Despite reductions in opioid prescribing in the US in recent years, rates of drug overdose deaths continue to increase. While most of these deaths involve opioids, significant increases in overdose deaths involving other prescription drugs, including stimulants, benzodiazepines, and depressants, have been reported. Yet, relatively little is known about the prescribing rates of nonopioid controlled substances in adults, particularly in recent years. We sought to examine trends in pharmacy dispensing of all prescribed controlled substances among US commercially insured adults over the past 15 years.

Methods | The data for this investigation came from Optum Clinformatics Data Mart database, which contains deidentified longitudinal claims data on beneficiaries of a large US employer-sponsored commercial health insurance provider and covers approximately 9 million individuals aged 19 to 64 years in any given month across all 50 states. Controlled substances and their categories were based on US Drug Enforcement Administration controlled substances schedules (II-V) and therapeutic classes, as defined by the US Drug Enforcement Administration in August 2019. The study was deemed exempt by the Brigham and Women’s Hospital Institutional Review Board.

Using outpatient pharmacy claims, we identified dispensing of controlled substances to individuals aged 19 to 64 years between January 1, 2004, and June 31, 2019. We excluded individuals 65 years and older because pharmacy claims for certain controlled substances in this age group were heavily influenced by coverage decisions by the Centers for Medicare & Medicaid Services and may not reflect actual dispensing rates. Monthly dispensing prevalence was estimated as the proportion of enrollees with at least 1 dispensing among all enrollees who were enrolled for at least 28 days that month. Overall, 16 categories of controlled substances were evaluated. We present trends for the 6 most commonly dispensed (as of January-June 2019) categories and the 6 most commonly dispensed individual substances. Analysis began January 2004.

Results | Schedule IV depressants (benzodiazepines and sleep medications zolpidem, zaleplon, and zopiclone) and schedule II narcotics were the most commonly dispensed categories of controlled substances throughout the study period (Figure 1). Dispensing of schedule II narcotics peaked in 2011 to 2012, when a mean (SD) of 4.61% (0.13%) of adults received a dispensing in a given month and has been decreasing since then, accompanied by a decrease in utilization of schedule IV depressants, albeit at lower rate. Schedule II stimulants, the...
third most commonly dispensed category since 2011, displayed a steady increase in dispensing from a mean (SD) monthly prevalence of 0.28% (0.02%) in 2004 to 1.51% (0.06%) in 2019 (Figure 1). Almost all the increase was driven by an increase in dispensing of amphetamines. During the first half of 2019, mean (SD) monthly dispensing of dextroamphetamine (1.00% [<0.001%]), primarily in combination with amphetamine, approached that of oxycodone (1.12% [<0.001%]) and alprazolam (1.03% [0.04%]), the 2 most commonly dispensed controlled substances after hydrocodone (1.56% [0.05%]) (Figure 2). Utilization of the other 3 categories remained relatively stable, except for a small decrease in utilization of schedule IV narcotics following propoxyphene withdrawal in late 2010 (Figure 1).

Discussion | Consistent with previous reports,1 we observed a decreasing trend in dispensing of schedule II narcotics over recent years. In contrast, schedule II stimulants displayed a steady increase. While we were able to evaluate only rates of pharmacy dispensing of controlled substances, and not illicitly obtained use of these and related drugs, and our findings are based on the analysis of a single commercial insurance provider, the 5-fold rise in stimulant use that we observed over the last 15 years is concerning. Undoubtedly, some of this increase can be attributed to the increase in diagnosis of adult attention-deficit/hyperactivity disorder. Nevertheless, greater attention should be paid to stimulants as an emerging potential public health problem in light of increasing overdose deaths involving psychostimulants.3

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Assessment of Health Status and Barriers to Employment Among Medicaid Beneficiaries Not Meeting Work Requirements After Accounting for State Medical Frailty Exemptions

As of February 2020, 28 states have sought or received US Centers for Medicare & Medicaid Services approval to impose work requirements as a condition of Medicaid eligibility.\(^1\) Centers for Medicare & Medicaid Services requires states to exempt medically frail Medicaid beneficiaries from work requirements\(^2,3\) but gives states flexibility in defining such exemptions. After accounting for state definitions of medical frailty exemptions, it is uncertain whether non exempt beneficiaries not meeting work requirements are disproportionately ill or medically unable to work.\(^4,5\) We characterized the proportion of non exempt beneficiaries not meeting work requirements and determined whether they (1) differ in health from beneficiaries fulfilling them and (2) do not meet the requirements for health-related reasons.

Methods | We conducted a cross-sectional analysis using the Agency for Healthcare Research and Quality 2014 and 2015 Medical Expenditure Panel Survey (MEPS) Household Component, an annual nationally representative household survey. We used the demographic, labor, and health-related data in MEPS to model Medicaid work requirement criteria, including medical frailty. As we had insufficient data for individual states, we modeled work requirements nationally across all Medicaid beneficiary respondents. We conducted 4 parallel analyses, varying only the medical frailty exemption criteria used in each analysis. Given the nature of the data set, institutional review board approval was waived. This study followed the Consolidated Standards of Reporting Trials (CONSORT) reporting guideline.

For each analysis, we first excluded beneficiaries who are commonly exempted in all proposed state work requirement plans: those 17 years or younger, 65 years or older, pregnant, categorized as disabled on Supplemental Security Income, full-time students, primary caretakers of dependents younger than 6 years, or dually enrolled in Medicare. Next, we excluded medically frail beneficiaries—also exempt—using medical frailty designation methods from one of 4 states with clear, publicly described methods that could be modeled within MEPS: Arkansas, Indiana, Michigan, and New Hampshire (eAppendix in the Supplement). Finally, using weekly work hours reported in MEPS, we classified remaining non exempt beneficiaries as either fulfilling (working 20 or more hours per week) or not meeting (working less than 20 hours per week) the 20-hour workweek requirement proposed by 90% of states.\(^1\)

Using logistic regression adjusting for income, we compared the adjusted prevalence of self-reported fair or poor general or mental health among beneficiaries fulfilling and not meeting work requirements (eAppendix in the Supplement). Among beneficiaries not meeting work requirements, we estimated the proportion who self-reported the inability to work owing to illness or disability despite previous employment. We used Stata/SE version 14.0 (StataCorp), weighting all proportions accounting for MEPS survey design.

Results | Among 20,508 respondents representing 59,908,525 Medicaid beneficiaries nationwide in 2014 and 2015, 54,323,166 (75.7%) met the common work requirement exemptions. Depending on the state medical frailty exemption definition used, an additional 1.2% to 2.9% of beneficiaries who did not meet the common work requirement exemptions met state medical frailty exemptions. Of the remaining 21.4% to 23.1% of non exempt beneficiaries (ie, those subject to work require-