

The Impact of the Opioid Epidemic on White Homicide Rates

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Overview

- Little attention to impact of opioid epidemic on homicide
 - Opioid epidemic framed as public health crisis
 - Epidemic concentrated in the white population
 - No notable rise in national white homicide rates, until 2015
- Making the case
 - Expansion in street drug markets
 - Drug markets risky social spaces

Overview: Data and Methods

- State-level panel models, 1999 – 2016
- Outcomes: total homicide rate, white homicide rate, black homicide rate, drug-related homicide rate
- Predictors: opioid death rate, population size, divorce rate, unemployment rate, % college, poverty rate, race-ethnic composition, period effects
- GLS models corrected for autocorrelation, heteroskedasticity, cross-panel correlation

Overview: Results

- Significant effects of opioid death rate on white homicide rate and drug-related homicide rate
- No effect on black homicide rate
- Contemporaneous and lagged effects
- Approx. 20% of white homicides associated with opioid epidemic

Overview: Limitations and Conclusions

- Limitations
 - Alternative measures of opioid demand needed
 - Little known about opioid street markets
 - Further research needed on opioid epidemic and minority homicide
- Conclusions
 - Expand treatment to reduce opioid demand
 - Cutting off legitimate sources of supply could strengthen street drug markets
 - Enlarge public health frame to encompass sources of “despair”

