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Cellphone and Texting Bans: Evidence of Effectiveness in the United States

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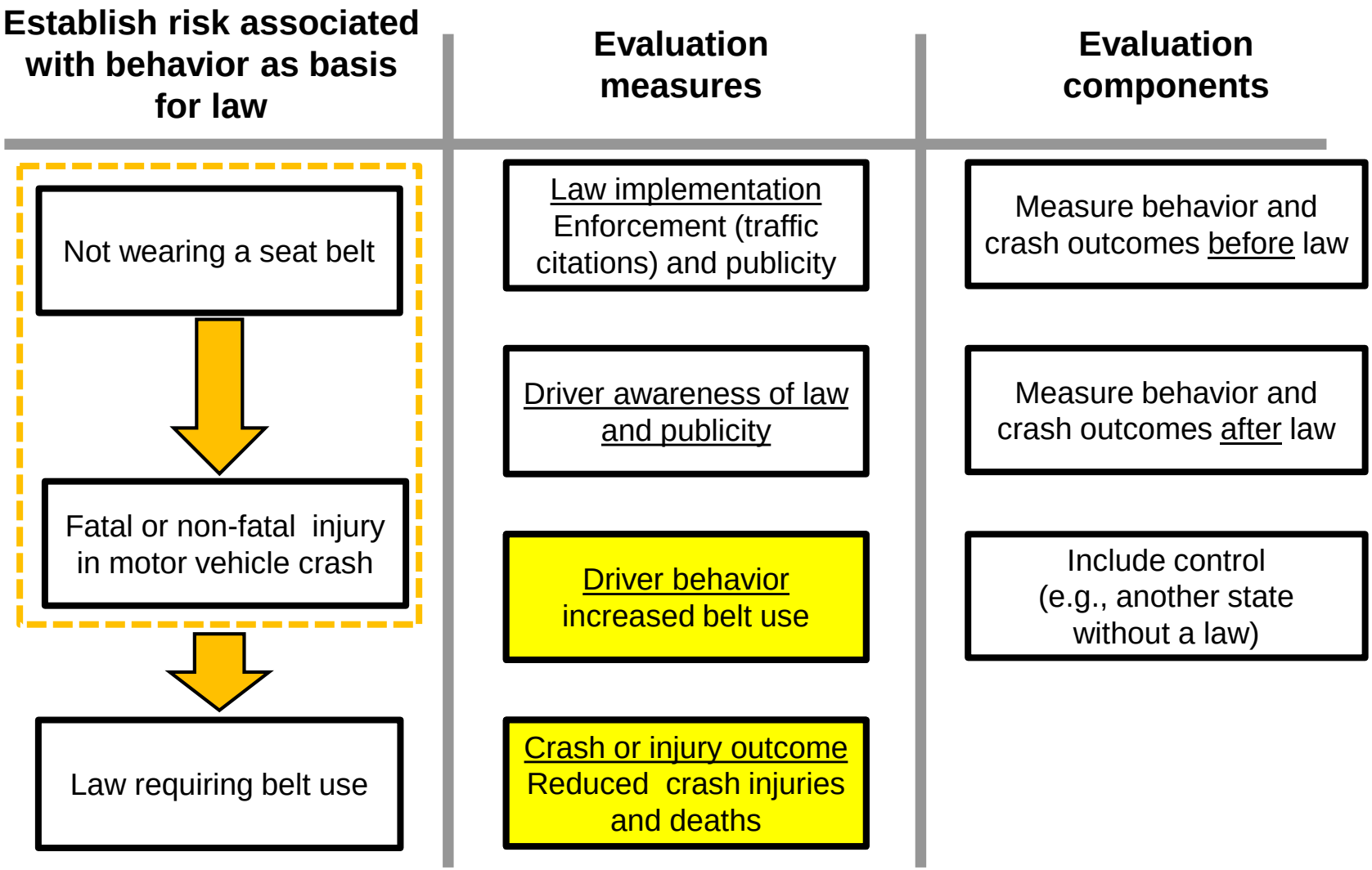
Evaluating the impacts of laws

