

Disparate Impacts of the COVID-19 Pandemic: People vs. Places

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FEDERAL RESERVE BANK OF MINNEAPOLIS

An early proposal

- March 26: Issued a proposal for a large-scale survey to provide a timely, broad view of pandemic extent and impact
- Important features
 - **Frequent** – daily (motivated by disease tracking)
 - **Large** – sufficient sample to generate county-level statistics and those for small demographic populations
 - **Lasting** – up to two years
 - **Modules** – health symptoms, behavior; financial health; mental/social

Motivation for the proposal

- Containing novel coronavirus outbreaks seemed likely to be important for a long period (12-18 months) plus recovery
- Impact of containment efforts seemed likely to be uneven
- The virus and containment efforts seemed likely to affect multiple dimensions of wellbeing
- Surveys seemed possibly an efficient way to track virus given lack of testing infrastructure in March 2020
- Timely information on disparate impacts could allow policymakers to target aid

The social science data response

- COVID Impact Survey
 - 10 states, 8 metro areas
- Census Household Pulse Survey
 - 50 states, 15 metro areas
- Others: Understanding America Study, CMU Delphi Project, supplements/additions to existing surveys like SHED, BLS

What we've learned

- Containing novel coronavirus outbreaks seemed likely to be important for a long period (12-18 months) plus recovery. **Yes.**
- Impact of containment efforts seemed likely to be uneven.
 - **Demographically yes, geographically no.**
- The virus and containment efforts seemed likely to affect multiple dimensions of wellbeing. **Yes.**
- Surveys seemed possibly an efficient way to track virus given lack of testing infrastructure in March 2020.
 - **Virus forecasts no, current health and long-term impacts of COVID infection yes.**
- Timely information on disparate impacts could allow targeting aid.
 - **No, but tracking aid receipt.**

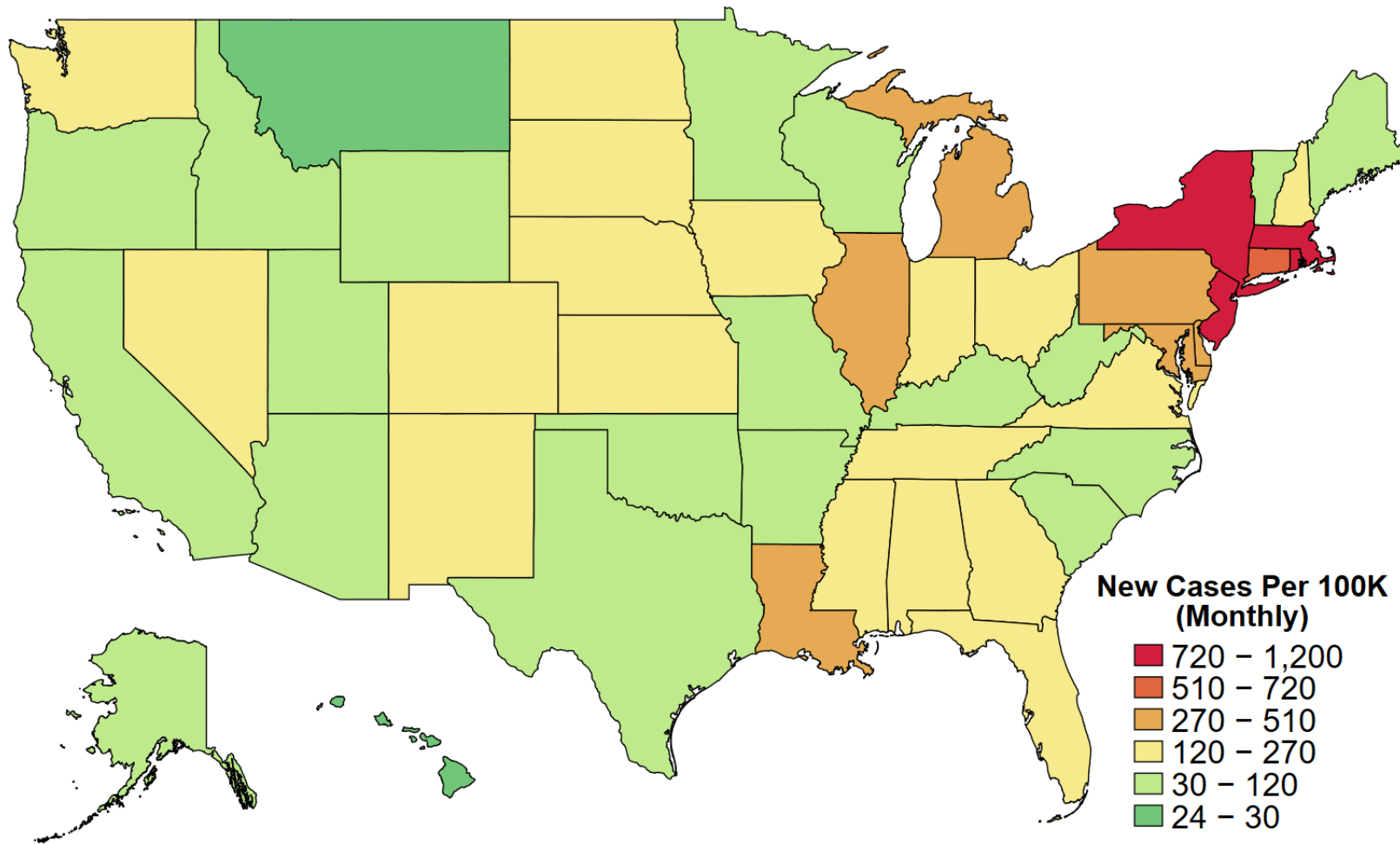
Overview

- Geographic dimensions of COVID-19 cases
- Outcomes in the COVID-19 environment across places: Employment, financial security, and mental health
- Outcomes in the COVID-19 environment across people
- Concluding discussion: Is it possible the economic impact of virus outbreaks will become more localized? And what next?



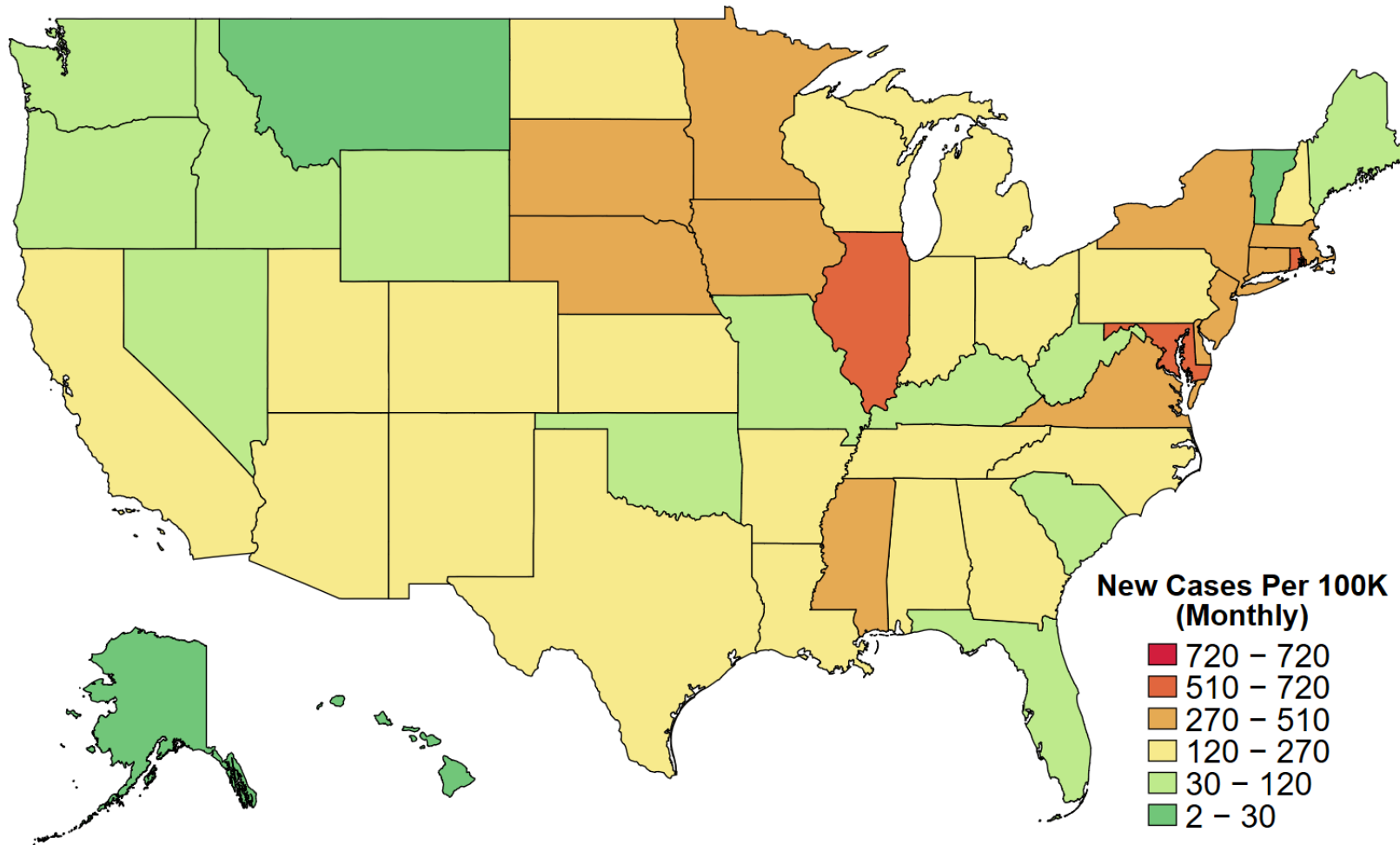
Geographic Dimensions of COVID-19 Cases

April - New Cases Per 100K by State



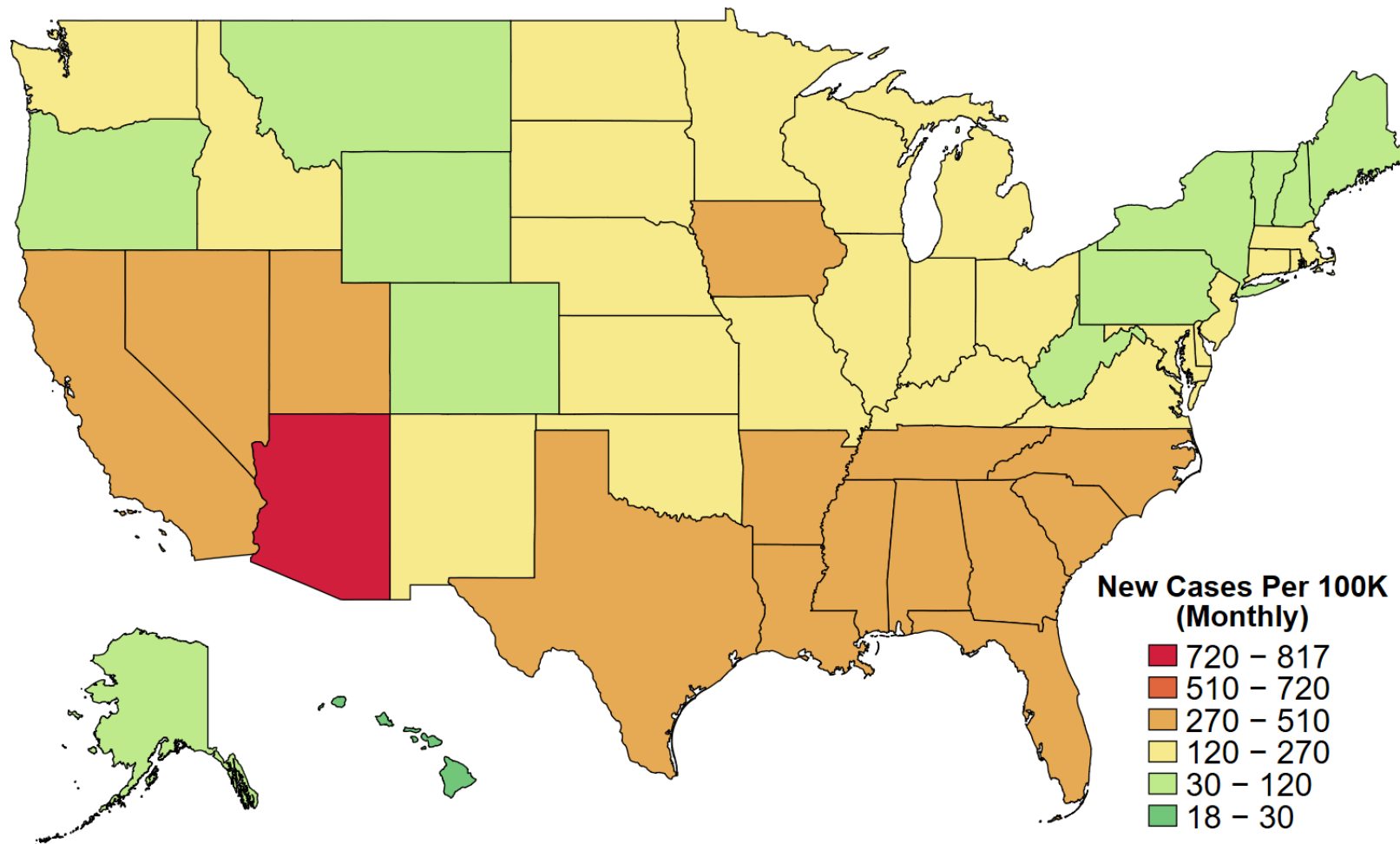
Note: Case data from New York Times. Population estimates from 2019 American Community Survey tables..