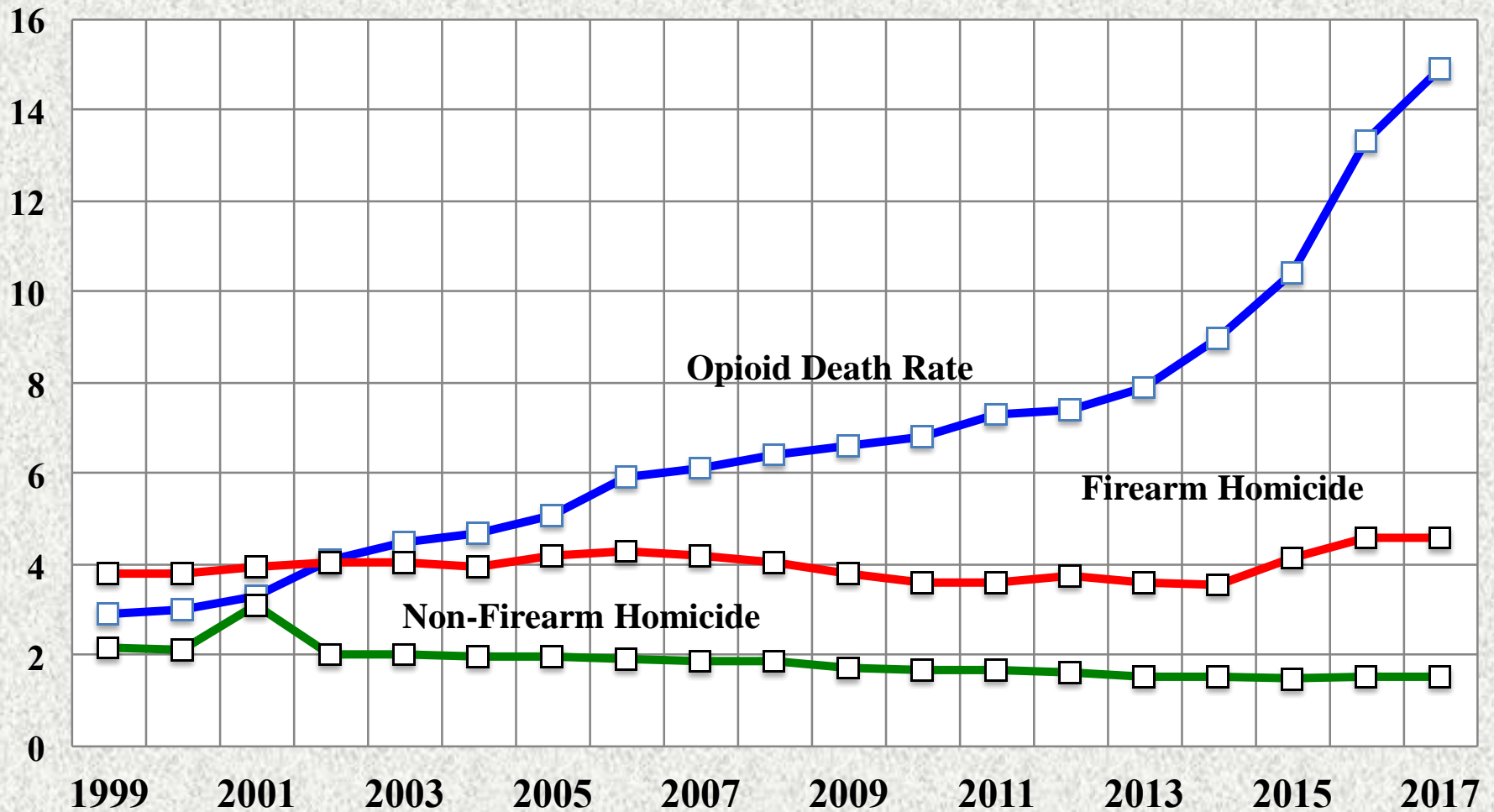
Measuring Opioid Demand

- Opioid death rate confounds prevalence of use with drug lethality (heroin and fentanyl v. prescription opioids)
- Multiple indicators show increase in opioid use
- Robustness checks
 - Reproduce analysis on period prior to upsurge in heroin and fentanyl (1999-2010)
 - Control for fentanyl seizures

Results

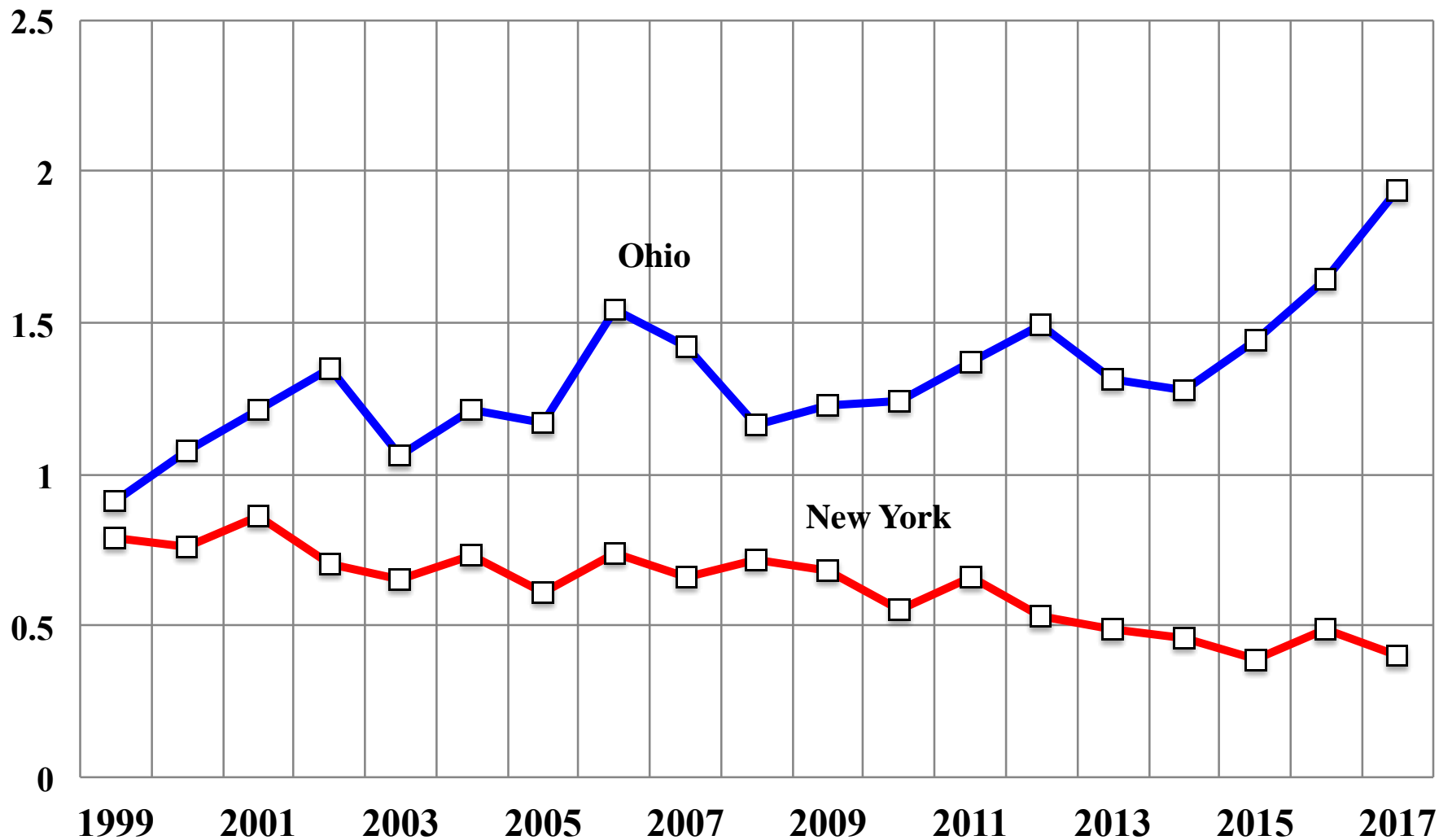
- National trends
- State variation
- Regression estimates
- Contemporaneous and lagged effects
- Predicted impact

