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The Mental Health Parity and Addiction Equity Act evaluation study: Impact on specialty behavioral healthcare utilization and spending among enrollees with substance use disorders

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ABSTRACT

Background: The federal Mental Health Parity and Addiction Equity Act (MHPAEA) sought to eliminate historical disparities between behavioral health and medical health insurance benefits among the commercially insured. This study determines whether MHPAEA was associated with increased BH expenditures and utilization among a population with substance use disorder (SUD) diagnoses.

Methods: Claims and eligibility data from 5,987,776 enrollees, 2008–2013, were obtained from a national, commercial, managed behavioral health organization. An interrupted time series study design with segmented regression analysis estimated time trends of per-member-per-month (PMPM) spending and use before (2008–2009), during (2010), and after (2011 − 2013) MHPAEA compliance. The study sample contained individuals with drug or alcohol use disorder diagnosis during study period (N = 2,716,473 member-month observations). Outcomes included: total, plan, patient out-of-pocket spending; outpatient utilization (assessment/diagnostic evaluation visits; medication management; individual, group and family psychotherapy, and structured outpatient care); intermediate care utilization (day treatment; recovery home and residential); and inpatient utilization.

Results: Starting at the beginning of the post-parity period, MHPAEA was associated with increased levels of PMPM total and plan spending ($25.80 [p = 0.01]; $28.33 [p = 0.00], respectively), as well as the number of PMPM assessment/evaluation, individual psychotherapy, and group psychotherapy visits, and inpatient days (0.01 visits [p = 0.01]; 0.02 visits [p = 0.01]; 0.01 visits [p = 0.03]; 0.01 days [p = 0.01], respectively). Following these initial level changes, MHPAEA was also associated with monthly increases in PMPM total, plan, and patent out-of-pocket spending ($2.56/month [p = 0.00]; $2.25/month [p = 0.00]; $0.27 [p = 0.03], respectively), as well as structured outpatient visits and inpatient days (0.0012 visits/month [p = 0.01]; 0.0012 days/month [p = 0.00]).

Conclusion: MHPAEA was associated with modest increases in total, plan, and patient out-of-pocket spending and outpatient and inpatient utilization. These increases, while modest in magnitude, are larger in magnitude than increases detected among a sample of all enrollees (i.e. not only those with SUD diagnoses).

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1. Introduction

High proportions of Americans have substance use disorders (SUD). The Substance Abuse and Mental Health Services Administration's National Survey on Drug Use and Health found that, in 2013, 21.5 million people had at least one SUD; of these, 7.9 million also had one or more comorbid mental health (MH) condition (Center for Behavioral Health Statistics and Quality, 2015). A study using National Comorbidity Survey Replication data reports that drug and alcohol use are highly

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comorbid (Kessler et al., 2005). Without insurance, behavioral health treatment for SUD patients, which may involve treatment for drugs and/or alcohol addiction, and any comorbid mental health conditions, can be costly.[1] Despite the fact that health insurance is supposed to protect individuals from financial shocks associated with healthcare expenses, behavioral health (BH) insurance benefits, which cover MH and SUD services, have historically been less generous than insurance benefits for medical and surgical care in the employer-sponsored insurance market (Barry et al., 2003; Hodgkin, Horgan, Garnick, & Merrick, 2003; Merrick, Horgan, Garnick, & Hodgkin, 2006; Peele, Lave, & Xu, 1999).

"Parity" laws were designed to remedy these inequities, requiring plans to cover BH services at benefit levels matching corresponding medical and surgical benefits. When the landmark federal Mental Health Parity and Addiction Equity Act (MHPAEA) passed in 2008, it was the first national mandate to require parity for a comprehensive set of benefit design features. The law, along with subsequent regulation contained in the 2010 Interim Final Rule (IFR), required parity for financial requirements (e.g. copayments, coinsurance, etc.), quantitative treatment limits (e.g. annual outpatient visits, etc.) and non-quantitative treatment limits (e.g. prior authorization requirements, provider networks, etc.). With a few exceptions, MHPAEA applied to employer-sponsored plans for large employers (i.e. >50 employees) renewing on or after January 1, 2010[2] (110th Congress, 2008).

Before MHPAEA, state and federal attempts to improve equity of employer-sponsored BH coverage did not match MHPAEA's inclusivity of SUD benefits. Forty-five states enacted some form of parity law, although different conditions, benefits, and employer groups were included in each of the mandates (Sturm & Pacula, 1999). Notably, only five states included SUD benefits in their parity laws (Barry, Huskamp, & Goldman, 2010). The federal Mental Health Parity Act (MHPA), passed in 1996, required parity for annual and lifetime dollar limits for MH benefits, but did not apply to SUD benefits (U.S. Government Accountability Office, 2000). It is thus of interest to understand whether MHPAEA's inclusion of SUD benefits contributed to improved access to BH care for individuals with SUDs.

