# Geographic Variation in Opioid Mortality by Race/Ethnicity, 1999–2016

## Identifying epidemic hotspots

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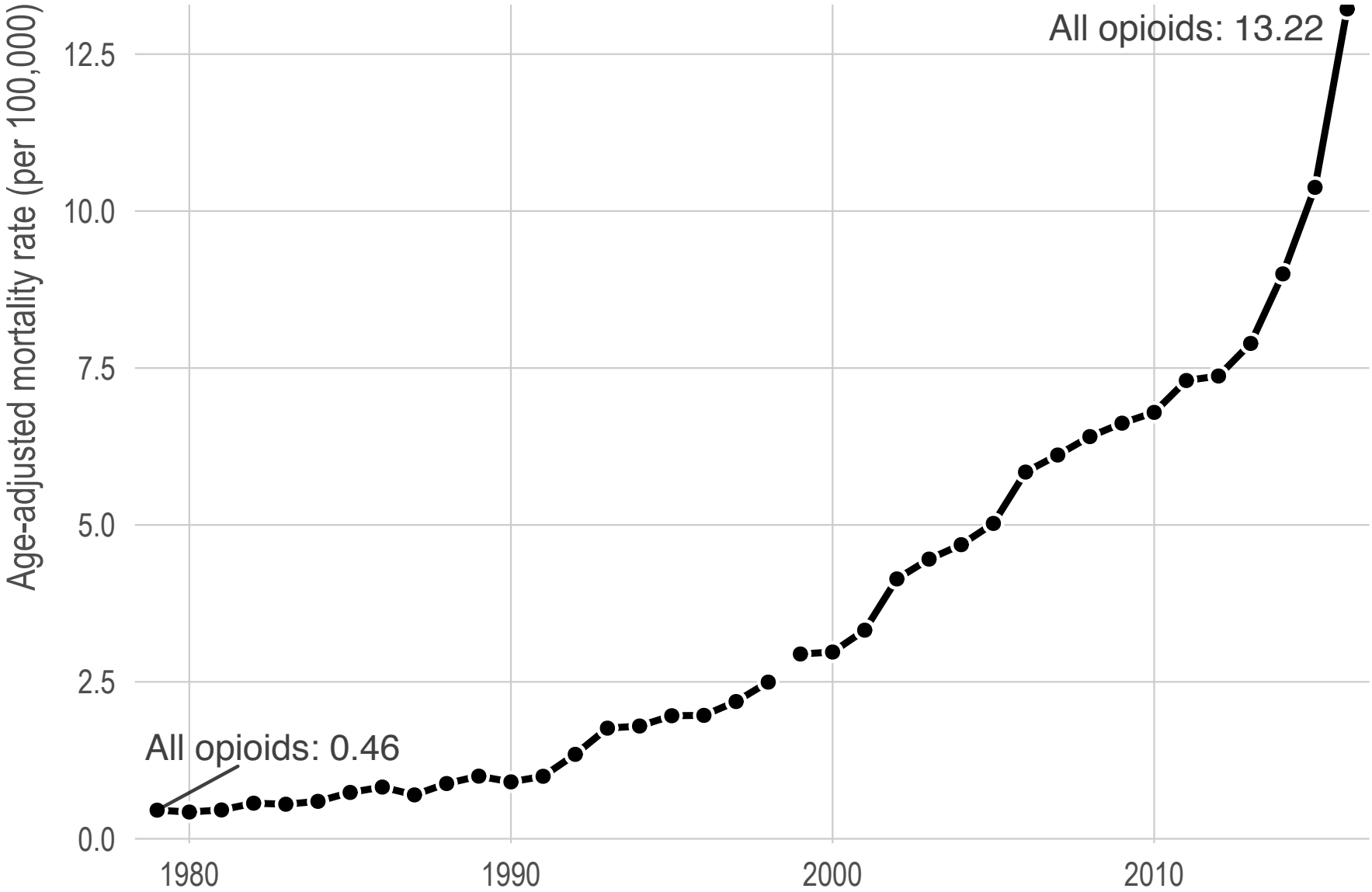
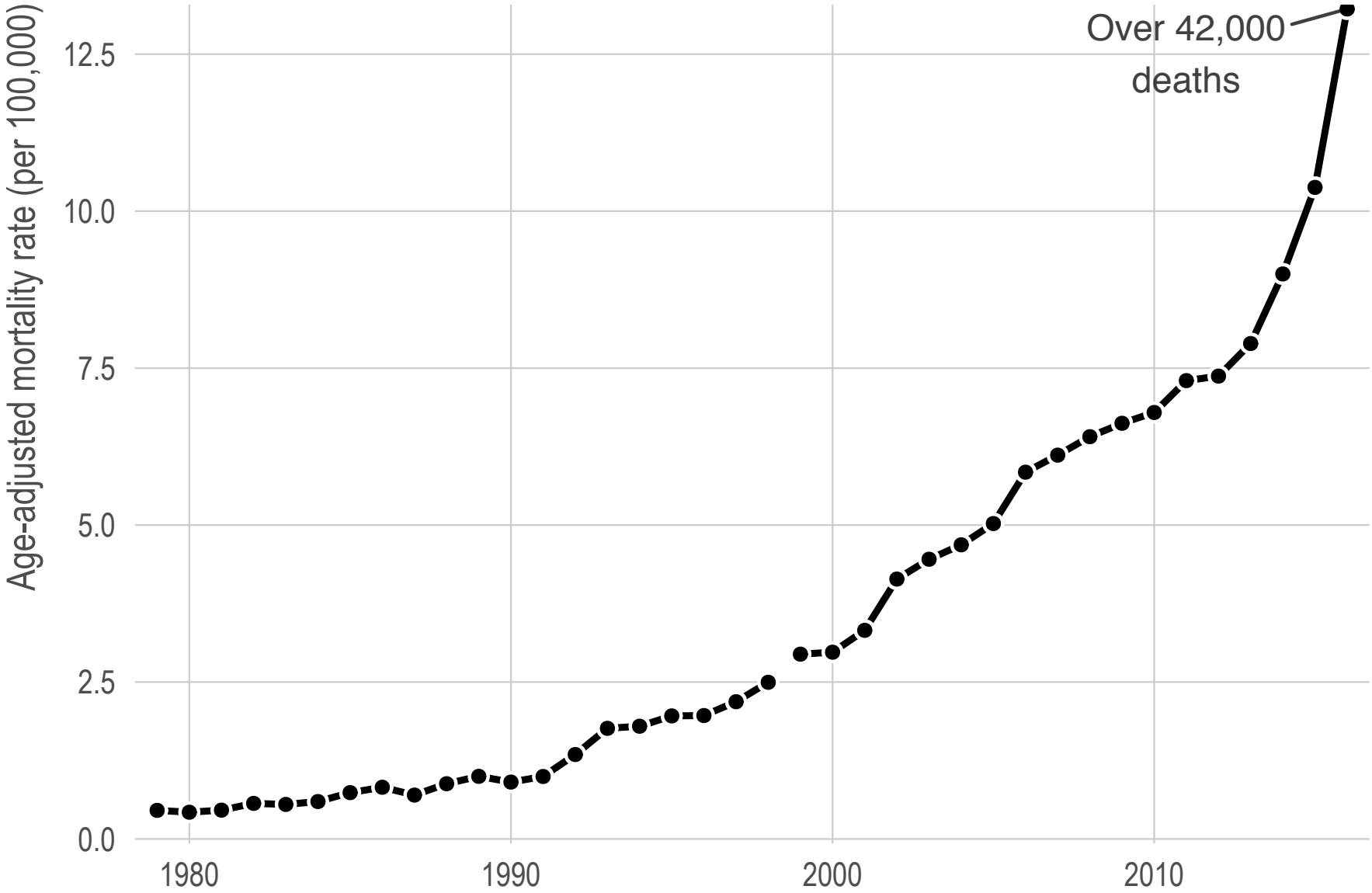
PAA 2018: Denver, CO

