Supplement A.

Measuring the Easing of COVID-19 Social Distancing Policies in the US States

To supplement Christopher Adolph, Kenya Amano, Bree Bang-Jensen, Nancy Fullman, Beatrice Magistro, Grace Reinke, Rachel Castellano, Megan Erickson, and John Wilkerson. Forthcoming. "The Pandemic Policy U-Turn: The role of partisanship, public health, and race in decisions to ease COVID-19 social distancing policies in the U.S." *Perspectives on Politics*.

In April and May of 2020, governors began to relax the social distancing mandates they had imposed in the preceding weeks. We identify the timing of first easing of social distancing policies to allow indoor activity as especially important in determining the overall degree of policy easing. Additionally, by tracing this first indoor policy easing, we are able to capture a policy decision that is more comparable across a varied state policy landscape.

In this supplement, we explain the data collection process we used to track social distancing policies in the states and to identify the U-turn towards easing. We then discuss the measurement challenges posed by substate easing and the techniques we developed to address them. Finally, we support our decision to focus on indoor, non-religious easing as the best available indicator of the policy U-turn that took place in spring 2020, in particular showing that the first steps to ease indoor activity presaged the overall degree of easing through the spring and summer of 2020.

Data Collection Process

Our ongoing data-collection process consists of the following steps: (1) regular monitoring of official state websites for COVID-19 social distancing policy executive orders and public health orders; (2) identification of relevant social distancing policies from within those orders; (3) determination of the level of restrictions each policy entails; (4) tracing "policy chains" linking new policies and past policies; and, (5) tracking state-coordinated phased easing across substate units, as applicable.

Policy Monitoring

Our data collection process begins with regular monitoring of official websites for each state and the District of Columbia to check for policy updates or developments. We rely primarily on Executive Orders (EOs) and Public Health Orders (PHOs) to code social distancing policy mandates, though in cases where states provides policy updates only through press releases or policy guidance documents, we use the best available official documentation. We only code policies that are directed at the state level, meaning policies that apply statewide, or which are coordinated by the state government across substate units (typically counties). We do not monitor or code independent action by local authorities.

Identifying Type of Policy

Second, we review the EO or PHO to determine which types of tracked policies it contains (if any). For this memo, we focus on five types of restrictions:

Gatherings Restrictions. We record absolute numeric limits for indoor or outdoor gatherings, as well as for religious venues or gatherings. For example, we might note that a state limits indoor non-religious gatherings to 10 people maximum.

Restaurant Restrictions. Restrictions on the activities of restaurants and other venues where food is served for consumed on-premises. We define establishments that serve both food and alcoholic beverages as "restaurants" if they earn less than 50% or more of their revenue from the sale of alcoholic beverages unless specified otherwise (e.g., the restaurant threshold in Michigan are those establishments that earn no more than 70% of their gross receipts from alcohol sales).

Bar Restrictions. Restrictions on the activities of bars, breweries, wineries, tasting rooms, and other venues where alcoholic beverages are consumed on-premises. We define establishments that serve both food and alcoholic beverages as "bars" if they earn more than 50% or more of their revenue from the sale of alcoholic beverages, unless they have a food licence and are allowed by the state to operate as restaurants regardless of their sources of revenue.

Business Closures. Restrictions on businesses or sectors deemed as non-essential other than bars and restaurants. Because states often applied different restrictions to businesses operating in different sectors, and because the definition of business sectors var-

ied widely across states (and even within states over time), there may be multiple overlapping business closures in place at a given time in a given state. As a result, the initial indoor easing of businesses may have taken place in phases in a state (e.g., fitness centers and gyms on 13 May 2020; casinos and entertainment venues on 15 May 2020; and personal service businesses like barbers and nail salons on 19 May 2020).

Stay-At-Home Orders. Mandates requiring individuals to stay at home for all non-essential activities, the definition of which varies from state to state. "Shelter-in-place" and "stay-at-home orders" are considered to be equivalent.[1]

Of these policies, business restrictions pose the most substantive coding challenge. Each state has different categorizations for various business sectors, making it very difficult to create universal business categories in our coding scheme. For example, New Mexico defines a broad category for close-contact businesses, which includes group fitness classes, personal training services, barbershops, hair salons, tattoo parlors, nail salons, spas, massage therapy services, esthetician clinics, tanning salons, guided raft tours, guided balloon tours, bowling alleys, and ice skating rinks. On the other hand, Oregon breaks these businesses into at least two categories: recreation and fitness establishments (gyms, fitness organizations, recreational sports, pools, personal training, school sports, dance, campsites) and personal care services. Moreover, New Mexico groups bars with close contact recreational facilities (which also includes indoor movie theaters, indoor museums, miniature golf, arcades, amusement parks, aquariums, casinos, concert venues, professional sports venues, event venues, performance venues, go-kart courses, automobile racetracks, and adult entertainment venues), a categorization not seen in any other state. Because the vast majority of these sectors would pose heightened risk of SARS-CoV-2 transmission if allowed operate unrestricted indoors, we focus here on whether any of them have been opened. We leave the task of creating and validating comparable business closures by sector to future research.

1 States may also issue non-mandated stay-at-home advisories, such as Connecticut: "At this critical time it is essential that everyone just stay home so we can contain the spread of this virus while keeping essential services running." We include these as a stay-at-home recommendation. While these recommendations are recorded in our dataset, only the easing of stay-at-home mandates enter the analysis in the main paper.

Identifying the Level of Restrictions

Third, we quantify the level of restrictions using four variables applicable to all policies, as well as special variables relevant only to specific policy types:

Mandate. Whether the policy is a mandate (1) or a recommendation (0) . For example, "residents are advised to stay at home and avoid unnecessary travel" is a stay at home recommendation, whereas "residents shall stay at home and avoid unnecessary travel" is a stay at home mandate.

Statewide geography. Whether the policy is applied for all geographic units of the state (1) or just specific sub-state areas, typically a set of counties (0).

Statewide population. Whether the policy is applicable to the state's entire population (1) or just particular demographics, such as individuals aged 65 and older, or individuals with chronic and/or severe health conditions (0).

Statewide. Coded as (1) if the policy applies both to all geographical areas and all demographics, and (0) otherwise.

