgets, staffing requirements), which suggests that public policies may be able to impact substance abuse treatment program practice quality.[6,7] These findings, combined with the IOM Committee recommendations, form the basis for this study. Specifically, this study examines the relationship between state policy approaches to authorizing outpatient substance abuse treatment programs and actual treatment program practices. For purposes of this study, state treatment program authorization refers to whether the state authorizes programs to operate by way of licensure, certification or accreditation mechanisms. As noted below, there are legal and practical distinctions between each of the three mechanisms that may affect the nature of the services that are offered or provided by the programs. Outpatient treatment programs were chosen as the unit of analysis for this study as 81% of the substance abuse treatment facilities in the United States offer outpatient (standard or intensive) services.[8]

This study builds upon the conceptual and empirical behavioral health literature that documents the importance of social and physical environments (in addition to individual-level factors) in facilitating health behavior change.[9] According to the social ecological model, the "environment" is conceptualized according to five spheres of influence: (1) social structure, policy, and systems; (2) community; (3) institutional/organizational; (4) interpersonal; and (5) individual.[10] The broadest sphere of influence (social structure, policy, and systems) includes federal, state, and local policies that regulate or support healthy behaviors whereas the narrowest sphere of influence focuses on individual characteristics that might influence healthy behaviors.[10] Whereas this model has been applied to evaluations of a number of behavioral health topics,[11–14] it has yet to be applied to evaluations of the substance abuse treatment system. This study aims to shed new light on these relationships by examining the association between state policy context (sphere 1) and outpatient substance abuse treatment organization practices (sphere 3).

How might state policies affect treatment programs and their practices? From a policy perspective, federal and state governments possess considerable power to affect the delivery and provision of proven, effective substance abuse treatment practices (to include wrap-around and after care services that are important in facilitating treatment access and preventing relapse[15–17]) through state authorization (i.e., licensure, certification, and/or accreditation) processes.[1,18,19] Licensure is traditionally regarded as a "minimal" standard and is generally granted to organizations after an inspection "to determine if minimal health and safety standards have been met."[18(p.3)] The terms certification and accreditation are often used interchangeably and considered "ideal or optimal" standards[20] with an eye toward continuous quality improvement or indicating that the organization has "additional services, technology or capacity beyond those found in similar organizations."[18(p.3)] State substance abuse treatment program authorization policies (i.e., licensure or certification/accreditation) often stipulate specific services that have to be offered, how and for how long services must be offered, and the types of organizations required to be authorized by the state (e.g., state-funded programs only).[19]

Additionally, in whole or partial lieu of state authorization, some states grant treatment programs licensure, certification or accreditation through "deemed status" when the program has demonstrated that it has met "...industry standards by obtaining accreditation from a nationally recognized body," such as JCAHO.[19(p.1)] The deemed status process emanates from the Medicare program whereby hospitals may be granted authorization status if they are accredited by a federally approved private accrediting body.[21] By granting licensure, certification or accreditation through deemed status, state governments recognize the external evaluation of organizational quality that is conducted by selected national accrediting bodies such as JCAHO, CARF or COA.[20] States that award deemed status to a treatment program are essentially stating that the treatment program is "deemed" to have met the state requirements for certification, accreditation or licensure by virtue of the national accreditation that it has received for its program by the national accrediting body. Basically, deemed status is a subset of state authorization—if a program is granted licensure, certification or accreditation by deemed status, it is then "deemed" to have at least met the state authorization requirements. In Iowa, for example, treatment programs interested in being licensed by virtue of having received accreditation from JCAHO, CARF or COA must apply for the distinction of "licensure through deemed status".[22] As of February 8, 2007, 23% of the licensed substance abuse treatment programs in Iowa were "licensed through deemed status" by virtue of having received accreditation from JCAHO, CARF or COA.[23] Thus, deemed status plays an important role in state approaches to authorizing substance abuse treatment programs. As such, it may be important to account for this classification when examining the relationship between state authorization approaches and treatment program practices.

Given the legal distinction between licensure and certification/accreditation, and the possibility of granting authorization through deemed status, it is possible that treatment program practices vary based on whether programs are operating in licensure or certification/accreditation states and whether the state grants authorization through deemed status. These distinctions provide the basis for this study. Specifically, based on a review of research literature and drawing on the social ecological model, two primary research questions (RQs) were examined. RQ1: Do treatment services offered by programs vary based on the state authorization type (i.e., licensure vs certification/accreditation with and without accounting for deemed status)? RQ2: Does the provision of wrap-around and after care services necessary to maintain treatment effects vary based on the state authorization type (i.e., licensure vs certification/accreditation with and without accounting for deemed status)?

