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Chriqui, Jamie; Terry-McElrath, Yvonne; McBride, Duane C.; and Eidson, D, "State Policies Matter: The Case of Outpatient Drug Treatment Program Practices" (2008). *Faculty Publications*. 7.
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Regular article

State policies matter: The case of outpatient drug treatment program practices

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Received 30 May 2007; received in revised form 2 July 2007; accepted 8 August 2007

Abstract

This study examined relationships between state policy requirements governing outpatient substance abuse treatment services and reported outpatient treatment program practices. State policies effective as of February 1, 2003, and February 1, 2004, were collected and analyzed via primary legal research; data were validated by state officials (88% response rate; > 90% validation rate). Treatment practice data were obtained from the National Survey of Substance Abuse Treatment Services for the years 2003 and 2004. Multivariate analyses clustered by state were conducted, controlling for state, program, and state-aggregated client admission characteristics. Results indicated that treatment programs located in states with requirements for comprehensive substance abuse assessment, family counseling, substance abuse and infectious disease/sexually transmitted disease testing services, HIV/AIDS education, and aftercare services had significantly higher odds of offering such services (p values ranging from < .05 to < .001). This study presents new information regarding the potential role that state policy context may play in understanding treatment program practices. © 2008 Elsevier Inc. All rights reserved.

Keywords: Substance abuse treatment; State policy; Treatment practices; Treatment services; State regulation

1. Introduction

Recently, many diverse groups have called for, and have recognized, the role that state legislatures and state executive branch agencies can play in ensuring access to, substance abuse treatment programs that include proven or effective practices. These groups have included major federal and quasi-governmental organizations such as the National Institute on Drug Abuse and the Institute of Medicine,

national organizations such as the Robert Wood Johnson Foundation, and panels of experts in the addiction treatment and drug abuse health services research fields (e.g., the Join Together Blueprint for the States Policy Panel) (Blue Ribbon Task Force on Health Services Research, 2004; Committee on Crossing the Quality Chasm: Adaptation to Mental Health and Addictive Disorders, Institute of Medicine, 2006; Robert Wood Johnson Foundation, 2006; Rosenbloom, Garson, Shah, & Ambrogi, 2006). The relatively recent emphasis on states' roles in ensuring the provision of proven and effective practices in substance abuse treatment settings stems from several key factors. First, although federal, state, and local governments are the primary payers of substance abuse treatment services in the United States, the majority of substance abuse treatment services in the United States are paid for by state governments (Mark et al., 2005); thus, states have a vested interest in seeing that clients receive quality

The views expressed in this article are solely attributable to the authors and do not reflect the views of the Robert Wood Johnson Foundation or its trustees, the University of Illinois at Chicago, or the authors' employers.

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treatment services. Second, with the exception of federal regulations for certifying opioid treatment programs, state governments are primarily responsible for authorizing substance abuse treatment programs in the United States (Chiqui, Terry-McElrath, McBride, Eidson, & VanderWaal, 2007). Consequently, substance abuse treatment programs are governed by a diverse set of state policies. The adoption and diffusion of evidence-based practices are largely left to treatment program organization and provider decisions. Third, concerns have been raised regarding the provision of quality care in substance abuse treatment settings. McGlynn et al. (2003) published in the *New England Journal of Medicine* a seminal study documenting adherence to quality-of-care indicators for 30 acute and chronic conditions, including alcohol dependence. Their study concluded that alcohol dependence ranked lowest in terms of the percentage of recommended quality care received (only 10.5%; McGlynn et al., 2003).

To date, the substance abuse treatment literature has documented the role of organizational and management factors in substance abuse treatment delivery (for a review of the key literature and findings in this area, see, e.g., D'Aunno, 2006). Program ownership, organizational affiliation, client:staff ratios, Joint Commission on the Accreditation of Healthcare Organizations accreditation, managed care relationships, clinical supervisors' graduate medical education, and managerial practices are among the factors contributing to program incorporation of established or proven practices (Alexander, Nahra, & Wheeler, 2003; D'Aunno, 2006; D'Aunno & Vaughn, 1995; Friedmann, Alexander, & D'Aunno, 1999; Wells, Lemak, & D'Aunno, 2006). Yet, as D'Aunno has recently concluded, many of the factors affecting treatment program organization and management are structural in nature and may require "large-scale policy changes to improve treatment practices and outcomes" (D'Aunno, 2006).