May - New Cases Per 100K by State



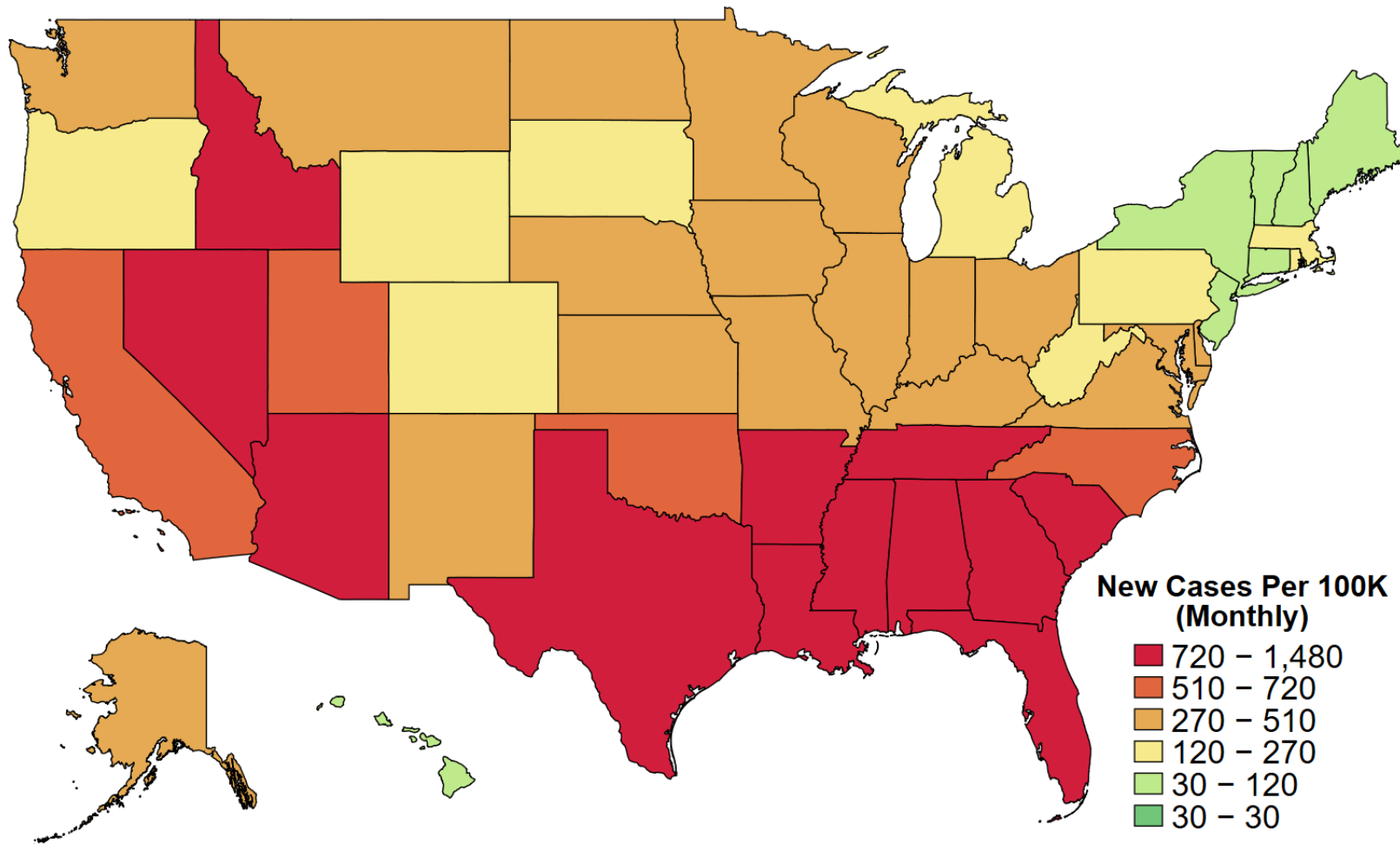
Note: Case data from New York Times. Population estimates from 2019 American Community Survey tables..

June - New Cases Per 100K by State



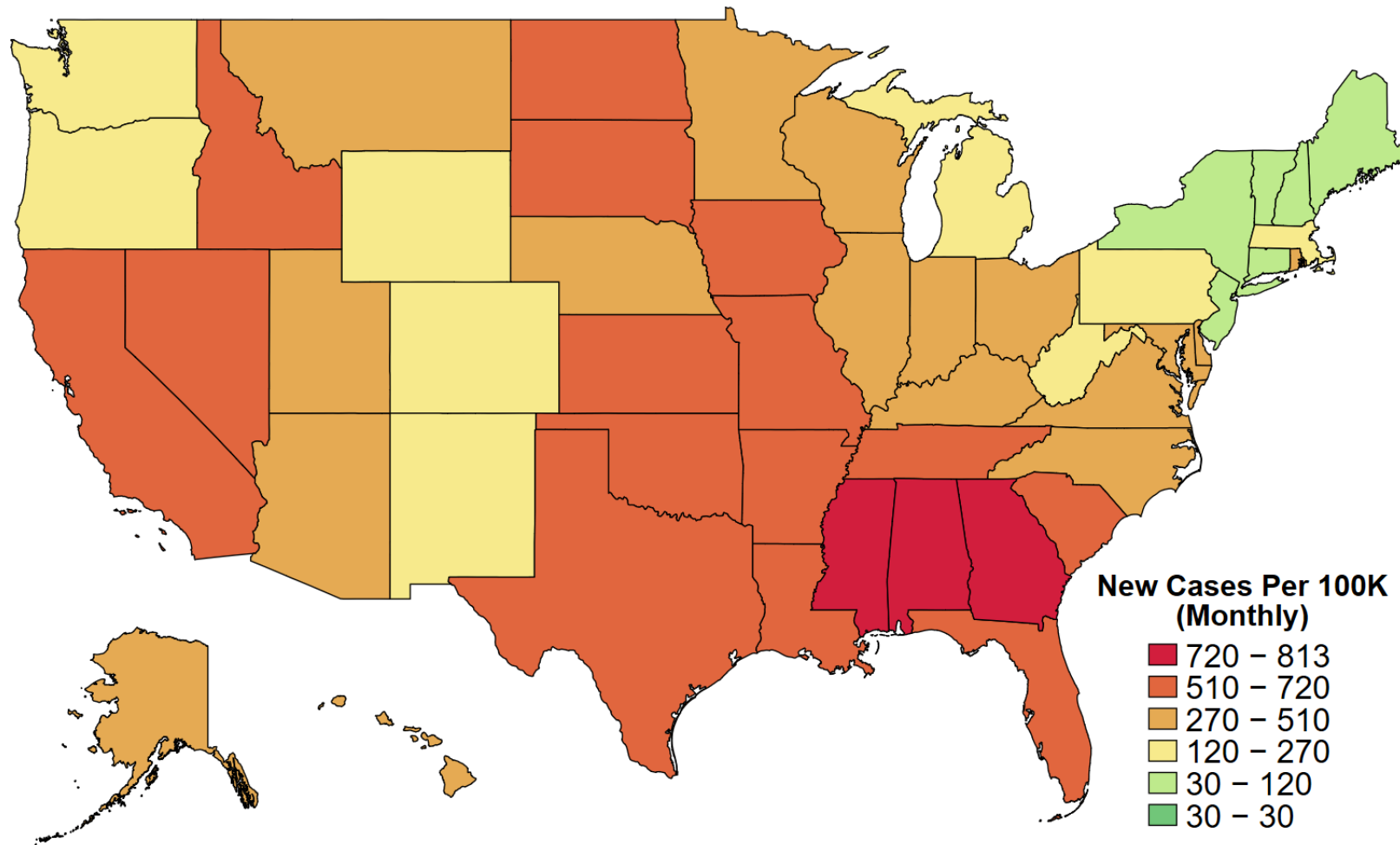
Note: Case data from New York Times. Population estimates from 2019 American Community Survey tables..

July - New Cases Per 100K by MSA



Note: Case data from New York Times. Population estimates from 2019 American Community Survey tables..

August - New Cases Per 100K by MSA



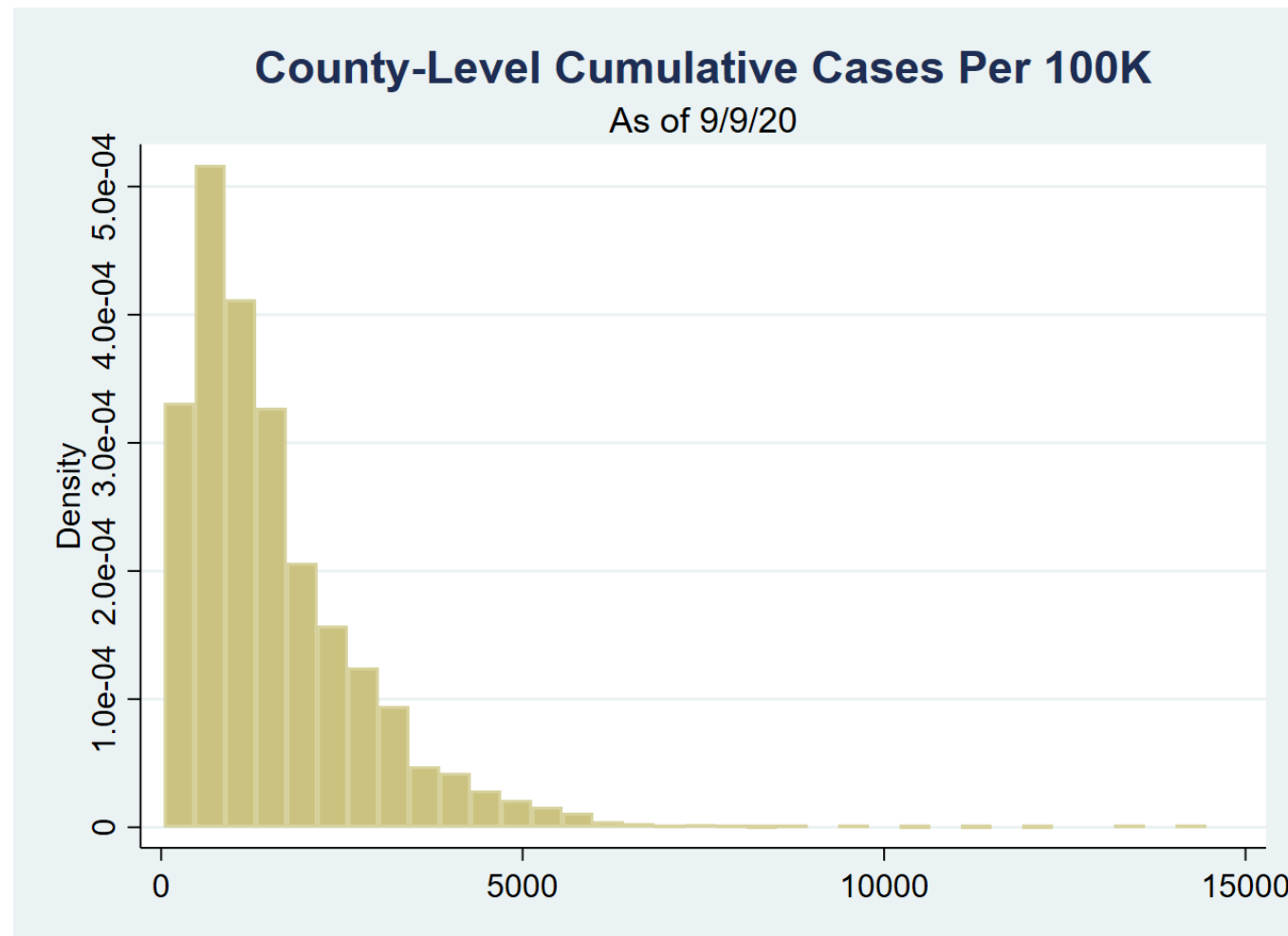
Note: Case data from New York Times. Population estimates from 2019 American Community Survey tables..

New Cases Per 100K by MSA


Metro Area	April	May	June	July	August
Atlanta-Sandy Springs-Alpharetta, GA	178	167	254	805	679
Boston-Cambridge-Newton, MA-NH	877	480	175	122	152
Chicago-Naperville-Elgin, IL-IN-WI	474	673	216	293	400
Dallas-Fort Worth-Arlington, TX	86	156	303	781	656
Detroit-Warren-Dearborn, MI	560	151	166	220	268
Houston-The Woodlands-Sugar Land, TX	115	111	377	848	716
Los Angeles-Long Beach-Anaheim, CA	167	271	424	812	497
Miami-Fort Lauderdale-Pompano Beach, FL	261	181	575	2279	1019
New York-Newark-Jersey City, NY-NJ-PA	899	237	73	59	61
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	543	419	174	218	195
Phoenix-Mesa-Chandler, AZ	71	128	841	1475	364
Riverside-San Bernardino-Ontario, CA	119	143	376	845	667
San Francisco-Oakland-Berkeley, CA	86	97	172	377	422
Seattle-Tacoma-Bellevue, WA	161	86	85	231	200
Washington-Arlington-Alexandria, DC-VA-MD-WV	371	666	277	257	291

Note: Case data from New York Times. Population estimates from 2019 American Community Survey tables..

