

# **Renters, State Eviction Bans, and Mental Health: Evidence from the COVID-19 Pandemic in the U.S.**

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## **Abstract**

The COVID-19 pandemic spurred an economic downturn that put millions at risk for eviction. In response, most states implemented policies to reduce evictions. While these eviction bans have been linked to lowered COVID-19 transmission and mortality, we hypothesize that the benefits of state eviction moratoria extend to mental health. Merging household-level data from the Census Bureau's Household Pulse Survey (CHHPS) (n=446,109) to state-level data on the timing of eviction bans, this study examines the links between COVID-related economic hardships and mental health among renters and assesses whether state eviction bans buffered renters against the detrimental mental health impacts of financial hardship. We also examine how the racially disparate patterning of COVID-related economic hardships shaped disparities in mental health and further assess whether state eviction bans differentially impacted mental health by race-ethnicity. In doing so, our findings will improve understanding of the pandemic's indirect toll on population disparities in mental health.

## INTRODUCTION

In addition to its devastating direct toll on the health and mortality of those infected, the COVID-19 pandemic spurred a historic economic downturn that put millions of Americans at risk for eviction, with potentially important consequences for population health. Prior to the pandemic, renters in the U.S. experienced nearly 900,000 evictions each year (Desmond et al. 2018), and a majority of low-income renter households spent more than half of their income on housing costs (Desmond 2015). The pandemic—and the subsequent economic crisis—put millions more at risk of eviction (Gopinath 2020). By September 2020, roughly one in six renter households was behind on rent and at threat of eviction (Llobrera et al. 2020). The rising tide of evictions left in the wake of the pandemic likely had negative impacts on a range of health outcomes, as eviction is a particularly salient and pernicious source of stress that impacts mental health risks, in particular (Hoke and Boen 2021). Importantly, Black and Latinx individuals and households experienced the highest pre-pandemic rates of eviction, and these groups were also hardest hit by the economic downturn and eviction crisis spurred by the pandemic. As a result, the rising threat of evictions during the pandemic may have played a critical role in patterning racial-ethnic disparities in mental health.

In response to the looming eviction crisis, the U.S. Centers for Disease Control and Prevention (CDC) enacted a national eviction moratorium on September 4, 2020. This federal moratorium was layered on top of a patchwork of state-level eviction policies, as a majority of states introduced their own eviction bans at some point in 2020-2021. As a result, individuals and families experienced a range of eviction-related policies that varied both across both time and place. Recent research documents that these eviction bans were beneficial for population health, insofar as their implementation decreased state-level COVID-19 incidence and mortality

rates, particularly for the most economically vulnerable households (Leifheit et al. 2021; Nande et al. 2021; Sandoval-Olascoaga, Venkataramani, and Arcaya 2021).

We hypothesize that the benefits of state-level eviction moratoria extend beyond COVID-19 infection and prevalence to mental health. By lowering eviction risks for households experiencing financial hardship, these bans may have reduced eviction-related stress and worry for vulnerable renter households in ways that affected mental health. To examine this question, we merge household-level survey data from the Census Bureau's Household Pulse Survey (CHHPS) to state-level data on the timing eviction bans from the COVID-19 U.S. state policy database (Raifman 2020). Our sample consists of a national sample of 446,109 renters under the age of 65, observed between April 2020 and April 2021. In our investigation, we:

- 1) Examine the association between COVID-related economic hardships and mental health among renters; and*
- 2) Assess whether state-level eviction bans moderate the associations between these economic hardships and mental health for renters, potentially buffering against the detrimental impacts of these financial difficulties.*

Given that Black and Latinx individuals were at greatest risks of job, income, and housing loss during the pandemic, we further:

- 3) Assess how the unequal patterning of COVID-related economic hardships shape racial-ethnic disparities in mental health; and*
- 4) Examine whether state-level eviction bans differentially impact mental health by race-ethnicity.*

Our study is the first to investigate how eviction bans were associated with population patterns of anxiety and depression, critical outcomes given the large increase in mental health risks experienced during the pandemic. Furthermore, our results will provide new evidence of how eviction bans may have exacerbated or reduced racial-ethnic disparities in health. In addition to improving understanding of the pandemic's indirect toll on population mental health and racial-ethnic mental health disparities, this study also offers new insights into the effectiveness of eviction moratoriums in mitigating the pandemic's indirect impacts on health and well-being.

