

**“The Opioid Epidemic Was Not Caused
by Economic Distress But
by Factors that Could be More Rapidly
Addressed”**

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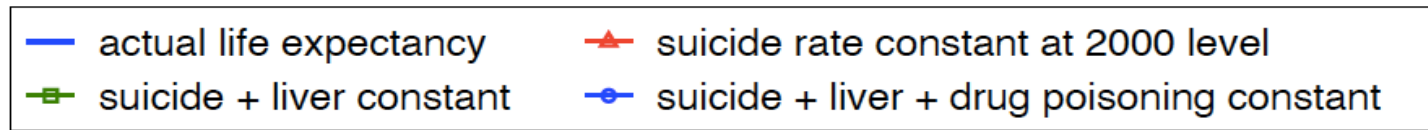
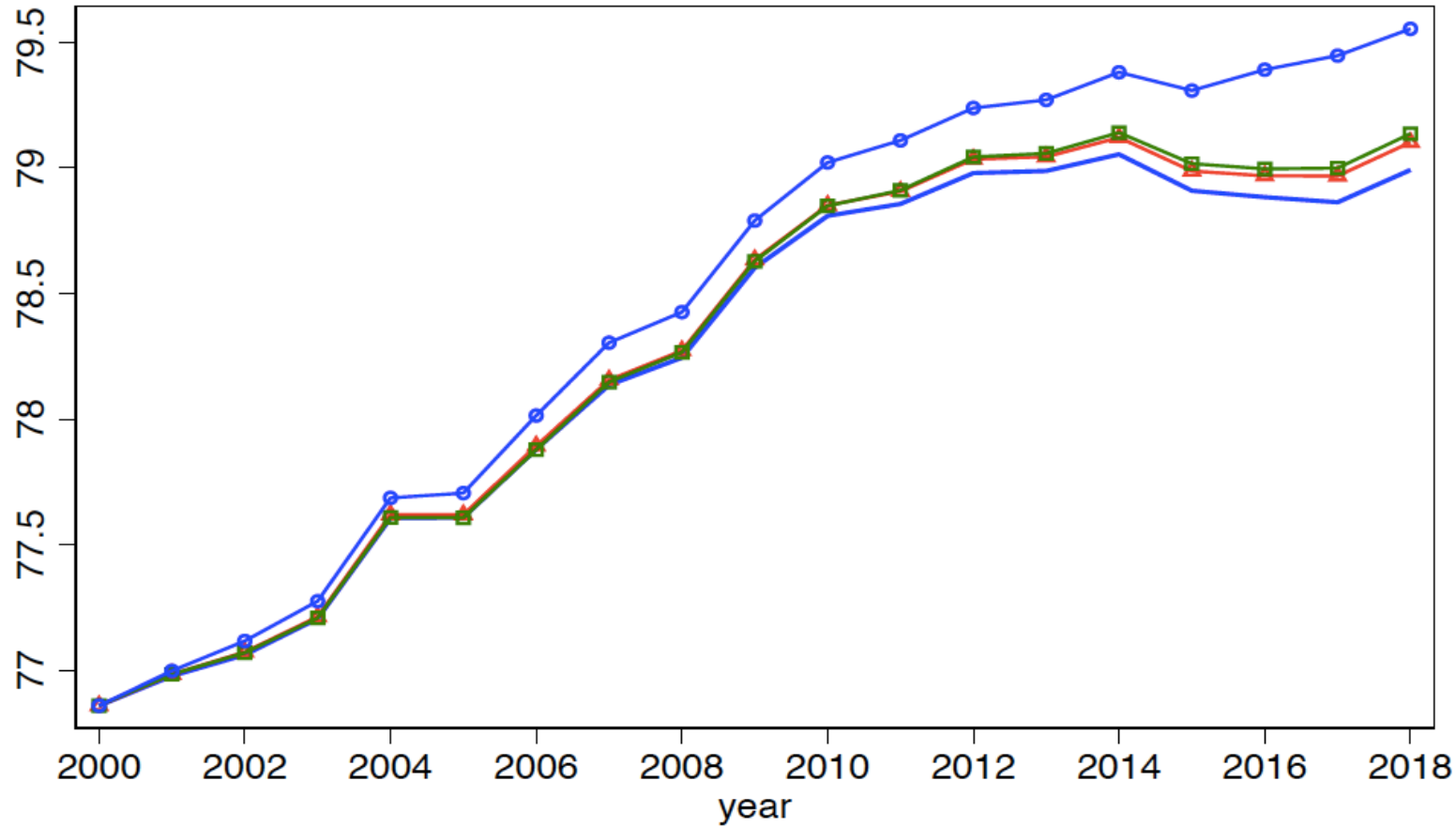
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Overview