For bar restrictions, restaurant restrictions, and closures of other businesses, we also identify the level of business restriction the policy requires. This ordered variable reflects key differences in permitted business operations that have emerged over the course of the pandemic:

Full closure. Businesses are required to fully close service to customers and in-person operations, excepting only minimal business operations deemed to be essential. In these cases, the public could not access services and workers could not engage in typical operations beyond functions allowing for minimum basic operations.

Takeaway only. Businesses are permitted to have curbside, take-away or take-out, delivery, drive-through, and like modes of service. Customers or patrons are not allowed on-premises with the exception of picking up items ordered.

Outdoor allowed. In addition to take-away services, businesses are permitted to provide in-person services and/or to have patrons visit their premises, but only outdoors.

Indoor allowed. Businesses are permitted to provide in-person services and/or to have patrons visit their premises indoors. In some cases, indoor capacity may be limited,

social distancing may be mandated, and certain indoor areas may remain restricted even when indoor services are permitted (such as bar areas in restaurants).

For gathering restrictions, we record an absolute numeric limit for indoor and outdoor religious and non-religious gatherings. We do not code relative capacity limits (e.g., indoor gatherings at religious venues may operate at up to 33% capacity). If gatherings are only restricted by relative capacity limits, we leave the absolute numeric limits blank and capture the restrictions in policy coding notes. Thus, we capture gathering limits with the following:

Indoor non-religious gathering limit. The maximum number of people allowed in an indoor gathering, excluding religious gatherings of any kind. Coded as (0) when no gatherings of any size are permitted, and left blank to indicate policies which do not impose absolute numeric limits on gatherings.

Outdoor non-religious gathering limit. The maximum number of people allowed in an outdoor gathering, excluding religious gatherings of any kind. Coded as (0) when no gatherings of any size are permitted, and left blank to indicate policies which do not impose absolute numeric limits on gatherings.

Indoor religious gathering limit. The maximum number of people allowed in an indoor gathering for a religious purpose, including gatherings at houses of worship. Coded as (0) when no gatherings of any size are permitted, and left blank to indicate policies which do not impose absolute numeric limits on gatherings.

Outdoor religious gathering limit. The maximum number of people allowed in an outdoor gathering for a religious purpose. Coded as (0) when no gatherings of any size are permitted, and left blank to indicate policies which do not impose absolute numeric limits on gatherings.

Tracing policy chains

States frequently amended their emergency policies on COVID-19; moreover, in many states, limitations on the maximum duration of emergency orders required states to frequently reissue orders unchanged to prevent their expiration. As a result, over the course of the pandemic, tracing the course of a specific policy area – such as a given state's restrictions on restaurants – involves the parsing of a sequence of orders, each of which could amend, extend, or end the current restaurant restrictions.

To better track the evolution of each policy area in each state, after we identify the policy type and level of restrictions associated with the text contained in a newly issued EO or PHO, we assign the new provisions with a unique policy ID (PID). Each PID consists of the state's postal abbreviation and an arbitrary four digit code (e.g., a new policy issued by Utah might be assigned UT0035).[2] The unique PID assigned to each policy allows us to link successively issued policies in a "policy chain," indicating how new policies modify a previous policy of the same type. For example, a new policy extending the expiration date on restaurant restrictions would link back to the PID of the prior policy it extends.

Specifically, for each new policy, we code whether it acts on a previous policy by listing the prior policy's PID under one of the following variables:

Extends. Continues the previous level of restrictions as tracked, with potential minor amendments (e.g., on 28 April 2020, Alabama extended a 10-person indoor gathering limit but also began allowing drive-in gatherings; this is an extension because the underlying gathering restriction remained the same, and amendments for vehicle gatherings were captured in coding notes).

Expands. Shifts to a higher restriction level compared to the prior policy. For example, the new policy might require the closure of previously-permitted in-person services, or lower the numeric gathering limit (e.g., the new policy might allow only 30 people to gather, whereas the prior policy allowed up to 50 people to gather).

Eases. Shifts to a lower restriction level compared to the prior policy. For example, the new policy might re-open in-person services where previously only take-away was permitted, or might raise the numeric gathering limit (e.g., the new policy might allow 10 people to gather, whereas the prior policy banned gatherings completely).

Ends. All restrictions are lifted, ending a policy chain. In our dataset, this could mean the complete ending of all emergency policy (e.g., the end of all emergency COVID-19 restrictions on restaurants), the easing of those restrictions to a level we do not track (e.g., we do not track non-mandatory recommendations on business operations), or that the state devolved authority to counties and thus restrictions were no longer coordinated at the state level.

2 The numbers associated with each PID are arbitrary and do not reflect the ordering of policy implementation, nor do they reflect the total number of mandates enacted by a given state.

Recording Substate Easing and Expansion

The process outlined above is sufficient for maintaining complete histories of the level of restrictions for social distancing policies in states that only enacted policies statewide across all geographic units. However, a number of states employed phased expansion and/or easing of policies which allowed for different levels of restriction in different areas of the state, almost always defined by county. Policy chains that involve substate variation contain all the variables defined above (such as whether the policy is a mandate, and any relevant levels of restriction) but also contain a machine readable list of the counties to which the policy applies.

As an example, consider Utah's gathering restrictions. The policy recorded under UT0035 imposed a statewide gathering recommendation, with suggested 20 person limits on indoor and outdoor gatherings in all counties. The next gathering policy adopted by Utah divided the state into two sets of counties, which in our database splits the policy chain into two separate branches. For counties classified as Public Health Risk Status Orange, the prior statewide policy of recommended 20 person limits was extended under as UT0031. For counties classified as Public Health Risk Status Yellow, the new policy relaxed recommended limits on social gatherings to 50 people or fewer. Thus, for these counties, the prior policy was eased. This branch of the policy chain was recorded as UT0032.

Our database, and in particular the concept of policy chains linked by PIDs, allows the tracking of particular counties as the move through different tiers (and thus potentially levels of restriction) over time. Over the course of the epidemic, states that employed substate easing moved counties across tiers more or less frequently. In some cases, the resulting patchwork of differing restrictions varied in complex ways over time and geography; in other states, substate variation was muted. But overall, substate phased easing and expansion makes tracking the policy map of state social distancing measures increasingly complex from April onward, when many states started implementing substate restrictions.

