

Integration of Substance Abuse Treatment Organizations into Accountable Care Organizations: Results from a National Survey

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Abstract To meet their aims of managing population health to improve the quality and cost of health care in the United States, accountable care organizations (ACOs) will need to focus on coordinating care for individuals with substance abuse disorders. The prevalence of these disorders is high, and these individuals often suffer from comorbid chronic medical and social conditions. This article examines the extent to which the nation's fourteen thousand specialty substance abuse treatment (SAT) organizations, which have a daily census of more than 1 million patients, are contracting with ACOs across the country; we also examine factors associated with SAT organization involvement with ACOs. We draw on data from a recent (2014) nationally representative survey of executive directors and clinical supervisors from 635 SAT organizations. Results show that only 15 percent of these organizations had signed contracts with ACOs. Results from multivariate analyses show that directors' perceptions of market competition, organizational ownership, and geographic location are significantly related to SAT involvement with ACOs. We discuss implications for integrating the SAT specialty system with the mainstream health care system.

Keywords accountable care organizations, substance abuse treatment organizations, care coordination

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An important component of efforts to improve quality and reduce costs in the US health care system is a focus on improved care coordination, especially for individuals with chronic illness. Accountable care organizations (ACOs), with their financial incentives to reach targets for cost and quality, have the potential to play an important role in these efforts (Casalino et al. 2015 [this issue]). We argue that improved coordination of care for individuals with substance use problems in particular could have a substantial effect on the extent to which ACOs achieve their targets (Lewis et al. 2014).

One reason for the importance of improved care coordination for individuals with substance use problems is their high prevalence in the US population. An estimated 26 percent of adults in the United States have a behavioral health problem (i.e., a mental health illness, substance use disorder, or some combination) (Kessler et al. 2005). The twelve-month prevalence rate of substance use disorders in US adults is about 12 percent for alcohol and 3 percent for illicit drugs (SAMHSA 2014b). Of these individuals, 2.1 million suffer from addiction or misuse of prescription opioids and another 460,000 have heroin use problems (SAMHSA 2014c).

Furthermore, substance use disorders are chronic illnesses, rather than acute medical conditions (McLellan et al. 2000). Individuals with substance use problems often enter treatment multiple times over many years. Such individuals can suffer relapses even if they have remained abstinent for long periods. The ongoing risk of relapse suggests the need for coordinated, longitudinal monitoring and maintenance care as with any other chronic disease (Friedmann, Saitz, and Samet 1998).

Another reason that ACOs should be concerned with coordinating care for individuals with substance use problems is that these disorders are costly in many ways: increased health care costs, crime, and lost productivity. Indeed, the estimated annual societal cost of substance use problems in the United States—including illegal drugs, alcohol, and tobacco—is more than \$600 billion (National Drug Intelligence Center 2011).

Yet ACOs face challenges, as well as opportunities, in coordinating care for individuals with substance use problems. Individuals with substance use problems commonly have comorbid medical and, importantly, psychosocial conditions, including unemployment and homelessness, lower levels of physical health, poor adherence to treatment regimens, and, as noted, higher costs of care (McLellan et al. 1998). Often unacknowledged, but nonetheless critical, is the stigma that accompanies substance use disorders: attitudes among health care professionals and affected individuals themselves present barriers to both access to care and quality of care.

These factors may explain why results from a recent national survey of 257 ACOs show that relatively few of them (37 percent) had relationships with behavioral health provider groups and only 21 percent had formal contracts with such groups outside the ACO (Lewis et al. 2014).

Nonetheless, prior research shows that integrating treatment for behavioral health problems in medical settings can improve physical and behavioral health outcomes compared to traditional models in which medical and behavioral health providers work independently (Unützer et al. 2012; Chung et al. 2013; Butler et al. 2008; Collins et al. 2010). Further, we argue that, though the challenges that individuals with substance use problems present for care coordination are substantial, individuals with other common, complex chronic illnesses present similar obstacles.

Thus the purpose of this article is twofold: first, to examine the extent to which substance abuse treatment (SAT) organizations are being integrated into ACOs across the nation and, second, to develop an understanding of factors that may promote or inhibit this integration. We focus on SAT organizations because they provide the great majority of treatment for individuals with substance use disorders in the United States: about fourteen thousand of these organizations have a daily census of more than 1 million clients (SAMHSA 2014a). To achieve these objectives, we draw on data from a recent (2014) nationally representative survey of SAT organizations that included questions about their involvement with ACOs.