At the same time, research has shown that a comprehensive approach to substance abuse treatment is considered ideal (National Institute on Drug Abuse, 1999). Such an approach includes comprehensive intake/assessment (American Psychiatric Association, 1994; McLellan, Luborsky, Woody, & O'Brien, 1980; Mee-Lee, Shulman, Fishman, Gastfriend, & Griffith, 2005; Morgan, Morgenstern, Blanchard, Labouvie, & Bux, 2003; Thom et al., 1992); behavioral therapies including counseling services (Avants, Margolin, Usubiaga, & Doebrick, 2004; McLellan, Arndt, Metzger, Woody, & O'Brien, 1993); infectious disease/sexually transmitted disease (STD) testing and education services (Batki & Ferrando, 1996; Broome, Joe, & Simpson, 1999); transitional assistance and ancillary services (Lo, MacGovern, & Bradford, 2002; McCarty, 2000; Orwin, Ellis, Williams, & Maranda, 2000; Reif, Horgan, Ritter, & Tompkins, 2004); and relapse-prevention (Annis, 1991; Carroll, 1996; Irvin, Bowers, Dunn, & Wang, 1999; Witkiewitz & Marlatt, 2004) and continuing care/aftercare services (Brown, Seraganian, Tremblay, & Annis, 2002; Siegal, Li, & Rapp, 2002). Interestingly,

the substance abuse treatment, health services research, and public health policy fields have failed to thoroughly document the nature and extent of state policy requirements for the provision of these services by treatment programs that are state authorized. Furthermore, researchers have yet to examine the relationship between state policy requirements and actual treatment program practices. Understanding the nature of this relationship, if any, is important because, without a national regulatory system, state policy requirements are one of the only common denominators (aside from federal block grant requirements and voluntary national accrediting body requirements) that could help to effectuate the use, incorporation, or use and incorporation of proven and effective practices into state-authorized treatment programs (i.e., the vast majority of programs operating today). Furthermore, without an understanding of this relationship, a potentially important contextual component of the substance abuse treatment delivery system may be overlooked. This study aims to begin to fill this gap by examining whether state policy requirements do, indeed, relate to actual treatment program practices.

2. Materials and methods

2.1. Data sources

2.1.1. Independent variables: State policy data

State policy requirements governing state-authorized standard outpatient substance abuse treatment programs (for further discussion of the state authorization process and its relationship to outpatient treatment program practices, see Chiqui et al., 2007) were captured using primary legal research methods (Mersky & Dunn, 2002). For purposes of this research, "state" was defined to include each of the 50 states and the District of Columbia. State statutory and regulatory policies (hereafter referred to as "state policies") effective as of February 1, 2003, and February 1, 2004, were obtained via searches of relevant Westlaw state policy databases. Westlaw is a commercial service provider of electronic legal reference information. To ensure comprehensive capture of potentially relevant state policies, Boolean text-based searches of the Westlaw state policy databases were combined with detailed reviews of statutory tables of content and indices available from Westlaw. Tables of content and indices were not available for state regulatory laws for the reference dates of interest.

Dichotomous coding schemes were used to capture state requirements for the provision of 16 evidenced-based services (National Institute on Drug Abuse, 1999) spanning five treatment service areas provided by outpatient programs seeking state authorization: (1) recognition of treatment need, (2) counseling services, (3) testing services, (4) HIV/AIDS education services, and (5) maintenance of treatment effects (including relapse-prevention and continuing care/aftercare services). The "recognition of treatment need"