Measurement Challenges for Policy Chains

In our paper, we focus on the first easing of social distancing mandates to allow the public to resume greater indoor activity. We argue this step constitutes the clearest signal of a U-turn towards policies that seek to resume greater economic activity, as well as a step of particular epidemiological significance given the greater transmission

risk of SARS-CoV-2 indoors. However, identifying the first indoor policy easing in each state is often challenging because of changes in the geographical and sectoral scope of each policy over time.

The problem of sectoral scope is a current limitation of the data, but is specific to business restrictions, and does not apply to restrictions on gatherings, bars, or restaurants. For other non-essential businesses, states set different policies for widely different groupings of business sectors, and shifted those groupings frequently over time to selectively ease or expand restrictions on specific types of businesses. While we have not yet disaggregated by business sector, we may imagine tracking easings across four broad business categories – retail, entertainment, personal care services, and fitness centers. This allows us to gain analytical purchase over Oregon, which draws on these sectors for categorizing various businesses. However, in Colorado's most recent business categorization, disaggregation would be more complex as we see many disparate sectors, including non-critical manufacturing, offices, smoking lounges, gyms and fitness centers, retail, personal services, outdoor guided services, casinos, bounce houses and ball pits, and events and amusement centers. It is thus difficult to create analytically useful broad business categories that apply across all the states. Instead, we chose to focus on the first indoor easing of any business sector in a state as a less arbitrary indicator of the U-turn of business restrictions.

The problem of substate easing is general, applying to all five of our policy types. Although most social distancing policies adopted in March and April of 2020 were statewide, in many cases governors allowed some counties to ease their policies earlier than other counties. Going a step further, some states created systems of"phases", sorting counties into risk-based tiers based on epidemiological indicators, with different levels of restriction associated with each tier. Counties could then progress to gradually more relaxed tiers, or sometimes even return to earlier phases with heavier levels of restriction. As noted in the last section, our database accommodates both patchwork easing by county, as well as more formal phased easing by tiers, by tracing out the movement of each county through a branching set of policy chains. This means that in states that employed substate easing to relax initial statewide policies, we must simultaneously trace out each "branch" of counties that breaks off from the initial statewide policy chain in order to determine which counties first eased to allow the resumption of indoor activity.

An example helps illustrate these challenges. Figure S1 shows the evolution of restaurant restrictions in the state of New York. The first order issued by the state required all restaurants to close for onsite indoor and outdoor consumption, allowing only take-

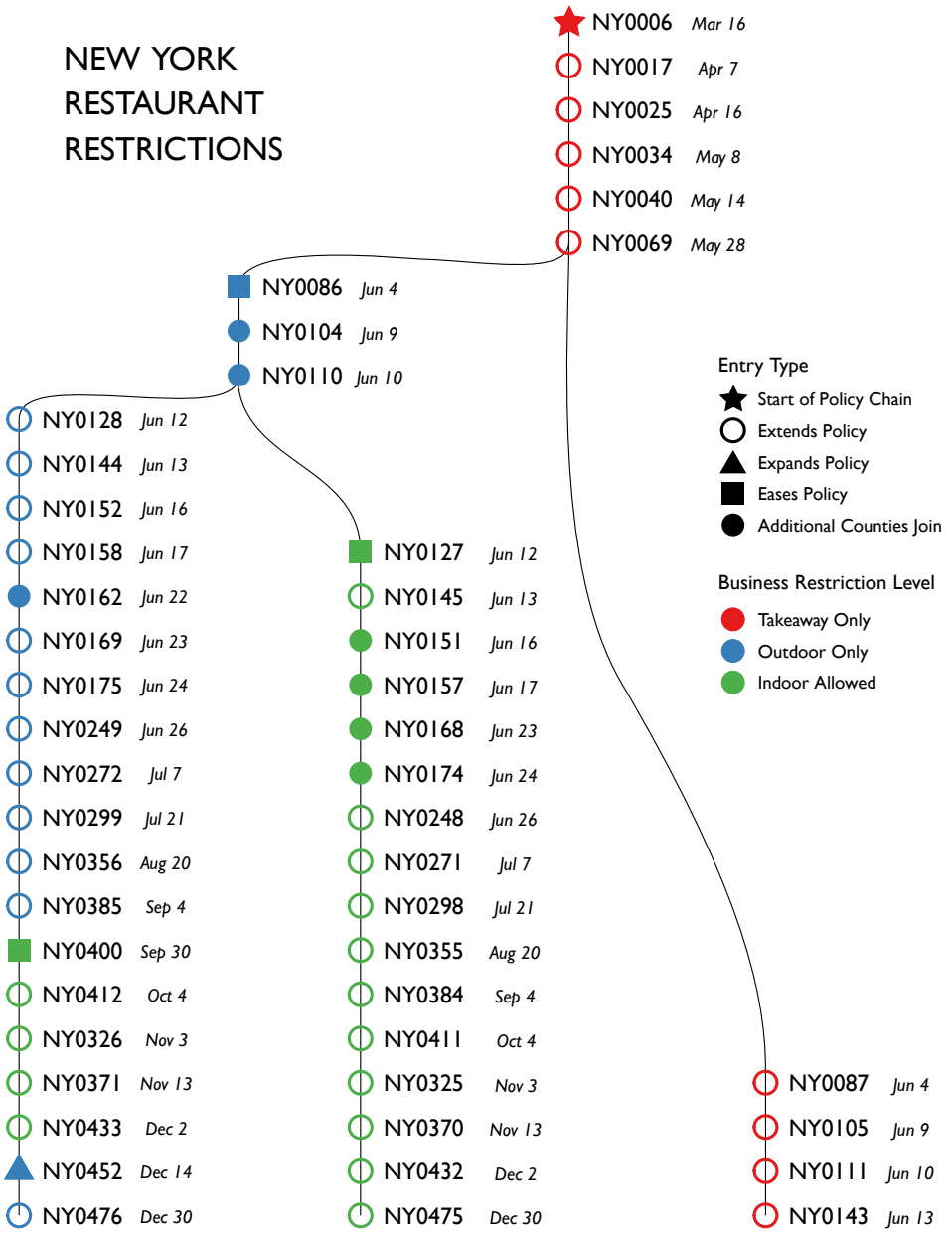

Figure A1. *The policy chain of restaurant restrictions in New York.* The evolution of New York state's restaurant restrictions, by restriction level and county grouping. Source: Authors' original data (Fullman, Bang-Jensen, Reinke, Magistro, Castellano, Erickson, Walcott, Dapper, Amano, Wilkerson, and Adolph, 2021). Data available at `http://covid19statepolicy.org`.

away service. This order, issued and enacted on 16 March 2020, is recorded as NY0006 at the head of the policy chain at the top of the figure. This statewide restriction was extended five times, the last on 28 May 2020, recorded a policy NY0069.

