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Growth in spending on substance use disorder treatment services for the privately insured population

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ABSTRACT

Background: Approximately 8% of individuals with private health insurance in the United States have substance use disorders (SUDs), but in 2009 only 0.4% of all private insurance spending was on SUDs. The objective of this study was to determine if changes that occurred between 2009 and 2012 – such as more generous SUD benefits, an epidemic of opioid use disorders, and slow recovery from a recession – were associated with greater use of SUD treatment.
Methods: Data were from the 2004–2012 Truven Health Analytics MarketScan® Commercial Claims and Encounters Database. This database is representative of individuals with private insurance in the United States. Per enrollee use of and spending on SUD treatment was determined and compared with spending on all health care services. Trends were examined for inpatient care, outpatient care, and prescription medications.
Results: During the 2009–2012 time period, use of and spending on SUD services increased compared with all diagnoses. Two-thirds of the increase was driven by higher growth rates in outpatient use and prices. Despite the high growth rates, SUD treatment penetration rates remained low. As of 2012, only 0.6% of individuals with private insurance used SUD outpatient services, 0.2% filled SUD medication prescriptions, and 0.1% used inpatient SUD services. In 2012, SUD services accounted for less than 0.7% of all private insurance spending.
Conclusions: Despite recent coverage improvements, individuals with private health insurance still may not receive adequate levels of treatment for SUDs, as evidenced by the small proportion of individuals who access treatment.

1. Introduction

Approximately 8% of the 201 million individuals in the United States with private insurance have a diagnosable drug or alcohol use disorder (1.8% for illicit drug use or dependence and 6.7% for alcohol abuse or dependence; author analysis of the 2013 National Survey on Drug Use and Health data (Substance Abuse and Mental Health Services Administration, 2013). However, according to the 2013 National Survey, only 0.8% of private insurance enrollees received substance use disorder (SUD) treatment from a specialty provider annually.[1] Mark and Vandivort-Warren (2012) found that SUDs accounted for only 0.4% of total private insurance spending in 2009. However, these authors also revealed that utilization and spending had been increasing since 2001. Other studies also have reported increased SUD admissions in recent years (Health Care Cost Institute, 2013).

Since 2009, a number of changes have occurred to the health care and SUD treatment environment that warrant an examination of post-2009 data. This time period included implementation of the Mental Health Parity and Addiction Equity Act and parts of the Affordable Care Act as well as economic challenges such as low wage growth and loss of wealth, as the country emerged from recession. Starting in 2009, through the Affordable Care Act,

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[1] *Specialty treatment* is defined as treatment received at any of the following types of facilities: hospitals (inpatient only), drug or alcohol rehabilitation facilities (inpatient or outpatient), or mental health centers. It does not include treatment at an emergency department, private doctor's office, self-help group, prison, or jail.

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millions of young adults aged 18–25 years have been added to their parents' insurance coverage. Further, during this period, the nation has experienced rapid growth in prescription drug abuse, which may have increased the use of SUD services.

This study builds on earlier work that used 2001–2009 data to examine changes in use of and spending on SUD treatment services for individuals with private insurance (Mark and Vandivort-Warren, 2012). We include the 2004–2012 time period to encompass historic data, but we focus on the years 2009–2012. Trends are compared with those for all medical diagnoses. We address the following questions: was there a significant change in trends in use and spending on SUD services after 2009? Did treatment spending for SUDs and for general health services grow at similar rates? What types of services primarily account for these spending trends? How much has the increased availability of insurance to young adults contributed to spending trends? Do these trends differ for services and medications used to treat alcoholism versus opioid addiction?

A number of interacting factors may culminate in changes in the number of individuals receiving SUD treatment and its cost. The prevalence of SUDs is not static, and as it changes it can create more or less demand for services. For example, since 2005, there has been a dramatic rise in prescription drug abuse, particularly opioid drug abuse (Centers for Disease Control and Prevention, 2010; White House Office of National Drug Control Policy, 2011).

Although the literature associating economic recessions and substance use reports mixed results, the most recent U.S. recession and the accompanying economic stressors also may have affected demand for SUD services. A number of studies have suggested that substance use or mental health problems increase during recessions (Charles and DeCicca, 2008; Davalos et al., 2012; Dee, 2001; Fritjers et al., 2013; Mulia et al., 2014; Vijayasiri et al., 2012), whereas other studies have suggested that they decline (Ruhm, 1995; Ruhm and Black, 2002) or have found no relationship between recessions and substance use (Ruhm, 2013). There is limited evidence on the use of SUD services during and after a recession, but some studies have suggested a decline (Maclean et al., 2013; Storti et al., 2011).