Laws requiring seatbelt use as an example

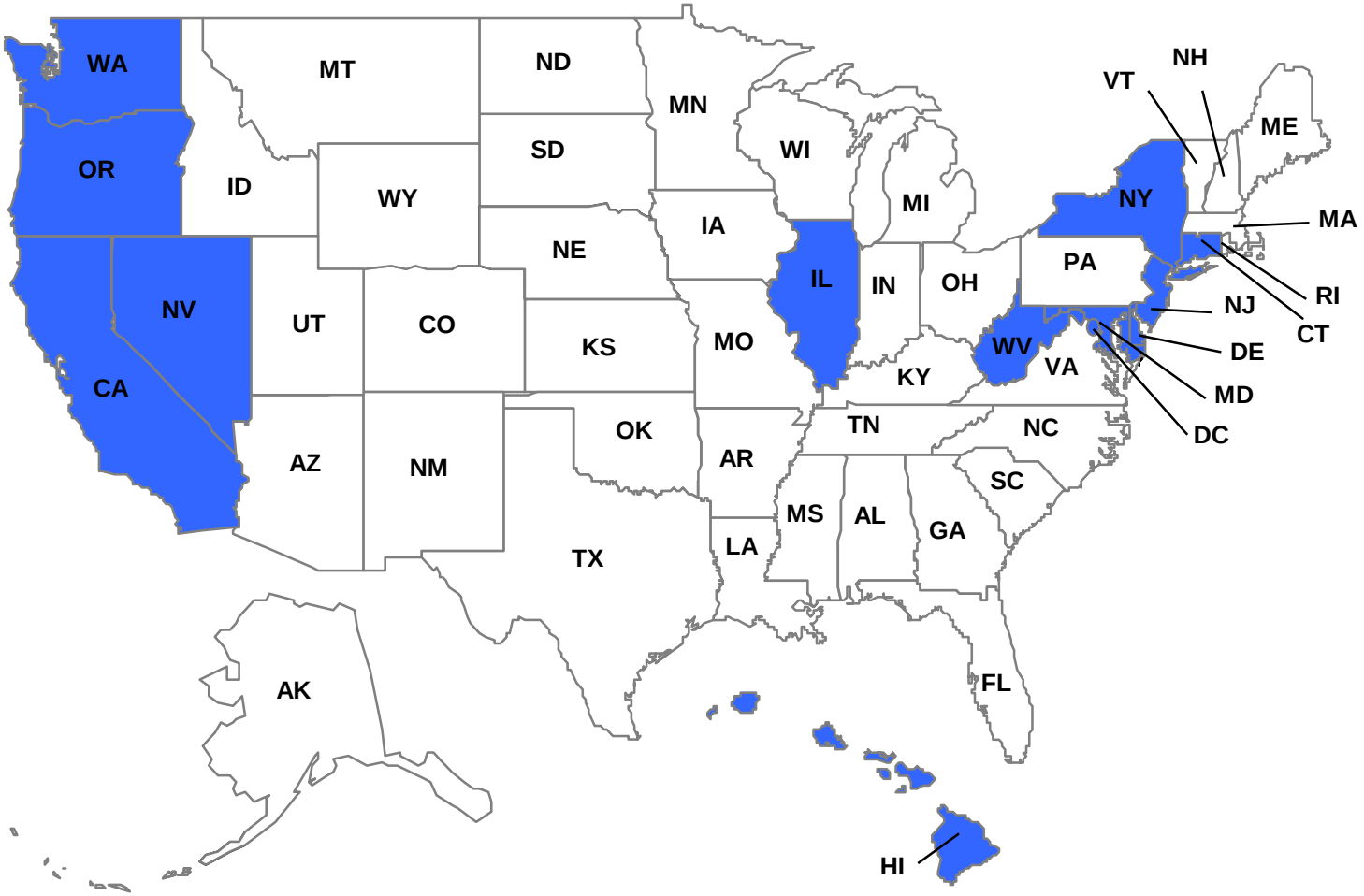


Cellphone laws and driver behavior

- In the past, strong laws, with strong and publicized enforcement, have been effective in changing driver behavior and reducing crashes
- Almost all U.S. states have laws limiting drivers' phone use
- Research on effects of laws on driver behavior
  - All-driver bans on hand-held phone conversations reduced observed rates of hand-held phone conversations
  - Drivers in ban states reported higher rates of hands-free phone use and lower overall phone use compared with drivers in non-ban states
  - Some evidence that all-phone bans directed at teenage drivers do not affect their phone use
  - Scant evidence on compliance with texting bans
  - After publicized enforcement campaigns in 2 cities, lower rates of handheld phone conversations and phone manipulations were observed

States that ban all drivers from using hand-held phones

March 2014



Crash effects of all-driver bans on handheld phone conversations are unclear

- 9 peer-reviewed studies
  - Various crash measures (e.g., insurance collision claims; fatal crash involvements; fatalities in bad weather or on wet roads; single-vehicle, single-occupant fatal crashes)
- Mixed findings from 4 state-specific studies using fatal or non-fatal crash measures
- Mixed findings from 5 multi-state or cross-state national studies of fatal crash measures
- Some studies had important limitations (e.g., mis-coded laws, not accounting for confounding factors, brief after-ban study period)