On 4 June, the governor split the state into two groups of counties, easing restaurant restrictions on one group to allow outdoor seating[3] while maintaining take-away only restrictions in the remaining counties[4]. The first group of eased counties follows the left branch of the first fork in the PID chain (NY0086); the second group of counties follows the far right branch (NY0087). The first branch is extended twice, then branches again, splitting into NY0128, a set of counties where outdoor only restrictions are extended, and NY0127,[5] a group of counties where indoor seating at restaurants is allowed as of 12 June 2020[6]. This latter group of counties are the first to experience indoor easing of restaurants in the state of New York, and the date at which they were eased – 12 June 2020 – is the date used for New York's indoor easing of restaurants in our baseline model. Beyond identifying this specific data of first indoor easing, policy chains allow us to capture greater nuance in the evolution of each policy over time and substate regions.

Aside from being potentially very complex to trace, this geographic patchwork raises several questions for measurement. For states where easing occurred at the substate level rather than statewide, should we count as the initial indoor easing the date on which the state first allowed increased indoor activity in a single county? Or should we wait for every county to ease? In our paper, we focus on initial easing in any county, as

3 This group of counties included Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, and Yates counties

4 Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, and Westchester counties.

5 Albany, Allegany, Cattaraugus, Chautauqua, Columbia, Dutchess, Erie, Greene, Nassau, Niagara, Orange, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Suffolk, Sullivan, Ulster, Warren, Washington, and Westchester counties.

6 These counties are Broome, Cayuga, Chemung, Chenango, Clinton, Cortland, Delaware, Essex, Franklin, Fulton, Genesee, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Wayne, Wyoming, and Yates counties

we are interested in the moment when policy begins to change course. Moreover, epidemiologically, easing some counties where SARS-CoV-2 has already achieved wide community spread creates at least the possibility for spillovers. But in our robustness checks, we also focus on groups of counties with shared demographic characteristics; for example, we might ask when a state first eased a county with a significant Black or Latino population.

Why Focus on Initial Indoor, Non-Religious Easing?

We suggest the timing of initial easing to expand indoor activity in non-religious settings is the best available indicator of policy U-turns – or persistent shifts from policies seeking to restrict social interaction towards policies attempting to expand economic activity. In this section, we explain our reasoning for excluding religious gatherings, focusing on resuming indoor activity, and emphasizing initial efforts to ease.

Why exclude religious gatherings? The earliest executive orders restricting gatherings were often unclear as to whether religious gathers were exempt. Consequently, many of the earliest policies easing gathering restrictions made no change other than to create or clarify exemptions for religious purposes (see for example State of North Carolina (2020) or State of Tennessee (2020)). Even where the applicability of early policies to religious gatherings was clearly state, the initial easing of limits on religious gatherings appears to follow a different policy track from other easing decisions, as a result of early confusion over state's powers to restrict such gatherings as well as efforts to forestall legal challenges around the First Amendment.[7] To the extent religious easing reflects pressures from First Amendment concerns or from courts instead of a marked U-turn in state policy, we consider non-religious gathering restrictions to be a more re-

7 For example, in May 2020, the former mayor of the city of Bothell in Washington State sued Governor Jay Inslee for violating his First Amendment rights of freedom of religion, assembly, and speech by restricting private gatherings for Bible study in his home. This example additionally demonstrates the perceived – and, ultimately, real – pressure from courts that challenged restrictions on religious gathering. Indeed, in December 2020, *Calvary Chapel Dayton Valley v. Steve Sisolak* was brought to the U.S. 9th Circuit Court of Appeals. The Calvary Chapel held that Governor Steve Sisolak of Nevada's religious gathering limits led to a disparate treatment between religious establishments and other secular businesses. The court ruled that the numeric cap of religious gatherings was to be lifted and instead churches were to be held to the same percent capacity standards of other businesses such as casinos, bars, and restaurants.

liable metric for states' easing tendencies. In any case, including the easing of religious gatherings in our analysis does not change our results.

Why focus on initial indoor easing? As noted in the main text, indoor public spaces present the greatest risk for the spread of SARS-CoV-2, a fact that was understood by May 2020 (Lewis, 2020). Thus the decision to allow indoor activity to resume is of clear epidemiological significance. It is also sharply measurable and comparable across states in a way that more granular policy details are not, given the various ways states defined degrees of allowed capacity and the difficulty of aggregating dissimilar policy measures into a single metric. For example, it is unclear how to assess the relative "stringency" of a 50 percent capacity limit for outdoor dining and a 15 percent capacity limit for indoor dining. On the other hand, the shift from allowing only outdoor dining to allowing indoor dining at all can be clearly measured and compared across policies and states.

Does initial indoor easing signal a genuine U-turn in restrictions? At the time of writing – in April 2021 – the United States has passed through three surges in COVID-19 cases. The first surge occurred in March–April 2020. Afterwards came the period of easing that is the subject of this study, followed by a second surge in the summer of 2020. The third surge, in the fall and winter of 2020-2021, clearly involved new or expanded social distancing mandates in numerous states (Fullman et al., 2021). With that context in mind, it is reasonable to ask whether the policy U-turn we identify in the spring of 2020 endured into the summer of 2020. Did a state's choice to ease indoor social distancing mandates earlier than other states in April–May 2020 make it more likely that a state would resist re-expanding those mandates in the summer, as cases again climbed in much of the United States? Or were early easings unrelated to the level of restrictions in place later in the summer?