County-Level Cases Per Capita

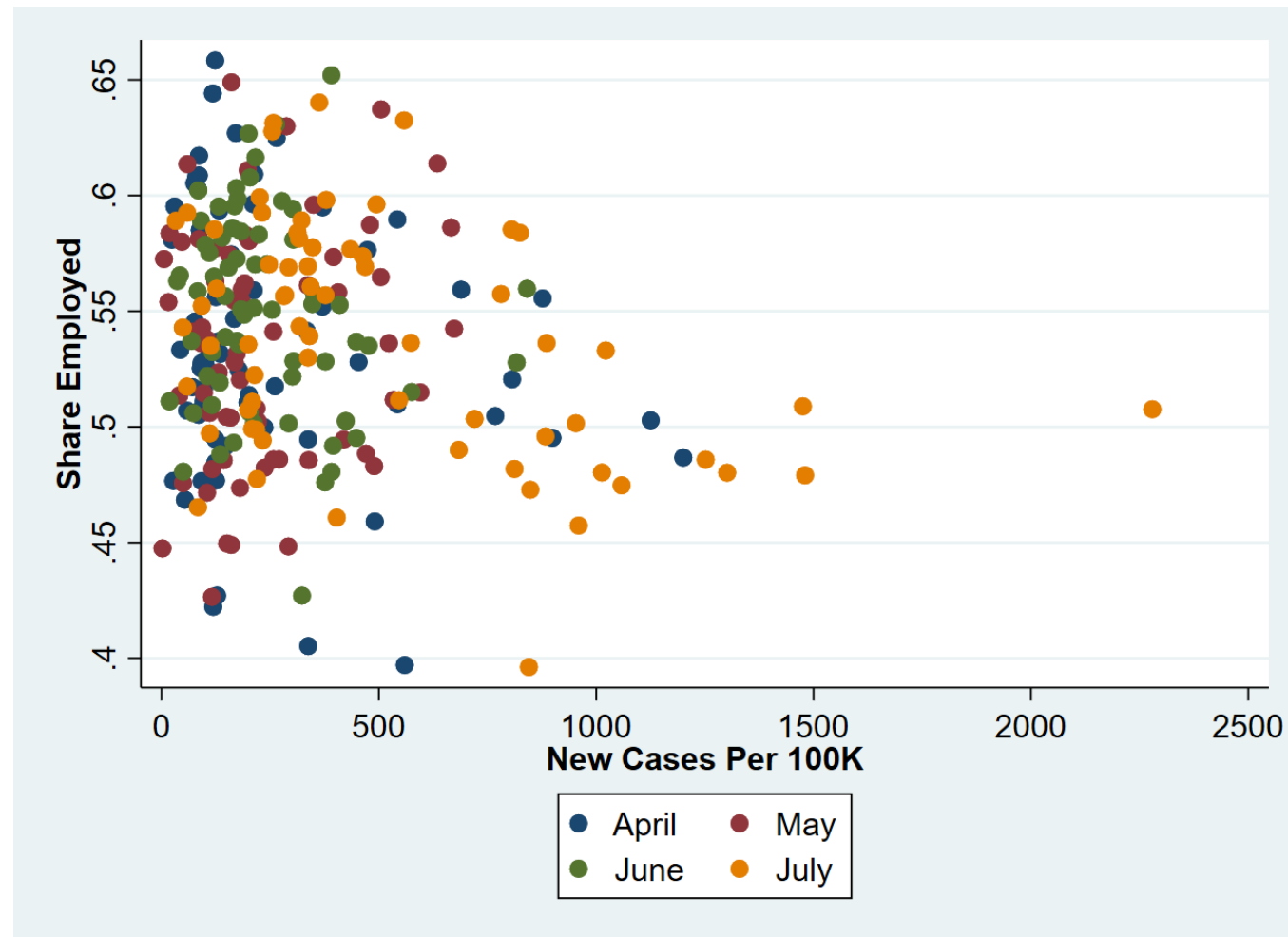


Note: Case data from New York Times. 2019 county-level population estimates from Census Bureau.



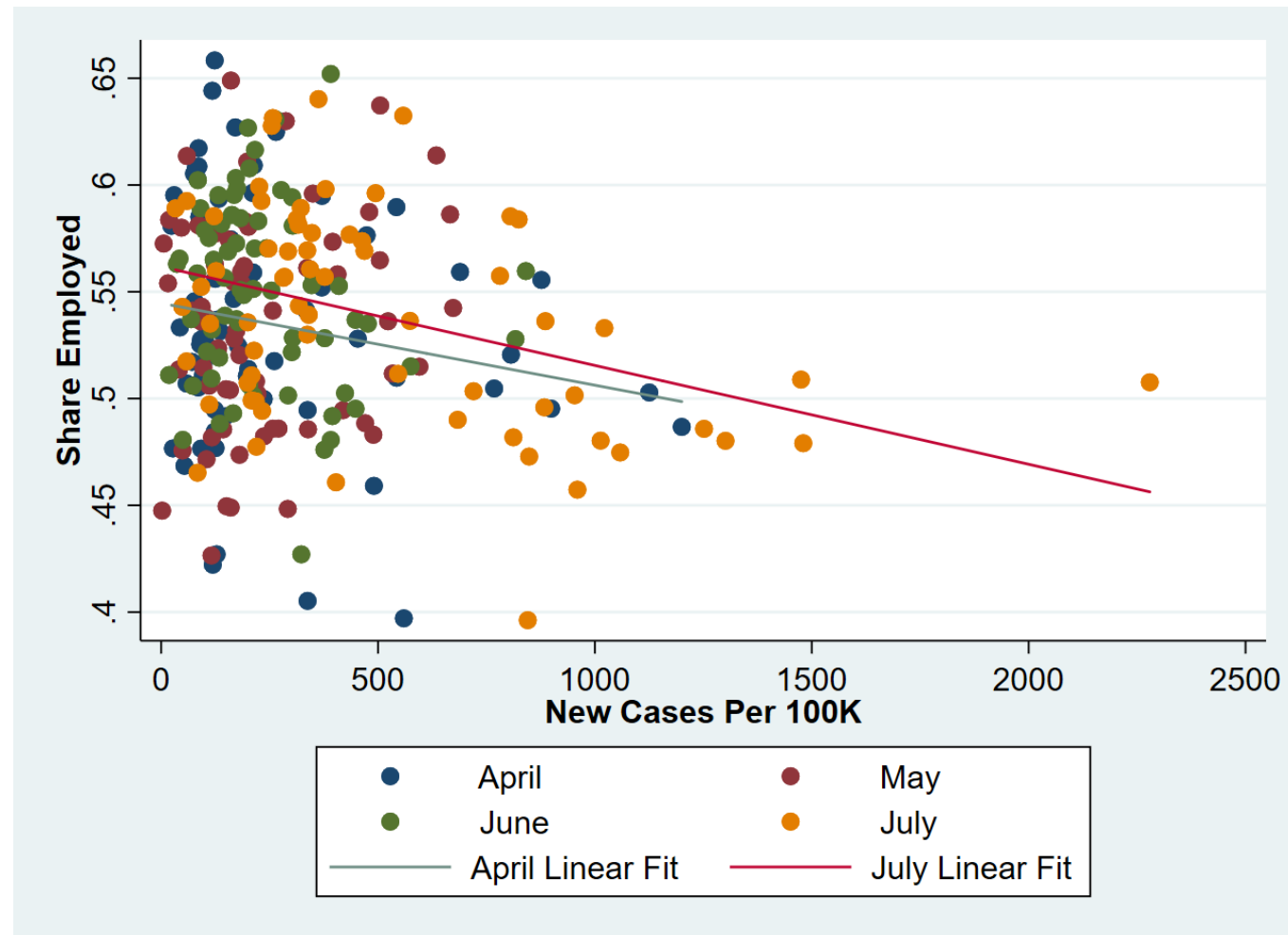
Outcomes in the COVID-19 Environment across Places

Employment-to-Population Ratio



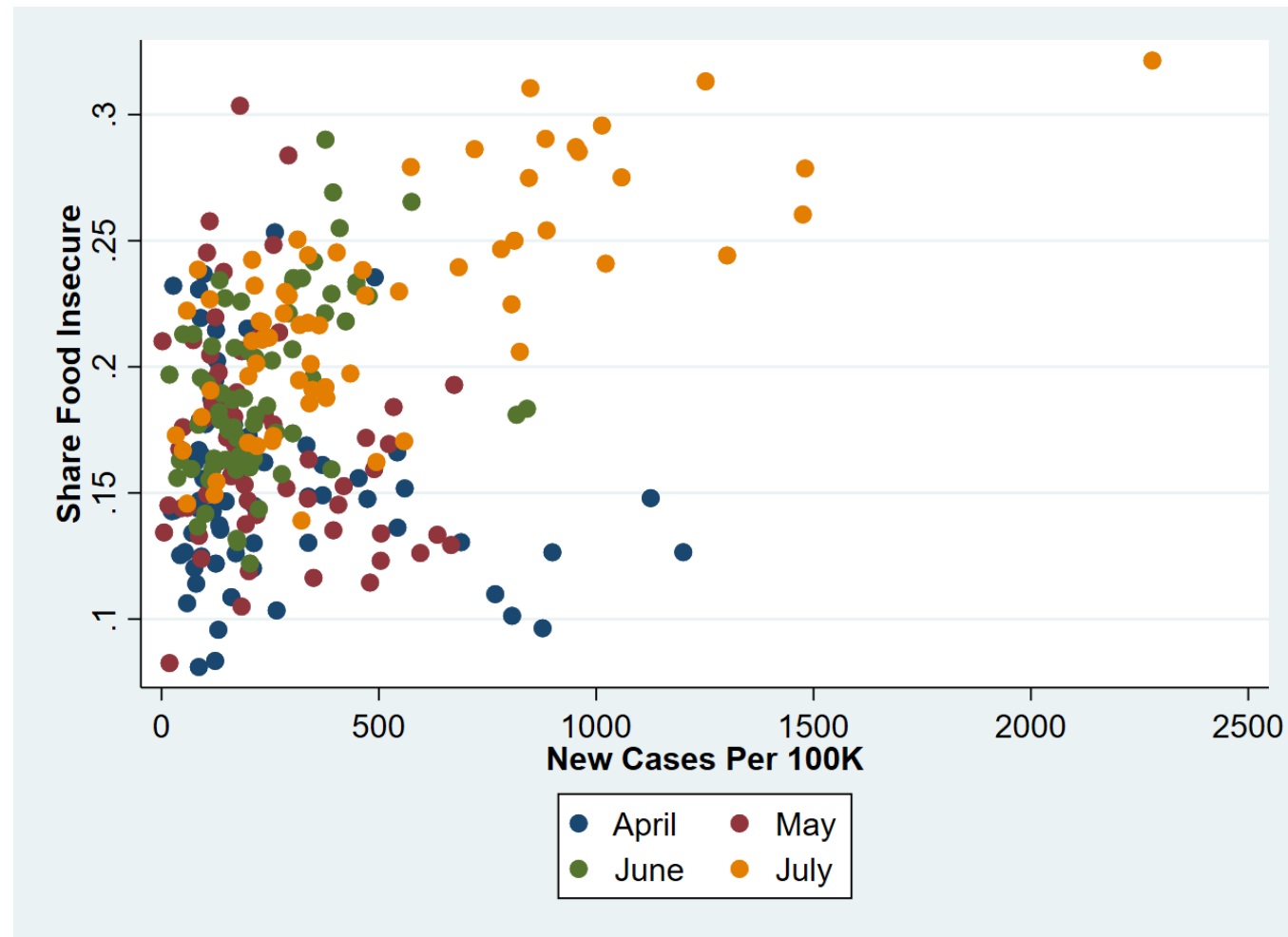
Note: Outcome data calculated using Phase 1 of Census Bureau Household Pulse Survey microdata. Cases data from New York Times. Population estimates from 2019 ACS tables.