# Overview of the opioid epidemic

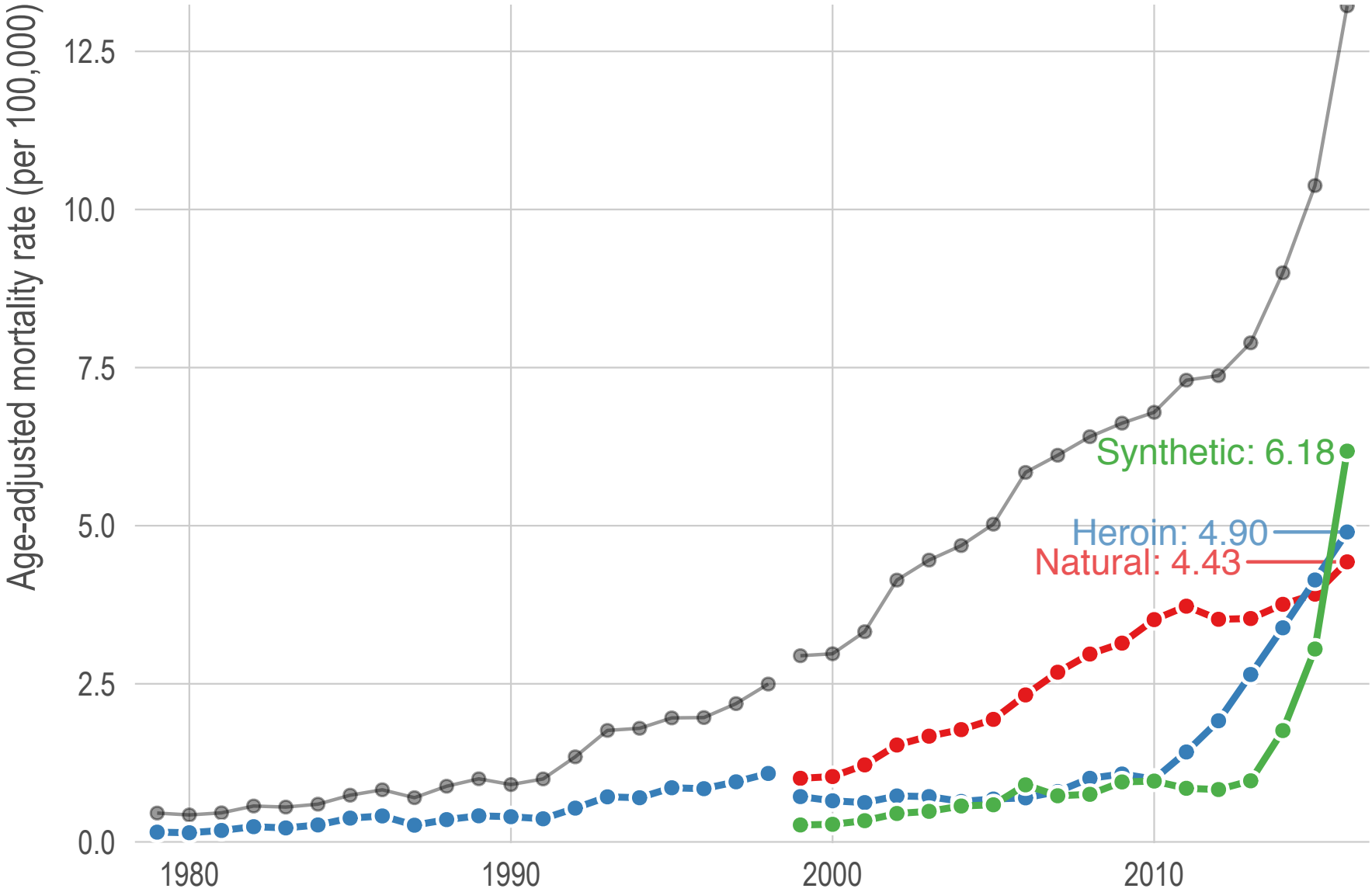
# Almost 30x increase