To address this question, we look at the evolution of restaurant restrictions over the summer months. Restaurant restrictions are epidemiologically important (Rabin, 2021) and also tend to apply across the same clearly defined group of businesses in all states, making them a good candidate for comparison across this scope. For states that issued only statewide policies on restaurants, we simply track changes in the level of business restrictions applied to restaurants (as before, with four levels indicating whether restaurants were fully closed, were allowed to provide take-away service only, were allowed to open to outdoor service on-premises, or were allowed to open for indoor dining). For states that imposed different restrictions across different geographical regions – including states which eased initially statewide restrictions at different rates in different

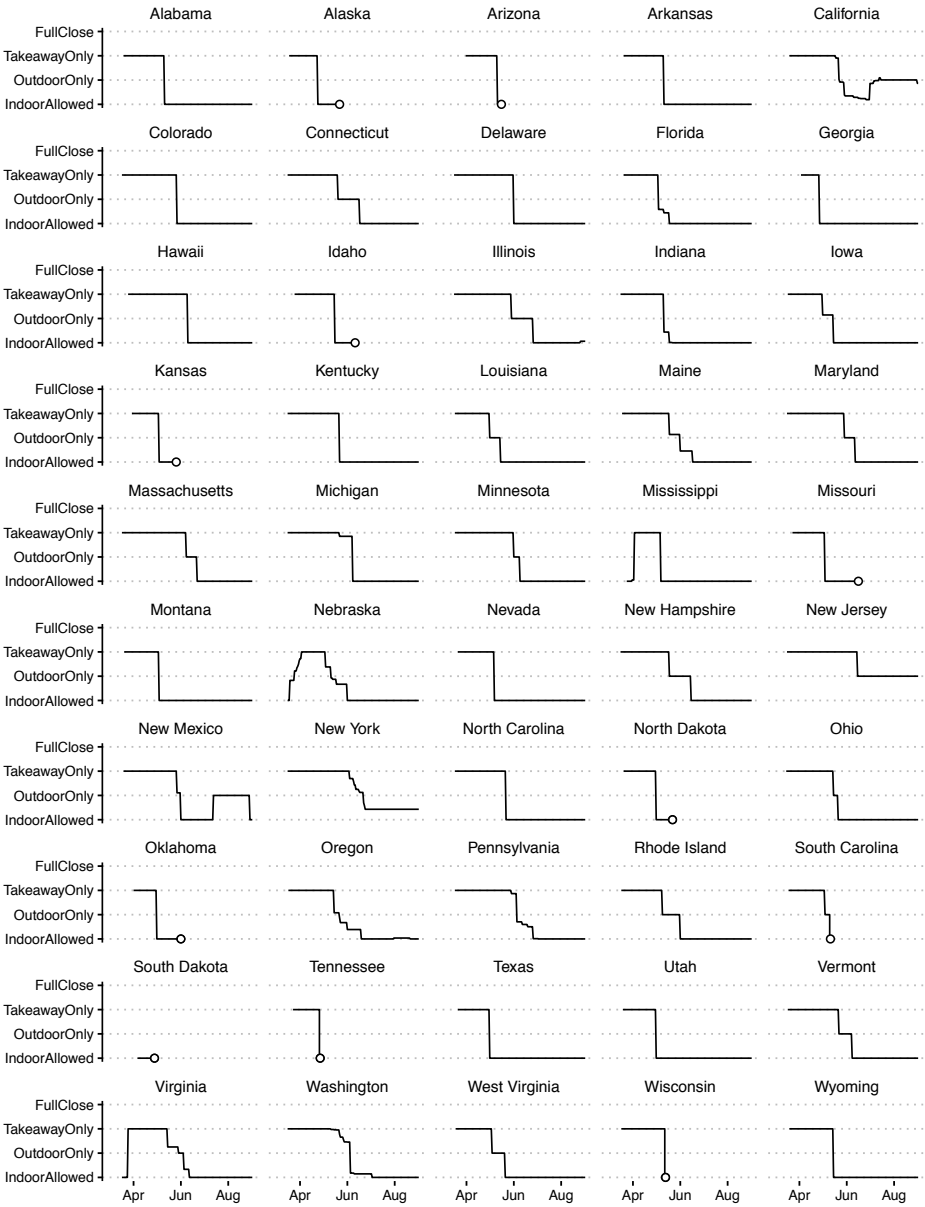

Figure A2. *Level of restaurant restrictions over time.* Only restrictions imposed or coordinated by the state government are shown. For states with varying restriction levels by county, plots show population-weighted averages across counties, treating the level of restrictions as an interval-level variable. An open circle indicates the end of all restrictions (e.g., an end to capacity limits and social distancing mandates for restaurants). Source: Authors' original data collection (Fullman et al., 2021). Data available at `http://covid19statepolicy.org`.

counties – we must trace the path of each county over time through the restaurant restriction policy chain, as we did for New York in Figure A1. At each point in time, we use county population weights to identify the weighted-average level of restaurant restrictions that applied to each state's residents.

Figure A2 collects the time series of restaurant restriction levels for every state. At the start of our study period, every state other than South Dakota restricted restaurants to providing take-away service only. But as part of the policy U-turn, states rapidly reduced the level of restaurant restrictions to allow resumed in-person dining, albeit typically with requirements for social distancing and/or reduced capacity. Tellingly, very few states including California and New Mexico raised their level of business restrictions over the summer of 2020 to re-impose bans on indoor dining. Through the end of August 2020 at least, the U-turn persisted for restaurants.[8]

How did states respond to the second wave? Aside from adopting mask mandates (Adolph, Amano, Bang-Jensen, Fullman, Magistro, Reinke, and Wilkerson, Forthcoming), some states chose to impose or maintain higher levels of restrictions on bars. Thus looking at whether states reversed course on bar restriction levels over summer 2020 provides a tough test for the policy U-turn. Figure A3 shows how the level of bar restrictions evolved over this period, and does indeed show ten states reversed course on bars after initially easing to re-open indoors[9] But even for bar restriction, the policy most prominently associated with renewed restrictions in summer 2020, the vast majority of states resisted re-expanding restrictions in terms of the four levels measured here.

8 As marked in Figures A2 and A3 with open circles, some states completely ended their restaurant and/or bar restrictions during the summer of 2020 (that is, they removed all remaining capacity and social distancing requirements for indoor service), possibly devolving such regulations to local governments. It is worth noting that some of these states later re-instituted at least some restrictions. If these restrictions involved a 25 percent capacity limit (or lower) or 10 person limit per room indoors, they were reviewed as reinstating a robust social distancing mandate for restaurants or bars. An example shown in Figure A3 is Arizona's re-imposition of takeaway only for bars on 29 June 2020 (State of Arizona, 2020*a*). If comparatively less restrictive policies were reinstated, these policies were not captured in the current dataset. For example, Arizona's re-imposed a 50 percent capacity limit while continuing to permit indoor dining on 11 July 2020; this policy is not shown in Figure A2 (State of Arizona, 2020*b*). For more details on the dataset's codebook and inclusion criteria, please refer to the documentation available at `http://covid19statepolicy.org/` (Fullman et al., 2021).

