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Variation in out of pocket health care costs for individuals with anxiety disorders by type of insurance coverage

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ABSTRACT

Purpose: Given that out-of-pocket (OOP) costs impact adherence to treatment and recent and proposed changes to the health insurance system that impact OOP costs, it is imperative to understand the OOP cost burden faced by individuals with anxiety disorders depending upon type of insurance coverage. The objective of this study was to determine the annual OOP cost burden faced by individuals with anxiety disorders and the variation of these costs by type of insurance coverage.

Methods: Using weighted nationally representative data from the 2011–2014 Medical Expenditure Panel Surveys, total OOP health care costs were assessed for all respondents who indicated that they had an anxiety disorder (N = 9985). Total OOP health care costs were also calculated separately by type of insurance.

Results: Average annual OOP costs among individuals with anxiety was $1152. The highest OOP cost were incurred by individuals with private fee-for-service (FFS) insurance ($1356/year, 4.1% of annual income), while individuals enrolled in HMOs with dual Medicare/Medicaid had the lowest OOP cost ($129/year, 6.8% of annual income). Individuals without insurance had high OOP cost burden ($1309/year, 12.5% of annual income).

Conclusion: Individuals with anxiety disorders have a wide range of OOP cost depending upon their insurance coverage. Those with anxiety should carefully consider their choice of insurance coverage if interested in minimizing OOP costs.

1. Introduction

Anxiety is a natural reaction to stress, but in overwhelming amounts over an extended period of time, it can cause significant debilitating effects on an individual's functioning and quality of life (Soni, 2010). There are many different types of anxiety disorders such as post-traumatic stress disorder (PTSD), obsessive compulsive disorder (OCD), and general anxiety disorder (GAD). Altogether, anxiety disorders are the most common mental health disorders in the United States. According to the National Institute of Mental Health, generalized anxiety disorder alone is prevalent in 18.1% of the U.S. population, with an average age of onset around 11 years of age (Kessler, Berglund, Demler, Jin, & Walters, 2005; Kessler, Chiu, Demler, & Walters, 2005). Emerging data show anxiety disorders play a significant role in medical illness, suggesting that it is similar to depression in terms of risk, comorbidity and outcome (Roy-Byrne et al., 2008). While effective treatments for anxiety disorders exist, rates of treatment and treatment adherence are often low (Weisberg, Beard, Moitra, Dyck, & Keller, 2014). High out-of-pocket (OOP) costs have been shown to be a significant contributing factor to treatment adherence (Iuga & McGuire, 2014). Thus, understanding OOP cost burden faced by people with anxiety disorders by type of insurance coverage can provide valuable information to both individuals with anxiety disorders to help with choosing types of health insurance coverage, but also to policy makers to assist with insurance benefit design considerations that impact OOP costs.

Total health care expenditures for anxiety disorders is substantial. Using data from the Medical Expenditure Panel Survey (MEPS), it was estimated that $33.71 billion were spent in 2013 to treat mood and anxiety disorders, with half of that amount in prescription medication (Shirneshan et al., 2013). From 2009 to 2010, the annual overall healthcare expenditure associated with anxiety disorders was estimated at $1657 per person (Shirneshan et al., 2013). Individuals with anxiety and other mental illnesses demonstrate a higher prevalence of chronic diseases, including obesity and metabolic syndrome, than the general population (Stanley & Laugharne, 2012). Given that chronic conditions are commonly associated with anxiety, patients with anxiety likely incur higher medical expenditure to treat it and its comorbidities than individuals with other conditions. Higher out-of-pocket costs are

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important to determine because non-adherence is highly correlated with out-of-pocket cost. Naturally, patients are less likely to seek care and/or adhere to medication if they are unable to cover the costs (Iuga & McGuire, 2014), which in turn could lead to adverse health outcomes (Tamblyn, Laprise, & Hanley, 2001).

A recent study showed an increase in rates of treatment with medication for anxiety disorders, with psychotropic medication use increasing from 57.4% in 2004 to 63.8% in 2009, but over a third of people with anxiety disorders still receive no treatment (Wu, Wang, Katz, & Farley, 2013). Although previous studies have quantified annual costs of overall treatment and medication for anxiety disorders, these studies did not explicitly examine out-of-pocket costs experienced by individuals with anxiety disorders, which better shows an individual's economic burden of treatment. There is also a gap in the literature addressing how out-of-pocket cost burden varies by type of insurance coverage in this population. As policymakers consider changes to the health insurance system, it is imperative to understand how differences in the type of health insurance can impact the out-of-pocket cost burden for people suffering from this highly prevalent condition.

In order to prevent widening healthcare disparities, it is important to assess how different types of insurance coverage affects the out-of-pocket expenditures of patients with prevalent disorders such as anxiety disorders, especially when the cost of treatments could financially incapacitate lower income families. The type of insurance affects annual deductibles, and co-payments for physician visits and prescription drugs. Insurance coverage, or lack thereof, can significantly change how much a household pays for routine yearly doctor's visit to monthly check-ups for conditions that require ongoing management.