since 1980



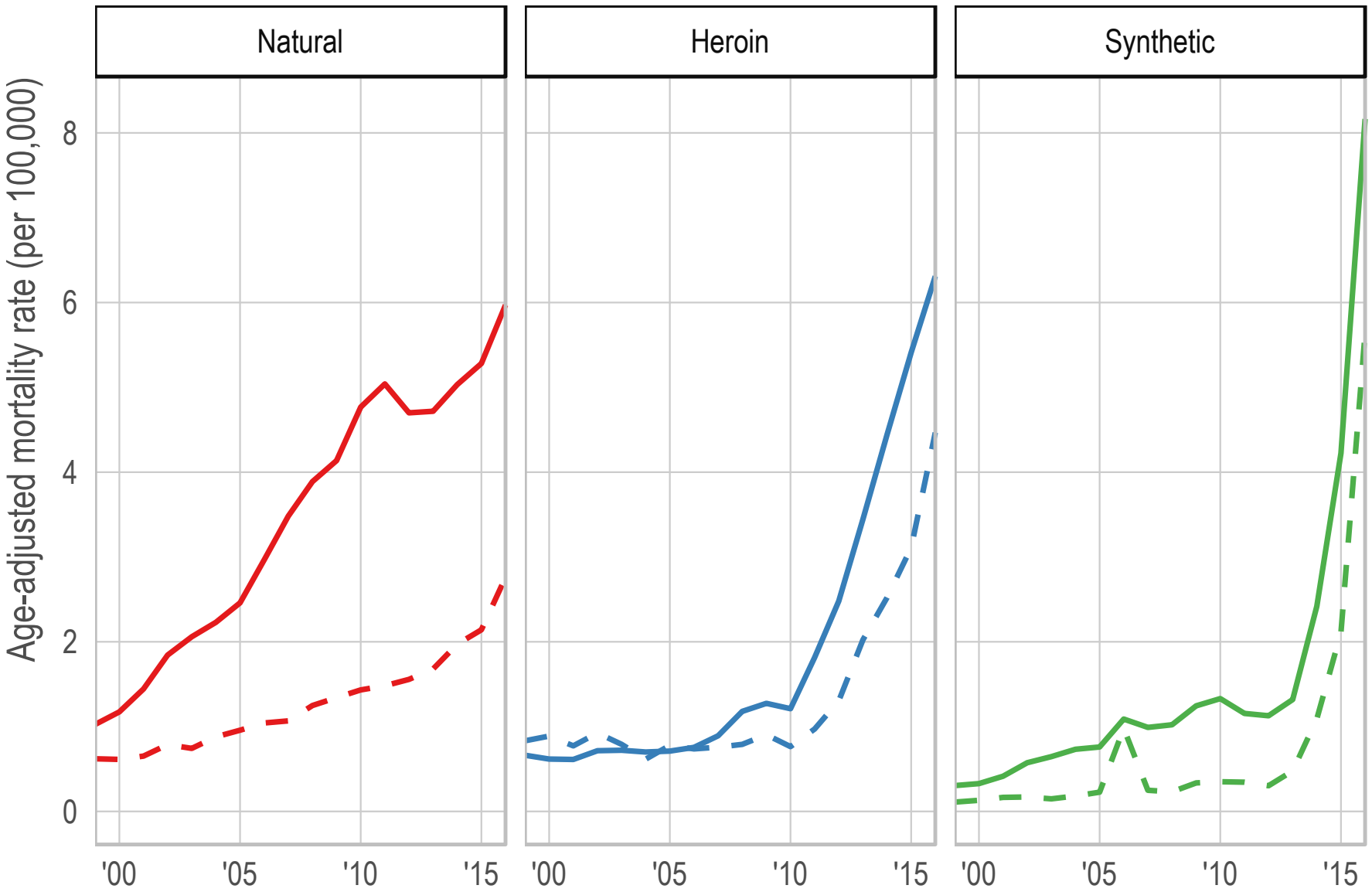
# More than deaths by car accidents or guns