Methods

Data sources

A combination of sources was used to obtain study data. Table 1 both delineates and provides descriptive characteristics for the specific variables included in the analysis.

Table 1
Descriptive statistics for the sample

Dichotomous dependent outcomes			Independent predictors and control variables			
NSSATS program-level policy domain/subcategories			**State policy, state sociodemographics, and program characteristics**			
	N	**%**		***N***	**% or mean**	**Range**
Treatment-related services			Type of state authorization			
Assessment	10,038	97.4	Licensed (vs certified/accredited)	10,047	47.5	
Counseling			State authorization and deemed status	10,047		
Individual	10,004	96.3	Licensure-only		35.1	
Group	10,012	94.1	Certification/accreditation-only		30.1	
Family	9,956	76.1	Licensure/any deemed status		12.4	
Testing services			Certification/accreditation/any deemed status		22.3	
Substance abuse	10,024	86.3	State sociodemographics			
HIV	9,915	29.4	Governor democratic party	10,047	45.9	
Hepatitis B	9,875	17.7	Legislature democratic party	10,047	32.5	
Hepatitis C	9,880	18.4	Median household income in $1000	10,047	45.2	$32.0–$57.3
Sexually transmitted disease	9,866	17.9	State client admission characteristics			
Tuberculosis	9,896	30.3	% clients employed	10,047	26.4	0.1–50.6
Education services			% clients male	10,047	68.0	58.5–79.3
HIV	10,003	57.0	% clients outpatient	10,047	60.9	22.5–100.0
Pharmacotherapies			Program characteristics			
Antabuse	9,978	13.3	Outpatient/intensive outpatient client count	10,047		

Naltrexone	9,959	9.0	0–11 (1st quartile)		19.8
Buprenorphine	9,941	5.6	12–34 (2nd quartile)		23.3
			35–84 (3rd quartile)		27.9
Wrap-around services			85–2,765 (4th quartile)		29.0
Social services	9,976	45.7	Offers payment assistance	10,047	53.8
Discharge plan	10,021	84.9	Program ownership	10,047	
Employment	9,951	33.0	Private, not-for-profit		58.1
Housing	9,946	37.0	Private, for-profit		32.0
Child care	9,968	9.8	Governmental		9.9
Transportation assistance	9,982	29.7	Program-reported authority for licensing/ certification/accreditation[a]		
Maintenance of treatment effects			State substance abuse agency	9,867	91.5
Relapse prevention	9,961	86.7	State mental health department	9,536	20.1
Continuing care/after care	9,983	86.6	State public health department	9,328	30.4
			Region	10,047	
			Northeast		22.2
			Midwest		24.4
			South		25.4
			West		28.0
			Year	10,047	
			2003		51.2
			2004		48.8

Total *N* possible for analysis=10,047 (including only those cases with valid data on all control variables). The sample includes the following: primary substance treatment programs only, and within this category, only outpatient or intensive outpatient programs. Federal/tribal programs were excluded; also excluded were data from Alaska, Hawaii, South Dakota, the District of Columbia, and U.S. territories.

[a]Response categories are not mutually exclusive

Dependent variables

Dependent variables were obtained from the Substance Abuse and Mental Health Services Administration's National Survey of Substance Abuse Treatment Services (N-SSATS) for the years 2003 and 2004.[24] N-SSATS is an annual, point-prevalence survey that collects data on the location, characteristics, services offered, and number of clients in treatment at public and private substance abuse treatment facilities throughout the United States.[8] N-SSATS' sampling universe includes: (1) all active treatment facilities in the Inventory of Substance Abuse Treatment Services (I-SATS), which includes all known drug and alcohol abuse treatment facilities, and (2) other facilities that are not yet added to I-SATS but discovered during the first 3 weeks of the survey or added by state substance abuse agencies. A recent study documented that N-SSATS correctly identified 70% of all substance abuse facilities in a midsize city and that it serves as a satisfactory national frame for studies on substance abuse treatment services.[25] N-SSATS collects data from facilities using mailed questionnaires, telephone interviews or web-based online surveys, and has achieved a 95% response rate.[8]

