

Utilization, price, and spending trends for antidepressants in the US Medicaid program

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Abstract

Background: Antidepressants are often used in the treatment of major depressive disorder and other mental illnesses, and constitute one of the most widely prescribed and costly medication classes in the US Medicaid Program. However, antidepressant utilization and price patterns within this market have not yet been adequately characterized.

Objectives: This study was undertaken to analyze antidepressant drug utilization and price trends and to quantify market-share competition in Medicaid.

Methods: Quarterly utilization and payment data were retrieved from the national Medicaid pharmacy claims files provided by the Centers for Medicare & Medicaid Services. Quarterly per-prescription prices were estimated by dividing the payment amounts by the number of prescriptions. Descriptive time series analysis was conducted to assess the trends of utilization, expenditures, market shares, and prices from January 1991 through December 2005, for 3 major antidepressant subclasses—Selective Serotonin Reuptake Inhibitors (SSRIs), Tricyclic Antidepressants, and Other Antidepressants—as well as for individual agents within these subclasses. Using exponential smoothing models, 3-year market-share forecasts were produced.

Results: From 1991 to 2005, the total number of antidepressant prescriptions rose 380% from 6.82 million to 32.72 million. Total expenditures on antidepressants increased from \$159 million in 1991 to \$2.26 billion in 2004, then decreased to \$1.99 billion in 2005, following the entry of lower-priced generic fluoxetine in 2001 and generic paroxetine in 2003. The payment market share for the SSRIs increased from 40% in 1991 to 82% in 1997, then decreased to 64% in 2005. It is projected to be 64% (95% confidence interval [CI]: 51–77%) in 2008 quarter 4.

This study was presented at the 10th Annual Meeting for the International Society for Pharmacoeconomics and Outcomes Research (ISPOR), Arlington, VA, USA, May 2005, and at the 2nd Asia-Pacific ISPOR Conference, Shanghai, China, March 2006, where it received the Best Poster Presentation Award.

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Conclusions: Increases in antidepressant drug expenditures were primarily because of rising utilization; however, there was also some increase in average price per prescription for many of the antidepressants studied. Switching to generic drugs may offer significant cost-saving potential.

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Keywords: Antidepressants; Medicaid; Expenditure; Drug utilization; Drug price; Market share

Introduction

Depression is among the most prevalent major mental health disorders, as 8–10% of the US population suffer from depression.¹ Depression may be associated with a patient's family history or medical illness such as stroke, heart attack, cancer, Parkinson's disease, or a hormonal disorder.² Depression is particularly prevalent among Medicaid recipients, and Medicaid enrollees experience a higher rate and severity of depression than privately insured individuals.³ In a 10-state Substance Abuse and Mental Health Services Administration Medicaid study, 17% of adult enrollees were treated for major depression and 32% for minor depression and anxiety disorders.⁴ In another study, claims data were analyzed for 6500 adults who were eligible for services in both a Health-Maintenance Organization (Colorado Access) and a behavioral health carve-out. Nine hundred and fifty individuals (14.6%) had a depressive disorder diagnosis.⁵ A 2003 review of data from the National Comorbidity Survey and the National Household Survey on Drug Abuse reported depression prevalence estimates for Medicaid enrollees ranging from 18% to 20%.¹ In conjunction with high prevalence rates, depression is associated with a significant economic burden on society. The annual cost of depression in the United States was estimated at \$83 billion in 2000, including \$26 billion in the direct costs of depression treatment, \$51 billion in productivity loss, and \$6 billion in suicide-related costs.⁶

Antidepressant medications are widely used in the treatment of depression. Available antidepressants are generally categorized into 3 subclasses: Selective Serotonin Reuptake Inhibitors (SSRIs), Tricyclic Antidepressants (TCAs), and Other Antidepressants, a category which includes Monoamine Oxidase Inhibitors (MAOIs), Heterocyclic Agents (HCAs), and several other antidepressants. The SSRIs, TCAs, and HCAs are all commonly used for the treatment of depression. TCAs have additional indications besides depression; for example, clomipramine was the first drug approved

by the US Food and Drug Administration (FDA) for obsessive-compulsive disorder (OCD). Patents on the branded TCAs have expired, and all TCAs are currently produced by generic manufacturers.⁷ SSRIs are considered a major advancement in the treatment of depression, as this antidepressant subclass provides for improved dosing, safety, and tolerability compared with the TCAs and MAOIs.^{8–10} With a better understanding of the role of serotonin in other psychiatric disorders, the use of SSRIs expanded beyond mood disorders into the treatment for alcoholism, anorexia nervosa, borderline personality disorder, bulimia nervosa, hot flashes, OCD, panic disorder, posttraumatic stress disorder, premature ejaculation, premenstrual syndrome, and social anxiety disorder.^{11–15} Finally, a number of Other Antidepressants have been approved by the FDA between 1961 and 2004 for the treatment of major depressive disorder. Like the other subclasses, the use of these antidepressants has expanded into other indications. For example, in June 2006, extended-release bupropion became the first drug to be approved by the FDA for patients with seasonal affective disorder.¹⁶

During much of the 1990s, antidepressants were the most widely prescribed medications in the United States.^{17,18} For the Ohio Medicaid Program, this category ranked number 1 during each of the years 1997–2001.¹⁹ Not surprisingly, in parallel with high utilization, expenditures on antidepressants have been extremely high. In 2001, a total of \$12 billion was spent on antidepressants in the United States, representing approximately 8% of total US prescription retail sales.²⁰ In 2005, Medicaid (all state programs combined) was spending approximately \$2 billion per year on antidepressants, about 5% of its total pharmaceutical budget.²¹

To understand the underlying causes of this expenditure increase, it is important to determine the specific roles of utilization and price in this context. One study across drug classes, which was based on US national retail sales data, found that the overall rise in drug spending was accounted

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