Table 1
Study sample descriptive statistics

N-SSATS treatment program outcomes	No.	%	State policies for standard outpatient requirement predictors (n = 9,025)	%
Recognition of treatment need				
1. Comprehensive substance abuse assessment/diagnostic services provided	9,017	97.4	1. Comprehensive substance abuse assessment requirement	95.7
2. Patient placement, diagnostic criteria, or both			2. Patient placement, diagnostic criteria, or both	
Not captured in N-SSATS			Use of ASAM patient placement criteria	20.3
			Use of <i>DSM-IV</i> diagnostic criteria	27.4
			Use of ASI diagnostic criteria	7.2
Treatment provision				
1. Counseling services provided			1. Counseling services required	
Family counseling	8,947	76.8	Family counseling/therapy	39.6
Group therapy	8,994	94.3	Group counseling/therapy	87.4
Individual therapy	8,989	96.4	Individual counseling/therapy	85.3
2. Testing services provided			2. Testing services required	
Drug or alcohol urine screening	9,004	86.1	Drug or alcohol testing/screening	5.5
Screening for hepatitis B	8,865	17.5	Hepatitis B or C testing/screening	9.4
Screening for hepatitis C	8,870	18.1		
HIV testing	8,903	29.2	HIV/AIDS testing	12.6
STD testing	8,860	17.9	STD testing	10.8
TB screening	8,890	30.5	TB testing	11.5
3. Education services provided			3. Education services required	
HIV or AIDS education, counseling, or support	8,985	57.3	HIV/AIDS education	35.6
Maintenance of treatment effects				
1. Relapse prevention	8,948	86.7	1. Relapse prevention	28.0
2. Aftercare counseling	8,973	86.7	2. Continuing care/aftercare counseling	42.8

category includes requirements for comprehensive assessment as well as requirements for three measures of patient placement, diagnostic criteria or both for use of: (1) American Society for Addiction Medicine (ASAM) patient placement criteria for outpatient and intensive outpatient substance abuse treatment (ASAM Levels I and II.1; Mee-Lee et al., 2005); (2) the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*, which contains criteria for diagnosing both substance abuse and dependence (American Psychiatric Association, 1994); and (3) the Addiction Severity Index (ASI), a comprehensive addictions assessment and monitoring tool that can be used to evaluate substance use, as well as medical, employment, legal, family, social, and psychiatric status (McLellan et al., 1980, 1992). The “counseling services” category includes requirements for the provision of family, group, and individual counseling services. The “testing services” category includes requirements for substance use, HIV/AIDS, tuberculosis (TB), STDs, and hepatitis B or C testing. The “maintenance of treatment effects” category includes requirements for the provision of relapse-prevention and continuing care/aftercare services. Table 1 (column 2) provides a detailed listing of state policy variables.

Following identification and coding of state policy requirements, state authorizing officials were contacted via an electronic mail survey to confirm accurate coding of the state’s data. Responses were received from 45 states (88% response rate) and revealed that our initial coding was correct in > 90% of the cases. In the remaining cases, the data were corrected to reflect the state’s response.

Data for 47 states were included in the analysis. Alaska and South Dakota were excluded because programs in these states were not required to be authorized as of the study reference dates; the state authorization process was voluntary. Hawaii was excluded because its accreditation requirements had not yet been promulgated (i.e., they were in draft format) as of the study reference dates. The District of Columbia was excluded due to missing data for one of the study years.

2.1.2. Outcome variables: National Survey of Substance Abuse Treatment Services program data

Outpatient substance abuse treatment program practice data for 2003 and 2004 were obtained from the Substance Abuse and Mental Health Services Administration’s (SAMHSA) National Survey of Substance Abuse Treatment Services (N-SSATS; U.S. Department of Health and Human Services, 2005). N-SSATS is an annual point-prevalence survey of the location, characteristics, services, and number of clients enrolled in treatment at public and private treatment facilities in the United States. The N-SSATS reference date is March 31 of each year. Although not considered a census of substance abuse treatment programs in the United States, N-SSATS has been determined to provide a satisfactory national sampling frame for substance abuse treatment services, having accurately identified 70% of all substance abuse facilities in a midsize city (Carise, McLellan, Festinger, & Kleber, 2005).

