

THE COVID-19 PANDEMIC IN INDIANA: DOCUMENTING ITS SPREAD AND THE SOCIAL DISTANCING BEHAVIOR OF HOOSIERS

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Governor Eric Holcomb ✓
@GovHolcomb



Today, I announced I'll sign an executive order requiring Hoosiers to wear face coverings in most public settings, beginning Monday.

4:48 PM · Jul 22, 2020 · [Twitter Web App](#)

998 Retweets and comments **4.9K** Likes

Motivation:

Yesterday, Governor Eric Holcomb announced that Hoosiers over 8 years old will have to wear masks in many public and indoor settings

How much will this affect Hoosiers' behavior?



Research Questions

1. How did the early COVID-19 Pandemic evolve across Indiana?
2. How did social distancing behavior evolve in Indiana?
3. Were there differences in social distancing behavior by rural vs. urban counties?
4. What events affected social distancing behavior in Indiana?

We are grateful to SafeGraph for providing Social Distancing Metrics and Weekly Patterns data.

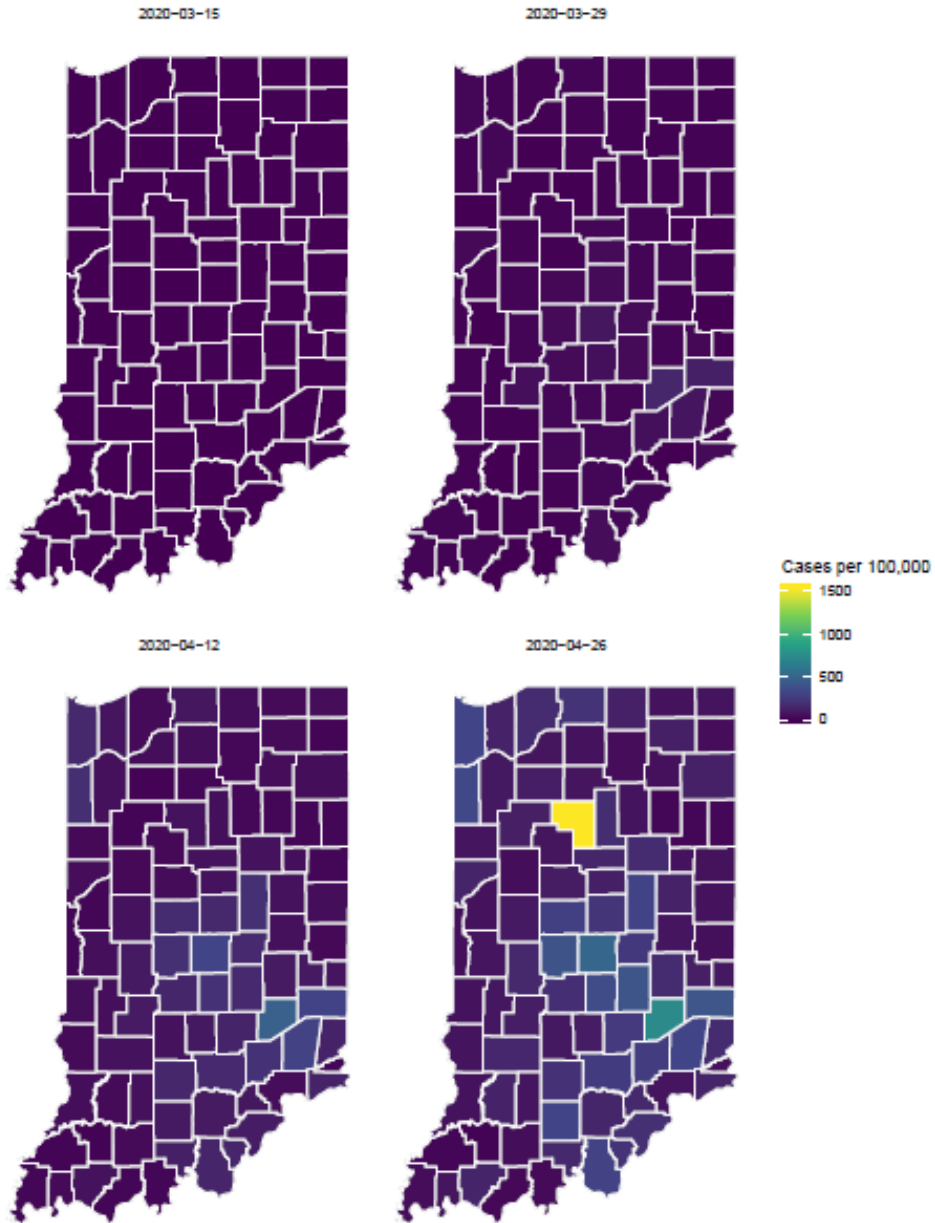
“SafeGraph, a data company that aggregates anonymized location data from numerous applications in order to provide insights about physical places. To enhance privacy, SafeGraph excludes census block group information if fewer than five devices visited an establishment in a month from a given census block group.”