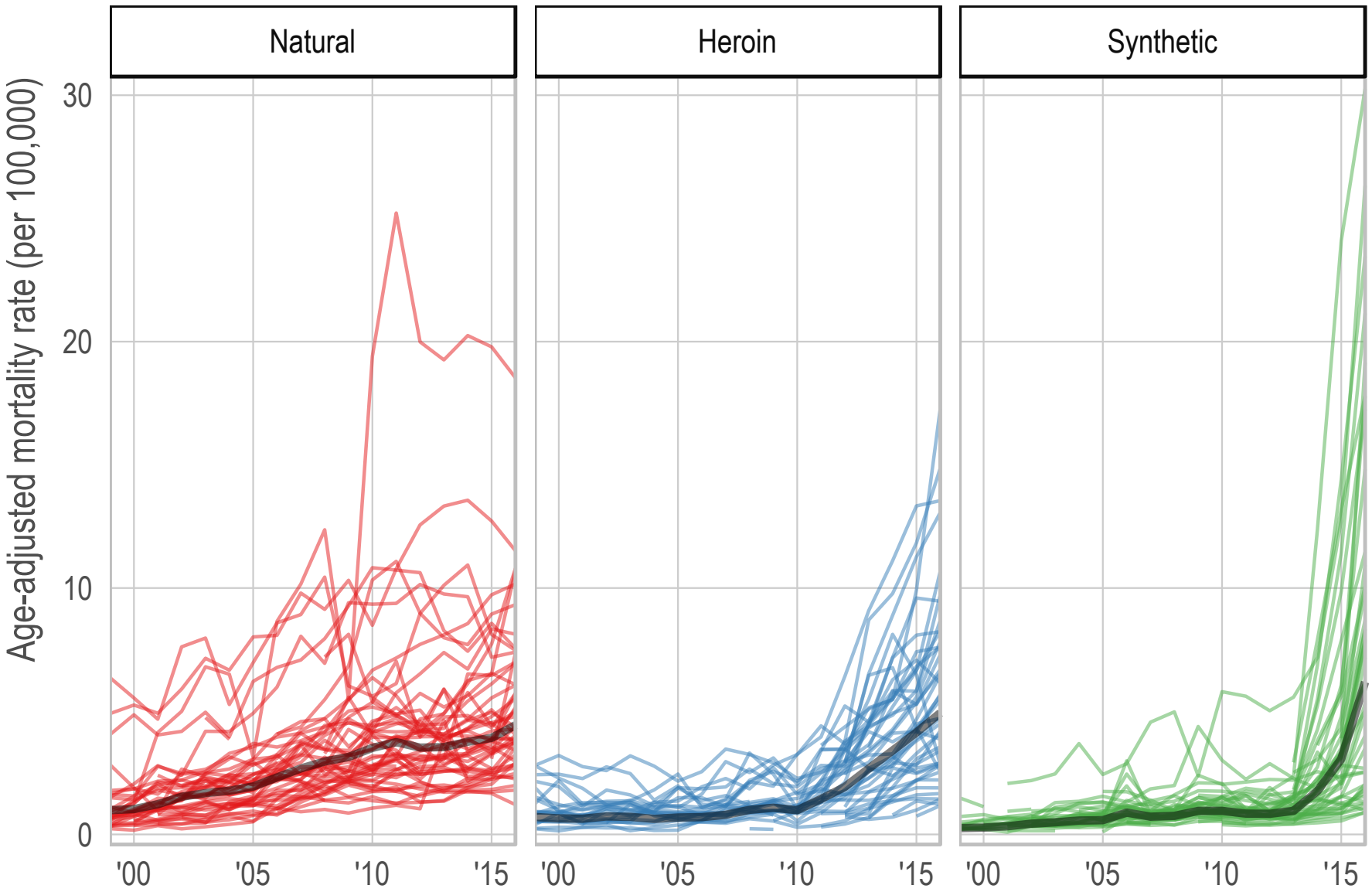
# Variation by opioid type



# Variation by race/ethnicity



# Variation by state



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    - The epidemic over time (1999–2016)
    - The *current* epidemic in terms of both mortality rate and rate of increase
2. Identify "epidemic hotspots" — areas with high mortality and rapid increases

