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The OxyContin® Reformulation in 2010 Increased States' Food Insecurity Rates

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KEY FINDINGS

- States with higher initial OxyContin® misuse rates had an increase in food insecurity after OxyContin® reformulation.
- OxyContin® reformulation increased state food insecurity rates by an average of 0.657 percentage points over the entire post-reformulation period. This means that almost 1 in 100 U.S. households would not have experienced food insecurity had OxyContin® not been reformulated.
- The post-reformulation effect on food insecurity increased over time. Food insecurity increased approximately 2 percentage points by years 6-7 and approximately 3 percentage points by years 8-9 after reformulation.

The massive surge in opioid misuse and overdose over the past three decades has led to major family, economic, and social disruptions in the United States.[1-3] In light of the size and growth of the population with opioid use disorders, federal and state governments have implemented numerous supply-related interventions. OxyContin® - a highly potent, extended-release opioid was among the most commonly-abused narcotics throughout the 2000s. In an effort to quell misuse, OxyContin® was reformulated into an abuse-deterrent version in 2010. The new version of OxyContin® was designed to be more difficult to crush or dissolve, thereby making it more difficult to inject and inhale (behaviors that increase risk of overdose).[4] As a consequence, many people with opioid use disorders transited from using prescription opioids to using street drugs, such as heroin, resulting in numerous unintended consequences, including increases in child welfare caseloads, heroin deaths, and blood-borne diseases.[1,5-7] The 2010 OxyContin® reformulation has shifted the demographic profile of opioid users to the group already more likely to be food insecure.

This brief summarizes findings from our recent study that investigated whether the 2010 OxyContin® reformulation increased food insecurity across U.S. states from 2010 to 2019. It provides further evidence of the unintended consequences associated with OxyContin® reformulation.

OxyContin® Reformulation Increased Food Insecurity

Food insecurity is a social problem of policy interest because it is associated with a host of negative outcomes across the life course, such as poor physical and mental health, reduced healthcare utilization, reduced work productivity and school achievement, etc.[8-11] Our analysis of the direct effect of OxyContin® reformulation on state food insecurity rates, which relies on pre-reformulation OxyContin® misuse rates for identification, finds that state food insecurity levels in states with OxyContin® misuse rates above the national median prior to reformulation are, on average, 0.657 percentage points higher post-reformulation (2011-2019) in models that include controls for state demographic characteristics as well as policy variables that changed over time (prescription drug monitoring program (PDMP), pill mill legislation, medical marijuana law (MML), and active and legal medical marijuana dispensaries). In other words, almost 1 in 100 U.S. households (0.657percentage points) would not have experienced food insecurity without reformulation.

The effects of OxyContin® reformulation on food insecurity increased over time (see Figure 1). We created a measure of cross-state variation in exposure to OxyContin® reformulation, measured by the percentage of the population reporting misuse of OxyContin® prior to the reformulation. Although there was no statistically significant effect throughout the first three years after reformulation, by year 3 (2013), we can begin to see that reformulation led to increases in food insecurity. These effects increase over time. A 1 percentage point higher rate of initial OxyContin misuse rate increased the state food insecurity rate by 1.670 percentage points in 2016, 2.178 percentage points in 2017, 2.685 percentage points in 2018, and 3.192 percentage points in 2019.

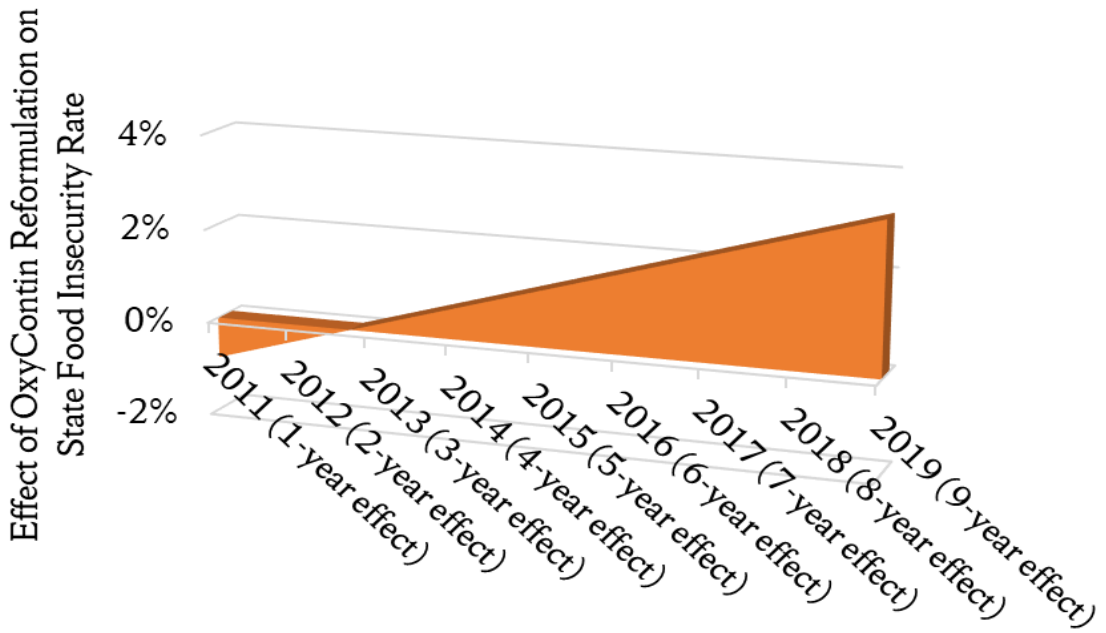

Figure 1. Effect of OxyContin® Reformulation on Average State Food Insecurity Rate Over Time

Data Source: National Survey on Drug Use and Health (NSDUH); University of Kentucky Center for Poverty Research National Welfare Data; [12] American Community Survey; U.S. Census Data; Integrated Public Use Microdata Series.[13] Estimates are from "Food Insecurity and the Opioid Crisis," The ANNALS of the American Academy of Political and Social Science.[14]

A Call for a New Policy Approach

Given our finding that OxyContin® reformulation - a policy designed to reduce opioid misuse and overdose - increased food insecurity, public policy should consider not only the direct addiction-related health needs of people who use drugs but look at these individuals as a whole person and consider their food, housing, transportation, and other needs. Public policies must also recognize that people who use drugs are embedded within families and communities and that their drug use causes disruptions that extend far beyond the user themselves. Failure to address these needs are likely to cause the cycle of substance use and food insecurity to repeat itself.

Data and Methods

We use state-year level data from 2001-2019 from a variety of sources to exploit cross-state variation in the level of OxyContin® misuse prior to drug reformulation. We used state-level data from the National Survey on Drug Use and Health (NSDUH) to create the measure of cross-state variation in exposure to OxyContin® reformulation. Information on food insecurity and some state-level characteristics are drawn from the University of Kentucky Center for Poverty Research National Welfare Data.[12] Other demographic characteristics come from the American Community Survey, the U.S. Census Bureau, and the Integrated Public Use Microdata Series.[13] For full details, see the published study.[14]

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