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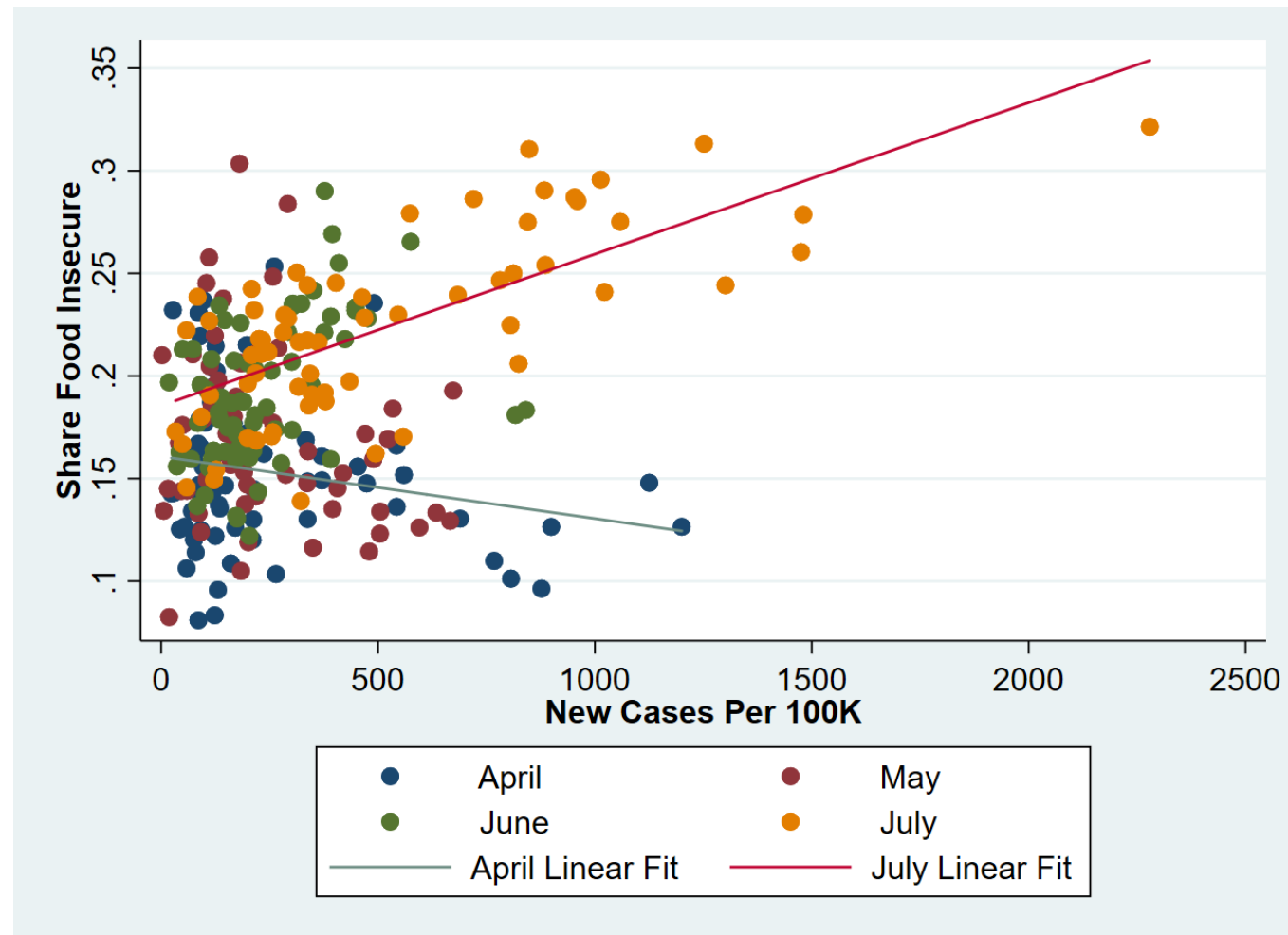
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Share Couldn't Afford Food Wanted



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Place-level correlation between cases and outcomes is unstable

	Share Employed	Share Employment Income Loss	Share Food Insecure	Share Poor Mental Health	Share Late Rent/Mortgage Payment
Panel A. April					
New Cases Per 100	-0.040** (0.013)	0.052** (0.020)	-0.041*** (0.010)	0.087*** (0.015)	0.059* (0.024)
R-Squared	0.068	0.101	0.143	0.509	0.193
Panel B. July					
New Cases Per 100	-0.042*** (0.011)	0.005 (0.016)	0.068*** (0.009)	0.028*** (0.008)	0.020 (0.015)
R-Squared	0.192	0.001	0.558	0.160	0.051

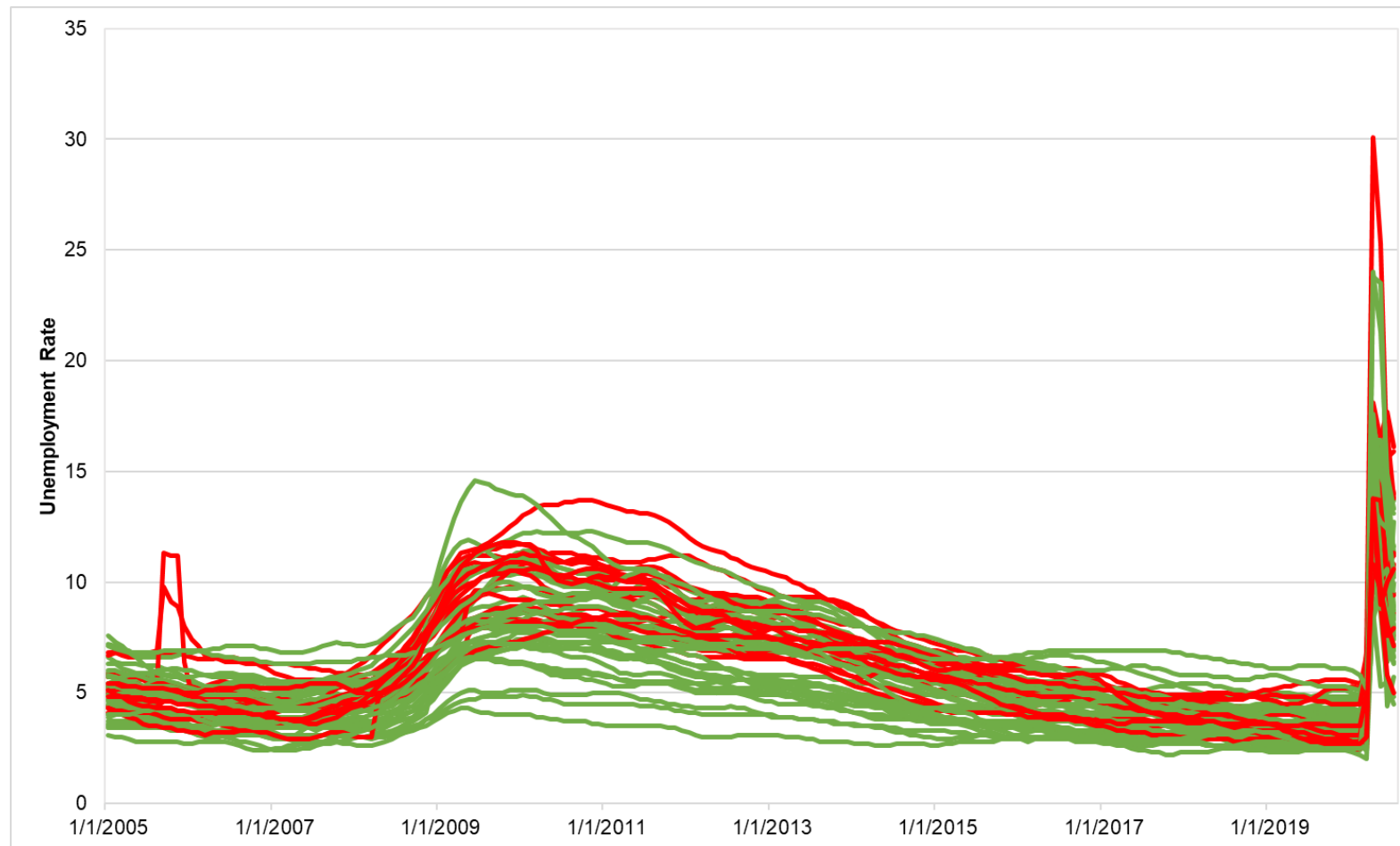
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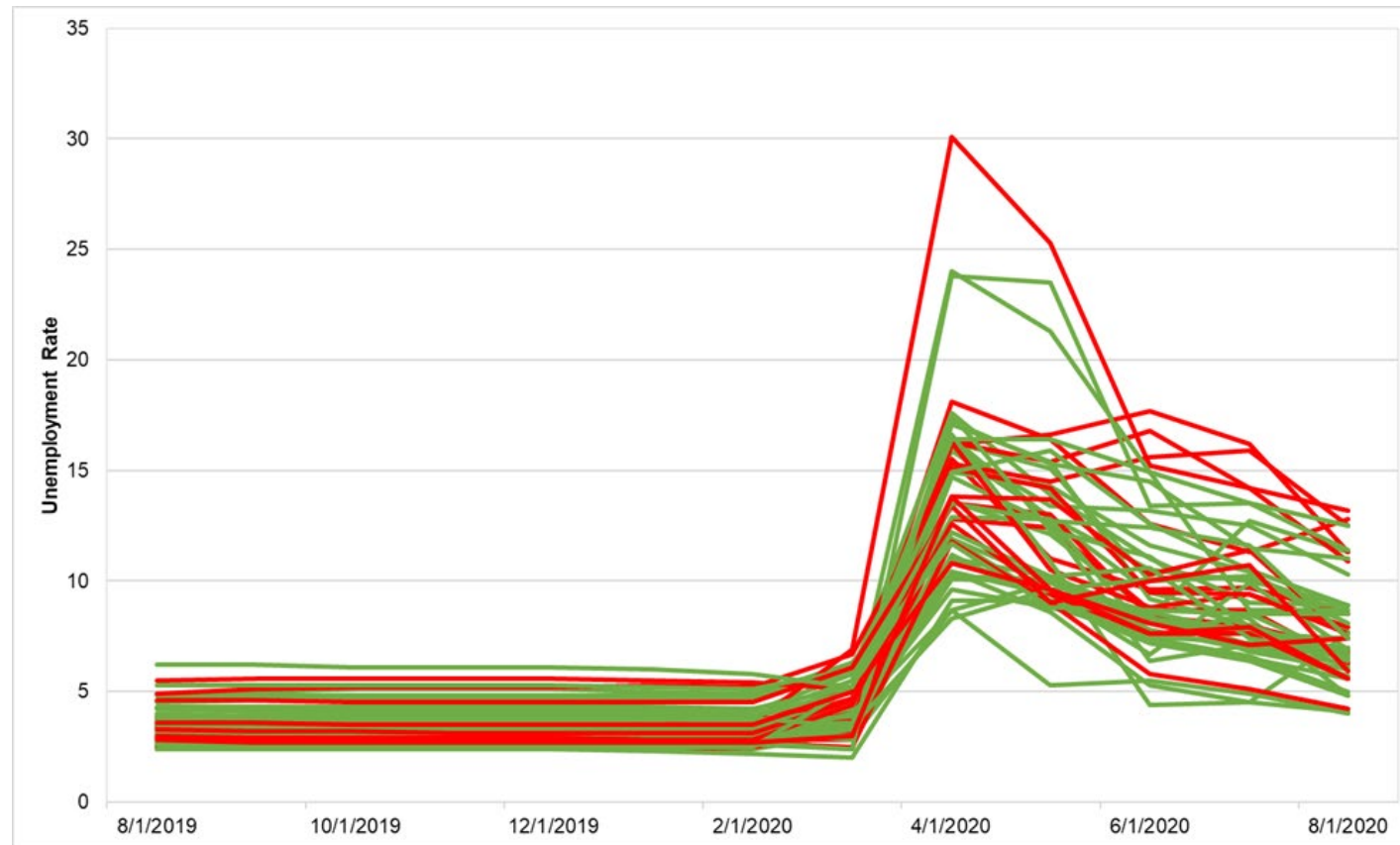
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Unemployment trajectories not systematically different across states with high case rates




Source: State unemployment rates. Bureau of Labor Statistics and FRED. Red indicates state experienced over 720 new cases per 100,000 for any month April through August, 2020.