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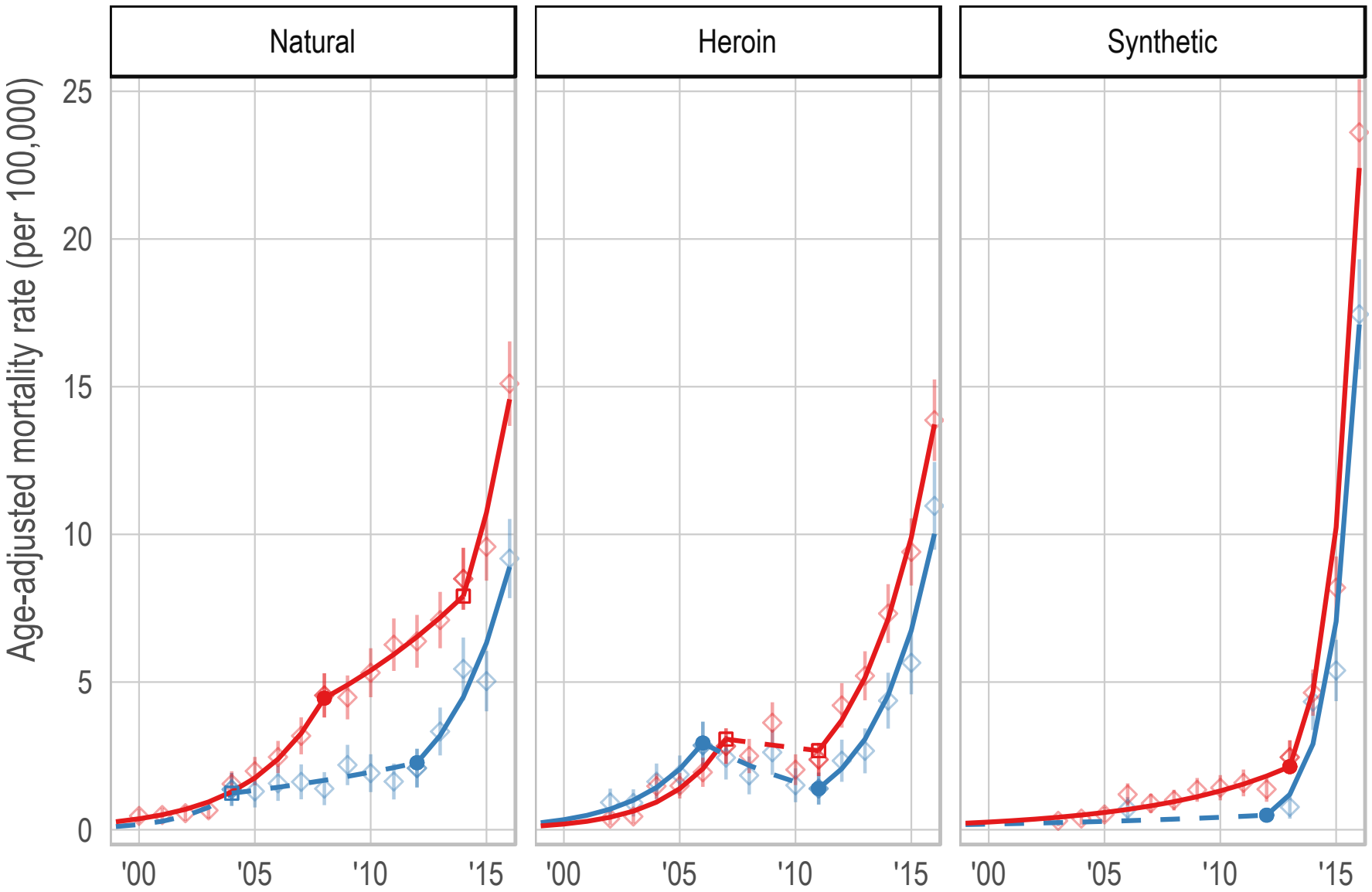
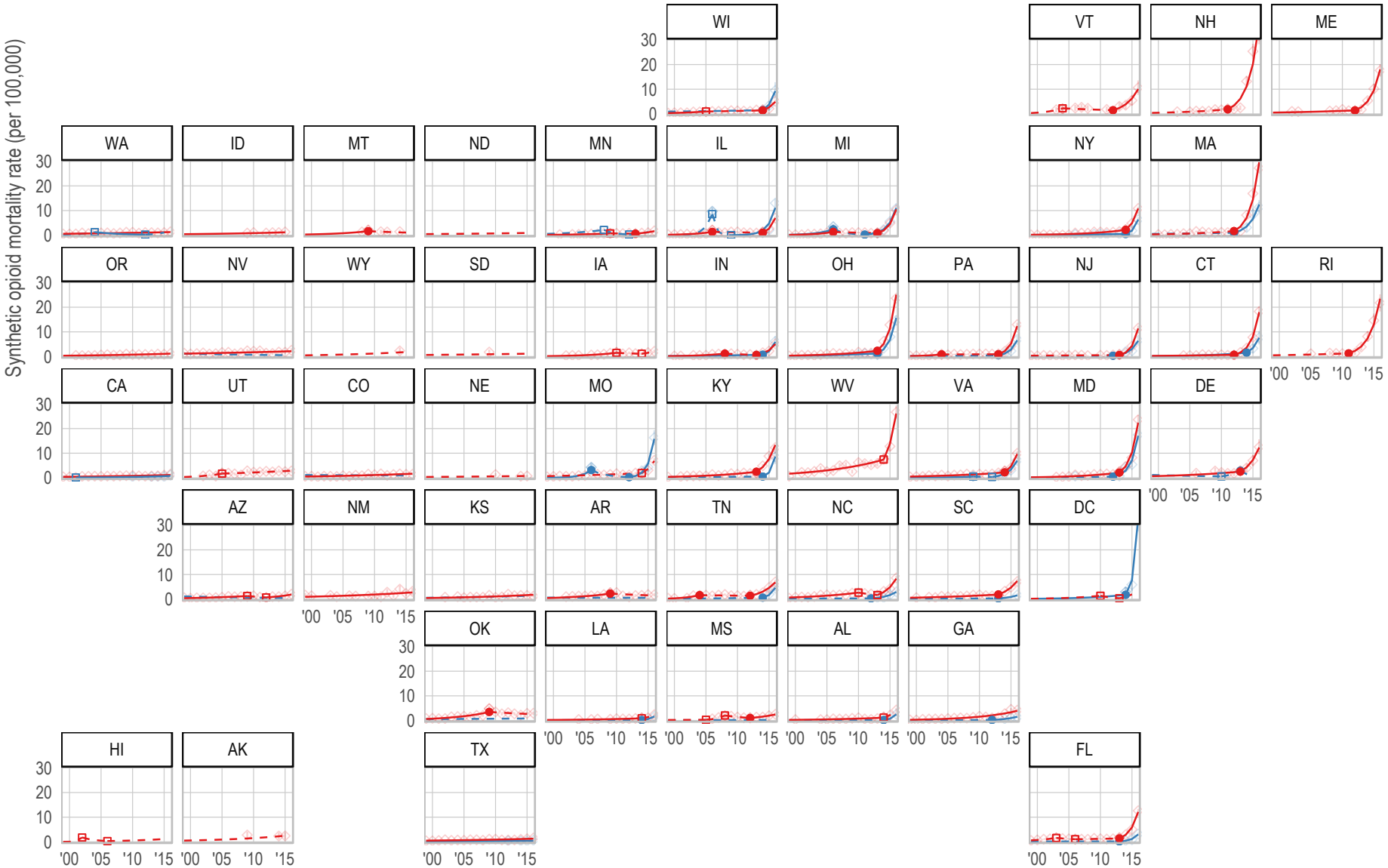
3. Joinpoint regression

