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The Diffusion of Acamprosate for the Treatment of Alcohol Use Disorder: Results From a National Longitudinal Study

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ABSTRACT

To consider how the Affordable Care Act may impact the diffusion of acamprosate, an evidence-based treatment for alcohol use disorder (AUD), the present study estimated the associations between acamprosate availability, Medicaid revenues, and private insurance revenues. Data were collected from organizational leaders of national samples of 307 specialty treatment centers in 2009–2012 and 372 treatment centers in 2011–2013. Notably, there was not a significant change in the percentage of organizations offering acamprosate over the study period. However, greater reliance on Medicaid and private insurance as sources of revenue was positively associated with the availability of acamprosate. In addition, acamprosate availability was positively associated with access to physicians and the presence of on-site primary medical care, while centers that placed greater emphasis on confrontational group therapy were significantly less likely to offer acamprosate for AUD treatment. To the extent that the ACA is expanding the number of insured individuals enrolled in Medicaid and commercial insurance sold through health insurance exchanges, this study suggests that the ACA may hold promise for expanding the availability of this EBP for AUD treatment. Future research is needed to measure whether this potential impact actually occurs within the specialty treatment system over time.

1. Introduction

The evolving context of health reform in the US with the ongoing implementation of the Affordable Care Act (ACA) renders an examination of the use of evidence-based practices (EBPs) such as pharmacotherapy for alcohol use disorder (AUD) treatment both timely and significant. Emerging evidence has shown that ACA has reduced the percentage of individuals who are uninsured (Cantor, Monheit, DeLia, & Lloyd, 2012; Martinez & Cohen, 2014). It is anticipated that many of these newly insured individuals, particularly those covered by Medicaid, have AUD or other substance use disorders (SUDs) (Buck, 2011). This growing number of Americans covered by Medicaid and private insurance, coupled with ACA's mandates regarding the extension of treatment parity and the inclusion of SUD treatment as essential benefits in health plans, is expected to profoundly impact the SUD treatment field (Beronio, Glied, & Frank, 2014; Garfield & Druss, 2012; McLellan & Woodsworth, 2014; Pating, Miller, Goplerud, Martin, & Ziedonis, 2012; Roy & Miller, 2012).

While these expected impacts have been heralded, their actual forms are emerging slowly through the phased nature of ACA's implementation. For example, major efforts to enroll individuals in health insurance plans were not seen until late 2013 (Henry J. Kaiser Foundation, 2014), more than 3 years after the legislation was passed. Thus, the full impact of ACA on specialty treatment will not be known for some time.

One of the broad goals of ACA is to enhance the quality of health care, as seen in its mandated inclusion of SUD treatment as an essential health benefit (McLellan & Woodsworth, 2014). With the ACA's increasing and stabilizing revenue for SUD treatment via the expanding number of insured individuals, quality improvement should be facilitated. Thus, in the short-term, the potential impact of ACA can be considered by examining whether revenues from the two primary types of insurance that are expected to expand as ACA implementation moves forward, namely Medicaid and private insurance, are associated with the availability of EBPs.

The present study focuses on the diffusion of acamprosate, an EBP for AUD approved by the US Food and Drug Administration (FDA) in 2004. Initial studies documented that acamprosate was superior to placebo (Kiefer et al., 2003; Whitworth et al., 1996) and confirmed its safety (Carmen, Angeles, Ana, & Maria, 2004). Other studies did not find clinically meaningful improvements in alcohol consumption (Morley et al., 2006; Richardson et al., 2008). Meta-analyses have shown, however, that acamprosate improves the likelihood of abstinence and duration of continuous abstinence (Carmen et al., 2004) and that it is more effective than tablet naltrexone for these outcomes (Maisel, Blodgett, Wilbourne, Humphreys, & Finney, 2013). It may be particularly useful for patients who have successfully completed detoxification and when it is paired with psychosocial counseling (Maisel et al., 2013).

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Although acamprosate has been available for more than a decade, its diffusion in specialty treatment settings has been modest. In its initial year of availability in the US, only 7% of SUD treatment programs offered this medication (Ducharme, Knudsen, & Roman, 2006). More recent organizational research has documented varying rates of adoption, typically showing availability in less than one-third of programs (Abraham, Knudsen, Rothrauff, & Roman, 2010; Knudsen, Abraham, & Roman, 2011; Knudsen, Roman, & Oser, 2010). There is some evidence of greater availability of acamprosate in private-sector programs (Roman, Abraham, & Knudsen, 2011). In addition, its availability has been correlated with other organizational features, such as workforce characteristics, being embedded within a hospital, and accreditation (Abraham et al., 2010; Ducharme et al., 2006; McCormick et al., 2006). Much of this prior work has relied upon cross-sectional data, and none have simultaneously considered the financial factors of Medicaid and private insurance revenues.

Drawing upon data from a longitudinal study of US AUD treatment programs, this study examines two research questions. First, is there evidence of increased diffusion, defined as availability of acamprosate as a treatment option, over time? Second, is greater reliance on Medicaid and private insurance as sources of revenue associated with the availability of acamprosate?