As indicated in Table 1, 22 N-SSATS variables were utilized as dependent variables for this study. Table 1 identifies the N-SSATS variables that were employed to capture direct treatment service provision, wrap-around services designed to address the many ancillary social, health, employment and other services needs of clients, and after care services designed to maintain treatment effects upon discharge. All of these service elements have been well-documented as part of a comprehensive approach to substance abuse treatment.[15–17]

Independent variables

State outpatient substance abuse treatment program licensure, certification, and accreditation status as of February 1, 2003 and February 1, 2004 was obtained via original legal research conducted by The MayaTech Corporation for the Robert Wood Johnson Foundation-supported ImpacTeen project. These data were obtained using primary legal research techniques[26] to search state statutes for each of the 50 states and the District of Columbia in Westlaw, an online legal research service, and were verified by the state agencies responsible for authorizing outpatient substance abuse treatment programs. An 88% response rate was achieved for state verification; in all but one instance (where the state regulations had recently changed), data were correctly captured. A single dichotomous outcome was created indicating if a state utilized certification/accreditation vs licensure. A second dichotomous variable was created to indicate deemed status. Interaction terms were also computed to indicate if the state granted licensure through deemed status or certification/accreditation through deemed status. For purposes of this study, data were not included for Alaska, Hawaii, South Dakota or the District of Columbia. Alaska and South Dakota were excluded because programs in these states were not required to be authorized—the state authorization process was voluntary. Hawaii was excluded because as of the study reference date, their accreditation requirements had not yet been promulgated (i.e., they were in draft format). The District of Columbia was excluded from the analyses because of missing control variable data.

Control variables

In line with the social ecological model and given the goal of examining state-level differences in program practices, analyses were controlled for state sociopolitical, demographic, and socioeconomic characteristics; region; year; and specific program-level variables. Democratic Governor and Democratic-controlled legislature variables were obtained from the National Conference of State Legislatures based on results of the 2000 and 2002 election years.[27–30] The

rationale for using the 2000 and 2002 election cycles was to account for the lag effect associated with the party in power having an opportunity to effectuate a policy change for the years 2003 and 2004. Democratic party status was considered to be potentially important given that voters who self-affiliated with the Democratic party in the 2004 presidential election were significantly more likely to report quality of health care as an important issue confronting the nation than were self-reported Independent or Republican voters.[31] State-level median household income data were obtained from the Bureau of the Census for the years 2003 and 2004.[32] Treatment program client characteristic proxies (not available in N-SSATS) included the following state-level treatment client characteristics based on data obtained from the 2003 and 2004 treatment episode data set (TEDS): percent of clients employed, percent male, and percent enrolled in outpatient programs.[33,34]

A series of program-level control variables were computed from the 2003 and 2004 N-SSATS data sets[24]: a quartile client count measure (defined as the total number of clients in standard or intensive outpatient treatment; quartile definition based on data for all 50 states plus the District of Columbia); a dichotomous variable indicating if the program offered payment assistance; and program ownership (i.e., for profit, private or government) as ownership status has been shown to relate to variations in treatment program practices and service offerings.[6,7,35,36] The program-reported state authorization agency (substance abuse agency, public health agency, and/or mental health agency) as obtained from the 2003 and 2004 N-SSATS data sets was also controlled for. One other factor that the study team had hoped to control for (but were unable to find a reliable data source for the time period of interest) was state-level substance abuse treatment program expenditures. Such data are generally unreliable because state funding for different aspects of substance abuse treatment may be spread across a variety of budget line items. In addition, these appropriations may differ between states. Future analyses would be well-served to include such data should they become available.

Statistical analyses

Analyses were conducted in Stata v.9.2 using the logistic statement. All models were clustered by state to address the multilevel nature of the data and controlled for the previously described state and program characteristics. State clustering was utilized to account for the lack of independence between programs within the same state having the same values for state-level independent and control variables.

Results

Sample characteristics

As indicated in Table 1, virtually all programs reported providing assessment and individual or group counseling services; more than three-quarters of programs also reported providing family counseling, substance abuse testing, discharge planning, relapse prevention, and continuing care/after care services. Greater variance was observed for the remaining dependent variable categories with relatively low distributions of programs offering HIV, hepatitis, sexually transmitted disease or tuberculosis testing; pharmacotherapies; and several of the wrap-around services that have been found to be related to improved treatment outcomes. The strong majority of programs reported authorization by a state substance abuse agency (91.5%) and less than one-third reported authorization by the state public health department or state mental health department.