We extend Valerie A. Lewis et al.'s recent study (2014) by focusing explicitly on the nation's specialty SAT sector. In addition, we examine factors that may account for the inclusion of these organizations in ACOs that Lewis et al. (2014) did not have data to examine. We begin by providing some background information on the US substance abuse treatment system and then present the conceptual model that guides our analysis.

Background

Most addiction treatment in the United States is provided by the approximately fourteen thousand local organizations that constitute the SAT system. Contrary to the "country club" stereotype fed by the media's fascination with "celebrity rehab," most SAT organizations are small (fifteen full-time staff members on average), predominantly urban agencies that serve patients from their communities. Because substance use disorders often produce indigence, but have not been disorders qualifying for disability entitlements, SAT programs serve a large proportion of individuals

with substance use disorders who currently lack health insurance. As a result, many of these organizations are highly dependent on federal and state block grants to cover the costs of the uninsured. Waiting lists are common, especially for indigent or underinsured patients seeking the limited number of publicly funded treatment slots (Friedmann et al. 2003).

The SAT system evolved separately from mainstream medical and mental health care, and so the organization, financing, and geographic location of SAT programs remain separate from mainstream health care institutions (D'Aunno 1997; Friedmann, Saitz, and Samet 2003). One consequence of this organizational distance is that most SAT agencies are underresourced, have few slack resources to invest in technological improvements, rely on paraprofessional rather than professional staff to provide treatment, and commonly focus on helping clients initiate the twelve steps to the exclusion of pharmacotherapy and other evidence-based practices (D'Aunno 2006). At the other end of the spectrum, a minority of SAT programs are fiscally, technologically, and strategically sophisticated; affiliated with mainstream health care institutions and investigators (Ducharme et al. 2007); striving to implement quality improvement processes and evidence-based practices (Hoffman et al. 2011; Quanbeck et al. 2011); and likely positioning themselves in anticipation of health reform.

Conceptual Approach

We argue that a critical first step toward the integration of substance abuse treatment with primary care and other mainstream health care providers is the formal inclusion of SAT organizations in ACOs (Buck 2011). As noted above, SAT organizations are the main providers of treatment for substance use disorders across the nation; the number of individuals they treat suggests that meaningful coordination of care for this population needs to involve them.

To address the study objectives, we use a conceptual framework that integrates four distinct, empirically well-supported, models of organizational adaptation to changes in their external environments, including innovations in the organization of services, such as ACOs (Damschroder et al. 2009; Rye and Kimberly 2007). These models include (1) a *socio-technical* model that emphasizes how well an innovation matches the work needs and characteristics of its intended users; (2) an *organizational-managerial* model that emphasizes social and material support for an innovation within its host organization; (3) a *market* model that focuses on the dynamics of market supply, demand, and competition and their effects

on the adoption of an innovation; and (4) a *government policy* model that emphasizes the role of government policies that may hinder or support adoption of innovation. In short, these models suggest several conditions, discussed below, that may promote or hinder the likelihood of the inclusion of SAT organizations in ACOs.

The Role of Government Policy. The Affordable Care Act (ACA) prompted three important changes in many states that, in turn, may provide important incentives for SAT organizations to join ACOs. First, ACA legislation abolished categorical restrictions on eligibility for Medicaid that have traditionally limited enrollment to children and parents, older adults, and individuals with qualifying disabilities, resulting in expansion of Medicaid insurance coverage to millions of individuals—including those with substance use disorders.

Second, many states have established health insurance exchanges (HIEs), organizations that primarily serve individuals buying insurance on their own and small businesses with up to one hundred employees, providing a choice of different health plan options.

Third, the ACA requires HIEs and state Medicaid programs to provide coverage for substance abuse treatment. By removing financial barriers, the ACA, in combination with enactment of the Mental Health Parity and Addiction Equity Act of 2008, has the potential to improve access to substance abuse treatment.

We expect that SAT organizations located in states that have expanded Medicaid coverage or that have launched an HIE are more likely to participate, or plan to participate, in ACOs. There are two key rationales for this argument. The first is that ACOs will be motivated to include SAT organizations to the extent that SAT patients have insurance coverage. Though ACOs, by definition, have incentives to lower costs, they also need revenue to cover their costs. Insurance coverage for individuals with substance use disorders is thus important for integrating their care in mainstream health care organizations. Second, SAT organizations will be more motivated to join an ACO to the extent that they need to coordinate care for their patients who have gained insurance coverage.