9 These states are Arizona, California, Colorado, Florida, Michigan, Nevada, Pennsylvania, Texas, and Washington, as well as Kentucky, although only briefly.

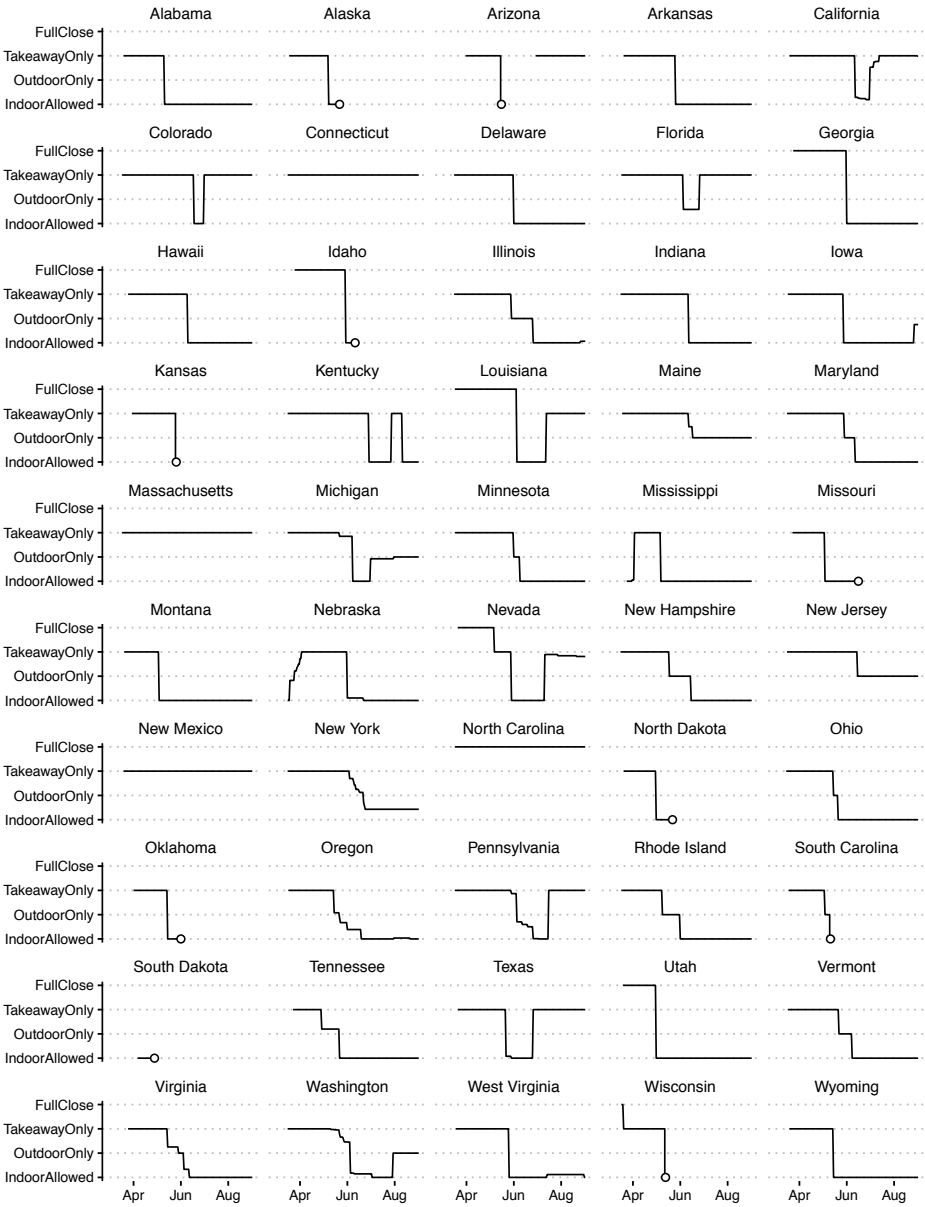

Figure A3. *Level of bar restrictions over time.* Only restrictions imposed or coordinated by the state government are shown. For states with varying restriction levels by county, plots show population-weighted averages across counties, treating the level of restrictions as an interval-level variable. An open circle indicates the end of all restrictions (e.g., an end to capacity limits and social distancing mandates for bars). Source: Authors' original data collection (Fullman et al., 2021). Data available at `http://covid19statepolicy.org`.

We conclude that the initial decision to ease indoor restrictions in April and May 2020 was for the most part a durable one through the end of August and, while necessarily an imperfect measure, is still the best available comparable indicator of whether and when a state began the policy U-turn from increasing restrictions to reducing them.

How similar was easing in counties with varying levels of Black population?

Tracing the evolution of coordinated sub-state policy restrictions also helps answer an important question relevant to our main paper's findings on race and the timing easing: in states with varied sub-state policies, did the level of restrictions apply differently to residents by race? In particular, did counties with higher proportions of Black residents ease faster, slower, or at the same rate as counties with lower proportions of Black residents, at least in terms of our measured level of business restrictions? (One reason this might be the case is if states chose to maintain higher levels of restriction in counties which denser populations, compared rural populations.)

To answer this question, we compute the population-weighted-average level of restrictions separately for counties with an above average percentage of Black residents, compared to the state as a whole. Figure A4 reports these results for restaurant restrictions (top panel) and bar restrictions (bottom panel), in each case showing only states which coordinated sub-state easing for that policy type. Looking at restaurant restrictions, it is striking how similar the level of applied restrictions were within states by the racial composition of counties. New York – which maintained higher restrictions on the New York City area for an extended time – is the main exception. Turning to bar restrictions, New York is joined by Nevada cases where counties with a higher percentage of Black residents tended to have higher levels of restriction for longer periods of time. Tennessee, on the other hand, moved to ease indoor restrictions on bars more quickly in counties with higher Black populations. But again, within most states, counties with either above or below average percentages of Black residents have similar levels of restriction at each point in time.