Data from 10,877 publicly funded standard and intensive outpatient treatment programs were obtained from the

N-SSATS data for the 47 states noted above. Programs that did not report substance abuse treatment as their primary focus (i.e., mental health, combined mental health and substance abuse treatment, and health care), as well as tribally and federally owned treatment programs, were excluded. We only selected publicly funded outpatient treatment programs included in N-SSATS because state policy requirements generally are mandated for programs receiving state authorization (which includes all programs receiving state funding). Outpatient programs were selected for analysis because, as the 2004 full N-SSATS data show, the vast majority of treatment programs in the United States offer standard outpatient (72%) or intensive outpatient (42%) services as compared to residential (27%), day treatment (14%), detoxification (21%), methadone/L- α -acetylmethadol maintenance (7%), or hospital inpatient (8%) services (U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies [U.S. DHHS, SAMHSA, OAS], 2006a).

All outcome variables were dichotomous and were listed after question stems in the N-SSATS survey instrument, which read, “Which of the following [“substance abuse services” or “services”] are provided by this facility at this location...?” Thirteen outcomes were selected for analysis (Table 1, column 1), covering the five service areas noted earlier: recognition of treatment need, counseling services, testing services, HIV/AIDS education services, and maintenance of treatment effects.

2.1.3. Control variables

A series of control variables were included to account for possible confounding influences of state- and program-level characteristics. State outpatient substance abuse treatment program authorization type (i.e., certification/accreditation vs. licensure) was controlled for because prior research has documented the relationship between authorization type and outpatient treatment program practices (Chiqui et al., 2007). Other state-level control variables included state median household income (U.S. Census Bureau, 2005) and Democratic Party in power for the governor and state legislature (National Conference of State Legislatures, 2000a, 2000b, 2002a, 2002b). Democratic Party status was of interest because self-affiliated Democratic Party voters in the 2004 presidential election were significantly more likely to identify quality of health care as an important issue confronting the nation than were self-reported independent or Republican voters (Blendon, Brodie, Altman, Benson, & Hamel, 2005). To account for the policy lag effect of the party in power on state policy provisions in effect in 2003 and 2004, political party data from the 2000 and 2002 elections were used (i.e., the 2004 elections occurred following the study reference dates). We were unable to find a suitable indicator of state-level expenditures on substance abuse treatment services. Future analyses would be well served to include expenditure data should they become available.

Four program-level controls were obtained from N-SSATS: (1) program ownership type, (2) program-reported state authorization agency type, (3) client counts, and (4) payment assistance acceptance. Program ownership type has been well documented to relate to treatment program practices and service offerings (D'Aunno, 2006; Knudsen, Ducharme, & Roman, 2006; Roman, Ducharme, & Knudsen, 2006; Wells, Lemak, & D'Aunno, 2005; Wheeler, Fadel, & D'Aunno, 1992). Program-reported state authorization agency data were included because analyses conducted by the study team indicated that treatment program practices vary according to the type of state agency (i.e., substance abuse, public health, and mental health) responsible for authorizing the program. The final two program-level controls included a quartile client count measure (defined as the total number of clients in standard or intensive outpatient treatment; quartile definition was based on data for all 50 states plus the District of Columbia) and a dichotomous variable indicating whether the program offered payment assistance.

Three aggregated state-level client characteristics variables were obtained from SAMHSA's Treatment Episode Data Set for the 2003 and 2004 periods because client characteristics data were not available in the N-SSATS data set: percent employed, percent male, and percent outpatient (U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies [U.S. DHHS, SAMHSA, OAS], 2006b, 2006c). Furthermore, a year 2004 dummy variable was included to control for time trends.

2.2. Data analysis

Analyses were conducted using Stata v.9.2, using the logistic command and clustering by state. 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.

3. Results

Missing data due to nonresponse were present on some of the N-SSATS variables used as controls. Thus, after deleting cases with missing control data and data for states with voluntary or unpromulgated policy provisions, 9,025 cases remained for analysis (83% of the original 10,877 cases). Table 1 presents descriptive statistics for all outcome and predictor variables.