At the state-level, there was a relatively even distribution in terms of programs operating in certification/accreditation states compared to licensure states (52.5% vs 47.5%). Nearly two-thirds of the programs operated in states that do not recognize deemed status (35.1% in licensure-only

states and 30.1% in certification/accreditation-only states). The remaining programs operated in states that grant state authorization either through normal licensure or certification/accreditation mechanisms or through deemed status (12.4% grant licensure through deemed status and 22.3% grant certification/accreditation through deemed status).

Relationship between treatment service offerings and state authorization type (RQ1)

Assessment, individual counseling, and sexually transmitted disease testing service availability did not significantly vary by state licensing/certification/accreditation policy or by authorization (licensure or certification/accreditation) with deemed status. However, the provision of many other key treatment and related services did show variance by type of service and type of state authorization when controlling for state and program-level factors (see Table 2).

Counseling services Programs in certification/accreditation-only states had significantly lower odds of offering group counseling compared to programs in licensure-only states, licensure states with deemed status, and certification/accreditation states with deemed status. Programs in certification/accreditation with deemed status states had significantly higher odds of offering this service than programs in licensure-only states. A somewhat similar pattern was seen with regard to family counseling services. Thus, programs in states that allow for deemed status, whether as a part of the licensure or certification/accreditation process, had significantly higher odds of providing group and family counseling.

Testing and education services Program provision of public health testing and education services also varied by state authorization type. These analyses revealed that the higher odds of programs in certification/accreditation states' offering *substance abuse testing* services (noted above) was clearly driven by programs operating in states with certification/accreditation and deemed status (and not certification/accreditation-only states). On the other hand, there were several instances where programs had lower odds of offering *public health testing* if they operated within a state that recognized certification/accreditation and deemed status. Programs that operated in certification/accreditation-only states (compared to certification/accreditation with deemed status) had significantly higher odds of offering HIV, hepatitis B, and hepatitis C testing, and HIV education services. Furthermore, programs in certification/accreditation with deemed status states had significantly lower odds of conducting HIV testing services than programs in license-only states. No differences were observed on testing and education service provision between license-only and license and deemed status states.

Pharmacotherapies Of the three pharmacotherapy treatments examined for this study, only the provision of buprenorphine was significantly related to the type of state authorization. Programs in certification/accreditation-only states had significantly higher odds of offering buprenorphine than programs in licensure-only states or programs in licensure with deemed status states.

Relationship between state authorization type and wrap-around/after care services (RQ2)

Results in Table 3 show that in many instances, being in a certification/accreditation state was a key factor associated with the provision of wrap-around and continuing care/after care services. Programs in certification/accreditation-only states had significantly higher odds of providing employment counseling, child care assistance, and transportation assistance than programs in licensure-only states and significantly higher odds of providing linkages to social services, discharge planning, employment counseling, transportation assistance, and continuing care/after care services than programs in licensure states with deemed status. It is interesting to note that

Table 2

Multivariate relationships between state authorization type and treatment service offerings

Outcome	State authorization type	%	OR	*p*	95%	CI
Assessment (*N*=9,017)		Not significant				
Counseling services						
Individual (*N*=8,989)		Not significant				
Group (*N*=8,994)						
	Licensure-only	94.5	(ref)			
	Certification/accreditation-only	92.0	0.57	**	0.42	0.79
	Licensure/deemed status	94.8	0.98		0.64	1.49
	Certification/accreditation/deemed status	96.6	1.47	*	1.03	2.10
	Certification/accreditation-only vs licensure/deemed status		0.59	**	0.39	0.88
	Certification/accreditation-only vs certification/accreditation/deemed status		0.39	***	0.28	0.55
	Licensure/deemed status vs certification/accreditation/deemed status		0.67		0.42	1.05
Family (*N*=8,947)						
	Licensure-only	80.6	(ref)			
	Certification/accreditation-only	72.9	0.74	**	0.59	0.92
	Licensure/deemed status	71.6	0.62	**	0.46	0.85
	Certification/accreditation/deemed status	79.0	1.04		0.74	1.45
	Certification/accreditation-only vs licensure/deemed status		1.18		0.86	1.62
	Certification/accreditation-only vs certification/accreditation/deemed status		0.71	*	0.52	0.97
	Licensure/deemed status vs certification/accreditation/deemed status		0.60	***	0.46	0.79
Testing services						
Substance abuse (*N*=9,004)						
	Licensure-only	82.5	(ref)			