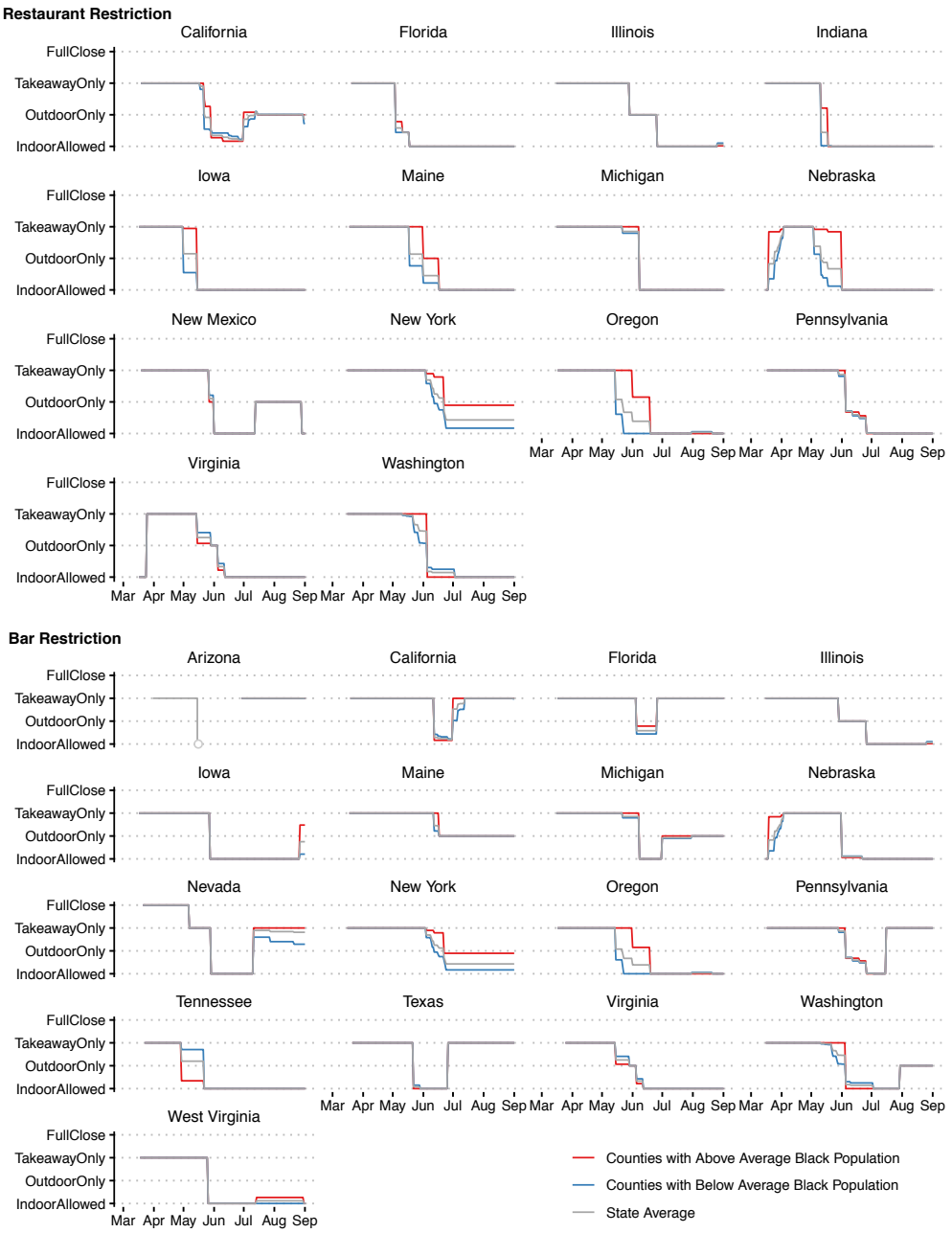
Restaurant Restriction
California
Florida
Illinois
Indiana
Iowa
Maine
Michigan
Nebraska
New Mexico
New York
Oregon
Pennsylvania
Virginia
Washington
FullClose
TakeawayOnly
OutdoorOnly
IndoorAllowed
Mar Apr May Jun Jul Aug Sep
Bar Restriction
Arizona
California
Florida
Illinois
Iowa
Maine
Michigan
Nebraska
Nevada
New York
Oregon
Pennsylvania
Tennessee
Texas
Virginia
Washington
West Virginia
Counties with Above Average Black Population
Counties with Below Average Black Population
State Average

Figure A4. *Level of bar and restaurant restrictions over time by racial composition of affected counties.* For each policy area, only states which at some point had state-coordinated policies that varied by region are shown. The gray line in each plot shows the restrictions present in the population-weighted-average county. Red lines show the weighted-average level of restriction applied to counties with a percentage of Black residents *above* the state average. Blue lines show the weighted-average level of restriction applied to counties with a percentage of Black residents *below* the state average. Where only the gray line is visible, all counties have the same level of state-coordinated restrictions. Source: Authors' original data collection (Fullman et al., 2021). Data available at `http://covid19statepolicy.org`.

References

Adolph, Christopher, Kenya Amano, Bree Bang-Jensen, Nancy Fullman, Beatrice Magistro, Grace Reinke, and John Wilkerson. Forthcoming. "Governor partisanship explains the adoption of statewide mask mandates in response to COVID-19." *State Politics & Policy Quarterly* .

Fullman, Nancy, Bree Bang-Jensen, Grace Reinke, Beatrice Magistro, Rachel Castellano, Megan Erickson, Rebecca Walcott, Carolyn Dapper, Kenya Amano, John Wilkerson, and Christopher Adolph. 2021. "State-level social distancing policies in response to COVID-19 in the US." Version 1.124, April 7. `http://www.covid19statepolicy.org/`.

Lewis, Tanya. 2020. "How coronavirus spreads through the air: what we know so far." *Scientific American* .

Rabin, Roni Caryn. 2021. "The C.D.C. links restaurant dining and a lack of mask mandates to the virus' spread in the United States." *New York Times* (March 5). `https://www.nytimes.com/2021/03/05/world/cdc-masks-dining-virus.html`.

State of Arizona. 2020*a*. "Pausing of Arizona's Reopening: Slowing the Spread of COVID-19." Executive Order 202-43. June 29. Archived at `http://covid19statepolicy.org` as State Policy Source Arizona0017.