3.1. State policy requirements

Virtually all programs (96%) were in a state with policies requiring mandatory assessment for substance abuse treatment programs. However, specification of particular patient placement, diagnostic criteria, or both

Table 2

Multivariate analyses of the relationship between state policy requirements and reported treatment program practices

N-SSATS outcome	Policy predictor	%	Odds ratio	<i>p</i>	95% confidence interval
Treatment provision					
1. Counseling services					
Family counseling (<i>n</i> = 8,947)	Family counseling/therapy				
	No	73.6	(ref)		
	Yes	81.8	1.42	**	1.13, 1.77
Group therapy (<i>n</i> = 8,994)	Group counseling/therapy				
	No	94.2	(ref)		
	Yes	94.3	1.23		0.81, 1.86
Individual therapy (<i>n</i> = 8,989)	Individual counseling/therapy				
	No	96.5	(ref)		
	Yes	96.4	0.84		0.37, 1.88
2. Testing services					
Drug or alcohol urine screening (<i>n</i> = 9,004)	Drug or alcohol screening/testing				
	No	85.7	(ref)		
	Yes	93.8	7.25	***	3.47, 15.13
Screening for hepatitis B (<i>n</i> = 8,865)	Hepatitis B or C testing				
	No	17.2	(ref)		
	Yes	20.4	1.97	**	1.32, 2.93
Screening for hepatitis C (<i>n</i> = 8,870)	Hepatitis B or C testing				
	No	17.6	(ref)		
	Yes	22.5	2.25	***	1.45, 3.48
HIV testing (<i>n</i> = 8,903)	HIV/AIDS testing				
	No	27.4	(ref)		
	Yes	41.3	4.01	***	2.50, 6.45
STD testing (<i>n</i> = 8,860)	STD testing				
	No	16.8	(ref)		
	Yes	26.6	2.37	**	1.44, 3.90
TB screening (<i>n</i> = 8,890)	TB testing				
	No	29.9	(ref)		
	Yes	34.6	1.70	*	1.13, 2.56
3. Education services (any)					
HIV/AIDS education/counseling/support (<i>n</i> = 8,985)	HIV/AIDS education				
	No	54.3	(ref)		
	Yes	62.7	1.62	***	1.31, 2.02
Maintenance of treatment effects					
1. Relapse-prevention groups (<i>n</i> = 8,948)					
	Relapse prevention				
	No	85.3	(ref)		
	Yes	90.1	1.33		0.83, 2.14
2. Aftercare counseling (<i>n</i> = 8,973)					
	Continuing care/aftercare counseling				
	No	86.0	(ref)		
	Yes	87.6	1.59	**	1.13, 2.25

Notes. Only one policy variable was entered per model. ref = referent. Models clustered by state. Models clustered by state and controlled for the following: state licensure/certification and deemed status policy, program-reported authorizing agency, program ownership, governor democratic party, legislature democratic party, state median household income, state treatment client admission characteristics (percent employed, percent male, percent outpatient, client count, and payment assistance), and year 2004 dummy.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

was less frequent. Only one fifth of programs were in a state that required the use of ASAM Patient Placement Criteria for the Treatment of Substance-Related Disorders, and just more than one quarter required the use of the *DSM-IV*. Very few programs (7%) were in a state requiring the use of the ASI. Requirements for group and individual counseling/therapy were widespread (> 85% of programs were located in states with such requirements); however, only 40% of programs were located in states with similar requirements for family counseling/therapy. Of interest was

the low percentage of programs located in states requiring specific testing services. Only 6% of programs were in a state actually requiring drug or alcohol testing/screening. State testing requirements for diseases associated with substance use (hepatitis B and C, HIV/AIDS, STDs, and TB) were present for only 9–13% of programs. Requirements for HIV/AIDS education, however, were more prevalent; more than one third of programs were in states with such policies. Finally, 28% of programs were in states with requirements regarding relapse-prevention services,

and nearly half (43%) of the programs were located in states with requirements for continuing care/aftercare counseling services.

3.2. Treatment program practices

Section 3.1 described the nature and extent of the state level policies. It is the purpose of this paragraph to report the distribution of actual program service practices from the N-SSATS data. Virtually all programs reported providing comprehensive assessment or diagnosis services (97%), as well as group (94%) and individual (96%) therapies. Family counseling was somewhat less prevalent, but was still provided by the strong majority of programs (77%). Eighty-six percent of programs reported performing urine screening for drug or alcohol abuse. However, testing for diseases associated with substance use was much less prevalent. Less than 20% of programs reported testing for hepatitis B or C or for STDs. Less than one third of programs reported testing for HIV (29%) or TB (31%). In contrast, more than half (57%) of programs reported providing HIV/AIDS education, counseling, or support. Services aimed at maintaining treatment effects were also widespread; 87% of programs provided relapse-prevention and continuing care/aftercare counseling.