States that ban all drivers from texting

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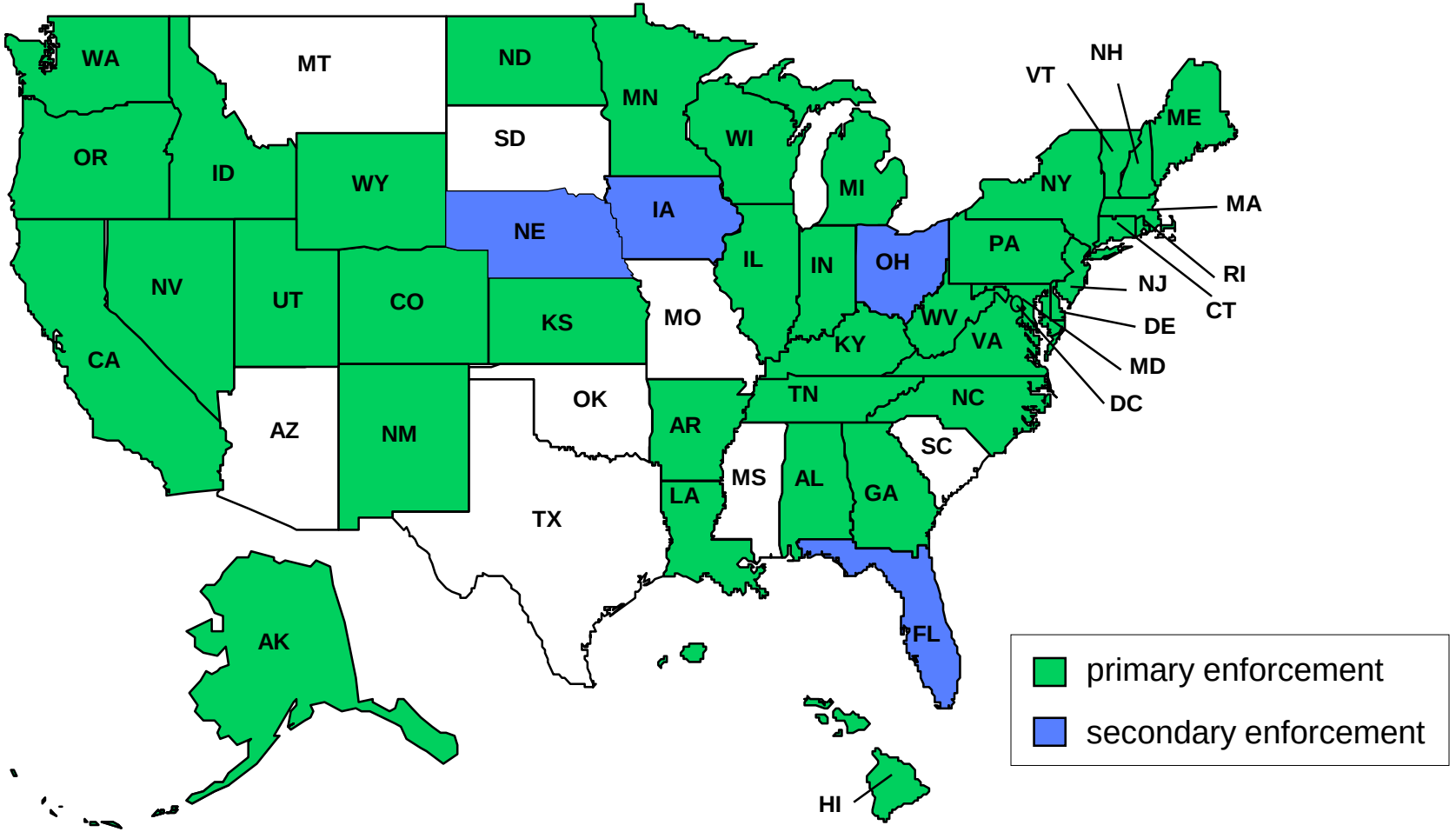
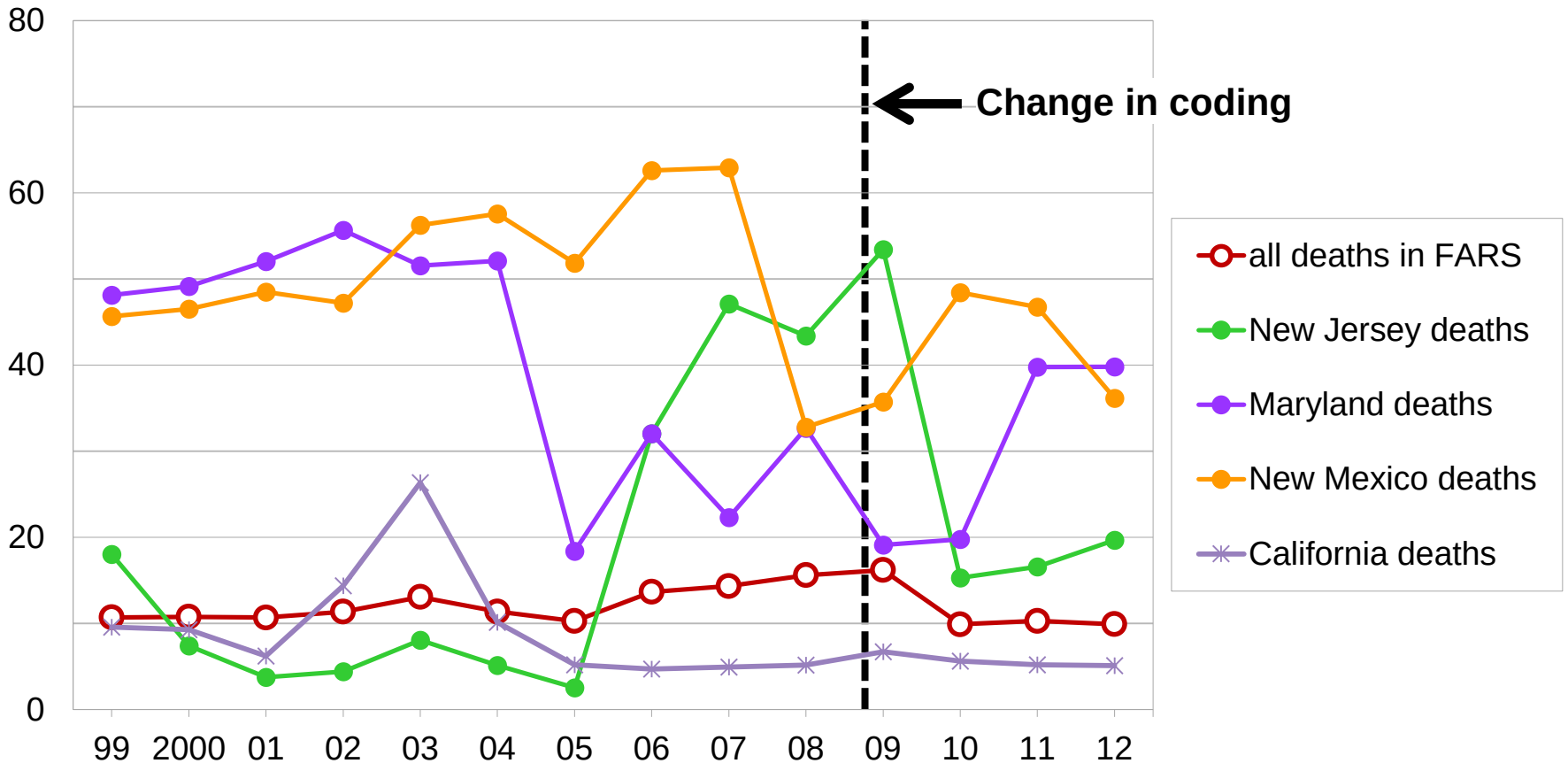