# Example Results: Maryland

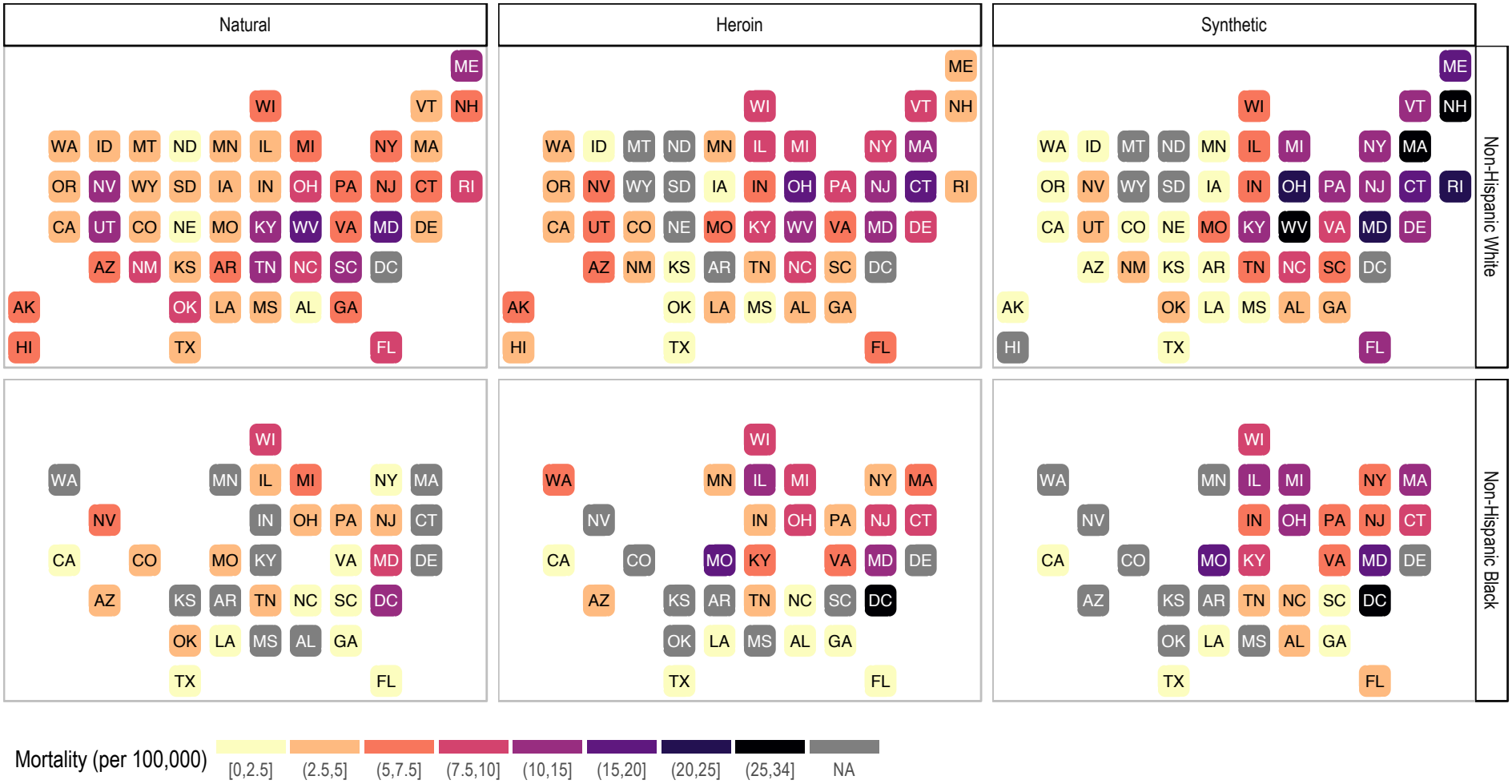


# Example Results: Synthetic Opioids

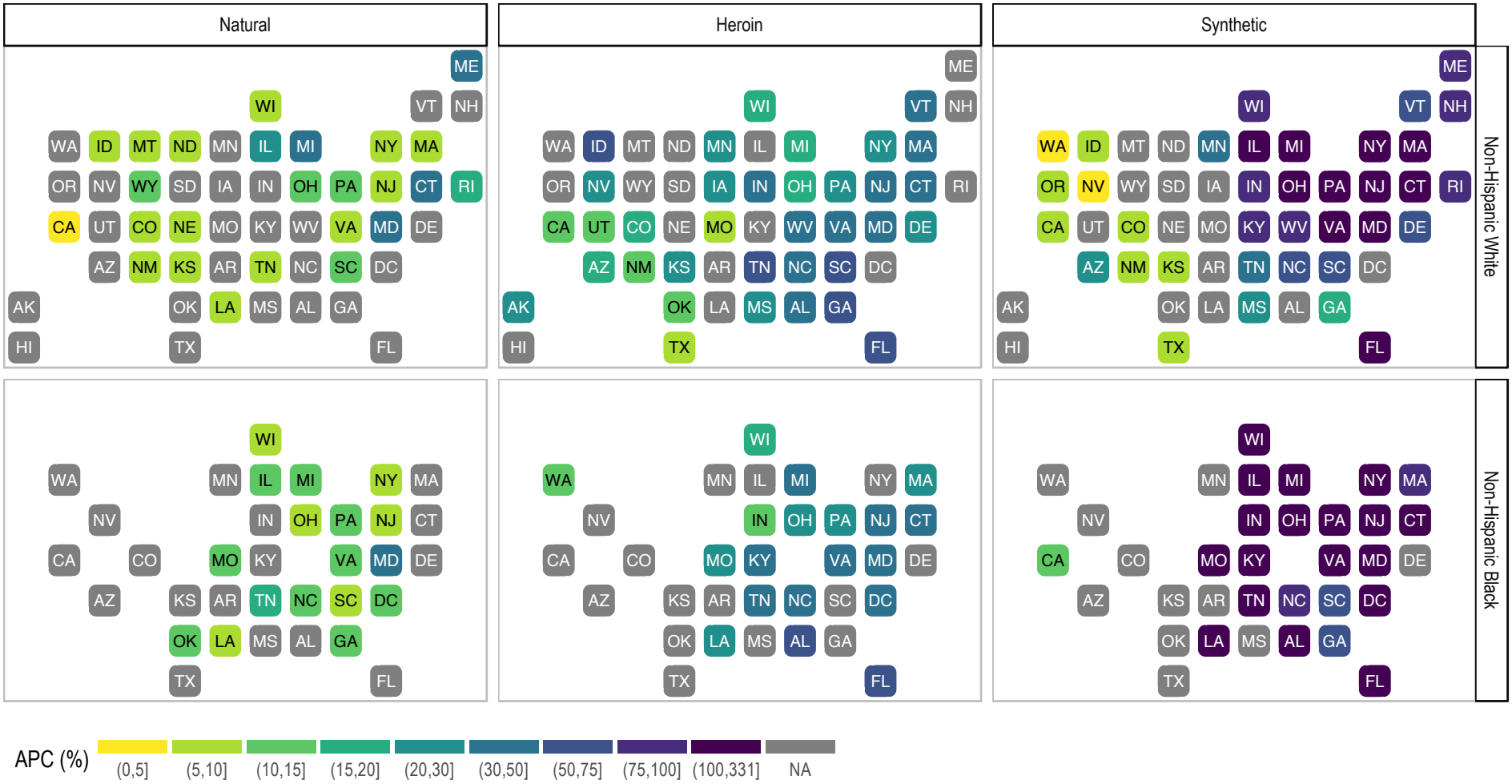


# Results: Current Epidemic

# Current Mortality



# Current Trajectory



# Epidemic Hotspots