3.3. Multivariate relationships between state policy requirements and treatment program practices

As noted in Materials and Methods, multivariate models controlled for a variety of program- and state-level factors. Results are presented in Table 2.

3.3.1. Assessment services

As stated previously, the percentage of outpatient programs reporting the use of comprehensive assessment was very high overall (97%). Given the lack of variance in this measure, multivariate models examining the odds of comprehensive assessment by state assessment did not provide meaningful results and are not shown in Table 2. Unfortunately, N-SSATS does not capture the program use of ASAM, *DSM-IV* criteria, or the ASI. Thus, we were unable to assess the direct relationship between state requirements for and treatment program use of these tools.

3.3.2. Counseling services

Outpatient programs' use of counseling services was partially associated with state policy requirements in this area. Although state requirements governing group and individual counseling services were not associated with program use of these services (such services were almost universal), programs in states requiring family counseling services had significantly higher odds of reporting the provision of such services (82%) as compared to programs in states without such requirements (74%).

3.3.3. Testing and education services

Across the board, in each instance where state policy required the use of testing services, outpatient treatment programs had significantly higher odds of conducting the testing services than programs in states without such policy requirements. Similarly, programs in states requiring HIV/AIDS education/awareness programs had significantly higher odds of providing such services (63%) than programs in states without such requirements (54%).

3.3.4. Relapse-prevention and aftercare services

Data indicated that state policy is not associated with the provision of relapse-prevention services (i.e., services offered during treatment designed to prevent the reinitiation of substance use). However, significant associations were observed with the provision of continuing care/aftercare services (i.e., services provided after treatment completion to help ensure the ongoing effect of treatment services). Models showed that programs in states with aftercare requirements had significantly higher odds of providing such services than programs in states without such requirements. Significant results were somewhat surprising, given the minimal difference in the percentage of programs offering aftercare services based only on state requirements for continuing care/aftercare (86% of programs in states without policy vs. 88% of programs in states with policy). Further investigation showed a significant interaction between program provision of aftercare services and state policy requirements for such services based on state authorization type (i.e., certification/accreditation vs. licensure). Specifically, programs were more likely to provide aftercare services if the state policy required it and if the program was located in a certification/accreditation state (as compared to a licensure state).

4. Discussion

The findings reported herein provide initial empirical evidence of the potential role that state policy may play in effectuating certain evidence-based outpatient substance abuse treatment program practices. Although we were not able to explore all possible relationships, the data indicate that a relationship does exist between state policy requirements and treatment program practices relative to family counseling, drug and alcohol screening, infectious disease/STD testing and education services, and aftercare services. Furthermore, in the case of group and individual counseling services, it was not surprising that we did not find a statistically significant difference in the relationship between programs in states with and without requirements for the provision of such services because state requirements and program practices in this area were nearly universal.

The results of this study seem to indicate that state policy requirements governing outpatient substance abuse treatment programs may have significant public health implications. These findings build on prior research that indicated a

potential relationship between state policy and program practices, namely, that state authorization type (i.e., certification/ accreditation vs. licensure) was significantly associated with the provision of infectious disease testing services (among other services; Chriqui et al., 2007). In this study, we further confirmed that a relationship does appear to exist between state policy requirements and program provision of infectious disease/STD testing and education services. It is clearly the case that the current analyses do not indicate whether state policy preceded services. However, inclusion of policy requirements regarding the provision of infectious disease/STD testing in state policies is a fairly low-cost policy mandate (relative to other mandates) that could have enormous public health benefits because of the documented link between substance use/abuse and infectious disease/STD (Aktan, Calkins, & Johnson, 2001; Batki & Ferrando, 1996; Broome et al., 1999; Edlin et al., 2005; Holmberg, 1996; National Institute on Drug Abuse, 1999; Nyamathi, Sands, Pattatucci-Aragon, Berg, & Leake, 2004).