Table 2
(continued)

Outcome	State authorization type	%	OR	p	95%	CI
	Certification/accreditation-only	88.6	1.63		0.85	3.13
	Licensure/deemed status	86.3	1.21		0.53	2.76
	Certification/accreditation/deemed status	88.4	2.03	**	1.23	3.35
	Certification/accreditation-only vs licensure/ deemed status		1.35		0.51	3.54
	Certification/accreditation-only vs certification/ accreditation/deemed status		0.80		0.42	1.52
	Licensure/deemed status vs certification/ accreditation/deemed status		0.60		0.28	1.29
HIV (*N*=8,903)						
	Licensure-only	33.5	(ref)			
	Certification/accreditation-only	32.4	1.08		0.70	1.68
	Licensure/deemed status	25.7	0.87		0.57	1.35
	Certification/accreditation/deemed status	19.9	0.52	**	0.32	0.82
	Certification/accreditation-only vs licensure/ deemed status		1.23		0.75	2.04
	Certification/accreditation-only vs certification/ accreditation/deemed status		2.09	*	1.13	3.85
	Licensure/deemed status vs certification/ accreditation/deemed status		1.69	*	1.00	2.85
Hepatitis B (*N*=8,865)						
	Licensure-only	19.2	(ref)			
	Certification/accreditation-only	18.9	1.24		0.94	1.65
	Licensure/deemed status	17.9	1.09		0.81	1.47
	Certification/accreditation/deemed status	12.5	0.81		0.62	1.04
	Certification/accreditation-only vs licensure/ deemed status		1.14		0.76	1.70

	Certification/accreditation-only vs certification/accreditation/deemed status		1.55	*	1.08	2.22
	Licensure/deemed status vs certification/accreditation/deemed status		1.36		0.99	1.85
Hepatitis C (*N*=8,870)						
	Licensure-only	19.8	(ref)			
	Certification/accreditation-only	20.1	1.33	*	1.04	1.71
	Licensure/deemed status	18.0	1.01		0.76	1.34
	Certification/accreditation/deemed status	12.5	0.75		0.57	1.00
	Certification/accreditation-only vs licensure/deemed status		1.32		0.91	1.91
	Certification/accreditation-only vs certification/accreditation/deemed status		1.76	**	1.22	2.56
	Licensure/deemed status vs certification/accreditation/deemed status		1.34	*	1.00	1.80
Sexually transmitted diseases (*N*=8,860)		Not significant				
Tuberculosis (*N*=8,890)						
	Licensure-only	32.2	(ref)			
	Certification/accreditation-only	32.3	1.22		0.99	1.51
	Licensure/deemed status	27.9	0.89		0.69	1.15
	Certification/accreditation/deemed status	26.7	0.90		0.69	1.17
	Certification/accreditation-only vs licensure/deemed status		1.37	*	1.01	1.85
	Certification/accreditation-only vs certification/accreditation/deemed status		1.36	*	1.04	1.78
	Licensure/deemed status vs certification/accreditation/deemed status		0.99		0.76	1.30
Education services HIV (*N*=8,985)						
	Licensure-only	57.4	(ref)			
	Certification/accreditation-only	62.8	1.27		0.88	1.84
	Licensure/deemed status	52.3	0.93		0.59	1.46

Table 2
(Continued)

Outcome	State authorization type	%	OR	p	95%	CI
	Certification/accreditation/deemed status	52.6	0.89		0.59	1.33
	Certification/accreditation-only vs licensure/ deemed status		1.37		0.91	2.07
	Certification/accreditation-only vs certification/ accreditation/deemed status		1.43	*	1.04	1.96
	Licensure/deemed status vs certification/ accreditation/deemed status		1.04		0.70	1.55
Pharmacotherapies						
Antabuse (*N*=8,962)		Not significant				
Naltrexone (*N*=8,943)		Not significant				
Buprenorphine (*N*=8,928)						
	Licensure-only	4.9	(ref)			
	Certification/accreditation-only	6.6	1.96	**	1.29	2.96
	Licensure/deemed status	5.4	1.13		0.69	1.84
	Certification/accreditation/deemed status	5.6	1.22		0.80	1.84
	Certification/accreditation-only vs licensure/ deemed status		1.74	*	1.05	2.88
	Certification/accreditation-only vs certification/ accreditation/deemed status		1.61		0.97	2.68
	Licensure/deemed status vs certification/ accreditation/deemed status		0.93		0.55	1.57