## BACKGROUND

### *Eviction Risks, Eviction Bans, and Population Health*

The unprecedented job and income losses caused by the COVID-19 pandemic put millions of Americans at risk of housing loss, including eviction (Gopinath 2020). In the early months of the pandemic, U.S. workers lost roughly 22 million jobs, with unemployment hitting a record high 14.7% in April 2020 (Bureau of Labor Statistics 2020). Just over half of these losses were recovered by October 2020, but the recovery was uneven (Bureau of Labor Statistics 2020). Even among workers who did not lose their jobs, an estimated 60% experienced a wage cut or freeze between March and June 2020 (Cajner et al. 2020). These economic losses exacerbated an already widespread housing affordability crisis. Prior to the pandemic, renters in the U.S. experienced nearly one million evictions each year (Desmond et al. 2018), and a majority of low-income renter households spent more than half of their income on housing costs (Desmond 2015). With the onset of the pandemic, the number of households at risk of losing their homes increased nearly exponentially (Llobrera et al. 2020).

Given evidence that eviction can be harmful to health (Desmond and Kimbro 2015; Fowler et al. 2015; Hoke and Boen 2021), the rising tide of evictions left in the wake of the pandemic likely had negative effects on a range of health outcomes. The experience of being evicted can expose individuals to a host of health risks, including heightened levels of psychosocial stress (Hoke and Boen 2021) and increased risks of unhealthy and substandard housing conditions, characterized by high levels of overcrowding and physical risks like lead and asbestos (Desmond 2012). Research increasingly identifies eviction as a potent threat to mental health, in particular (Hoke and Boen 2021).

In recognition of the adverse consequences of eviction, the federal government and states enacted legislation during the pandemic to curtail evictions and reduce viral transmission, in particular. The CDC enacted a moratorium on evictions in September 2020 (which was later deemed unconstitutional by the U.S. Supreme Court). A majority of states and the District of Columbia also implemented their own eviction bans beginning in March of 2020. Notably, state-level bans in evictions did not necessarily mirror state-level pre-pandemic risk of evictions. In the years leading up to the pandemic, eviction rates ranged from less than 1% (e.g., Idaho and New Jersey) to closer to 10% (e.g., South Carolina) (Desmond et al. 2018). During the pandemic, however, Idaho and South Carolina both enacted very brief eviction bans (lasting only between March and May of 2020) whereas New Jersey's eviction ban, also enacted in March, is still ongoing (Raifman 2020).

Initial evidence suggests that these bans have been effective in blunting the worst of COVID-19's direct toll on morbidity and mortality. Research exploiting the time-varying nature of the implementation and repeals of state-level eviction bans documents that these bans had significant impacts on state-level COVID-19 incidence and mortality rates (Leifheit et al. 2021;

Nande et al. 2021; Sandoval-Olascoaga et al. 2021). Importantly, research finds that the impact of state-level eviction bans and COVID infection risks were particularly pronounced for lower socioeconomic status (SES) individuals (Sandoval-Olascoaga et al. 2021), indicating that these bans may be most protective for those at greatest risk of eviction and infection.

### *Racial-Ethnic Disparities in Eviction Risks and Health*

Importantly, the economic devastation of the COVID-19 pandemic exacerbated racial-ethnic inequalities in financial hardship and housing insecurity. Black and Latinx individuals and households, who had high levels of pre-pandemic financial hardship and housing insecurity, also experienced the highest levels of job, income, and housing losses during the pandemic. Prior to the pandemic, Black and Latinx renters also faced especially high rates of eviction relative to White renters, and roughly one in four Black renters lived in a county where the Black eviction rate was more than twice as high as the White eviction rate (Hepburn, Louis, and Desmond 2020). Pre-pandemic, more than 50% of Black and Latinx renter households were rent burdened—spending more than 30% of their incomes on rent and utilities—compared to approximately 40% of White and Asian renter households (Wedeen n.d.).

