Regulation attenuation: Neighbor spillovers and policies in the opioid epidemic

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Abstract

Prescription drug monitoring programs (PDMPs)–online systems that providers and pharmacists can use to query patient prescription records–are one of the most widely-used state tools in regulating the prescribing and dispensing of opioids. However, the staggered adoption of PDMPs over the years has created opportunities for patients to evade monitoring by crossing into a state that does not have a PDMP. This paper fills a gap in the existing literature by evaluating the impact of attenuating neighbor spillovers that arise when states in proximity to each other do not coordinate their PDMP policies. I estimate the effect of PDMP implementation on opioid quantity supplied and opioid-related mortality in counties with a PDMP that are insulated from neighbor spillovers (termed *"closed"*), counties with a PDMP exposed to spillovers (*"open"*), and counties without a PDMP exposed to spillovers (*"contaminated"*). I find that, consistent with predictions, in *closed* and *open* counties opioid quantity supplied and prescription-opioid related mortality decrease, and illicit opioid mortality is not affected. The magnitude of the estimates is similar, which suggests that exposure to spillovers from untreated areas does not have a strong attenuating effect on counties with a PDMP. I also find that in *contaminated* counties, opioid quantity and both mortality outcomes decrease. These findings suggests that spillovers from treated areas may have an effect on untreated areas, potentially through increased monitoring by non-residential pharmacies.

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