All models controlled for program ownership, governor and legislature democratic party, state median household income, state client admission characteristics (percent employed, percent male, and percent outpatient), program client count, presence of payment assistance, program licensing/certification/accreditation authority (mental health agency, public health agency, and/or substance abuse agency), region, and year 2004 dummy.
*$p < 0.05$
**$p < 0.01$
***$p < 0.001$

Table 3

Multivariate relationships between state authorization type and wrap-around and after care service offerings

Outcome	State authorization type	%	OR	*p*	95%	CI
Wrap-around services						
Social services (*N*=8,959)						
	Licensure-only	45.2	(ref)			
	Certification/accreditation-only	54.7	1.31		0.96	1.77
	Licensure/deemed status	32.7	0.76		0.49	1.19
	Certification/accreditation/deemed status	44.9	1.30		0.97	1.76
	Certification/accreditation-only vs licensure/ deemed status		1.71	*	1.11	2.65
	Certification/accreditation-only vs certification/ accreditation/deemed status		1.00		0.77	1.31
	Licensure/deemed status vs certification/ accreditation/deemed status		0.58	*	0.37	0.92
Discharge planning (*N*=9,001)						
	Licensure-only	88.0	(ref)			
	Certification/accreditation-only	84.8	0.89		0.66	1.21
	Licensure/deemed status	77.3	0.54	***	0.38	0.76
	Certification/accreditation/deemed status	85.9	0.92		0.66	1.28
	Certification/accreditation-only vs licensure/ deemed status		1.66	**	1.18	2.32
	Certification/accreditation-only vs certification/ accreditation/deemed status		0.97		0.71	1.33
	Licensure/deemed status vs certification/ accreditation/deemed status		0.58	***	0.44	0.78
Employment (*N*=8,935)						
	Licensure-only	28.4	(ref)			
	Certification/accreditation-only	45.9	2.37	***	1.74	3.24
	Licensure/deemed status	26.1	0.99		0.71	1.39
	Certification/accreditation/deemed status	28.0	1.24		0.92	1.67

Table 3
(Continued)

Outcome	State authorization type	%	OR	*p*	95%	CI
	Certification/accreditation-only vs licensure/ deemed status		2.39	***	1.66	3.43
	Certification/accreditation-only vs certification/ accreditation/deemed status		1.91	***	1.34	2.71
	Licensure/deemed status vs certification/ accreditation/deemed status		0.80		0.55	1.16
Housing (*N*=8,932)						
	Licensure-only	34.8	(ref)			
	Certification/accreditation-only	43.4	1.24		0.96	1.61
	Licensure/deemed status	29.2	0.93		0.70	1.22
	Certification/accreditation/deemed status	38.5	1.29		1.00	1.66
	Certification/accreditation-only vs licensure/ deemed status		1.34		0.96	1.86
	Certification/accreditation-only vs certification/ accreditation/deemed status		0.96		0.73	1.27
	Licensure/deemed status vs certification/ accreditation/deemed status		0.72	*	0.55	0.94
Child care (*N*=8,949)						
	Licensure-only	7.6	(ref)			
	Certification/accreditation-only	14.3	1.39	*	1.02	1.88
	Licensure/deemed status	6.4	1.01		0.60	1.68
	Certification/accreditation/deemed status	9.4	1.06		0.80	1.41
	Certification/accreditation-only vs licensure/ deemed status		1.38		0.86	2.22
	Certification/accreditation-only vs certification/ accreditation/deemed status		1.31		0.89	1.91
	Licensure/deemed status vs certification/ accreditation/deemed status		0.95		0.57	1.58