- Without the opioid epidemic, American life expectancy would not have declined prior to 2020.
- The epidemic was sparked by the development and marketing of a new generation of prescription opioids and provider behavior is still helping to drive it.
- There is little relationship between the opioid crisis and contemporaneous measures of labor market opportunity.
- There do seem to be lagged effects of poor labor market conditions but the effect is modest relative to the scale of the epidemic.
- It will not be possible to quickly reverse depressed economic conditions, but it is possible to implement policies that would reduce the number of new opioid addicts and save the lives of many of those who are already addicted.

Actual and counterfactual life expectancy without deaths of despair



Like most epidemics, the opioid epidemic has hit poorer people harder

- Lower SES people have fewer resources to fight disease—e.g. they may find it much harder to find affordable treatment.
- **Those with only a high school degree are 2.5 times more likely to die** than people with a graduate degree, and people in poverty are 1.4 times more likely to die than people with incomes at or above five times the poverty line (Altekruse et al., 2020).

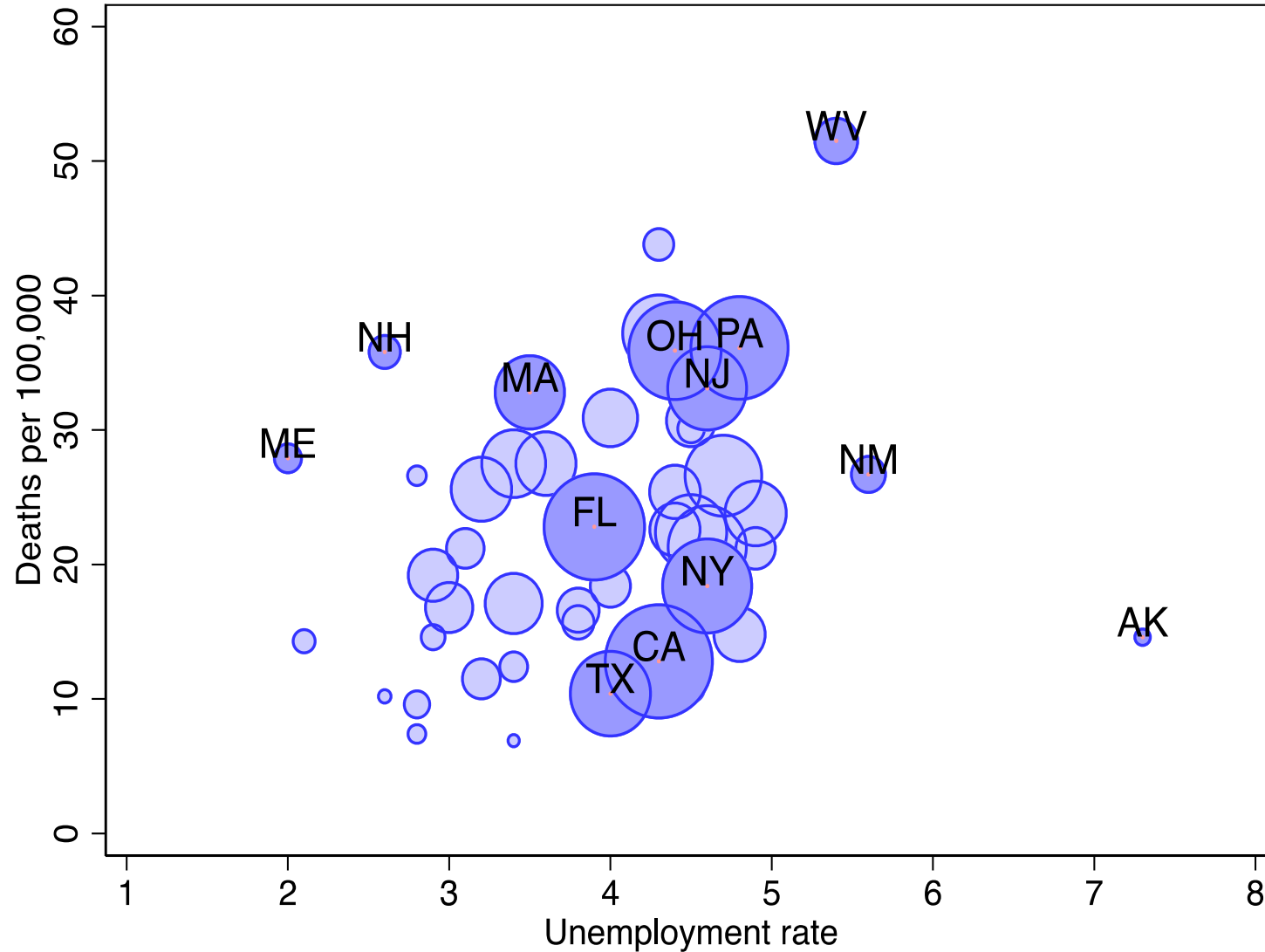
Opioids are not causing declining LFP

- Declines in male labor force participation among lower-skilled prime age men began well before the current opioid crisis. E.g. Parsons (1980): The share of men 45-54 who were out of the LF rose from 4.2% to 8.4% between 1948 and 1976 with similar increases for other prime-aged men.
- These trends reflect falling demand and low wages for less skilled workers combined with the growth of other sources of income support, such as disability payments (Council of Economic Advisors, 2016).
- Declining labor force participation among women is more recent.
- LFP for prime age women grew from 43% to 78% from 1962-2000, but fell to 75% in 2016. Declines closer to 10pp among women with \leq high school.
- These declines parallel ongoing declines in LFP among less skilled men, suggesting that similar underlying forces for men and women (Black and Schanzenbach, 2017).

Unemployment did not cause the opioid epidemic

- Manufacturing declined from 26.4% to 14.4% of the LF from 1970-2000 (U.S. Bureau of Labor Statistics, 2020) but the epidemic began only after 1997.
- The opioid epidemic began in the prosperous period before 2008.
- As the epidemic peaked in 2017-2018, unemployment was at its lowest level in decades (3.5%).
- The majority of opioid deaths occurred in large states with low unemployment rates (Currie and Schnell, 2018).