Coverage changes play an additional role. In recent years, more individuals may be seeking SUD treatment because the Mental Health Parity and Addiction Equity Act mandated improved insurance coverage, taking effect after 2009. This Act mandated that private insurers that cover mental health and SUD treatment provide coverage equivalent to their coverage of general medical services. The changes that were made by the Mental Health Parity and Addiction Equity Act are generally effective for plan years beginning after October 2009. Research to date has not found that this legislation increased SUD spending by much (Busch et al., 2014a). Furthermore, starting in 2010, the Patient Protection and Affordable Care Act requires that health plans offer coverage to young adults until the age of 26 years under their parents' insurance. Because young adults typically have the highest prevalence of substance use, this expansion may have led to increased demand for and use of SUD treatment. One study using national survey data found a potential shift in payer from self-pay toward privately covered treatment use among young adults with potential SUDs (Saloner and Le Cook, 2014).

Technological innovations also drive health care demand and spending (Congressional Budget Office, 2008; Newhouse 1992). New medications to treat alcohol and opioid dependence that came on the market in the 1990s and 2000s have offered new opportunities for recovery (Agency for Healthcare Research and Quality, 2014).

Finally, larger economic and health care trends also may drive SUD treatment spending trends. For example, general price inflation has been extremely low over the past few years (http://www.bea.gov/iTable/iTable.cfm?reqid=9&step=3&isuri1&903=13#reqid=9&step=3&isuri=1&903=13). Private health care spending has been growing at an unprecedentedly slow pace, perhaps in part because of the slow economy (Martin et al., 2014). This, as well as coverage design innovations (e.g., higher deductibles), may pull down SUD and other health spending growth (Fronstein and Roebuck, 2013). Each of these factors may contribute to the data examined in this investigation.

2. Methods

2.1. Data

We analyzed data from the Truven Health MarketScan Commercial Claims and Encounters Database from 2004 through 2012. Because of its size and geographic coverage across all states, the database is considered representative of the approximately 169 million individuals with employer-sponsored health insurance (De Navas-Walt et al., 2011). The Centers for Disease Control and Prevention and many other organizations have published findings on trends in spending and use of particular health care services using the MarketScan research databases. The data are from approximately 30% of the U.S. population with employer-sponsored health insurance. When weighted, they are considered to be representative of individuals in the United States with private insurance (Dunn et al., 2014, 2015). It should be noted, however, that over time the proportion of the population having private health insurance typically decreases during recessions and increases during economic upturns. This tendency is presumably reflected in the composition of the study sample.

We limited data to enrollees younger than 64 years, because most individuals 65 years and older are covered by Medicare. For the population in managed care plans, encounter data were provided by plans, most of which included prices for services. We calculated spending per enrollee on inpatient care, outpatient care, and prescription drugs for all members enrolled in employer-sponsored insurance on the basis of average annual monthly enrollment. We calculated totals for all health care, and specifically for SUD treatment.

This retrospective study was exempt from human subjects review because no individually identifiable health information was used.

2.2. Data analysis

We measured spending as the sum of payments made by insurers (primary and other insurers) and by patients (copayments, coinsurance, and deductibles). We used the International Classification of Diseases, Ninth Revision, to identify claims for inpatient and outpatient SUD treatment services. These claims were from individuals with a primary diagnosis of 291–291.9, 305.0, or 303–303.9 (alcohol abuse) and 292–292.9, 304–304.9, 305.2–305.9, or 648.3 (opioid and other drug abuse). Inpatient services include all services provided to individuals with a principal SUD diagnosis during an inpatient stay, including room and board charges. Outpatient services include all covered primary care, specialty, outpatient rehabilitation, and emergency department visits provided to individuals with a primary SUD diagnosis.

For prescription drug claims, addiction treatment medications were selected on the basis of the National Drug Code assigned to specific therapeutic classes, which were defined by the Truven Health RED BOOK classification system. It should be noted that for drug abuse treatment, outpatient medications are available only for treatment of opioid dependence, not for other drugs of abuse (e.g., cocaine abuse). Analyses of inpatient and outpatient drug use disorder services include treatment for all drugs of abuse. For alcohol use disorder, prescription medications include all those approved for this indication. We excluded methadone from this prescription drug analysis because it is not captured consistently in prescription drug claims, except for use as a pain medication. We then summarized claims by year, diagnosis category (SUDs vs. all health care), and care setting (inpatient, outpatient, or prescription drug).

For inpatient and outpatient care, we divided growth in spending per enrollee into multiplicative components, as shown in the following equsimilar approach for prescription dr:

$$\frac{\text{Spending}}{\text{enrollee}} = \frac{\text{spending}}{\text{day}} \times \frac{\text{days}}{\text{admission}} \times \frac{\text{admissions}}{\text{user}} \times \frac{\text{users}}{\text{enrollee}}.$$

We used a similar approach for prescription drugs, with spending per day and days per prescription fill as components. The spending per unit components are often referred to as *price*. This decomposition allowed us to determine which components were contributing to growth in spending over a given period. We then compared the relative contributions of the components of growth in spending per enrollee for treatment of SUDs with those for treatment of all medical conditions. We analyzed trends for two distinct periods: 2004–2009 and 2009–2012. We focused on changes in the use of SUD treatment services and spending trends that occurred after 2009. Finally, we conducted separate analyses to estimate the potential effects of the increased enrollment of young adults on SUD service utilization and on overall