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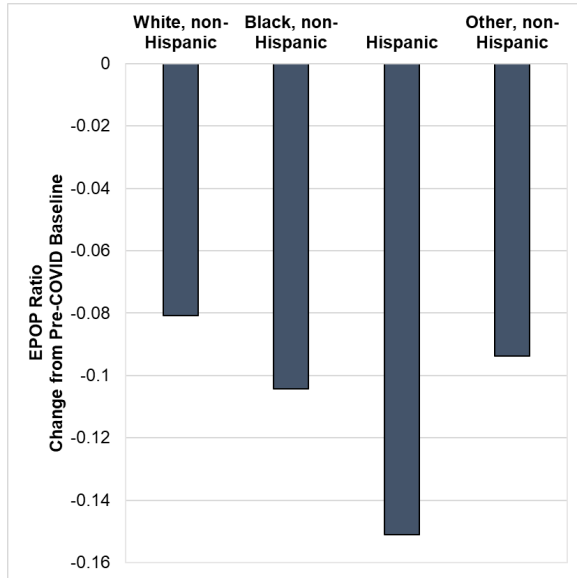


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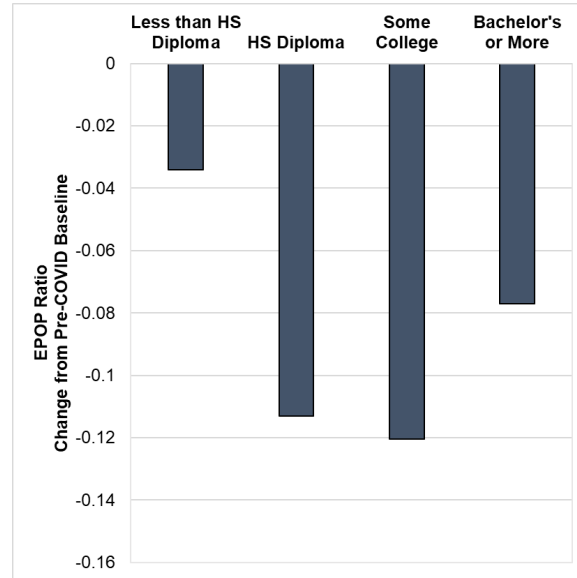


Outcomes in the COVID-19 Environment across People

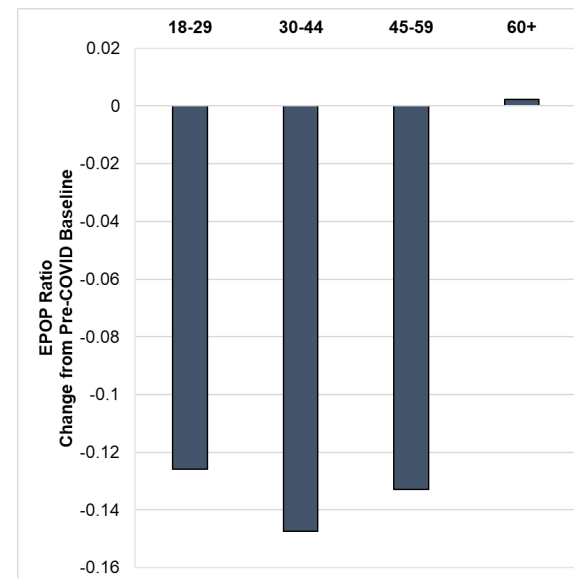
National changes in employment rates



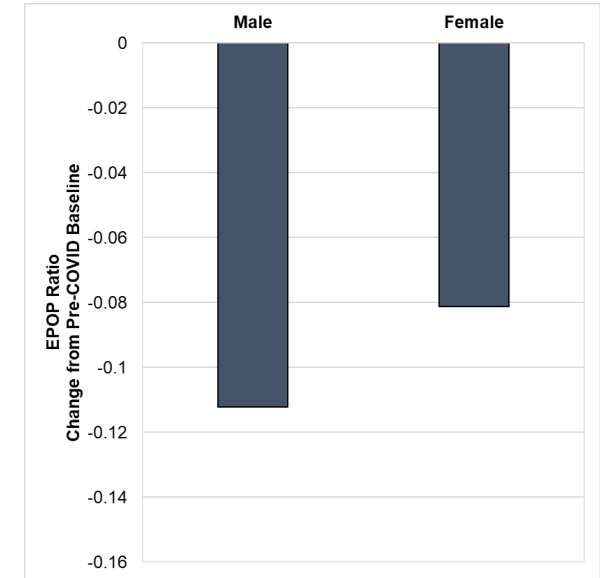
Race/Ethnic Groups



Education Groups



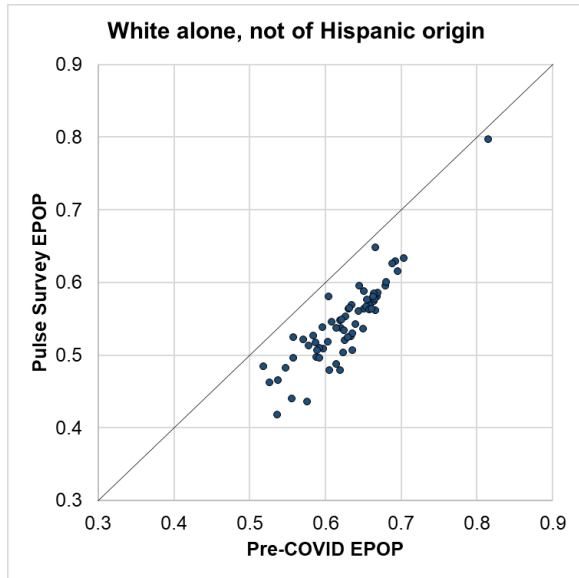
Age Groups



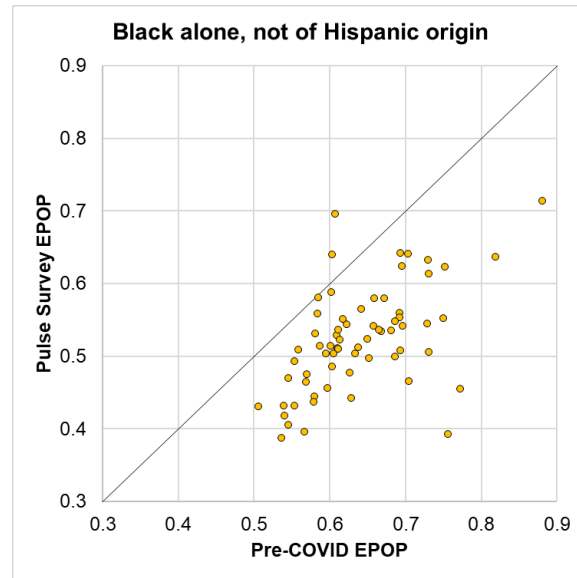
Gender

Source: Pre-COVID EPOP Ratio calculated using 2018 American Community Survey microdata, accessed through IPUMS USA. Pulse Survey EPOP calculated using Phase 1 Census Bureau Household Pulse Survey microdata.

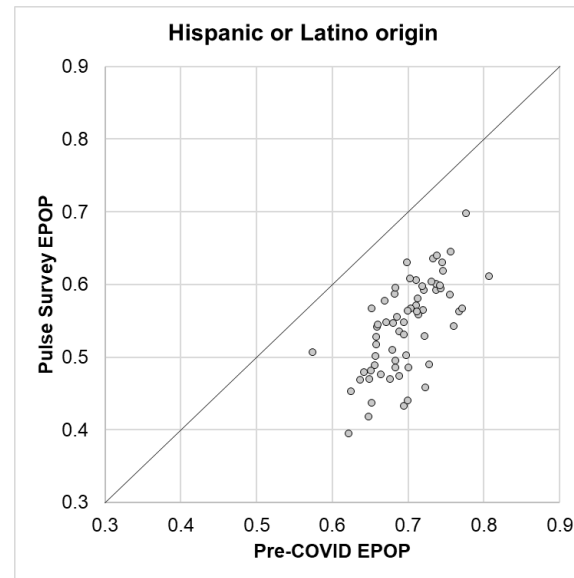
Local changes in employment rates: Race/Ethnic Groups



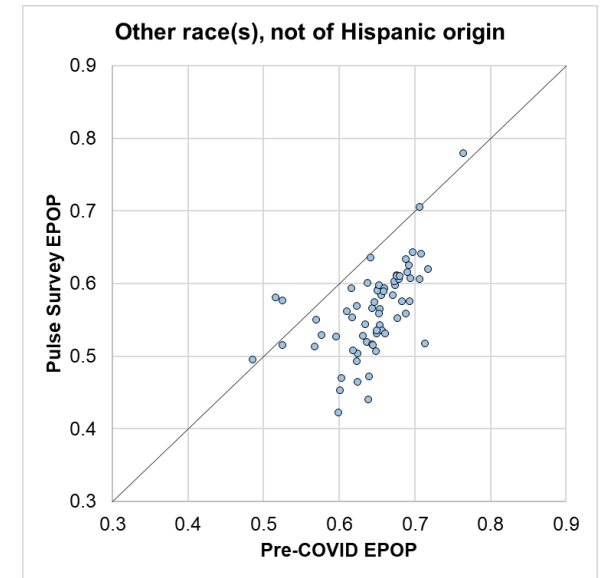
White



Black



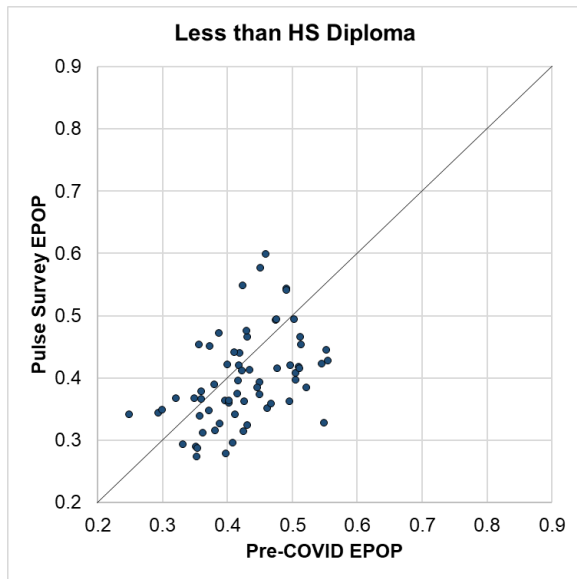
Hispanic



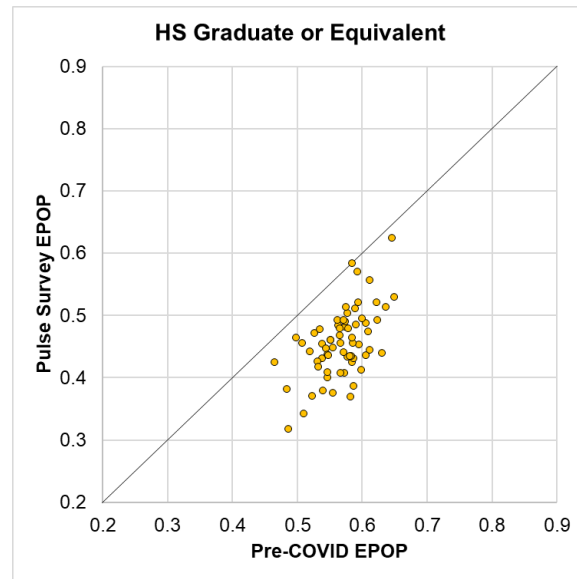
Other, not Hispanic

Source: Pre-COVID EPOP Ratio calculated using 2018 American Community Survey microdata, accessed through IPUMS USA.
Pulse Survey EPOP calculated using Phase 1 Census Bureau Household Pulse Survey microdata.

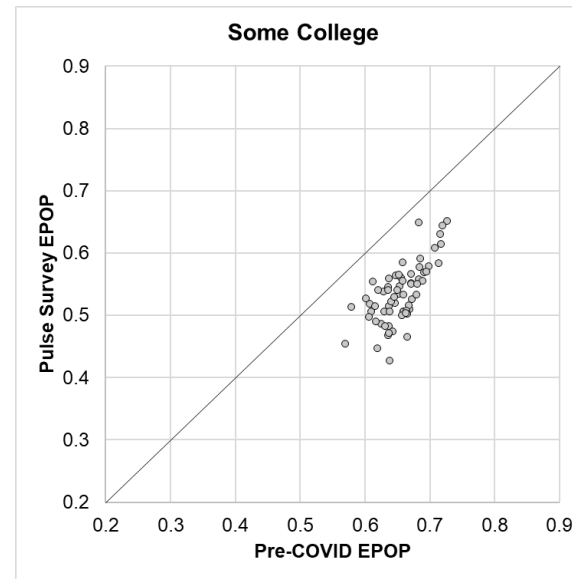
Local changes in employment rates: Education Groups