Transportation assistance (*N*=8,964)						
	Licensure-only	28.1	(ref)			
	Certification/accreditation-only	38.2	1.70	**	1.23	2.36
	Licensure/deemed status	19.0	0.75		0.55	1.00
	Certification/accreditation/deemed status	27.4	1.03		0.76	1.39
	Certification/accreditation-only vs licensure/deemed status		2.28	***	1.55	3.36
	Certification/accreditation-only vs certification/accreditation/deemed status		1.66	*	1.07	2.56
	Licensure/deemed status vs certification/accreditation/deemed status		0.73		0.51	1.03
After care services						
Relapse prevention (*N*=8,948)		Not significant				
Continuing care/after care (*N*=8,973)						
	Licensure-only	87.2	(ref)			
	Certification/accreditation-only	85.6	1.08		0.77	1.53
	Licensure/deemed status	79.3	0.62	*	0.41	0.93
	Certification/accreditation/deemed status	91.4	1.61		0.94	2.78
	Certification/accreditation-only vs licensure/deemed status		1.74	*	1.13	2.68
	Certification/accreditation-only vs certification/accreditation/deemed status		0.67		0.35	1.30
	Licensure/deemed status vs certification/accreditation/deemed status		0.39	**	0.21	0.72

All models controlled for program ownership, governor and legislature democratic party, state median household income, state client admission characteristics (percent employed, percent male, and percent outpatient), program client count, presence of payment assistance, program licensing/certification/accreditation authority (mental health agency, public health agency, and/or substance abuse agency), region, and year 2004 dummy.

*$p < 0.05$

**$p < 0.01$

***$p < 0.001$

programs in licensure states with deemed status had significantly lower odds of providing discharge planning and continuing care/after care services than programs in licensure-only states and significantly lower odds of offering linkages to social services, discharge planning, housing assistance, and continuing care/after care services than programs in certification/accreditation states with deemed status. No differences were observed in the odds of providing relapse prevention services between license states and certification/accreditation states.

Discussion

Building off of the social ecological model, this study provided an initial glimpse into the relationship between state policy context, outpatient treatment program authorization, and outpatient substance abuse treatment program practices. Findings support prior research indicating that policy makers may be positioned to effect treatment program practices including the provision of key wrap-around and after care services found to be related to positive long-term treatment outcomes.[6]

Program authorization type (with or without deemed status) did not appear to relate to program provision of assessment, individual counseling, sexually transmitted disease testing, antabuse and naltrexone medications or relapse prevention. However, the data revealed that authorization type (including authorization through deemed status) does appear to be associated with the provision of many treatment, wrap-around, and continuing care/after care services. It is interesting to note that the patterns of this relationship varied by category of service offering. The nature of the relationship between authorization type and wrap-around and continuing care/after care services that have been demonstrated to facilitate access to and/or retention in treatment[15–17,37–39] indicated that, for the most part, certification/accreditation (in some instances to include certification/accreditation through deemed status) was key to such service provision. Theoretically, these types of services might be more commonplace in programs with a more "comprehensive" portfolio of services (akin to a certification/accreditation requirement) than would programs operating according to "minimal" standards (i.e., licensure). In contrast, recall that the data indicated that programs in certification/accreditation with deemed status states had lower odds of offering several infectious disease and HIV education services than programs in states that did not allow for certification/accreditation authorization through deemed status. Also recall that the above findings were obtained from models controlling for program-reported authorizing agency. Initial models (data not shown) indicated that programs in certification/accreditation-only states (without deemed status) had significantly lower odds of reporting that they were authorized by the state public health department than were programs in licensure-only states (OR=0.22, $p<0.001$, 95%CI=−0.13–0.37) and licensure with deemed status states (OR=0.26, $p<.01$, 95%CI=0.10–0.65). Furthermore, programs in certification/accreditation-only states (without deemed status) reported significantly higher odds of being authorized by the state substance abuse agency (OR=3.19, $p<0.01$, 95%CI=1.40–7.27). Such findings imply that programs authorized by the state substance abuse agency may be more likely to be required to include wrap-around and other services that the substance abuse treatment field have deemed important factors in facilitating access to treatment and preventing relapse[15–17,37–39] whereas infectious disease surveillance activities are the legal responsibility of state public health departments and thus programs that are not authorized by these agencies may be less likely to be required to test for communicable diseases.[40] However, differences in testing, education, wrap-around, and continuing care/after care services still held even after controlling for authorizing agency type.