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  - Cost and availability

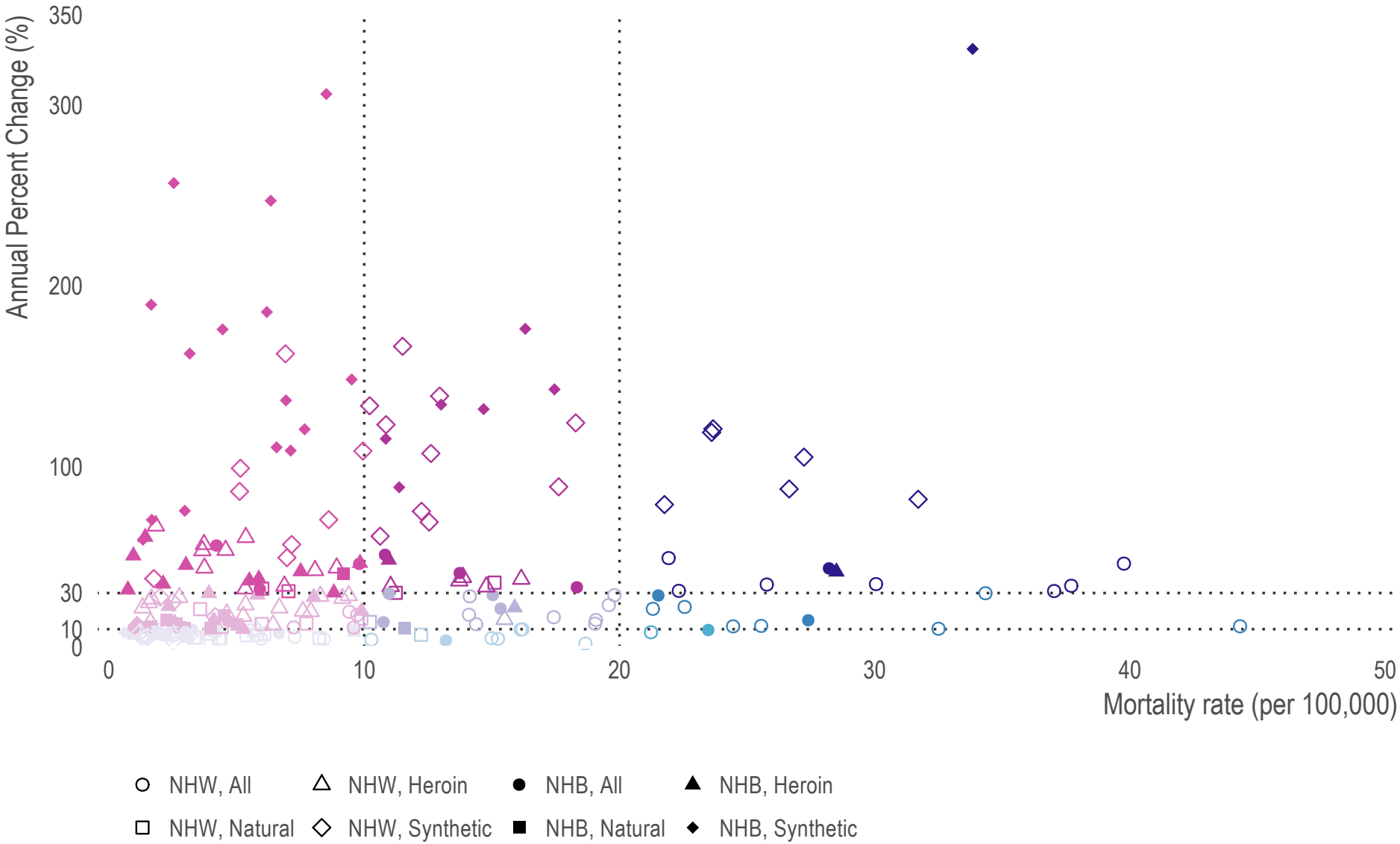
# Thank you

**Code and interactive results explorer:**

`https://tiny.cc/paa2018`

mathewkiang.com | : mkiang | : @mathewkiang

# Epidemic Hotspots



# Average Annual Percent Change