Figure 1. Age-Adjusted Opioid-Related Deaths, Firearm and Non-Firearm Homicides per 100,000 US Population, 1999 - 2017



Source: CDC

Figure 2. Age-Adjusted Firearm Homicides per 100,000 Non-Hispanic White Population, 1999 - 2017: Ohio and New York



Source: CDC

Table 2. The Effect of Opioid-Related Death Rates and Covariates on Total, Drug, and Race-Specific Homicide Rates in US States and Washington, DC, 1999 - 2016

	Homicide Rate			
	Total	Drug	White	Black
Opioid Death Rate	.029 (.018)	.054** (.012)	.055** (.019)	.016 (.028)
Population	-.092** (.017)	.032** (.010)	-.100** (.018)	-.026 (.026)
Divorce Rate	.256* (.117)	.039 (.062)	.817** (.093)	.096 (.080)
Unemployment Rate	.019 (.075)	.009 (.045)	-.286** (.069)	.034 (.064)
Bachelor's Degree	-.250* (.102)	-.054 (.066)	-.564** (.106)	-.142 (.125)
Public Assistance	.002 (.039)	-.025 (.025)	-.072 (.038)	.088 (.066)
Poverty Rate	.629** (.086)	.032 (.052)	.697** (.078)	.255* (.108)
Black	.369** (.017)	.051** (.009)	.209** (.014)	.121** (.029)
Hispanic	.116** (.017)	-.020 (.010)	.123** (.015)	.006 (.032)
Wald Chi ²	1406**	242**	1495**	92.8**
Pseudo R ²	.749	.237	.673	.189
No. of observations	866	866	815	667

Notes: State-level feasible generalized least squares panel regression coefficients, adjusted for autocorrelated errors within panels and cross-sectional correlation and heteroskedasticity. Variables in natural logs. Standard errors in parentheses. White opioid death rate in white homicide model. Race-specific divorce, unemployment, and poverty measures in white and black models. Year effects not shown.

**p < .01 *p < .05

Contemporaneous and Lagged Effects

- Users typically begin with own supply or that of family & friends
- Some then move to street markets
- Contemporaneous and two-year lagged effects found
 - Lagged effect twice as large as contemporaneous effect on white homicide
 - No difference in lagged and contemporaneous effects on drug-related homicide

Impact Assessment

- Predicted white homicide count at 25th and 75th percentile of opioid death rate dist'n (all other variables at means)

$$5744 (75^{\text{th}}) - 4655 (25^{\text{th}}) = 1089$$

- Yearly average number of white homicides = 5474
- Approx. 1 in 5 white homicides associated with growth and spread of opioid epidemic
- Interquartile range yields conservative estimate
- Result would not have differed much had min and max values of the opioid dist'n been used

Limitations and Future Research

- Data suppression does not allow reliable estimates of Hispanic homicide
- Results for black homicide uncertain; based on total opioid death rates
- Area-specific survey measures of opioid use needed
- Much more to learn about dynamics of street opioid markets
 - Locations
 - Level of violence

Conclusions

- Retain public health response to opioid epidemic
 - Avoid mass arrests and imprisonment
 - Expand treatment
- Regulation of legitimate sources of supply should take into account impact on black market
- Respond to sources of despair
 - Retooling for “new economy” jobs
 - Wage growth
 - Expanded social services and educational opportunities

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