Data on COVID-19

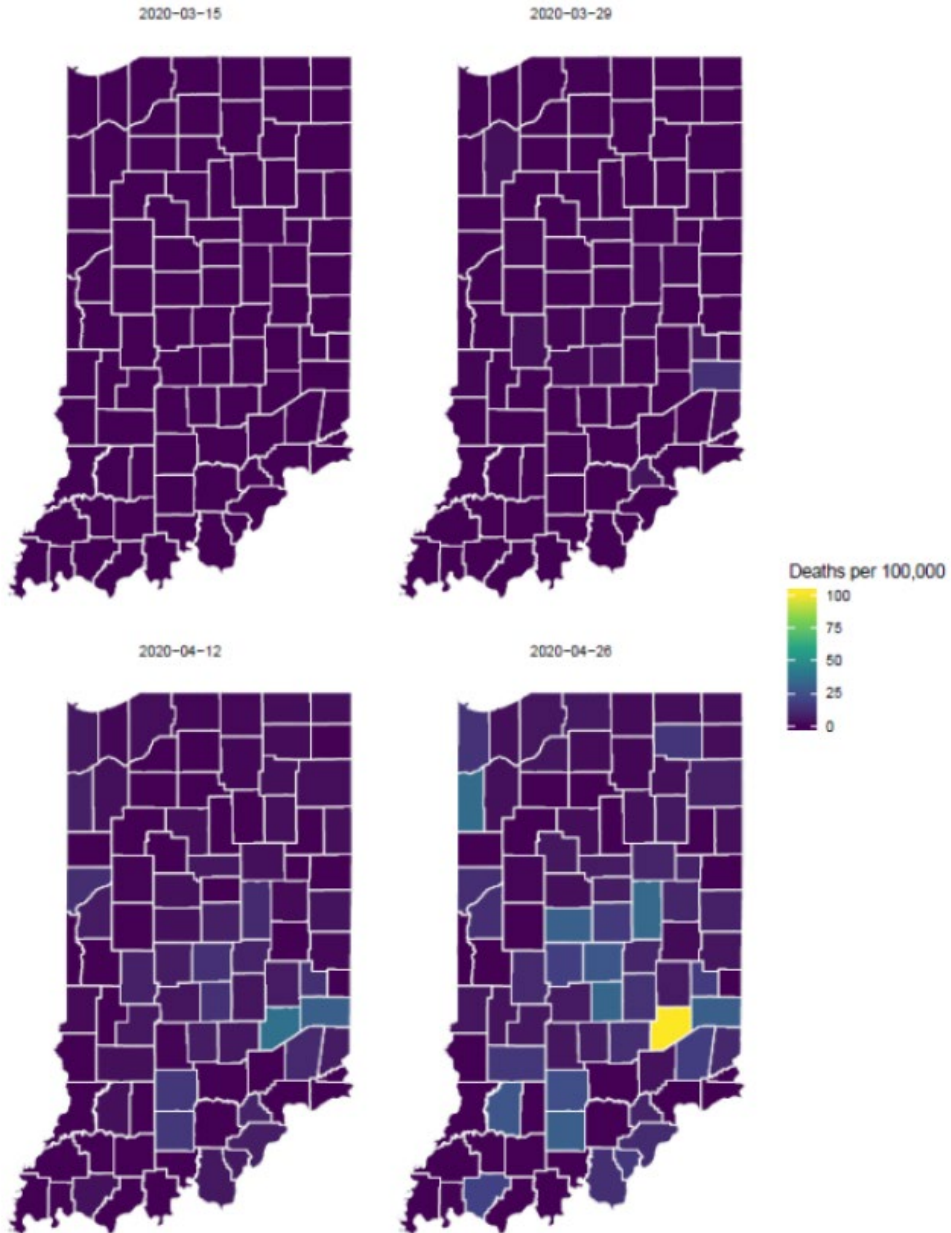
- Confirmed and probable incidence and deaths at the county-day level
- Compiled by the New York Times from state and local governments and health departments
- Available for free download here:
<https://github.com/nytimes/covid-19-data>





