Deaths of Despair

Econ 43565 Bill Evans Fall 2020

Introduction

- · Long term secular decline in mortality
- · Especially pronounced for minorities
- Starting in the 1990s, mortality rates started to climb for middle-aged whites particularly low educated males
- Generated from particular deaths
 - Drug poisonings, suicides, alcohol liver disease
 - Case and Deaton: "Deaths of despair"

First 1/3 of Class

- Outline the basic trends
 - Trends are scary
 - Problem is concentrated in a particular group (low skill whites)
- Lead Case and Deaton to suggest a demanddriven story – deaths of despair
- We will evaluate the demand hypothesis

 Minor part of the story

Last 2/3's of the class

- Components of the trends
 - Most of the deaths of despair is rising drug deathsMost of drug deaths are opioid/heroin
- Outline the origins of the opioid/heroin/fentanyl crisis
- Show is was more supplier driven
 - Opioid crisis looks to be started by OxyContin
 - · Heroin crisis started by the reformulation of Oxy
 - · Fentanyl crisis piggy-backs on the heroin crisis





	1999		2015	
Age	White non-Hispanics, high school or less	Blacks, all	White non-Hispanics, high school or less	Blacks, all
25-29	145.7	169.8	266.2	154.6
30-34	176.8	212.0	335.5	185.5
35-39	228.8	301.4	362.8	233.6
40-44	332.2	457.4	471.4	307.2
45-49	491.2	681.6	620.1	446.6
50-54	722.0	945.4	927.4	703.1
55-59	1,087.6	1,422.8	1,328.3	1,078.9
60-64	1,558.4	1,998.3	1,784.6	1,571.1
a. Morta	ality rates are expressed as deal	ths per 100,000 pe	ople at risk.	
a. Morta 5-29: 8 -29:)-34: 9	ality rates are expressed as deat 32% increase 8% decline 30% increase	ths per 100,000 pe	ople at risk.	





















Case and Deaton

• Deaths of despair are a result of the breakdown in institutions: Jobs, earnings, family

- Time trends are easy to establish
- Correlation pronounced
- Correlation ≠ causation



















- Institutional outcomes have been declining for Blacks as well
- Poorer levels and same trends in outcomes
- Why has the drug crisis not impacted this group nearly as much?











This portion of class

- Extent of the problem
- 3 separate phases all linked
 - Prescription meds
 - Movement to heroin
 - Entrance of fentanyl
- Outline the origins of each phase
- What can be done?







Some facts

- Drug deaths
 - 1983: 6,445
 - **-** 2017: 72,000
- Peak deaths/year for other epidemics
 HIV/AIDS: 41,669 in 1995
 - Motor vehicle fatalities: 51,903 in 1978

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- Murder: 24,530 in 1993

Some facts

- 774,000 drug poisoning deaths between 1999 2018
 - Military deaths Spanish American War through now
 -- 702,000
- 440,000 opioid deaths since 1999
 # of US deaths in WW II ~ 400,000













Enter OxyContin

- Introduced in 1996 -- Purdue Pharma (Sackler Family)
- Active ingredient is Oxycodone
 - Been around since 1917
 - Introduced to US in 1935
 - Percodan Oxycodone and aspirin (1950)
 - Percocet Oxycodone and acetaminophen (1974)
- Extended release formula had high mg content of Oxycodone
- One of most successful drugs ever -- \$35 billion in worldwide sales through 2015 ٠

Enter OxyContin

- Released at same time as more aggressive pain management is taking place
- Purdue actively marketed to GP's
- Originally marketed as "non habit forming"
 - Purdue trained sales force to mislead about addiction
 - Porter and Jick (1980)

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 - In 1996, Purdue was allowed to say addiction is rare when appropriately used
 - Forced to stop in 2001
 - 2007 Paid \$600 million in fines to Feds

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Problem

- OxyContin high in MG content
- Easy to crush and snort or inject to access all the drug at once
- Soon became a drug that could easily be abused
- Its sales success meant it was available everywhere



Advertising plan

- 1996 advertise OxyContin for cancer patients
- 1997 and on push for chronic pain sufferers
- Budgeted \$640 million to advertise from 1996-2000

Our argument

- Purdue advertising launched the opioid epidemic
- How do we know? By where Purdue did not advertise
- Triplicate prescription pad states

Triplicate Prescription Pad states

- 3 copies
 - One kept by the Doc
 - Two given to pharmacy one sent to state
- For Schedule II drugs
- Designed to monitor Rx narcotics
- 5 states in 1995 (CA, ID, IL, MI, NY, TX)

Discovery documents

- Released after settled court cases involving Purdue Pharma
- Original marketing plan for OxyContin
- Indicate a lack of interest in advertising in Triplicate pad states

Purdue and Triplicate states

- Focus groups Doc's don't like triplicate pads
 - "Most did not want to go through the trouble involved, and they did not want to give the Government an excuse to monitor their activities"
- Will use some other drug than Schedule II
 - "Writing triplicate prescriptions was more trouble than others....To the extent that they can avoid this extra effort, they will try to follow alternate protocols"

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they would write each year is very small, and probably would not be sufficient to justify any separate marketing effort" (p. 59)

Advertising strategy – avoid triplicate states

- "...our research suggests the absolute number of prescriptions











Second stage

- Did the aggressive advertising lead to more acute crisis?
- Measure by mortality rates (deaths/100,000) for drug deaths
- String together MCOD data from 1983-2017
 Span ICD 9 and 10 codes
- Drugs poisonings easy to measure opioids less so



















OxyContin reformulation

- OxyContin was the drug of choice for abuse
- Purdue Pharma under intense pressure to address
- · Developed and abuse-deterrent version
- FDA approves reformulation on April 5, 2010
- New formulation is released without notice on August 10, 2010
- Old drugs immediately pulled from market



Problem

- Demand for opioids is still there
- The ability to get high is NOT
- Solution: switch to a close substitute
- That alternative: heroin
 - US awash in heroin
 - Incredibly cheap drug now
 - New distribution networks through Mexico



















How is fentanyl making it to the US?

China

- Mail order via dark web
- US Treasury "The most common distribution medium is via the U.S. Postal Service,"
- FedEx/UPS subject to electronic tracking of foreign packages to identify source -- USPS is not
- · Work in small independent networks
- 700 fentanyl-related sales listing on English language dark web sites

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Mexico

- Produced by drug gangs
- \$32,000 in raw ingredients can produce 1 million pills w/a street value of \$20 million
- Brought in as a raw drug
- Any mixing with other drugs is done at the retail and not wholesale level
- Sinaloa/Jalisco cartels are the most likely sources
- Few years ago, going wholesale price for heroin/pound in Mexico was \$600. Now \$100

















Restrictions

- 2018 At G-20 dinner with Trump and Xi in Buenos Aires, Xi agreed to reclassify fentanyl as a controlled substance
- Makes these dark web sites in China subject to enforcement by state government
- Greatly reduced dark web sales from China
- Problem: precursors now being sent to Mexico