State of Arizona. 2020*b*. "Reducing the Risk, Slowing the Spread: Limiting Indoor Dining." Executive Order 202-47. July 9. `https://azgovernor.gov/file/35221/download?token=dcqvammZ`.

State of North Carolina. 2020. "Executive Order." Executive Order No. 128. May 5. Archived at `http://covid19statepolicy.org` as State Policy Source NorthCarolina0010.

State of Tennessee. 2020. "Executive Order." Executive Order No. 30. April 28. Archived at `http://covid19statepolicy.org` as State Policy Source Tennessee0026.

Supplement B.

Regression Tables

To supplement Christopher Adolph, Kenya Amano, Bree Bang-Jensen, Nancy Fullman, Beatrice Magistro, Grace Reinke, Rachel Castellano, Megan Erickson, and John Wilkerson. Forthcoming. "The Pandemic Policy U-Turn: The role of partisanship, public health, and race in decisions to ease COVID-19 social distancing policies in the U.S." *Perspectives on Politics*.

Table B1. Cox proportional hazards model of first indoor, non-religious easing of five social distancing measures, 16 April to 6 July 2020, all states.

	Counterfactuals		hazard	95% CI	
Covariate	***pre***	***post***	**rate**	***lower***	***upper***
log(Population density, persons/mi^2)	277.4	53.3	2.05	1.44	2.83
log(Daily deaths/million, 7-day moving average)	5.29	0.81	1.92	1.22	2.90
Daily deaths/million is exactly zero	No	Yes	1.67	0.87	3.19
Republican governor	0	1	1.79	1.20	2.58
Black population (%)	3.5	14.2	1.55	1.26	1.89
Trump vote share in 2016	39.1	54.9	1.40	1.03	1.85
Slope of trend in new cases, last 14 days	+1.28	−1.42	1.14	1.03	1.26
Slope of trend in test positivity, last 14 days	+0.04	−0.15	1.14	1.01	1.28
Total state-policy-days at risk			8194		
Total state-policies at risk			237		
Total events			225		
AIC			1049.4		
Concordance index (Harrell's *c*)			0.768		

Each row shows the hazard ratio for (the counterfactual change in) the covariate listed at the left. To simplify comparison across covariates with different scales of measurement, hazard ratios for the interquartile range are shown for continuous covariates. Covariates with both 95 confidence limits above 1.0 significantly increase the chance of first-time substantive easing of a given policy. Baseline hazards are stratified across both the five pooled social distancing measures (recommendations and restrictions on gatherings, bar restrictions, restaurant restrictions, business closures, and stay-at-home orders) *and* whether the state employed coordinated substate easing for the relevant policy area. Standard errors used to compute confidence intervals are clustered by state. The concordance index shows the proportion of all pairs of states for which the model correctly predicts which state-policy will ease first. The Efron method is used to resolve ties.

Table B2. Cox proportional hazards model of first indoor, non-religious easing of five social distancing measures, 16 April to 6 July 2020, Democratic-governed states.

Covariate	Counterfactuals *pre*	Counterfactuals *post*	hazard rate	95% CI *lower*	95% CI *upper*
log(Daily deaths/million, 7-day moving average)	7.29	1.06	2.22	1.05	4.20
Daily deaths/million is exactly zero	No	Yes	0.85	0.38	1.90
log(Population density, persons/mi^2)	277.4	64.0	1.96	1.24	3.01
Trump vote share in 2016	38.9	47.2	1.33	0.96	1.80
Slope of trend in new cases, last 14 days	+1.24	−1.79	1.26	1.14	1.39
Black population (%)	3.7	14.0	1.17	0.74	1.74
Slope of trend in test positivity, last 14 days	+0.04	−0.19	1.07	0.84	1.33
Total state-policy-days at risk			4765		
Total state-policies at risk			117		
Total events			107		
AIC			376.6		
Concordance index (Harrell's *c*)			0.705		

Each row shows the hazard ratio for (the counterfactual change in) the covariate listed at the left. To simplify comparison across covariates with different scales of measurement, hazard ratios for the interquartile range are shown for continuous covariates. Covariates with both 95 confidence limits above 1.0 significantly increase the chance of first-time substantive easing of a given policy. Baseline hazards are stratified across both the five pooled social distancing measures (recommendations and restrictions on gatherings, bar restrictions, restaurant restrictions, business closures, and stay-at-home orders) *and* whether the state employed coordinated substate easing for the relevant policy area. Standard errors used to compute confidence intervals are clustered by state. The concordance index shows the proportion of all pairs of states for which the model correctly predicts which state-policy will ease first. The Efron method is used to resolve ties.

Table B3. Cox proportional hazards model of first indoor, non-religious easing of five social distancing measures, 16 April to 6 July 2020, Republican-governed states.

Covariate	Counterfactuals *pre*	Counterfactuals *post*	hazard rate	95% CI *lower*	95% CI *upper*
log(Population density, persons/mi^2)	280.8	53.3	2.42	1.63	3.45
Black population (%)	3.1	15.5	1.95	1.51	2.47
log(Daily deaths/million, 7-day moving average)	3.72	0.70	1.93	1.10	3.13
Daily deaths/million is exactly zero	No	Yes	1.52	0.55	4.20
Trump vote share in 2016	46.6	58.8	1.20	0.93	1.53
Slope of trend in new cases, last 14 days	+1.36	−0.94	1.18	0.92	1.50
Slope of trend in test positivity, last 14 days	+0.05	−0.13	1.14	0.94	1.37
Total state-policy-days at risk			3429		
Total state-policies at risk			120		
Total events			118		
AIC			419.4		
Concordance index (Harrell's *c*)			0.730		

Each row shows the hazard ratio for (the counterfactual change in) the covariate listed at the left. To simplify comparison across covariates with different scales of measurement, hazard ratios for the interquartile range are shown for continuous covariates. Covariates with both 95 confidence limits above 1.0 significantly increase the chance of first-time substantive easing of a given policy. Baseline hazards are stratified across both the five pooled social distancing measures (recommendations and restrictions on gatherings, bar restrictions, restaurant restrictions, business closures, and stay-at-home orders) *and* whether the state employed coordinated substate easing for the relevant policy area. Standard errors used to compute confidence intervals are clustered by state. The concordance index shows the proportion of all pairs of states for which the model correctly predicts which state-policy will ease first. The Efron method is used to resolve ties.