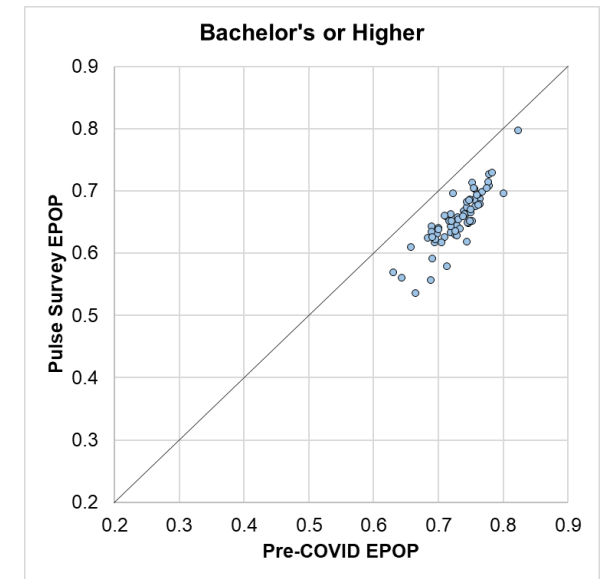
Less than HS
Diploma



High School
Graduate or
Equivalent



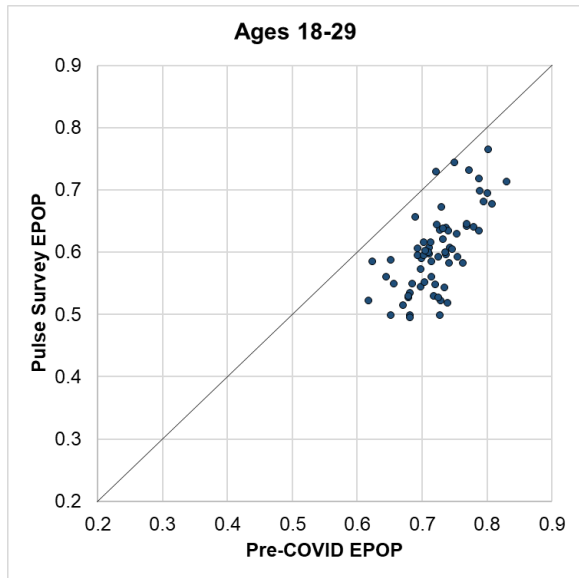
Some College



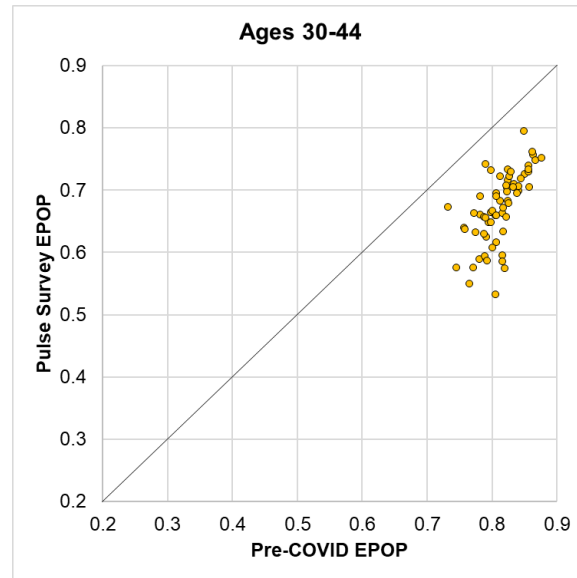
Bachelor's Degree or
Higher

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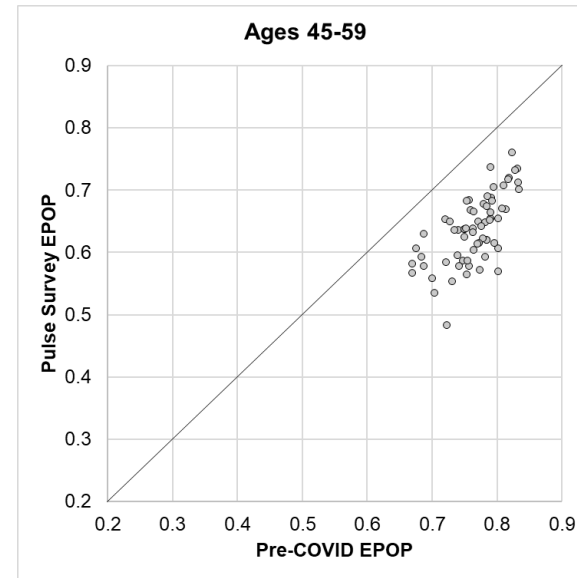
Local changes in employment rates: Age Groups



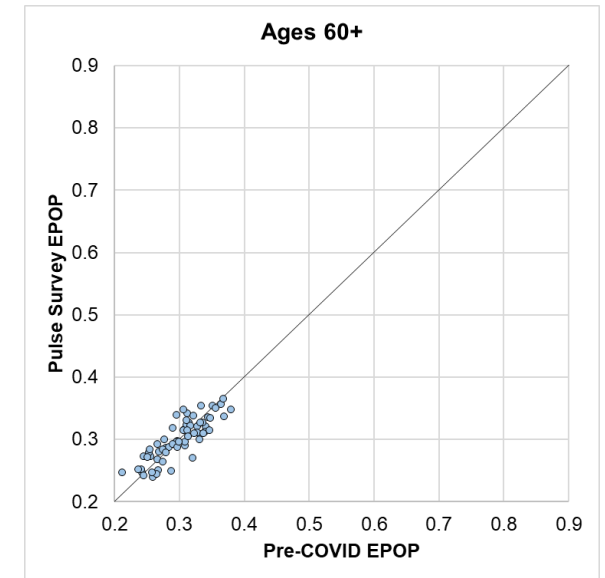
18-29



30-44



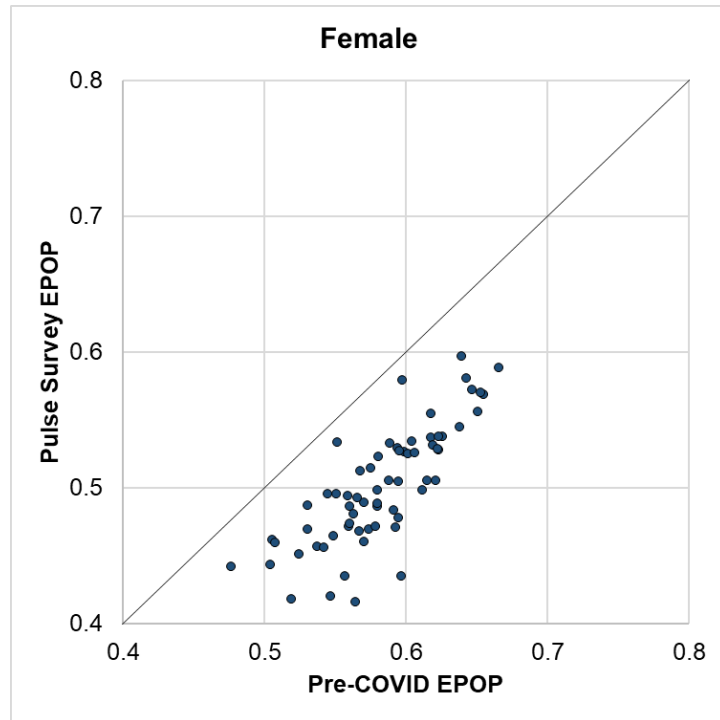
45-59



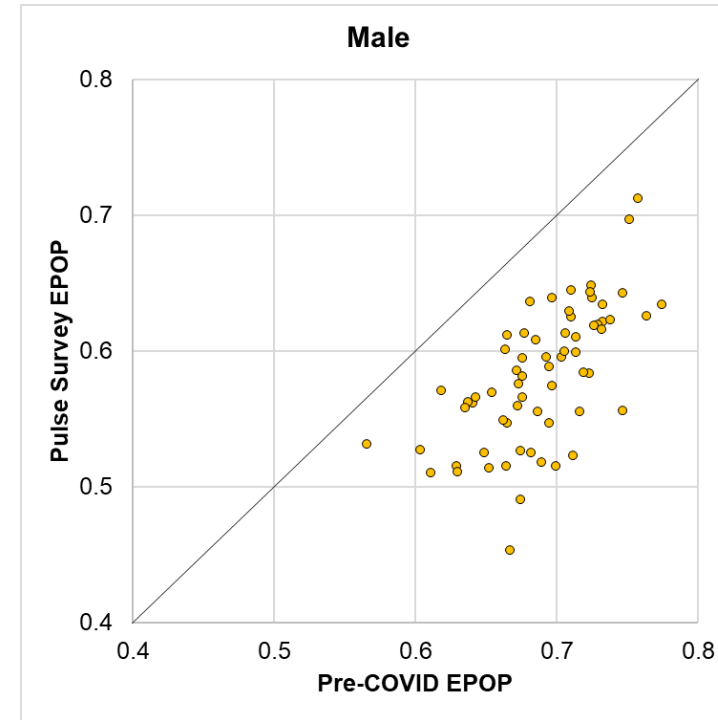
60+

Source: Pre-COVID EPOP Ratio calculated using 2018 American Community Survey microdata, accessed through IPUMS USA.
Pulse Survey EPOP calculated using Phase 1 Census Bureau Household Pulse Survey microdata.

Local changes in employment rates: Gender



Female



Male

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Pulse Survey EPOP calculated using Phase 1 Census Bureau Household Pulse Survey microdata.

Factors linking economic impacts across space

- Significant sectoral linkages across US markets (Osotimehin and Popov 2020)
- Common behavioral responses (many authors)
 - Self-reported protective behaviors
 - High frequency cell phone and retail data
- Connections across distant markets mean the US outbreak is not localized (Fogli et al 2020, Pueyo 2020)

Concluding discussion

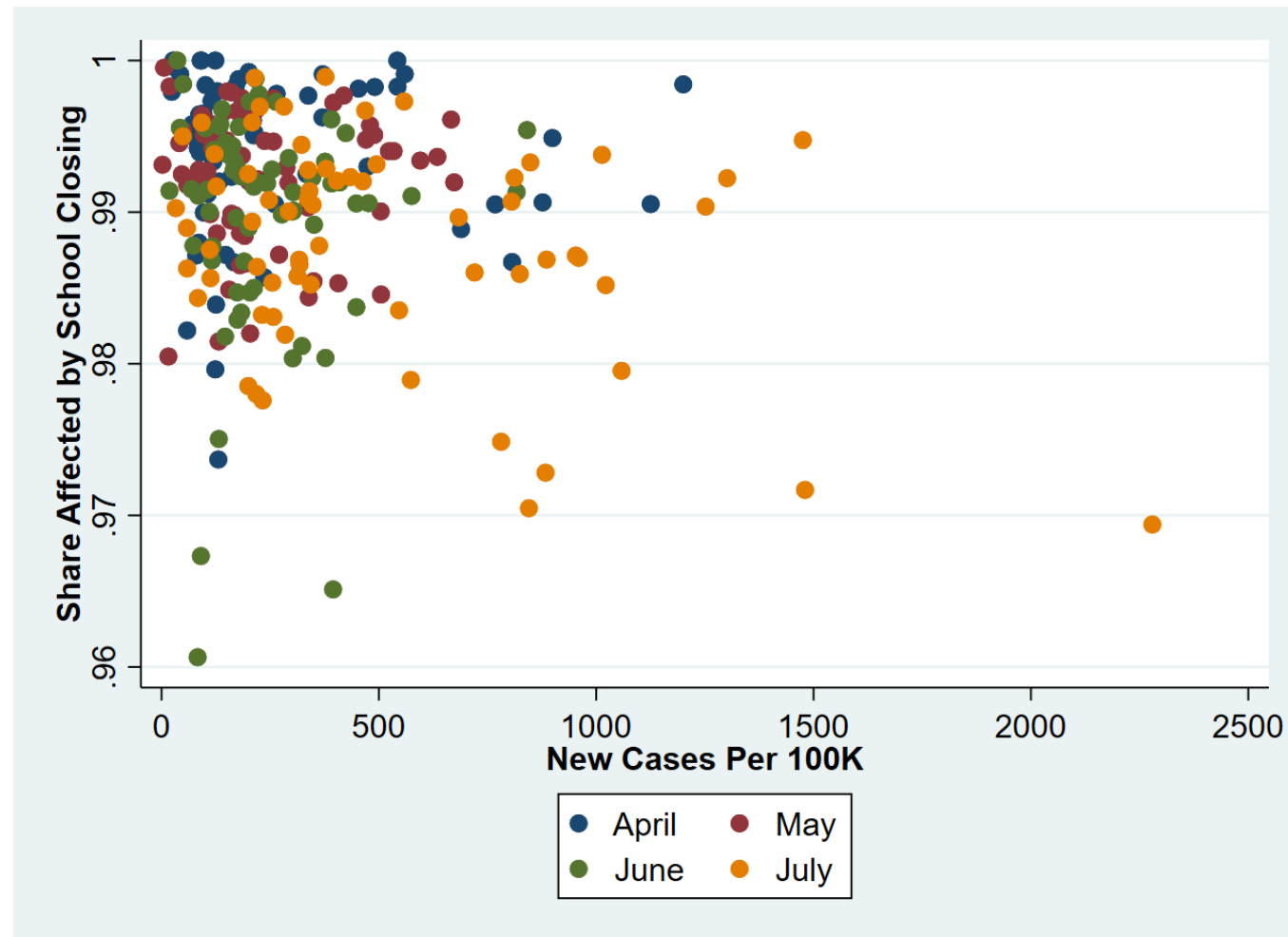
- The pandemic has expanded and receded on a per capita basis unevenly across the US during the past six months
- While some indicators show geographic patterns that suggest local infections are negatively related to labor market activity, many others are wrong signed or insignificant
- Suggests that economic impacts of the pandemic are not as localized as infections