Market Model. We expect that SAT organizations that face higher levels of market competition or increases in market competition are more likely to join ACOs. As a result of several factors noted above, there has been relatively little competition among SAT organizations for patients or funds. These factors include the relatively high level of need for treatment (see the prevalence of substance abuse disorders cited above), resulting in waiting lists in many locations; lack of payment (from insurance or government

programs) to expand the supply of treatment providers; and stigma associated with treatment seeking and treatment provision.

Yet the introduction of HIEs, Medicaid expansion, and mandated coverage for substance use disorders may increase payment for treatment and, as a result, increase competition among SAT organizations for patients, especially those with insurance coverage. In local markets characterized by such increased competition, SAT organizations are likely to seek inclusion in ACOs to reduce their uncertainty about attracting patients.

Organizational-Managerial Model. Two important characteristics of SAT organizations are likely to influence their participation in ACOs. The first is ownership. Much prior research shows significant differences between public and nonprofit SAT organizations, on the one hand, and for-profit SAT organizations, on the other (D'Aunno 2006; Roman, Ducharme, and Knudsen 2006). In particular, publicly owned and nonprofit SAT organizations provide a richer array of services for their patients, including HIV testing and other medical care (D'Aunno, Pollack, Jiang, et al. 2014). As a result, these organizations are more likely to be motivated to join ACOs to increase care coordination for their patients and to increase efficiency in their provision of health care services. Further, a much higher percentage of patients in for-profit SAT organizations pay for their care out of pocket. This means that for-profit SAT providers may be less concerned about the benefits they could gain from inclusion in an ACO. Finally, the majority of ACOs are Medicare or Medicaid ACOs; these ACOs are more likely to work with publicly owned and nonprofit SAT organizations whose clients often have Medicare or Medicaid coverage.

The second characteristic is accreditation. Much prior research shows that SAT organizations that hold accreditation from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) are more likely to have experience with managed care contracts and provide higher quality of care (D'Aunno 2006; D'Aunno, Pollack, Frimpong, et al. 2014). These characteristics make a SAT organization more attractive as a partner for an ACO. For the same reasons, SAT organizations that hold an accreditation from the Commission on the Accreditation of Rehabilitation Facilities (CARF), another common accrediting body in the field, also may be more likely to be included in ACOs.

Sociotechnical Factors. This model emphasizes the extent to which inclusion in an ACO matches the work needs, technology, and characteristics of SAT clinical staff members. More specifically, we expect that two important aspects of SATs as sociotechnical systems will be related to their inclusions in ACOs: their use of electronic health records (EHRs) and the

extent to which their staff are composed of clinicians with professional degrees. Prior work indicates the important role that EHRs play in managing and coordinating patient care for effective ACO performance (e.g., D'Aunno, Broffman, and Sparer 2014). Thus SAT organizations that use EHRs will be better candidates for inclusion in an ACO than other SAT organizations will be.

As noted above, many SAT organizations rely on paraprofessional staff. In turn, such staff members are less likely to relate well to the more professional clinical staff of health care organizations in ACOs. Paraprofessional staff members also are less likely to see the need for inclusion in ACOs due to their heavy reliance on twelve-step models of SAT treatment.

In sum, our conceptual approach suggests several factors that are likely to influence the involvement of SAT organizations in ACOs. Many of these factors can influence the motivation of both ACOs and SAT organizations to work closely with each other to coordinate care more effectively for individuals with substance use disorders. We empirically examined these arguments as discussed below.

Method

Overview. This study draws on methods and data from the National Drug Abuse Treatment System Survey (NDATSS), which comprises six prior surveys of outpatient substance use treatment programs conducted in 1988, 1990, 1995, 2000, 2005, and 2011 (the 2011 wave included only opioid treatment programs [OTPs]). A key strength of the NDATSS is its split-panel design: each survey wave since 1988 included programs from prior waves (panel programs), and each wave also added representative samples of newer programs. The addition of new programs keeps the NDATSS representative of the changing population of US treatment programs. Replacing programs that exit the sample over time (e.g., due to closure) also ensures adequate sample size and attendant statistical power. At the same time, the repeated assessment of a continuing panel of programs facilitates study of how established organizations change.

