Opioid Treatment for Pain and Work and Disability Outcomes: Evidence from Health Care Providers' Prescribing Patterns

MAESTAS, SHERRY

Key Findings and Policy Implications

This paper examines the relationship between area-level opioid prescribing practices and labor outcomes, including employment rates, wages, SSDI applications, and SSDI allowances. It calculates opioid prescribing propensities using 2012-2018 claims records from the largest U.S. commercial claims database, which spans three-quarters of all active U.S. physicians. It also applies a novel natural language processing algorithm to identify opioid analgesics in free text medication entry fields on SSDI applications. The paper finds that:

- Higher opioid prescribing rates in a geographic area reduce both the employment rate and weekly wages in the following year. Ten additional opioid prescriptions per 100 adults in a local area leads to a decrease in the employment-to-population ratio of 1.1 employed persons per 100 people of working age (a 1.6% decrease relative to the mean), and a decrease in the average weekly wage by $48.60 (a 6% decrease relative to the mean).

- Higher opioid prescribing rates in a geographic area increase SSDI applications, initial SSDI allowances, and SSDI applications specifically mentioning opioid use two years later. Ten additional opioid prescriptions per 100 adults in a local area leads to an increase in total SSDI applications by 0.08 per 100 relevant population (an 8% increase relative to the mean), an increase in applications mentioning opioid use by 0.03 (a 10% increase relative to the mean), and an increase in initially allowed applications by 0.02 per 100 relevant population (a 6% increase relative to the mean).

Medical conditions that cause pain are a leading reason why workers leave the labor force and seek disability benefits. Yet the fall in the labor supply of individuals with pain has occurred despite the increased availability of medications to treat pain – notably opioids – over the past two decades. This study suggests that opioid treatment for pain can itself have adverse effects on labor productivity and employment, even precipitating more permanent separation from the labor force through SSDI claiming.
.

NICOLE MAESTAS is Associate Professor of Health Care policy at Harvard Medical School, the Director of NBER's Retirement and Disability Research Center, and an NBER Research Associate.
TISAMARIE SHERRY is an Associate Physician Policy Researcher at the RAND Corporation.