The objective of this study was to determine the out-of-pocket cost burden faced by individuals with anxiety disorders and how this burden varies by type of insurance coverage using the most current data from a nationally representative sample of the U.S. population. For the purpose of this study, we examined total out of pocket health care costs experienced by individuals with anxiety overall (all types of insurance) and separately for those with private insurance, Medicaid coverage only, Medicare coverage only, both Medicaid and Medicare coverage (dual enrolled), and no insurance. Furthermore, because individuals with insurance coverage can usually select plans that are either fee-for-service where there are no restrictions on providers that can be seen but pay a proportion of the total cost (e.g. 20% of total cost), or enrollment in a managed care plan that restricts the providers that can be seen but usually reduces the out-of-pocket costs to see those providers, we further split insurance coverage into fee-for-service vs. managed care. We hypothesized that patients with Medicaid would experience the least amount of out-of-pocket cost, and uninsured individuals would experience the largest amount of out-of-pocket expenditures. Additionally, we hypothesized that enrollment in a managed care plan or Health Maintenance Organization (HMO) versus a Fee for Service (FFS) plan would likely impact out-of-pocket expenditures, with those enrolled in HMOs experiencing lower out-of-pocket expenses than those enrolled in FFS plans.

2. Methods

2.1. Data

This study used the 2011–2014 Medicaid Expenditure Panel Survey (MEPS) dataset. The Medical Expenditure Panel Survey (MEPS) provides nationally representative estimates of health care use, expenditures, sources of payment, and health insurance coverage for the U.S. civilian noninstitutionalized population. Estimates of respondents' health status, demographic and socio-economic characteristics, employment, access to care, and satisfaction with health care are also provided. The overlapping panel design of the survey includes five rounds of interviews covering two full calendar years and provides data for examining person level changes in selected variables such as expenditures, health insurance coverage, and health status. Using computer assisted personal interviewing (CAPI) technology, information about each household member was collected, and the survey builds on this information from interview to interview. All data for a sampled household are reported by a single household respondent. Upon completion of the household CAPI interview and obtaining permission from the household survey respondents, a sample of medical providers were contacted by telephone to obtain information that household respondents cannot accurately provide. Information was collected on dates of visit, diagnosis and procedure codes, charges, and payments. The 2011 through 2014 MEPS data includes a total of 146,102 observations. More information about the MEPS sampling frame and data elements can be found at http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr30/mr30.pdf (Davis, 2015).

2.2. Sample identification and measures

2.2.1. Individuals with anxiety

Individuals above the age of 18 who were either diagnosed or reported symptoms of anxiety in any given year were identified using the medical conditions file, which contains an for every medical condition experienced by an individual in a given year. Medical conditions reported by respondents were mapped by coders at the Agency for Healthcare Research and Quality (AHRQ) to International Classification for Diseases, 9th Revision (ICD-9) codes. ICD-9 code were further grouped into clinical classification codes for general conditions (e.g. anxiety, depression, diabetes, etc.). Individuals with anxiety disorders were identified using the clinical classification code of 651 which corresponds to any ICD-9 code for anxiety disorders (for example, these codes all contain symptoms of anxiety 291.89, 292.89, 300.01, 300.02, 300.03, 300.2x, 300.21, 300.23, 300.3, 301.4, 308.3, 309.21, with ICD-9 code 300.0 for unspecified anxiety). Using these codes, a total of 9985 individuals were identified as having an anxiety disorder, which represented 6.8% of the 2011–2014 MEPS sample.

2.3. Out-of-pocket expenditures

Total annual out-of-pocket expenditures paid by an individual for health care was calculated and included in the MEPS data. Out-of-pocket expenditures were defined as direct payments from individuals that include co-payments and deductibles and other payments for services not covered by insurance (Soni, 2017). Additionally, the proportion of household income representing out-of-pocket expenditures was calculated by dividing total annual out-of-pocket expenditures by total annual household income. The proportion of total household income was calculated for each individual, from which the mean proportion of total income was calculated across all observations. The proportion of household income spent on out-of-pocket healthcare costs was capped at 100% (i.e. if a person reported spending more than their annual income on out-of-pocket costs, the proportion was reported as 100%).

2.4. Type of insurance

MEPS includes detailed information on the type of insurance coverage each individual had in a given year. Insurance coverage was categorized into nine distinct categories. These categories included: private FFS, private HMO, Medicaid FFS, Medicaid HMO, Medicare FFS, Medicare HMO, Medicare/Medicaid FFS, Medicare/Medicaid HMO, and uninsured.

2.5. Household income

Total household income is measured in the MEPS by asking about all members in the household's taxable and non-taxable income including wages, interest, dividends, pensions, individual retirement