Management of Substance Use Disorders in Ambulatory Care in the United States, 2001-2009

An estimated 22.5 million Americans meet criteria for a substance use disorder diagnosis.1 Opioid use, in particular, has attracted attention recently because overdose deaths due to opioid analgesics have increased nearly 4-fold in the past decade.2 Effective treatment options have also increased during this period.3 The impact of these developments on the delivery of substance abuse treatment in traditional ambulatory care settings is not known. Further change is expected as recent federal legislation is implemented.4 Therefore, we sought to describe the prevalence and management of substance use disorders in ambulatory care in a nationally representative sample.

Methods. We analyzed data from the National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) from 2001 through 2009. The NAMCS and the NHAMCS are nationally representative cross-sectional surveys of ambulatory visits administered by the National Center for Health Statistics (NCHS).5,6 Survey data include up to 3 diagnoses coded using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and up to 3 reasons for the visit coded using the NCHS Reason for Visit Classification. We identified visits by individuals 18 years or older in which a diagnosis or complaint of an alcohol or drug use disorder (defined as dependence, abuse, withdrawal, or intoxication) was recorded. We defined pharmacotherapy as the provision of any 1 of 5 medications approved by the US Food and Drug Administration for alcohol or opioid use disorders: buprenorphine, methadone, acamprosate, disulfiram, and naltrexone.3 We defined psychosocial therapy as the provision of psychotherapy, mental health counseling, or stress management. We evaluated differences in proportions with the χ² test and trends with the Cochran-Mantel-Haenszel test. We used multivariable logistic regression to identify predictors of management, adjusting for patient- and practice-level characteristics as well as time period. We performed analyses using SAS version 9.3 (SAS Institute Inc) and SAS-callable SUDAAN release 10.0.1 (Research Triangle Institute) to account for the complex survey design.

Results. We analyzed 8930 visits, representing an estimated 42.2 million adult visits involving substance use disorders in ambulatory settings between 2001 and 2009. Visits increased 70% over this period, from 10.6 million in 2001 through 2003 to 18.0 million in 2007 through 2009 (P = .006; Figure). Visits for opioid use disorders increased 6-fold from 772 000 in 2001 through 2003 to 4.4 million in 2007 through 2009, accounting for 7% of all substance use disorder visits in 2001 through 2003 and 25% of visits in 2007 through 2009 (P = .004).

Physicians prescribed pharmacotherapy in 6.3 million visits, representing 15% of all substance use disorder visits. These visits increased more than 6-fold, from an estimated 643 000 visits in 2001 through 2003 to 3.9 million visits in 2007 through 2009 (P < .001). Physi-
rians prescribed buprenorphine or methadone in 4.8 million visits and acamprosate, disulfiram, or naltrexone in 1.5 million visits. Physicians provided psychosocial therapy in an estimated 24.9 million visits, representing 59% of all visits. This proportion did not change significantly over time ($P = .87$). In multivariable models, time period was independently associated with pharmacotherapy (odds ratio [OR], 3.3 for 2007-2009 vs 2001-2003; 95% CI, 1.7-6.1) but not psychosocial therapy (OR, 0.8 for 2007-2009 vs 2001-2003; 95% CI, 0.5-1.3). However, neither therapy was provided in 15.4 million visits, accounting for 36% of visits and not varying significantly over time ($P = .76$).

Comment. In this nationally representative sample of adult ambulatory visits, visits involving a substance use disorder increased substantially between 2001 and 2009. Opioid use disorders accounted for a markedly increased share of visits over time. This finding is consistent with trends in substance use disorder–related utilization at the nation’s community health centers and emergency departments and, sadly, use of its morgues.2,7,8 Our study provides reason for optimism, however. Visits involving provision of pharmacotherapy increased as well, likely driven by the use of buprenorphine. Increasing recognition of previously undiagnosed disorders, improving familiarity with and use of available medications, and more frequent ambulatory care by individuals with substance use disorders all likely contribute to the trend of increasing visits over time. As millions of visits did not involve treatment, there remains both an opportunity and a need for further expansion of treatment within ambulatory settings.

Our study has several limitations. First, the cross-sectional, visit-based nature of the data precludes causal inferences. Residual confounding is possible, and underdiagnosis is likely. Finally, the NAMCS/NHAMCS lacks detailed clinical information, so we could not assess the appropriateness of management decisions by health care providers.

The Mental Health Parity and Addiction Equity Act of 2008 (Pub L No. 110-343) and the Patient Protection and Affordable Care Act of 2010 (Pub L No. 111-148) will provide increased support for the management of substance use disorders in ambulatory settings.9 Our study provides an important assessment of the national impact of substance use disorders in ambulatory care at a time when these laws have the potential to transform the US health care system’s ability to care for the millions of Americans struggling with these disorders.

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Mexico–United States Migration and the Prevalence of Obesity: A Transnational Perspective

Country of birth and length of stay in the United States have proven to be strong predictors of obesity among Mexican Americans,1 suggesting the US environment may be distinctively “obesogenic.” For example, a 12-oz bottle of American-made Coca-Cola has