- Although African-Americans have persistently high unemployment relative to other Americans, the epidemic started first among non-Hispanic whites, and had a particularly large impact on white women (Singhal, 2016).
- Most people taking opioids are working. Currie, Jin, and Schnell (2019) analyze data from all retail pharmacies in the U.S. and find that 85% of the opioids prescribed for working aged people were paid for by private employer provided health insurance. Most people who abuse opioids began with legally prescribed medications (Schnell, 2019). E.g., 80% of heroin users began using prescription opioids (NIDA, 2020).

Overdose deaths per 100,000 vs. unemployment rate, by state, 2018



Long-term economic decline explains only a small share of the toll

- E.g. Pierce and Schott's (2020) estimates imply that a shift from the 25th to the 75th percentile of trade exposure explains only up to 11.5% of the overall drug overdose deaths in 2017 (2.5 drug overdose deaths on a baseline of 21.7 per 1000 in 2017).
- Ruhm (2019) finds that after adding controls for counties' age and education structure, long-term economic decline explains < 1/9 of the growth in overall drug-related mortality rates and very little of the variation in deaths due to prescription opioids.
- The epidemic has raged in parts of the country were not suffering decline. E.g. Bloom et al. (2019) show that the west coast and New England *benefitted* from Chinese import competition but NH and MA have still been hit hard by opioids (Stopka et al., 2019).
- Entering the labor market during a recession increases the probability of overdose deaths years later but the effect is small: Even if *all* cohorts had experienced a strong recession at graduation, it would explain only 1/8th of the increase in opioid mortality since 2000 (Schwandt and von Wachter, 2020).

Three root causes of the opioid epidemic

- First, beginning in the late 1970s, new ideas about pain began circulating: Physicians began to believe that many patients suffered needlessly and that physicians had a duty to monitor and treat pain as “the fifth vital sign” (Wailoo, 2014). In the U.S. alternative therapies (such as physical therapy) are often more expensive than prescription opioids and may not be covered by insurance.
- Second, the U.S. has little public oversight of medical prescribing. **Any doctor or dentist can prescribe opioids**, and the maximum allowable dose is higher than in most other countries. Other countries require special training to prescribe opioids (Japan); require patients to register to use opioids (France, Italy, and Portugal); or require doctors to use special prescription pads for opioids (many countries) (Ho, 2019). Some countries with centralized health insurance systems do not cover opioids for non-cancer care, or to require pre-authorization for such uses.