From November 2013 to June 2014, we collected a seventh wave of data to examine the impact of the ACA on the accessibility and quality of substance use disorder treatment nationwide. The 2013–14 survey expanded the NDATSS study population to include residential and inpatient programs.

Sampling Frame and Sample. The NDATSS-2013 employs a stratified random sample of the four main types of representative programs in the US

substance abuse treatment system: outpatient OTPs, outpatient non-OTPs, inpatient programs, and residential programs. The OTPs and outpatient non-OTPs are further stratified by (1) panel programs that were interviewed in 2005 or 2011 and (2) programs that are new in the 2013 survey.

To ensure sample representativeness, we randomly selected new SATs and outpatient non-OTPs from the 2011 national census list of programs compiled by the Substance Abuse and Mental Health Services Administration (SAMHSA). In addition, we randomly selected new samples of inpatient and residential programs from the 2011 SAMHSA list.

We aimed to interview the director and the clinical services supervisor of 200 OTPs (170 panel programs and 30 new programs); 300 outpatient non-OTPs (230 panel programs and 70 new programs); 24 inpatient programs; and 107 residential programs. As in prior waves, the NDATSS focuses on organizations that employ multiple practitioners or counselors, as opposed to solo practices. These targeted organizations treat individuals with substance use problems, including individuals with at least some drug use problems (as opposed to alcohol use problems only).

Response Rate. We contacted 751 programs to participate in the survey, and, of these, 635 completed a pair of interviews, for a response rate of 84.6 percent. If we calculate the overall response based on the number of programs that completed at least some part of both surveys, the response rate was 85.5 percent (642 of 751). Finally, 88.1 percent of the programs (662 of 751) completed at least one interview. There was some variation in response rates among the sample strata, ranging from a low of 72 percent for inpatient programs that completed a pair of interviews to 89 percent for panel OTP programs that completed both interviews. These response rates are very similar to rates from prior NDATSS waves, which ranged from 82 to 92 percent.

Weights. We constructed survey weights to account for possible non-response bias in the data and to ensure that the sample was representative of the population. These weights were developed for the 695 programs that had either the director or the clinical supervisor completing at least some of the main interviews. The weighting adjustments consist of three stages: stage 1 adjustments for refusers in a screener survey, stage 2 adjustments for nonresponse in the director or supervisor surveys, and stage 3 adjustments for correcting the differences between the sample and the target population using poststratification. We developed adjustments for stages 1 and 2 using results of logit regression analyses comparing responding to nonresponding programs along several key variables (Chen, D'Aunno, and

Wilson 2014). These analyses show that programs newly added to the sample took more phone calls to contact and were less likely to complete the survey than programs participating in prior waves were.

Data Collection, Reliability, and Validity. The director and the clinical services supervisor of each participating program were asked to complete telephone surveys. The surveys cover a broad range of topics concerning the structure, financing, and delivery of substance use disorder treatment, including client demographics, referral sources, staffing, diagnostic and assessment protocols, services provided, quality improvement efforts, and licensing and accreditation.

We followed established methods that maximize reliability and validity in phone surveys (Groves et al. 1988). These methods include pretesting the survey with a random sample of ten programs, employing experienced telephone interviewers from Cornell University's Survey Research Institute, providing training specific to our study for telephone interviewers, sending each program director a cover letter explaining the study along with web-based work sheets that cued interviewees to consult financial and administrative records prior to the call, and making a brief phone call to follow up on the letter.

Further, as data are collected, we perform extensive computer reliability checks to signal interviewers of inconsistent or infeasible responses (e.g., the percentage of patients with various demographic characteristics should sum to 100 percent). Interviewers then work with respondents to resolve inconsistencies. Results are further scrutinized for reliability and validity. Reliability checks include comparisons of reported totals (e.g., total revenue) with the sum of reported detail (e.g., revenues by source); comparison of responses to related questions; comparison of responses between director and supervisor; and, for panel programs, comparison of responses over time. Results from several analyses provide support for NDATASS data reliability and validity (D'Aunno, Pollack, Frimpong, et al. 2014).