Concluding discussion

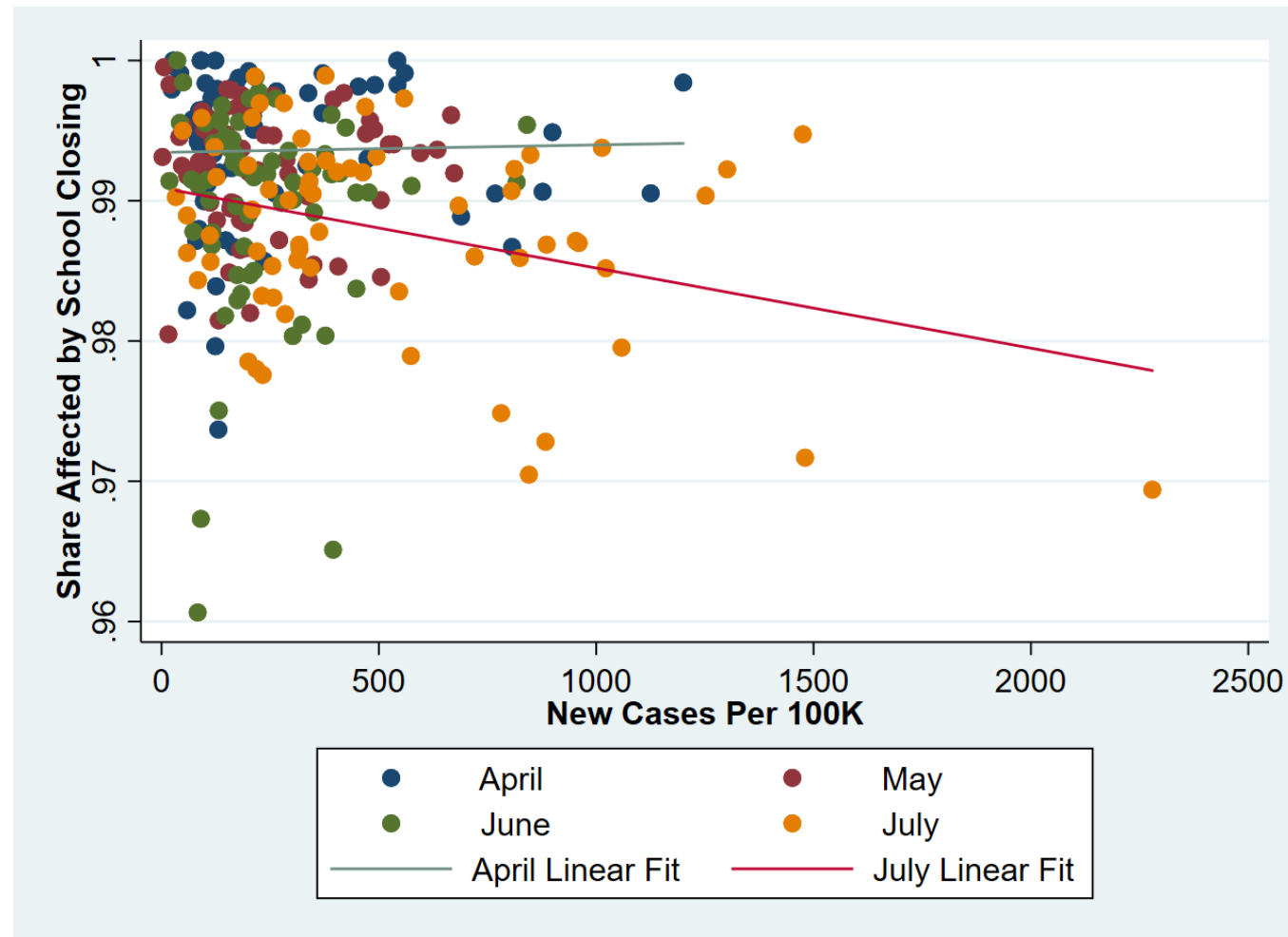
- Instead, the heterogeneous impacts of the virus on economic activity are clearest across people
 - Economic slowdown has most negatively impacted lower earners, those with less schooling, workers of color, and younger workers
- Given this, what do we still need to know?
 - Impacts of infection on earnings, employment and health – immediate and long-run. Start today!
 - More detail about safe behaviors. Knowable!

Thank you!

Share Child's Education Affected by Pandemic

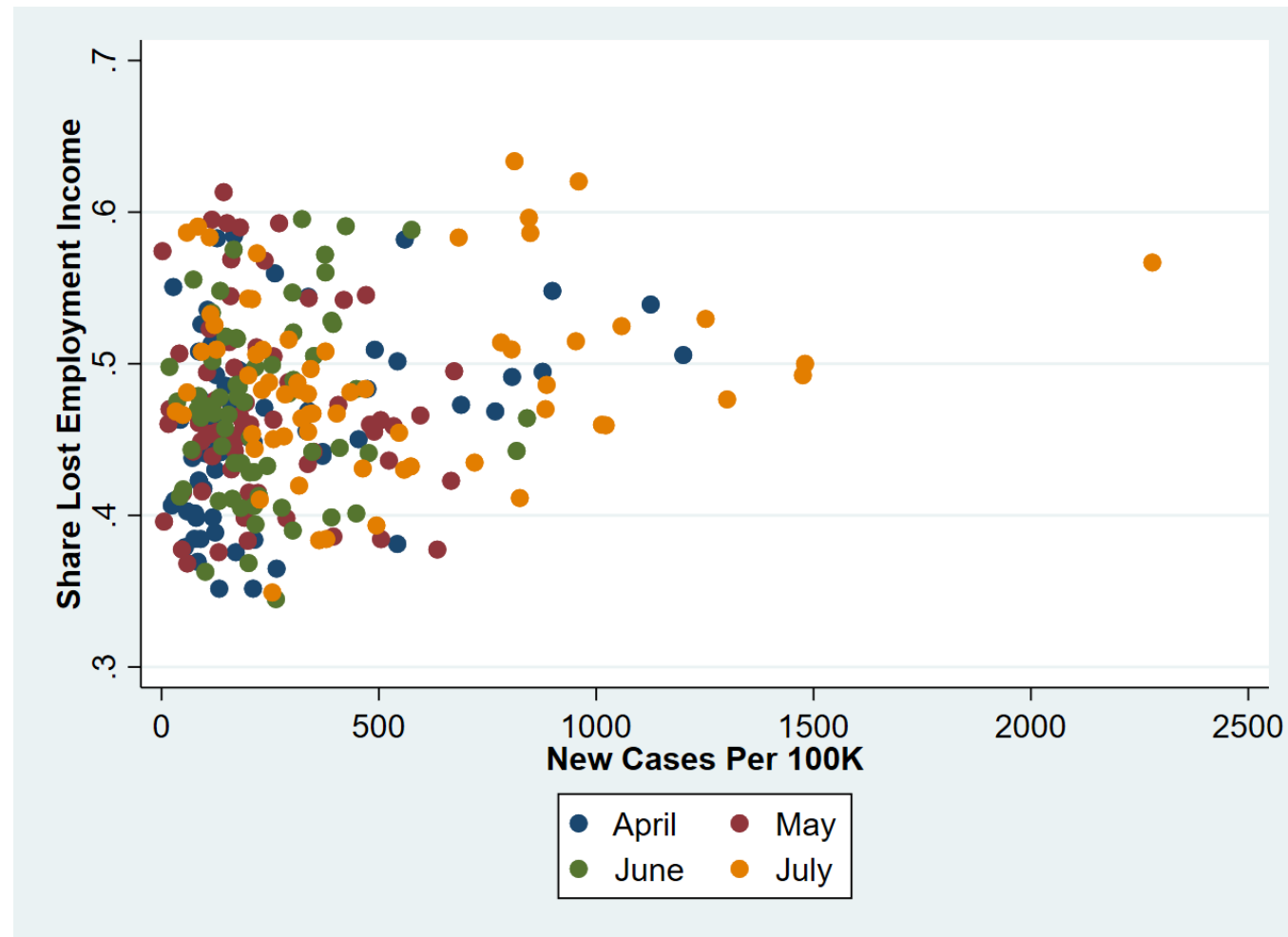


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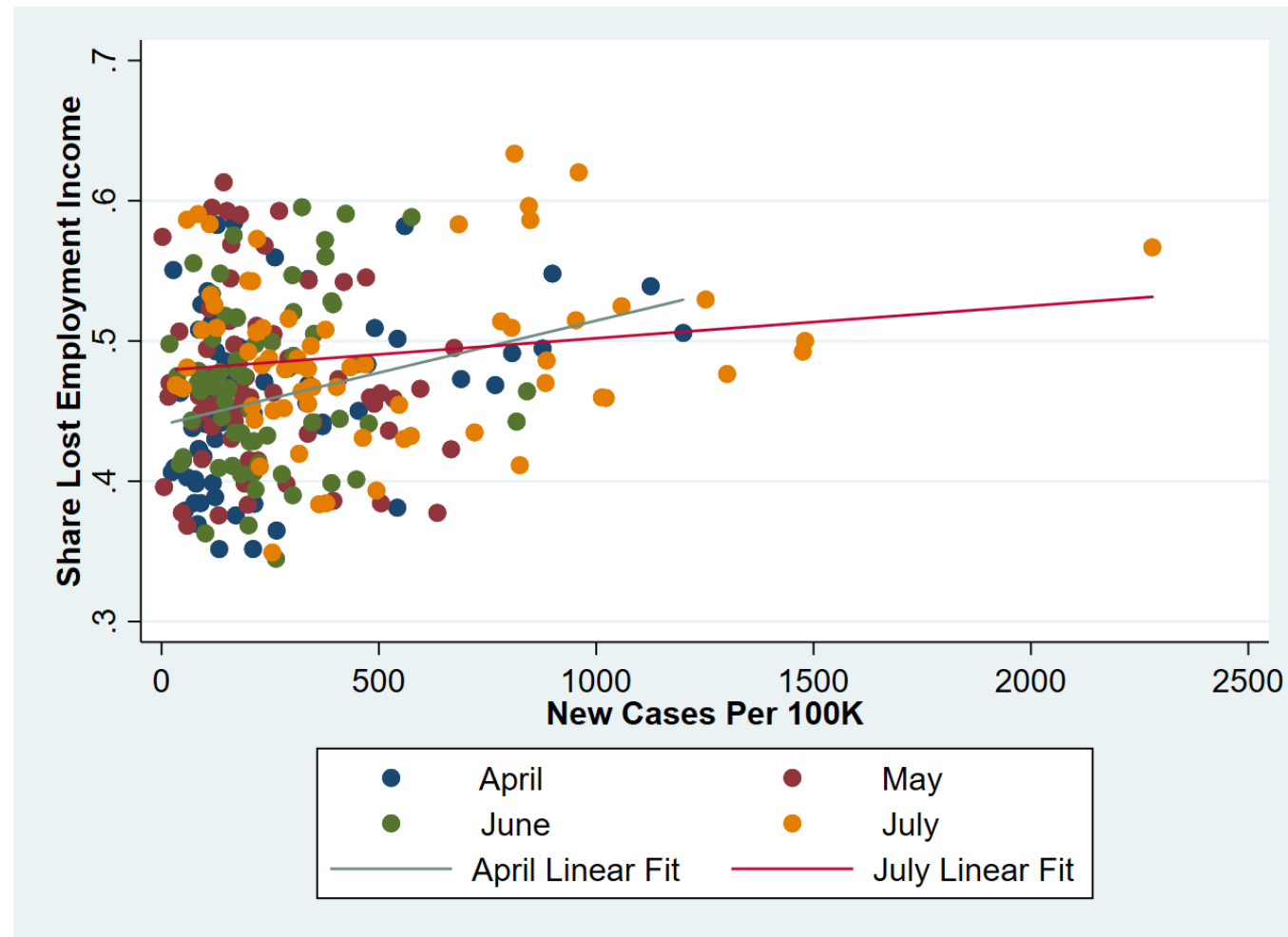
Note: Outcome data calculated using Phase 1 of Census Bureau Household Pulse Survey microdata. Cases data from New York Times. Population estimates from 2019 ACS tables.