Effects of texting bans on crashes also are unclear

- 2 peer-reviewed papers and 1 technical report
- In an analysis of insurance collision claim rates in 4 ban states and control states without bans, significant small increases in 3 states and no change in the 4th state
- 2 cross-state national studies had mixed findings and both had limitations
  - One study found single-vehicle, single-occupant fatal crashes were lower in states with stronger texting bans (all-driver, primary enforcement) compared with states without bans
  - Second study found no significant effects on number of fatalities associated with texting bans

Distraction is not reliably coded in police crash reports

Percent of deaths coded as involving driver distraction, Fatality Analysis Reporting System, by calendar year



Conclusions

- Despite increasing number of laws limiting phone use, it is unclear if they are having the intended effects on behavior and crashes
- Unsettled science regarding crash risks associated with phone use makes it difficult to formulate reasonable hypotheses about expected ban effects or to choose appropriate crash measures
  - Police crash reports unreliable in identifying crashes attributable to distraction
- Other significant challenges limited findings of some studies
  - Study designs often lack appropriate controls
  - Information on compliance with laws usually lacking
  - Strength, enforcement type, and specific provisions of laws vary across states and over time

Research needs

Research priorities

- Conducting studies of the crash risks associated with phone use that address the limitations of prior studies
- Validating the association of non-crash surrogates (e.g., crash-relevant conflicts) from naturalistic studies with crashes of different severities
- Conducting additional well-controlled evaluations of cellphone and texting laws that include assessments of their effects on driving behavior and on crashes of various severities