Dependent Variable

To measure the involvement of SAT organizations in ACOs, we began by providing directors with this definition of an ACO:

The Accountable Care Organization (ACO) (also called a collaborative care organization) is a model to integrate health care that was described in the 2010 Affordable Care Act. These models are arrangements in which providers coordinate health care, and may be financially

responsible, for a patient population. This means that they share in resulting savings when expenditures are reduced and/or quality benchmarks are achieved, but may also lose money if expenditures increase or care is of poor quality. We have a few questions for you about these practice models (National Drug Abuse Treatment System Survey 2013)

We then asked the directors of participating SAT organizations if they (1) had signed a contract with one or more ACOs; (2) plan to sign an agreement with an ACO; (3) are in discussions about joining an ACO; or (4) have no current intention of joining an ACO. Using these data, we created a four-level categorical variable for use in generalized logit models (with “none of these” as the referent category).

Predictor Variables

Government Policy. We used data from publicly available sources to create two dummy variables to measure the effects of state regulations—that is, is the SAT organization located in a state with Medicaid expansion (1 = yes, 0 = no) and is the SAT organization located in a state with an HIE (1 = yes, 0 = no).

Market Factors. We asked directors to report their perceptions of the extent to which there have been increases in the level of competition their organizations face using a five-point Likert scale (1 = no extent, 5 = a very great extent). Similarly, directors reported the extent to which their organizations currently face competition, using a five-point scale ranging from 1 = no extent to 5 = a very great extent.

Organizational and Managerial Characteristics. Directors reported organizational ownership (public, private for-profit, private not-for-profit; we used public as the referent category), and we also used data from directors to measure accreditation from JCAHO or from an alternative accrediting body in the field, the Commission on Accreditation of Rehabilitation Facilities (CARF) (1 = yes for either JCAHO or CARF; 0 = no to either).

Sociotechnical Factors. We used data from clinical supervisors to measure the percentage of staff members who are professionals (defined as clinical staff members with MD, RN, MSW, PhD, or other related master’s degrees). We also asked clinical supervisors if their programs used EHRs, and we created a dummy variable (1 = yes, 0 = no) with this information.

Control Variables. We controlled for the effects of several variables that could influence SAT inclusion in ACOs, including (log) size of the

treatment organization as measured by the total number of clients served in the past year, as reported by clinical supervisors (larger SAT organizations could be more attractive partners for ACOs). We also controlled for the availability or supply of ACOs: SAT organizations located in states with larger numbers of ACOs have more opportunities to link with them. Using data available from David Muhlestein (2014), we measured and controlled for the number of ACOs located in each state in which sample organizations are located. We also controlled for possible effects of ACO availability by measuring SAT organizations' geographic location by region (using dummy variables for Northeast, Midwest, Southwest, Southeast, West, and Northeast, with Northeast as the omitted referent category).

In addition, hospital-affiliated SATs may be more likely to join ACOs. Directors of SATs were asked if their programs were owned by, operated by, or had any affiliation with another organization; if directors replied yes to any of these questions, they were asked if the organization was a hospital. A positive response to this question was coded as 1; other responses were coded 0. We included a separate dummy if an SAT had formal linkages with a mental health center or psychiatric facility.

Those SATs that treat a large proportion of clients in high-risk groups may be more or less likely to be involved with ACOs. Clinical supervisors reported the percentage of clients who had injected drugs in the previous fiscal year and the proportion of African American, Hispanic/Latino, and women clients. These measures are characteristics of the mix of patients at the organizational level of analysis; we do not have data from individual patients.

Finally, we controlled for the major types of SATs in the US treatment system by creating dummy variables for program type: inpatient, residential, outpatient non-OTPs, and OTPs (with opioid treatment as the referent group). Several arguments suggest the importance of controlling for SAT program type. First, the great majority of SAT organizations provide only outpatient services (73 percent), and this suggests that by their prevalence alone they are more likely than other SAT organizations to be involved in ACOs. At the same time, one could argue that because inpatient or residential treatment services are relatively scarce, ACOs are likely to need them for their members, and, as a result, these types of SAT organizations are more likely to be involved in ACOs. Last, because OTPs serve an increasing number of clients with disorders stemming from prescription opioid abuse, which is a severe and growing national problem, we could argue that ACOs are likely to contract with OTPs.

Data Analyses

We first calculated descriptive statistics for all study variables. We examined distributions and rescaled or transformed variables as needed. We also conducted checks for multicollinearity. These checks found no evidence of multicollinearity, with the exception that states that expanded Medicaid were also highly likely to have HIEs ($p < .001$); we dropped the HIE variable from multivariable analyses. As discussed above, we compared responders, nonresponders, and the distribution of SAT organizations in the target population. Based on these analyses, we weighted the data to ensure that the sample is representative.