Evolution of COVID-19 Cases in Indiana (3/15 – 4/26)

- Very few cases before 3/29



Evolution of COVID-19 Deaths in Indiana (3/15 – 4/26)

- Very few deaths before 4/15

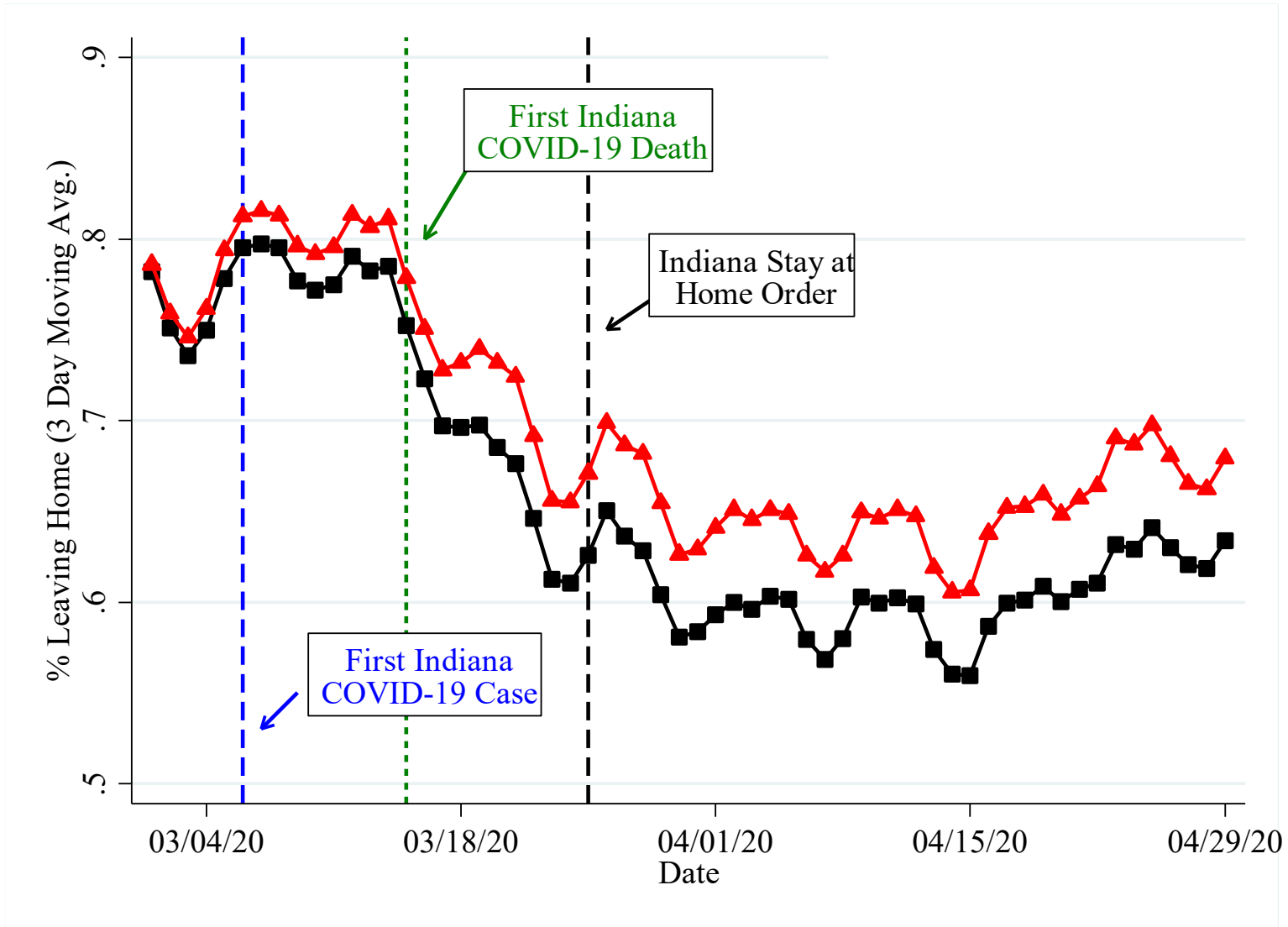


Data on Social Distancing from SafeGraph

- Tracks mobility by detecting the movement of smartphones
 - SafeGraph detects a person's likely "home" given cell phone's usual location overnight
 - Also measures visits to various points of interest (POIs), including gas stations, supercenters (e.g. Walmart), grocery stores, restaurants, bars.
 - Aggregated anonymized location data at the census block level
- We calculate measures of social distancing at county level
 - Percent of respondents staying at home completely at the county-day level
- We also calculate visits to categories of POIs to examine other behaviors
 - Visits to stores (gas stations, supercenters, and grocery stores)
 - Visits to recreation/entertainment (RV & recreational camps, bars, and restaurants)