The findings reported herein are subject to several limitations. First, cross-sectional analyses, based on only 2 years of data, were presented and, therefore, should not be interpreted to reflect long-term trends in state policy, nor can the results be interpreted causally. Ongoing research is planned by the study team to continually monitor the relationship between state policy requirements and treatment program practices over time to ascertain whether the relationships are maintained. Second, this study was limited to policy requirements and treatment program practices specific to outpatient treatment settings and, therefore, the results should not be generalized to all treatment settings. Third, it is not possible to generalize the relationships reported to all state policy requirement/treatment program practice relationships. Limitations in both the state policy collection and the N-SSATS data sets precluded inclusion of certain variables, including pharmacotherapies, transitional assistance, and ancillary services. Fourth, we were unable to explore the relationship between state policy requirements for use of ASAM Patient Placement Criteria for the Treatment of Substance-Related Disorders, the *DSM-IV*, and/or the ASI and treatment program practices in this area because N-SSATS does not ask treatment programs to report on their practices in this area. Thus, we were limited to assessing the extent to which programs provide, and the extent to which states mandate the use of, comprehensive assessment at intake. What tools or diagnostic criteria may or may not be employed by the treatment programs based on state requirements for use of these tools are unknown and provide an interesting question for future research. Fifth, although N-SSATS has been reported elsewhere as being a suitable source of treatment service data (Carise et al., 2005), responses to the survey are voluntary and, therefore, subject to response bias, including varying levels of knowledge, expertise, or both on the part of the respondents to the N-SSATS questionnaire. Furthermore, responses to the N-SSATS service variables are often reported in the

affirmative even if only one client of a given service provider has received the given service. Thus, N-SSATS treatment program reporting of service provision is not necessarily reflective of a service provided to a majority of clients in the given program and, therefore, analyses involving the N-SSATS data may contain an overestimation of the services actually provided to clients. Finally, as indicated above, we were unable to control for all possible factors that might confound the relationship between state policy requirements and treatment program practices, including state-level treatment program expenditures, geographic location of the treatment programs included in N-SSATS, and actual client characteristics for the treatment programs included in N-SSATS. Future analyses would be well served to control for these and other variables should they become available.

In spite of these limitations, the data reported herein seem to further provide evidence of a relationship between state policy requirements and treatment program practices as reported in N-SSATS. Research has indicated that program practices varied based on the state authorization approach governing outpatient treatment programs (i.e., certification/ accreditation vs. licensure; Chriqui et al., 2007). The current study also points to interesting relationships between state policy requirements and reported outpatient treatment program practices and, in the case of aftercare services, indicates a more complex interaction between program practice, state policy requirement for a service, and state authorization type. Further exploration of these interactions is the subject of future research. However, this study provides additional new data indicating that state policy requirements may, in fact, provide an important context surrounding outpatient substance abuse treatment program practices. Because state policy requirements are mandatory for state-authorized programs (i.e., all programs included in this study), the states are uniquely positioned to institute specific policy proscriptions emanating from scientific research in the substance abuse treatment arena, indicating that a comprehensive approach, specific services, or both are associated with positive treatment outcomes and reduced recidivism (Committee on Crossing the Quality Chasm: Adaptation to Mental Health and Addictive Disorders, Institute of Medicine, 2006; National Institute on Drug Abuse, 1999). Such data may be used to inform future state policy decision-making practices regarding outpatient substance abuse treatment program requirements. These data also imply the importance of a closer working relationship between researchers and clinicians who identify effective treatment practices and state policy makers. It is not sufficient to document and publish in relevant journals what services are effective. It is crucial for health services researchers to work with policy makers to incorporate best treatment practices into state policy and regulations. The data presented suggest that such implementation offers the potential to improve the quality of service received by those in drug treatment programs in that state.

Acknowledgments

Work on this article was supported by the ImpacTeen project funded by the Robert Wood Johnson Foundation (Frank J. Chaloupka, University of Illinois at Chicago, Principal Investigator). The authors are especially grateful to Victor Capoccia, Ph.D., for providing initial guidance in conceptualizing this research study. The authors would also like to thank Douglas Ross and Jacque Giem for data collection and research assistance.

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