We then used generalized logit regression to identify predictors of the participation of SAT organizations in ACOs. The generalized logit models compared SAT organizations that were not involved at all with ACOs to SAT organizations that (1) had a signed agreement to join an ACO; (2) had plans to sign such an agreement; and (3) were in discussions with ACOs. All statistical analyses accounted for the sample weights using the SURVEY procedures in SAS 9.4 (SAS Institute Inc. Cary, NC).

Results

Table 1 shows descriptive statistics for all study variables, both weighted and unweighted. The data show that directors in 15 percent of the (weighted) sample reported having signed a contract to work with an ACO; another 6.4 percent were planning to sign such a contract; and, finally, 4 percent were in discussions to consider working formally with an ACO.

Table 2 shows results from the multivariable generalized logit models that estimated the relationship between predictor variables and the participation of SAT organizations in ACOs. Coefficients in table 2 should be interpreted within each cell in comparison to the omitted reference group and with respect to each dependent variable (i.e., not across dependent variables).

Results show support for the role of market competition and organizational characteristics in SAT involvement with ACOs. First, directors who reported a very great level of local competition were more likely to have signed a contract with an ACO. Directors who reported that they perceived competition to some extent were more likely to be planning to sign a contract with an ACO.

Second, publicly owned and private nonprofit SAT organizations were more likely than private for-profit organizations to have a signed contract with an ACO, plan to do so, or be in discussions to do so. Those SAT

Table 1 Description of the SAT Organizations

	<i>N</i>	Sample (%)	Weighted (%)
Treatment type			
Outpatient OTP	239	34.39	8.55
Outpatient non-OTP	288	41.44	64.70
Inpatient	47	6.76	4.02
Residential	121	17.41	22.73
Region			
Northeast	224	32.23	22.98
Southeast	115	16.55	20.06
Midwest	164	23.60	24.11
Southwest	53	7.63	7.69
West	139	20.00	25.16
State-expanded Medicaid	438	63.02	59.91
ACO participation			
Signed agreement	99	14.24	14.97
Planning	55	7.91	6.42
In discussion	32	4.60	3.94
Electronic health record			
In place	390	57.18	55.03
Planning	160	23.46	23.68
Organization ownership			
Private for-profit	152	23.35	25.62
Private not-for-profit	415	63.75	63.98
Public	84	12.90	10.40
Owned by parent organization	151	23.16	20.68
Accreditation			
JCAHO	158	27.38	24.97
CARF	234	39.66	32.40
Other	20	3.66	4.67
% staff professionals			
0	285	43.71	59.05
>0–5	52	7.98	5.12
>5–15	145	22.24	15.92
>15	170	26.70	19.91
% of substance abuse clients			
African American		19.31	18.82
Hispanic		13.17	13.79
Native American		2.68	3.12
Asian		2.10	2.05
Female		38.29	37.02

(continued)

Table 1 Description of the SAT Organizations (*continued*)

	<i>N</i>	Sample (%)	Weighted (%)
State number of ACOs			
0–9	92	13.24	18.25
10–19	299	43.02	42.76
20–29	88	12.66	10.93
30–49	120	17.27	11.88
50+	96	13.81	16.17

Notes: OTP=opioid treatment program; ACO=accountable care organization; JCAHO=Joint Commission on Accreditation of Healthcare Organizations; CARF=Commission on the Accreditation of Rehabilitation Facilities

organizations that held JCAHO accreditation tended to be more likely ($p < .11$, two-tailed) than other SAT organizations to have a formal contract with an ACO.

Third, the results also show one regional difference in SAT involvement with ACOs. That is, compared to SAT organizations located in the Northeast, organizations located in the Southeast and Midwest were significantly less likely to have a signed contract with an ACO. Fourth, compared to SAT organizations located in states with very few ACOs (zero to nine), SAT organizations located in states with between ten and thirty ACOs tended to be more likely to have signed contracts with an ACO or planned to do so—SAT organizations planning to sign an ACO contract also tended to be located in states with fifty or more ACOs ($p < .14$, two-tailed).