2. Methods

2.1. Sample and data collection

This study utilized data collected during two rounds of interviews from national samples of US treatment organizations that offer specialty treatment for AUD. The initial round of data collection occurred from June 2009 to January 2012, while the second round of data collection began in October 2011 and ended December 2013. Both rounds utilized similar sampling and data collection strategies.

Sampling for the first round of data collection relied upon SAMHSA's 2008 Substance Abuse Treatment Services Locator, from which organizations in the 48 continental states (i.e., all states except Alaska and Hawaii) and the District of Columbia were randomly selected for eligibility screening by telephone. Random sampling ensured that the final sample included treatment programs in large metropolitan areas, mid-sized cities, small towns, and rural areas. Four criteria were employed to establish sample eligibility. First, organizations were required to provide AUD treatment to the general public (thus excluding military facilities, Veterans Administration, and correctional agencies from participation). Second, the organization was required at the time of screening to be treating patients of whom at least 25% had a primary diagnosis of AUD. Third, organizations were required to employ at least two full-time equivalent employees (thus, excluding individuals in private practice). Fourth, organizations were required to offer a level of AUD treatment at least equivalent or greater than the American Society of Addiction Medicine's definition of structured outpatient treatment. This final criterion excluded those organizations that only offer detoxification services, only provide DUI/DWI education services, or only dispense medications to treat opioid use disorders. These four criteria continued to be employed during the second round of data collection.

In both waves of data collection, eligible organizations were scheduled for face-to-face interviews with the administrator and clinical director (when the latter position existed within the treatment center). Written informed consent was obtained from participants before the interview began. In the first wave of data collection, 307 organizations participated (response rate = 65%). For the second round of data collection, attempts were made to re-interview administrators and clinical directors from the baseline sample of organizations that continued to meet eligibility criteria. To account for attrition (e.g., program ineligibility, closures, refusals) and to increase the statistical power of the study, additional organizations were recruited to participate in the second wave of data collection. These additional organizations were randomly selected and screened using the same eligibility criteria described above. A total of 372 treatment organizations participated in the latter round of data collection (response rate = 85%). In total, the dataset combining the two rounds of data collection contained 679 observations from 479 distinct organizations. Of these 479 organizations, 200 participated in both interviews (65% of the initial cohort), 107 participated in the first round only, and 172 were newly recruited for the second phase of data collection. The Institutional Review Boards of the University of Georgia and the University of Kentucky approved the study procedures.

2.2. Measures

Availability of acamprosate was measured through two items. First, participants were asked whether any medications were prescribed to treat substance use disorders or psychiatric conditions within the organization. If participants provided an affirmative response to this initial question, they were then asked whether acamprosate was currently prescribed by the treatment center to patients with AUD. The resulting dichotomous variable differentiated centers that prescribed acamprosate (coded 1) from those that did not prescribe this medication (coded 0).

The primary independent variables of interest were measures of sources of funding, which were emailed to participants prior to the face-to-face interviews. During the interview, participants were asked to indicate the percentage of past-year revenues that were received from Medicaid and from private insurance.

In addition to these measures of revenues, respondents were asked about the organization's structure, staffing, and treatment culture because these variables have commonly been examined in prior research on the adoption of EBPs (Garner, 2009; Glasner-Edwards & Rawson, 2010). Organizational structure was measured by government ownership (1 = governmental owner, 0 = private owner), being embedded in a hospital (=1, 0 = not embedded in a hospital), profit status (1 = for-profit, 0 = not for profit), accreditation by either the Joint Commission or the Commission on the Accreditation of Rehabilitation Facilities (1 = accredited, 0 = non-accredited), levels of AUD care offered by the organization, and availability of on-site primary care. The typology of level of AUD care categorized organizations into those that only offered outpatient care (reference category), those offering a combination of outpatient and inpatient/residential services, or those that only deliver inpatient/residential AUD care. The dichotomous measure of primary care differentiated centers with on-site primary care from those that did not offer this service.

Staffing was measured by the number of counselors employed, the percentage of counselors holding a master's-level degree or greater, and access to physicians. The number of counselors represented our measure of organizational size. An analysis of its distribution indicated that the median organization had 5 counselors and 75% of organizations had 10 or fewer counselors. However, some very large organizations skewed this variable, so this variable was natural log-transformed. The percentage of master's-level counselors served as a measure of workforce professionalism, as prior research has found it to be positively correlated with pharmacotherapy (Abraham, Knudsen, Rieckmann, & Roman, 2013; Abraham et al., 2010). The typology of physician access differentiated between organizations that employed at least one physician (reference category), those that had no staff physicians but contracted with at least one physician, and those with neither staff nor contract physicians.

Four treatment culture variables were measured in which participants were asked the extent to which the treatment program emphasized the twelve-step model, the medical model of addiction, spiritual counseling, and confrontational group therapy. A six-point Likert response scale (0 = no extent to 5 = very great extent) was used for each variable.

2.3. Statistical analysis

Descriptive statistics were computed for these measures within a dataset that combined the two waves of data. The characteristics of the