From a treatment system perspective, there clearly is a need for all programs, regardless of their state authorizing agency or authorization type, to test for infectious and sexually transmitted diseases because of the documented linkage between transmission of these diseases and substance

abuse.[15,41] Likewise, comprehensive programs will also include many of the wrap-around services that the field has identified as helping to facilitate access to needed social services and services designed to maintain treatment effects and thereby prevent relapse.[15–17,37–39,42] However, many of these services are often costly for treatment programs to provide and may not be as feasible to offer as relatively low-cost disease testing services. The fact that state authorization type (i.e., certification/accreditation vs licensure with or without deemed status) was associated with differences in the provision of service offerings points to the potential role that the broader state policy environment or context can play in shaping the treatment system, in addition to the priorities and influences of individual authorizing agencies.

Study limitations

The findings are subject to several limitations. First, the analyses were based solely on cross-sectional data from 2003 to 2004. Additional time points and/or longitudinal data would be needed to examine whether these findings are consistent over time (although states do not tend to change from one type of program authorization to another so it is unclear whether additional years of analyses would, in fact, yield differential results). Second, this study only examined one critical aspect of the state policy context—program authorization status. Whereas state treatment program authorization is a necessary precursor to program operation in the vast majority of states, it is not the only factor likely to relate to treatment program practices.[19] Future research should explore the relationship between the requirements contained *within* the state authorization provisions to determine if there is a correlation between requirements for the provision of specific treatment services and their incorporation in practice, possibly controlling for state authorization type. Third, as noted previously, N-SSATS cannot be understood to provide a census of treatment programs; however, the data appear to be fairly representative of the treatment programs within the states.[25] Fourth, it was not possible, given available data sources, to control for all possible factors that may confound the relationship between state substance abuse treatment program authorization type and treatment program practices. One such variable, state-level treatment program expenditures, may be important in understanding the role that the broader policy environment or context may play in effecting the delivery of treatment services. It will be important to consider this fact in future analyses when and if such data become available. Finally, this study did not examine the multilevel relationship between state policies, program practices, and client outcomes. Clearly, such a direction is necessary to truly understand whether the state policy context indirectly affects client outcomes and is the subject of future analyses.

Implications for Behavioral Health

The data presented have two major implications for behavioral health. First, consistent with the social ecological conceptual model, the data suggest that a state policy decision to require certification/accreditation for substance abuse treatment programs may have a major impact particularly on the extent of wrap-around and after care services offered to substance-using populations within that state. As the review of the literature documented, wrap-around services such as transportation to treatment, employment counseling, linkages to other needed social services, and assistance in obtaining housing significantly relate to positive drug treatment outcomes. Obtaining a job, having shelter, and successfully dealing with a wide variety of other health and human service needs that may be consequences of substance abuse all play a major role in recovery and maintaining that recovery. The data presented suggest that the type of state authorization may make an important difference in the breadth and continuity of substance abuse services related to reduced recidivism rates.

One of the complex findings reported in this paper revolves around deemed status. As was noted, deemed status occurs when licensure, certification or accreditation is awarded by the state to a program based on the program receiving accreditation from a nationally recognized accreditation agency such as JCAHO, CARF or COA (the provisions for which agencies apply vary by state). Readers may be curious why, as certification/accreditation is considered the "ideal" state standard, would programs in such states seek national accreditation? In theory, state authorization would be comparable to industry standards.[18] It is possible that some state-certified/accredited programs may wish to market their services to a broader audience, including individuals residing in neighboring states and a national audience. As such, these programs may be interested in obtaining national accreditation for purposes that extend beyond simply being authorized to operate by the state. The data indicated that state authorization through deemed status might make a significant difference in the breadth of counseling service and wrap-around/after care services offered. Programs in states that recognized deemed status as part of their authorization process had significantly higher odds of providing peer group and family counseling. The data may suggest that national accreditation standards such as those required by JCAHO may be more likely to result in group therapy and family therapy. A review of JCAHO standards indicates that these types of therapies were recently added to the JCAHO requirements along with other wrap-around services that support recovery and resilience.[43]

As a whole, the data reported support a core part of the social ecological model; that the social structure, policy, and systems that determine the requirements for outpatient substance abuse treatment program operation relate to the type and breadth of treatment services offered and the extent of wrap-around services provided that facilitate recovery and sustain that recovery. Ultimately, states have the power to require minimal or ideal standards in substance abuse treatment facilities. This regulatory power appears to relate to more comprehensive services for consumers of substance abuse services. Such services generally relate to a higher quality of care and result in better treatment outcomes.

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