Discussion

The results show that, as of late spring 2014, SAT organizations were commonly excluded from ACOs across the nation. Indeed, only 15 percent of SAT organizations had a signed agreement to be included in an ACO (and only 6 percent and 4 percent had plans in place to do so or were in discussions to do so, respectively). These results are similar to those reported by Lewis and colleagues (2014) from their national survey of ACOs. Of the 257 ACOs they surveyed, only 21 percent reported having a contract with a behavioral health specialty group from outside the ACO. These results hold important implications for the care of patients with substance use disorders within ACOs.

First, these data suggest that ACOs are not effectively integrating treatment and services for individuals with substance use disorders into

Table 2 Independent Correlates of ACO Participation

Correlate ^a	Signed	Plan to Sign	In Discussion
Extent of competition	No extent	1	1
	A little extent	2.95 (0.92, 9.45)	1.20 (0.31, 4.68)
	Some extent	2.66 (0.83, 8.50)	3.75 (1.28, 11.04)*
	A great extent	2.25 (0.60, 8.46)	2.65 (0.74, 9.44)
	A very great extent	10.39 (2.19, 49.28)*	3.34 (0.52, 21.32)
Participating in Medicaid expansion		0.93 (0.29, 2.99)	1.67 (0.57, 4.90)
		1.72 (0.66, 4.46)	0.67 (0.10, 4.57)
JCAHO accredited	2.73 (1.16, 6.43)	1.38 (0.51, 3.71)	3.49 (1.10, 11.00)
CARF accredited	1.78 (0.76, 4.18)	1.61 (0.49, 5.27)	
Ownership	Private for-profit	1	1
	Private not-for-profit	3.81 (1.18, 12.30)*	6.68 (1.91, 23.42)*
	Public	12.11 (3.01, 48.67)*	13.02 (2.73, 62.07)*
Electronic health record (EHR)	No EHR or plan	1	1
	EHR in place	1.67 (0.61, 4.52)	0.82 (0.29, 2.29)
	Planning EHR	0.66 (0.20, 2.18)	0.56 (0.17, 1.86)
Program type	Outpatient OTP	1	1
	Outpatient non-OTP	2.18 (0.81, 5.90)	1.37 (0.43, 4.33)
	Inpatient	2.26 (0.37, 13.90)	1.00 (0.13, 7.66)
	Residential	1.80 (0.50, 6.42)	1.36 (0.38, 4.80)

(continued)

Table 2 Independent Correlates of ACO Participation (*continued*)

Correlate ^a	Signed	Plan to Sign	In Discussion
Region	1	1	1
Northeast	0.12 (0.02, 0.63)*	0.15 (0.02, 1.42)	0.10 (0.01, 1.03)*
Southeast	0.35 (0.13, 0.97)*	0.77 (0.22, 2.75)	0.42 (0.09, 1.92)
Midwest	0.76 (0.18, 3.19)	1.20 (0.18, 7.83)	0.62 (0.08, 4.81)
Southwest	1.59 (0.51, 4.94)	2.20 (0.55, 8.76)	0.46 (0.08, 2.73)
West			
State number of ACOs	1	1	1
0–9	4.35 (1.37, 13.85)	8.52 (1.15, 62.96)	1.12 (0.31, 4.06)
10–19	5.97 (1.52, 23.42)	16.49 (2.05, 132.55)	0.81 (0.11, 5.80)
20–29	1.94 (0.46, 8.13)	7.53 (0.76, 74.99)	0.56 (0.08, 3.96)
30–49	3.92 (0.84, 18.35)	7.44 (1.15, 47.98)	0.42 (0.04, 4.64)
50+			

Notes: ACO=accountable care organization; JCAHO=Joint Commission on Accreditation of Healthcare Organizations; CARF=Commission on the Accreditation of Rehabilitation Facilities; OTP=opioid treatment program

^aFrom multivariable generalized logit analyses.

* $p < .05$, two-tailed

medical settings. To the extent this is true, we will continue to see fragmented service provision for this high-risk population who, as noted above, typically suffer from multiple chronic conditions. In turn, quality of care will continue to be suboptimal and costs of care will continue to be higher than they would if care for these individuals were more coordinated.

Of course, ACOs are still in the relatively early stages of formation. The results reported here and by Lewis et al. (2014) may be viewed from a more optimistic perspective: perhaps the integration of specialty addiction treatment into the mainstream health care system is in its infancy. Further, there are approaches other than formal contracts between specialty SAT organizations and ACOs for integrating care for individuals with substance use disorders into medical settings. In particular, ACOs that see the need to coordinate care for such individuals could hire behavioral health specialists to create their own treatment programs (or, similarly, increase the size of existing programs).