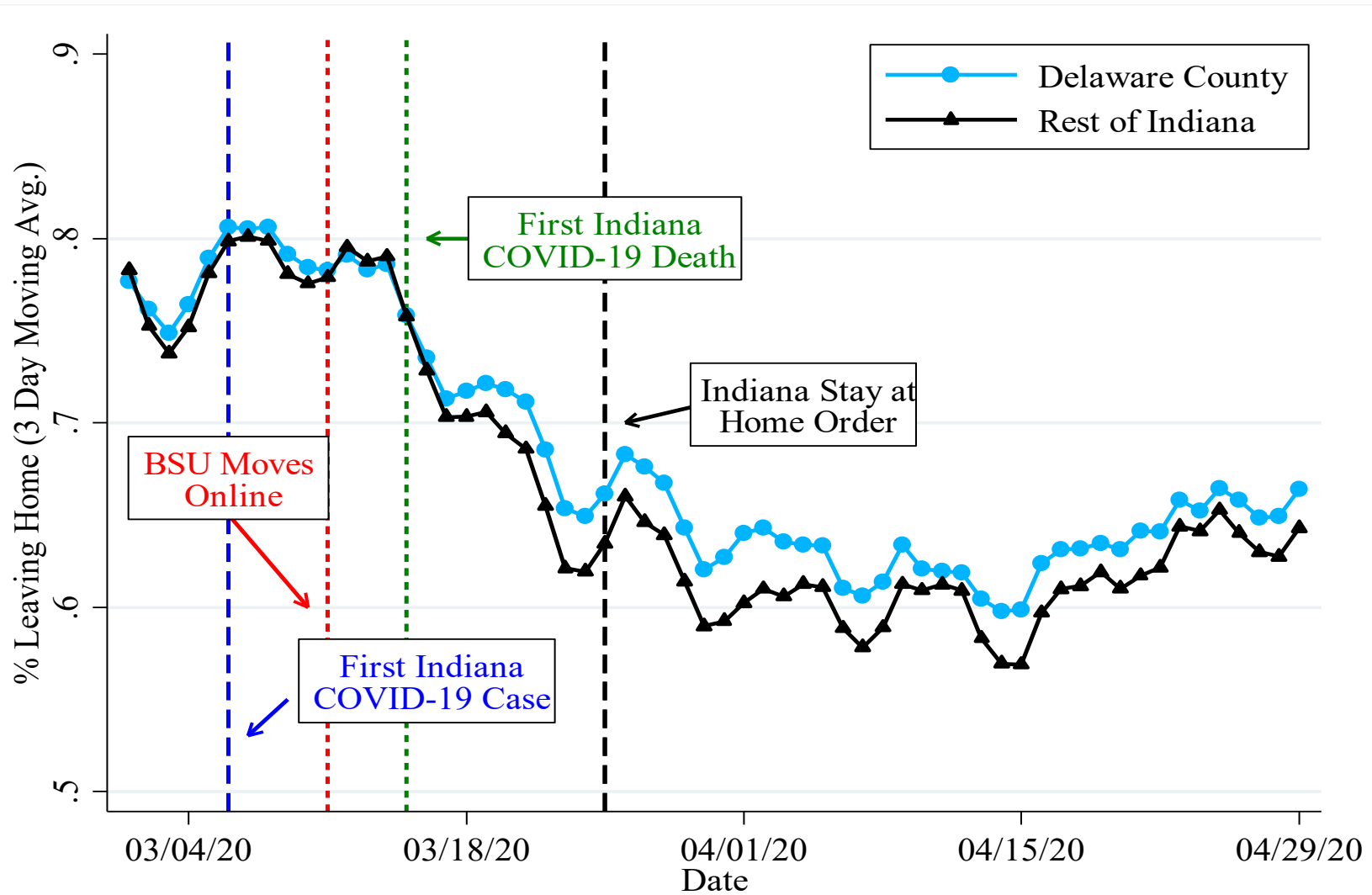
Percent of Indiana Residents Leaving Home