Cross-state national studies face special challenges

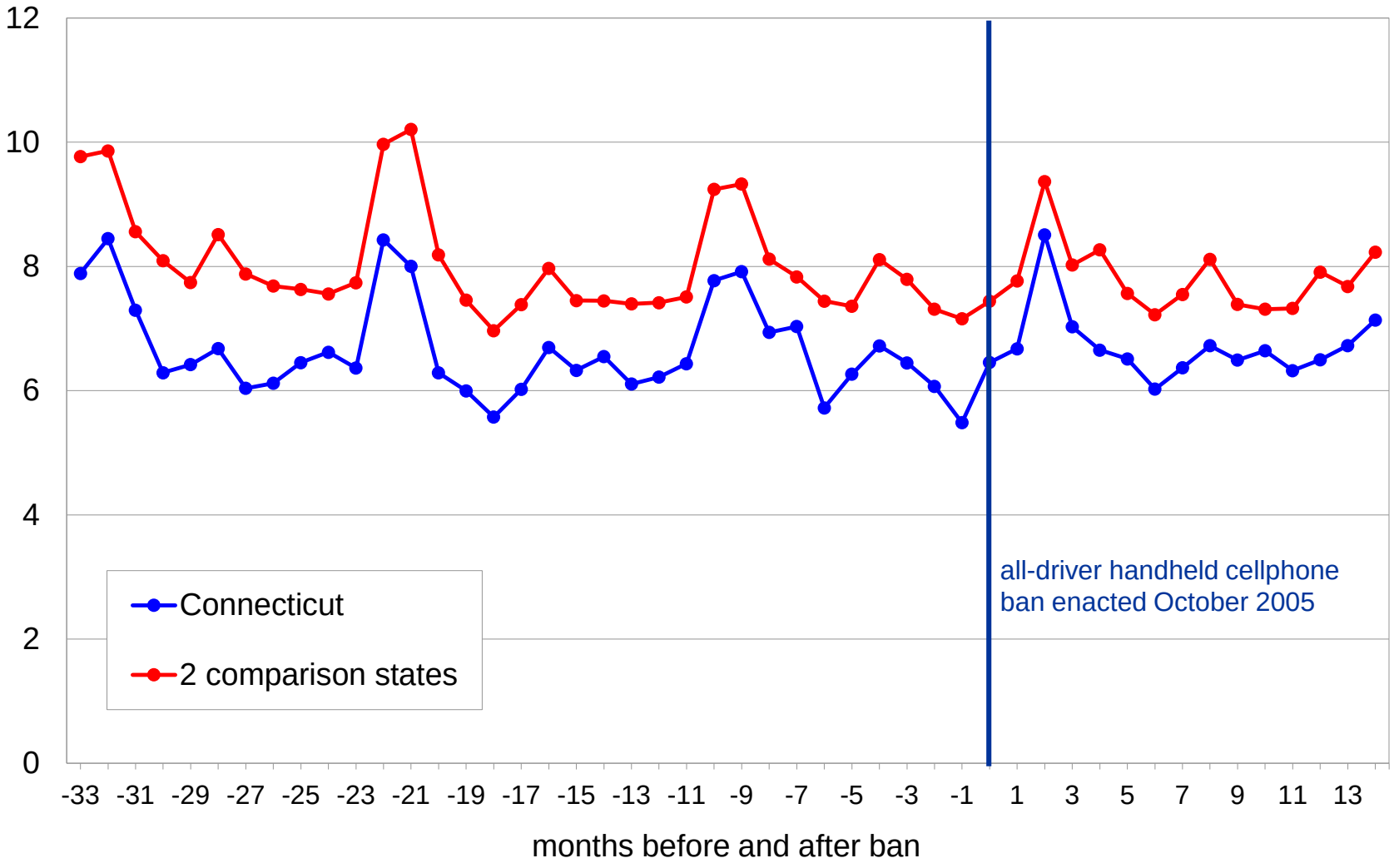
- Fatality Analysis Reporting System (FARS) is the only publicly available data set that can be analyzed by state
  - Fatal crash risk associated with phone use is unknown
  - Samples of fatal crashes small in some states, particularly when analyzed at the county and/or monthly level
- Difficult to identify appropriate control variables, especially during economic recession affecting driving exposure and crash risk
- Difficult to account for variations in cellphone laws across states and changes in laws over time
- Data on compliance with bans available in very few states

State-specific study designs can offer some advantages

- Strong design if appropriate control jurisdiction(s) included
- Opportunity to document implementation of ban and effects of bans on driver behavior
- Opportunity to evaluate effects on crashes of different severities using state police-reported crash data

Collision claim frequencies for new vehicles by month

Connecticut vs. Massachusetts and New York



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