In fact, Lewis and her colleagues (2014) examined this option, and the number of ACOs reporting that they have their own behavioral health provider groups (42 percent) is more promising. Yet it is difficult to imagine that national, state, or local goals for increasing population health, improving care quality, and decreasing care costs can be met without much more substantial efforts to integrate into the mainstream health system the million or more individuals who currently receive care in the specialty SAT system.

The results from multivariate analyses show relatively limited support for the proposed conceptual model and arguments to support it. Yet, as expected, market competition and some key organizational characteristics are significantly related to SAT organizations' involvement with ACOs. Though market competition has not played a substantial role in the specialty addiction treatment system to date, the ACA and related legislation may be changing the landscape, or, at least, changing perceptions of the landscape, for directors of SAT organizations. Uncertainty about the organization's future has likely increased for these managers, perhaps prompting their efforts to link to ACOs or prompting other efforts to gain some control over the flow of funds and clients to their organizations.

In contrast, prior research has established the role of key organizational factors in many aspects of the performance of SAT organizations (Flynn et al. 2011). Thus it is not surprising that public and private nonprofit SAT organizations differ from for-profit providers in their links to ACOs. In many ways, ranging from the profile of their clients to their locations and funding sources, for-profit providers in this field differ from their public and nonprofit counterparts. Nonetheless, even if their clients tend to have

fewer comorbidities and a generally higher level of functioning, for-profit SAT organizations still may need to increase engagement in care coordination programs. Policy makers should carefully consider the meaning of the marked absence of for-profit SAT organizations from ACOs.

The finding that fewer SAT organizations in the Southeast and Midwest have contracted with ACOs is also not surprising. Prior research shows that in the nation as a whole relatively few ACOs have formed in the southeastern and north-central states (Muhlestein 2014). Similarly, the results show that the supply of ACOs in states tended to be related to the likelihood that SAT organizations had signed a contract with an ACO or were planning to do so. In other words, SAT organizations located in regions and states with fewer ACOs with which to partner were indeed less likely to do so. Nonetheless, our data show that 17 percent of all SAT organizations in the United States are located in the Southeast and another 24 percent are located in the Midwest, making care coordination for clients with substance use disorders important in these locations.

Though it is not clear why other factors that we examined in multivariate analyses were not significantly related to SAT organizations' involvement with ACOs, one plausible possibility is that it is simply too early to see effects. In this view, the significant results reported above are the characteristics of so-called early adopters; characteristics of later adopters are still to be identified. In any case, another wave of survey data will occur in 2016 to examine this possibility and, importantly, document changes, if any, in the level of SAT organizations' participation in ACOs.

This study has several strengths including its national representativeness and timeliness. Nonetheless, it also has limitations. These cross-sectional data do not allow us to directly infer causation. The organizational-level data also do not allow exploration of individual patient/counselor characteristics. Further, the data are based on director and supervisor responses, which may be susceptible to reporting bias.

Despite these limitations, we conclude that relatively few SAT organizations have been included in ACOs across the nation. These findings raise concern that ACOs may not change the fragmented status quo for the delivery of addiction treatment. Indeed, SAT organizations fall into a category of service providers that Robert Berenson (2015 [this issue]) labels the "have-nots." These are relatively small organizations that may not command enough market power to be either included in ACOs or paid well enough to cover the expenses that they incur for serving clients with multiple and severe problems. Neither financial incentives now in place for ACOs nor market competition among ACOs to attract clients with substance abuse disorders who are now covered by insurance may be strong

enough to overcome barriers to the integration of “have-not” SAT organizations into the mainstream health care system. To the extent this is the case, policy makers may need to consider alternatives, including regulations that mandate such integration so that individual and population behavioral health problems are adequately addressed. In particular, Medicare and Medicaid ACOs could be mandated to include specialty behavioral health treatment services for their members through a combination of federal and state regulation.

In short, attention should be given to the development of formal arrangements that bring SAT organizations into ACOs in order to realize fully the potential benefits and savings from care coordination for patients with substance use problems. In the near term, policy makers and managers concerned with the integration of SAT organizations and individuals with substance use disorders into the mainstream of the US health care system should focus on the extent to which the ACA and related legislation are moving these systems closer together.

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