WE FLY



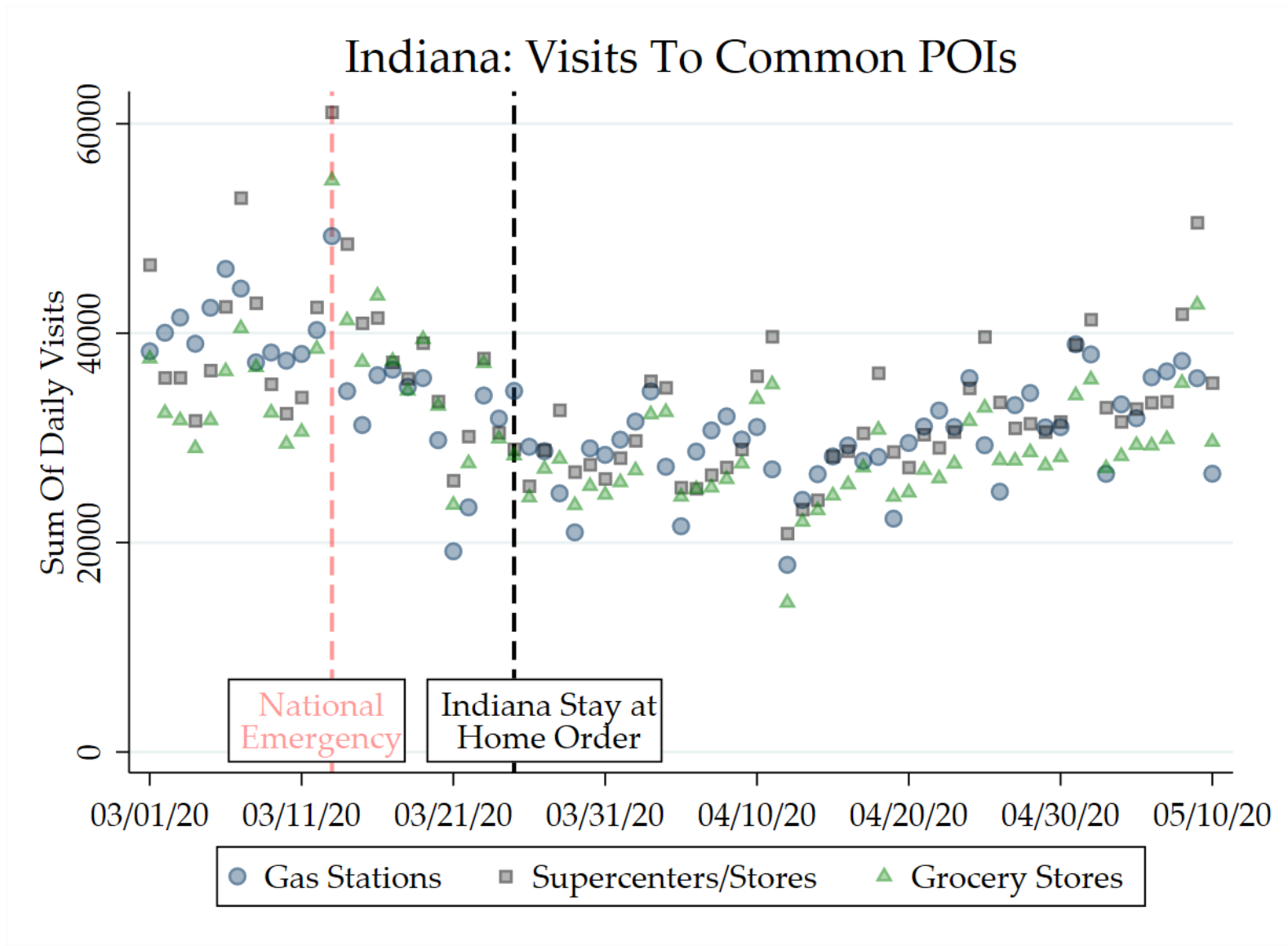
Percent of Indiana Residents Leaving Home