- Third, companies like Purdue Pharma began aggressively marketing a new generation of opioids as a safe, non-addictive way to treat pain.
- Purdue spent hundreds of millions of dollars targeting doctors, hospitals, medical schools, and sponsoring continuing medical education seminars which doctors take to maintain their accreditation (Van Zee, 2009).
- OxyContin, which was approved in 1995, **was specifically promoted as safe for chronic pain as well as for conditions like wisdom tooth extraction.** But OxyContin is extremely addictive. E.g. Barnett et al. (2017) show that ER patients treated by doctors who are high prescribers of opioids are more likely to be taking opioids six months later compared to other patients at the same hospitals.
- Alpert et al. (2019) show that in states where OxyContin was marketed more aggressively, deaths rose faster.

Physicians Over-Prescribe Opioids, Creating New Addicts

- Opioids are prescribed in situations where other safer alternatives are available and where opioids are ineffective over the long term. Opioids, are not suitable for non-terminal chronic pain, such as from back problems. According to NIDA (2020) 21-29% of patients prescribed opioids for chronic pain misuse them, 8-12% develop an opioid use disorder, and 4-6% of those who misuse prescription opioids start taking illegal opioids.
- Patients still frequently receive a 30-day supply of opioids when a 3-day supply would do → risk for addiction and diversion to the secondary market.
- In 2016 the CDC issued guidelines in an attempt to curb these practices (Dowell et al., 2016). But these guidelines are not binding on U.S. physicians.
- U.S. physicians also over-prescribe addictive benzodiazepines relative to doctors in other countries. Taking benzodiazepines with opioids increases the probability of a fatal overdose (Sun et al., 2017).

Policies to Curb Overprescribing

- Prescription Drug Monitoring Programs have now been implemented in every state. Pharmacists required to report all opioid prescriptions filled. A mandatory PDMP is one that doctors must consult before prescribing opioids.
- Buchmueller and Carey (2018), Anca et al. (2019), and Kaestner and Ziedan (2019) show that mandatory PDMPs reduced opioid prescribing.
- PDMPs and guidelines may be having an impact: opioid prescriptions peaked in 2012 at 81.3 per 100 people, and had fallen to **51.4 per 100 people by 2018** (Centers for Disease Control and Prevention, 2020).

Improving Access to Medication Assisted Treatment (MAT)

- Interdiction alone is unlikely to work for those already addicted and very difficult with Fentanyl.
- Less than 30% of people with a substance abuse problem receive treatment (Center for Behavioral Health Statistics and Quality, 2016).
- Many U.S. programs emphasize “abstinence-only,” whereas MAT (using drugs like buprenorphine) is much more effective in saving lives. Patients in abstinence-only treatment often overdose when they relapse, since they lose their tolerance for opioids.
- **While any U.S. doctor can prescribe opioids without any special training or oversight, doctors must obtain special licenses to prescribe MAT and are restricted in the number of patients they can treat** (University of Michigan Behavioral Health Workforce Research Center, 2019).
- Naloxone Access Laws are a bright spot. These laws permit naloxone, an overdose-reversing drug, to be prescribed to “third parties,” or make it available without a prescription. Rees et al. (2019) show that these laws reduced opioid deaths by 9-11%, with the largest reduction coming from deaths due to prescription drugs. The laws did not increase the use of opioids as some had feared.

Concluding Thoughts

- Mandatory PDMPs, new guidelines for opioid prescribing, and laws promoting naloxone had started to have an impact.
- Overdose deaths fell 4.1% in 2018 relative to 2017 (Hedegaard et al., 2020), enough to cause life expectancy to have resumed its rising trend before the COVID-19 pandemic hit.
- But in 2018, there were still **51.4 prescriptions per 100 persons** (more than 168 million total opioid prescriptions). 8 -12% of these patients are likely to develop an opioid use disorder.
- We need to:
 - reduce opioid prescriptions to “opioid naïve” patients,
 - increase access to non-addictive pain treatment,
 - expand the use of overdose-reversing drugs,
 - remove barriers to the use of MAT.
- Even during the pandemic, 15 states continued to see declines in overdose deaths (CDC, 2020) showing that common-sense, evidence-based policies can save lives.

Post-script: Overdoses during COVID—the Epidemic within the Pandemic

- Overdoses spiked in the first three months of the pandemic but may have declined subsequently (based on preliminary data from medical examiner's offices). Possible reasons for the spike include:
 - General despair
 - Unemployment (rose to 14.7% in April but fell back to 8.4% in August)
 - Fall in new entries into MAT, drastic reduction in access to all drug treatment
 - Disruptions in relationships with drug suppliers causing people to try new drugs or drug dealers
 - Changes in the way drug addicts take drugs (e.g. alone and without naloxone handy)
- Stay tuned!