Share Lost Employment Income in HH



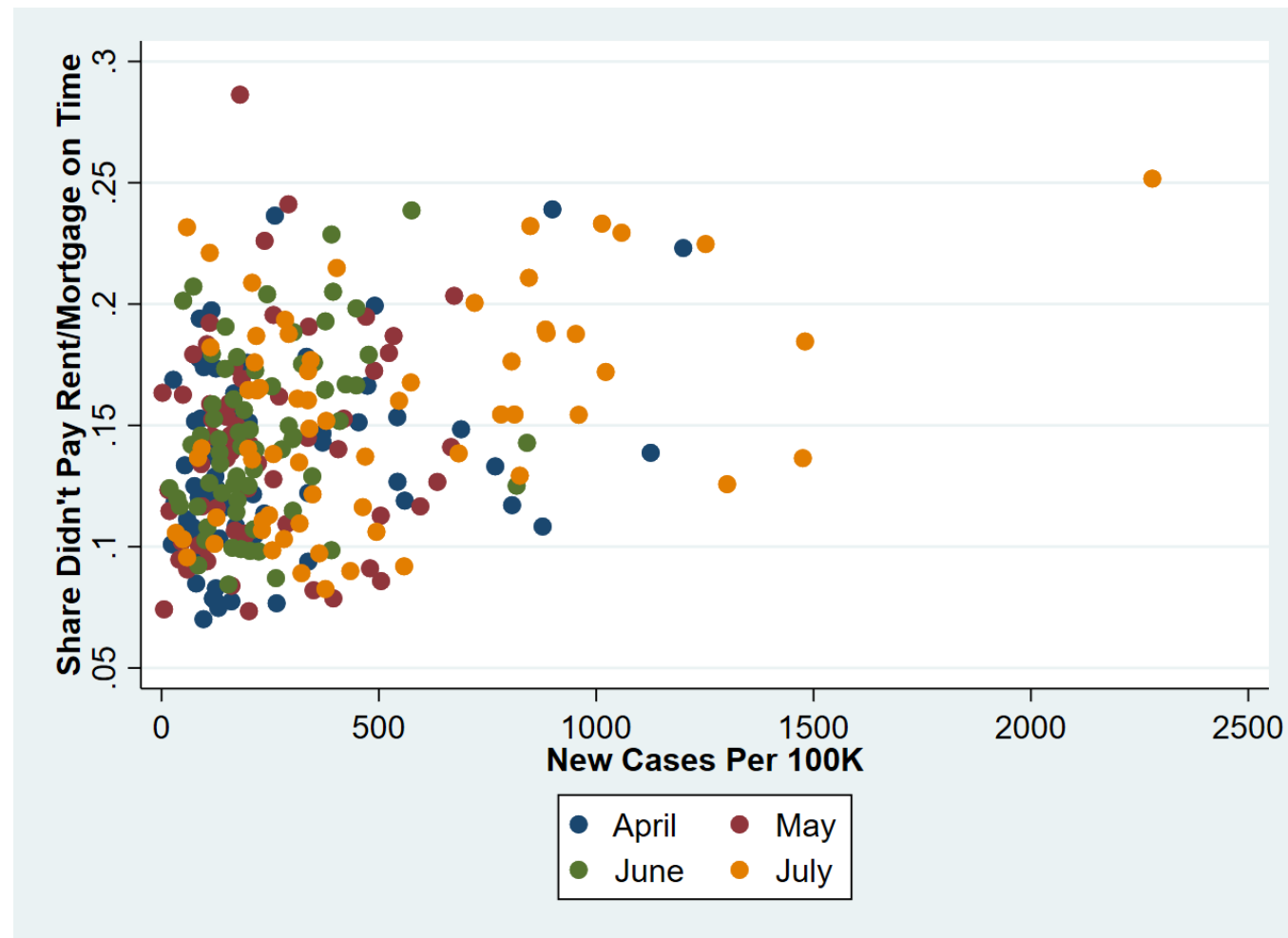
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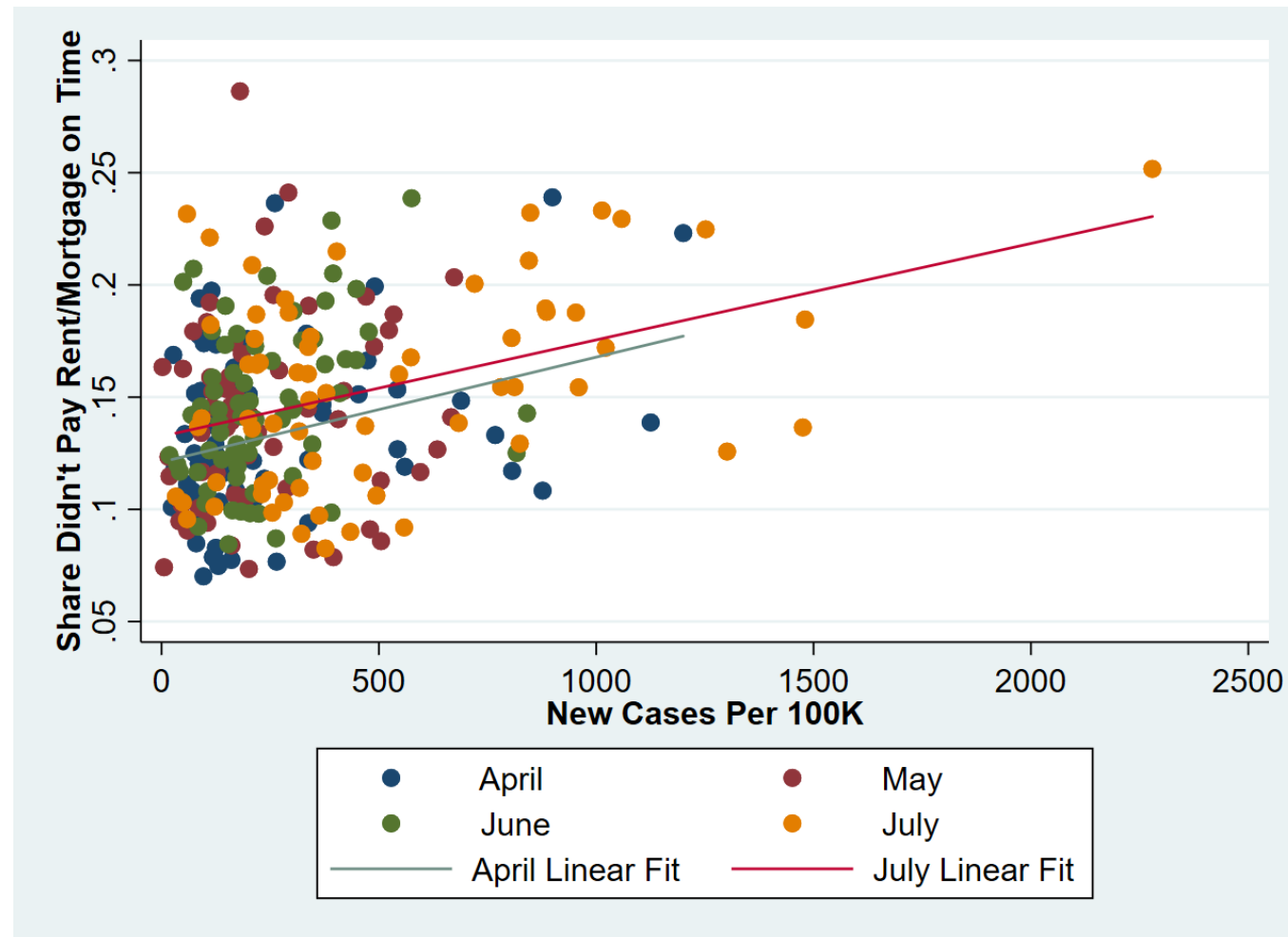
Note: Outcome data calculated using Phase 1 of Census Bureau Household Pulse Survey microdata. Cases data from New York Times. Population estimates from 2019 ACS tables.

Share Didn't Pay Rent/Mortgage on Time or Deferred Payment



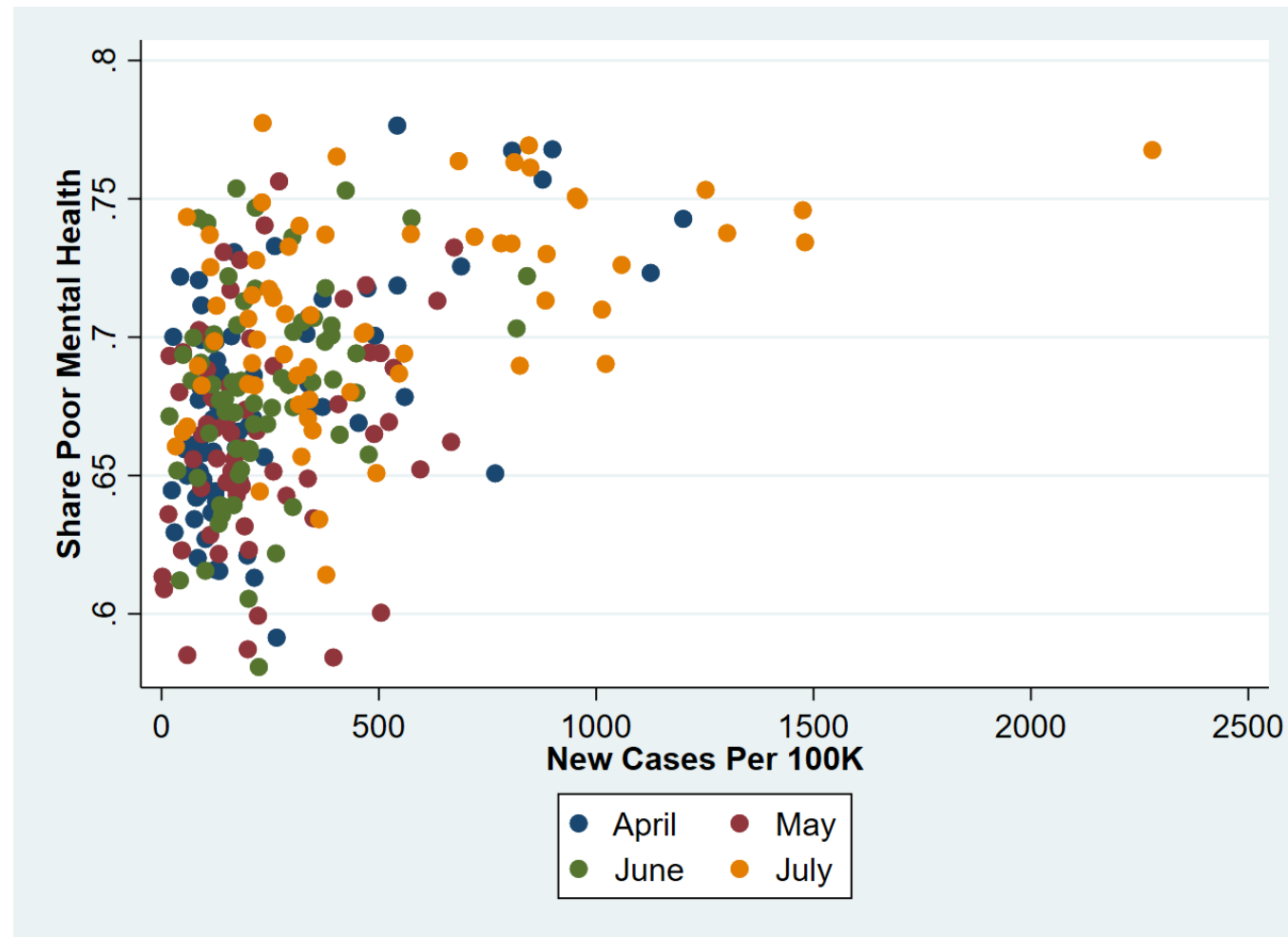
Note: Outcome data calculated using Phase 1 of Census Bureau Household Pulse Survey microdata. Cases data from New York Times. Population estimates from 2019 ACS tables.

Share Didn't Pay Rent/Mortgage on Time or Deferred Payment last month



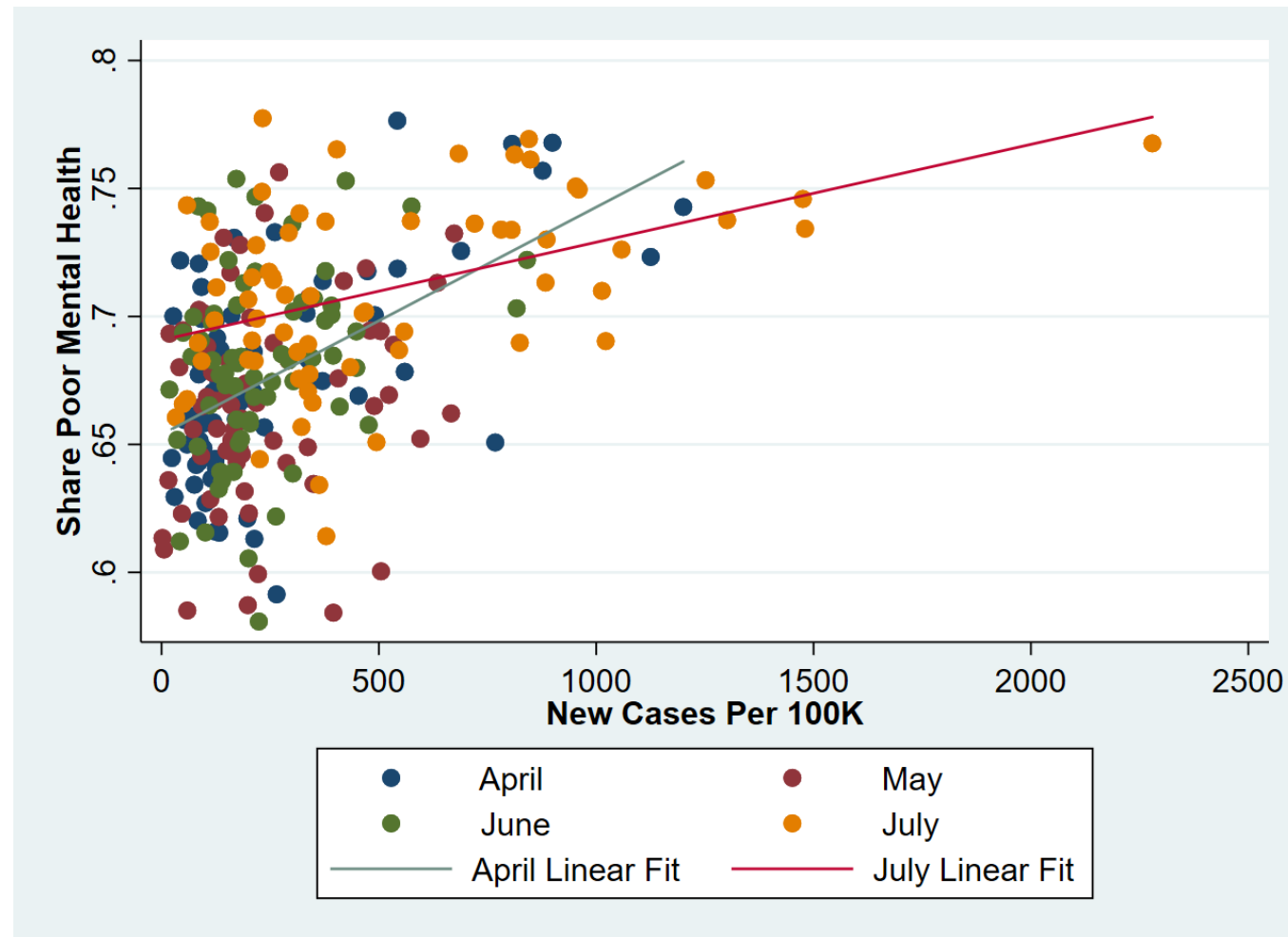
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Share Felt Depressed/Hopeless or Anxious



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