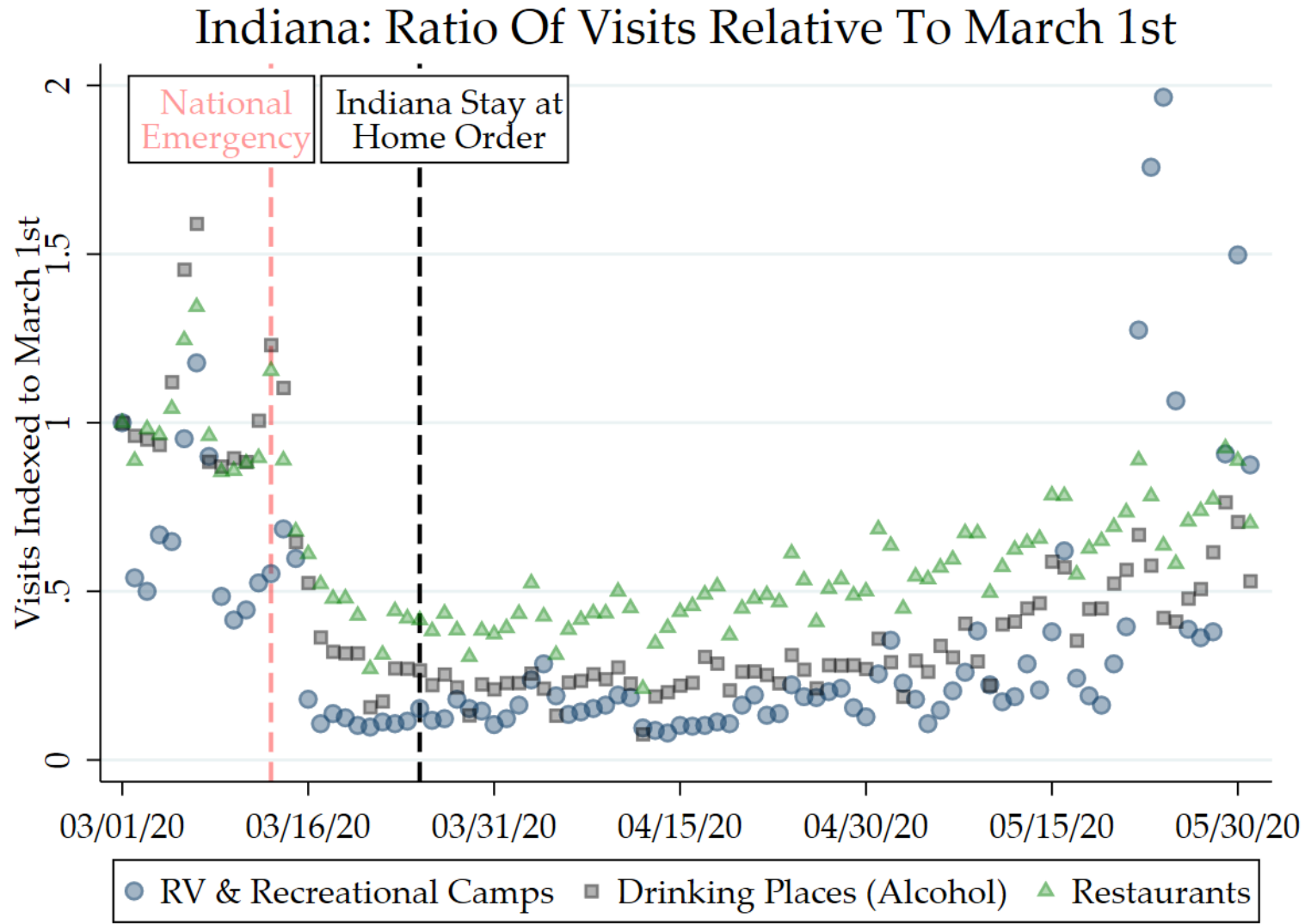
WE FLY



Visits to Three Types of Stores in Indiana



Visits to Three Types of Stores in Indiana



WE FLY

Summary

- The early spread of COVID-19 in Indiana was concentrated in a few counties, but widespread across the state.
- The same was true in deaths, but there was not perfect overlap between high cases and high deaths.
- Hoosiers largely adopted social distancing behaviors before state-mandated stay-at-home orders.
- Starting in April, social-distancing behaviors began to lapse, even with the stay-at-home order still in place.



Thank you!

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Study can be downloaded at:

<https://www.bsu.edu/-/media/www/departamentalcontent/millercollegeofbusiness/pdfs/faculty%20research%20collection/covid/covid-sdbehavior.pdf>





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