Prior research on the impact of MHPAEA on BH service use is sparse. Among the general population, there is some evidence of modest utilization increases associated with MHPAEA. Examining the effects of MHPAEA among high-utilizers at one employer group, Grazier et al. found an association between MHPAEA and increases in outpatient mental health service use (Grazier, Eisenberg, Jedele, & Smiley, 2015). Two additional studies documented modest increases in expenditures and utilization among all patients enrolled in carve-in plans, which administer both BH and medical benefits (Harwood et al., 2017) and carve-out plans, those that administer only BH benefits (Ettner et al., 2016).

It is of particular interest, however, to see how changes in BH service use associated with MHPAEA among individuals with SUDs compares to changes in a general sample of commercially insured individuals (including all enrollees regardless of their diagnoses). It may be that the effects are greater among commercially insured individuals with SUDs because SUDs are associated with elevated morbidity and associated service needs. Alternatively, the effects could be smaller among individuals with SUDs because these patients can be more difficult to engage in treatment, potentially due to enrollees' concerns about stigma (Mojtabai, Chen, Kaufmann, & Crum, 2014).

Thus far, two peer-reviewed studies have examined associations between MHPAEA and SUD utilization and expenditures. Busch et al. (2014) found modest increases in total spending for SUD treatment between 2009 and 2010 among enrollees of carve-in plans (including those who do not have SUD diagnoses). However, that study did not examine utilization or spending changes after non-quantitative treatment limits were required to be at parity (starting in 2011), and thus may not have documented the full extent of MHPAEA's effects. Also, that study's main outcomes focused on SUD treatment, rather than all BH treatment. McGinty et al. (2015) found that MHPAEA was associated with increased access to, use of, and total spending on out-of-network SUD services between 2007 and 2012. Although this study highlights a notable effect of MHPAEA, its focus on out-of-network care overlooks in-network care, which likely accounts for the majority of MH and SUD treatment. For example, a recent study found that among privately insured U.S. adults using mental health care, 82% used only in-network providers for their mental health care (Kyanko, Curry, & Busch, 2013).

The present study estimates the effects of MHPAEA on MH and SUD utilization and expenditures for a commercially insured population with a SUD diagnosis. This analysis is conducted using administrative claims and enrollment data provided by Optum®, a subsidiary of UnitedHealth Group. Optum was one of the largest managed behavioral health organizations (MBHO) in the country during the study period. The study asks: Post-MHPAEA, 1. Among enrollees with SUD diagnoses, did expenditures and inpatient, intermediate, and/or outpatient utilization increase? 2. Were these increases driven by changes in the penetration rate (i.e. the probability of any use) among all enrollees with SUD and/or by increases in utilization level among the subsample of enrollees who used services?

This study expands on the published literature in several ways. Its study period (2008–2013) includes three years following MHPAEA's IFR implementation, so findings incorporate changes associated with parity with respect to non-quantitative treatment limits. Additionally, this study examines all BH care obtained by a population with SUD diagnoses, rather than treatment for SUD diagnoses obtained by a general population of enrollees. MH comorbidities occur frequently among those with SUD diagnoses (Kessler et al., 2005), and MHPAEA affected insurance for both MH and SUD care, so its impact on the total BH received by patients with SUD is likely to be greater than its impact on SUD treatment alone. Our study examines total use, across both in-network and out-of-network providers. Finally, our findings should generalize more broadly by using data from enrollees in carve-out plans (about 25% of the sample) in addition to carve-in plan enrollees.

2. Material and methods

2.1. Data and study design

The Optum study data spanned 2008 to 2013 with information on (1) specialty BH insurance claims providing utilization, expenditure and diagnosis, (2) enrollment eligibility and demographics, and (3) employer and plan characteristics from Optum's Book of Business. Individual-level interrupted time series (ITS) study design and segmented regression models were applied to estimate the impact of MHPAEA on BH utilization and expenditures for adults with alcohol or drug use disorders during the study period. Specifically, this study compares utilization and expenditures across three time periods (1) "pre-parity": 2008–2009, (2) "transition": 2010, when good-faith efforts at compliance with respect to coinsurance, copayments, combined medical-behavioral health deductibles, and quantitative treatment limits went into effect for plans renewing on a calendar-year basis, and (3) "post-parity": 2011–2013, when publication of MHPAEA's IFR required legal compliance with MHPAEA provisions as well as parity for non-quantitative

[1] For example, one year of methadone maintenance treatment, used to treat addiction to opioids (such as heroin and alcohol), can cost as much as $4700 per person, according to the National Institute on Drug Abuse (2012). Health economists estimate that the resource cost of providing an episode of methadone maintenance can range from $1500 to $8000, depending on the length of the episode, while the cost of providing an episode of non-methadone substance use disorder treatment can range from $1000–$5000 (French, Popovici, & Tapsell, 2008). The out-of-pocket cost to patients depends largely on insurance coverage.

[2] Other exemptions include disability plans, long-term care plans, government-sponsored plans opting out, hospital or other fixed indemnity insurance, and plans showing that their costs increased by a certain amount as a result of compliance.