The already unstable housing landscape for low-income renters of colors was further destabilized during the COVID-19 pandemic, as job and income losses were concentrated among individuals holding lower wage occupations, who were disproportionately Black and Latinx. In April 2020, Black and Latinx workers were considerably more likely to be unemployed (19% and 16.4%, respectively) than White workers (13%) (Amburgey and Birinci 2020). In late May 2020, employment for workers in the lowest wage quintile—who are disproportionately Black and Latinx—was approximately 30% lower than pre-pandemic levels (Cajner et al. 2020). These

staggering job and income losses resulted in striking disparities in eviction risks during the pandemic. By late September 2020, roughly two in ten Black and Latinx renter households reported being behind on rent, and nearly one in ten Black and Latinx renter households reported that they were likely to be evicted in the coming months (Wedeen n.d.).

Because the pandemic widened racial-ethnic inequalities in financial hardship and eviction risks, it is possible that the pandemic also contributed to racial-ethnic disparities in mental health. Also plausible, though not yet investigated, is that eviction bans may have mitigated racial-ethnic differences in mental health during the course of the pandemic.

### *Hypotheses*

Linking household-level data from the CHHPS to state-level data on the timing of state-level eviction bans, we test the following four hypotheses:

*H1. Renter households reporting difficulty paying rent and other expenses have higher levels of anxiety and depression than renter households not reporting these financial difficulties.*

*H2. State-level eviction bans moderate the associations between financial difficulties and mental health, with the association being weaker for renter households in states with active eviction moratoria.*

*H3. Racial-ethnic disparities in reported difficulty paying rent and other expenses contribute to racial-ethnic inequalities in mental health.*

*H4. The moderating role of state-level eviction bans is stronger for Black and Latinx households than for White households.*

## DATA AND METHODS

### *Data and Sample*

Data for this study come from two sources. Our household-level data come from the Census Bureau's Household Pulse Survey (CHHPS), a repeated cross-sectional national household survey administered by the Census and five other federal agencies to gather information on the pandemic's effect on American well-being. Data collection began in April 2020 and is ongoing. Surveys were administered on either a weekly or bi-weekly basis. We include data from 34 separate waves, ranging from the beginning of April 2020 to the end of April 2021. We will include additional waves of data as they become available. The CHHPS sample is nationally-representative and includes detailed household-level data on economic hardship, health, and sociodemographic characteristics and has sufficient sample size to compare patterns and model outcomes across states. The CHHPS is also unique in that it allows for examining how patterns of economic hardship and health have evolved across the course of the pandemic. In addition to the CHHPS, we also use state-level policy data from the COVID-19 US State Policy Database (Raifman 2020), which includes time-varying, state-level information on the implementation and repeal of state eviction moratoria. We link household-level survey data from CHHPS to state-level eviction moratoria data to conduct our analyses.

Because we examine whether eviction bans modify the associations between household economic hardships and mental health, we restrict our analytic samples to renter households, who are the intended targets of the eviction moratoria. We also restrict our sample to householders under 65 years old. A majority of respondents participated in one weekly survey, but some participants participated in two or three surveys. For these respondents with repeated



observations, we only use their first observation. Our analytic sample include a total of 446,109 renter households observed in the first 34 waves of the CHHPS.

### *Measures*

Our study includes two key outcomes from the CHHPS: depression and anxiety. Depression was ascertained through the validated two-item Patient Health Questionnaire (PHQ), which asks respondents how often, over the past seven days, they have had little interest in doing things or were feeling depressed or hopeless. Anxiety was assessed through the validated two-item Generalized Anxiety Disorder scale (GAD-2). The GAD-2 asks respondents how often, over the past seven days, they had uncontrollable levels of worrying or felt nervous or on edge. Both measures used a response scale from 0 (not at all) to 3 (every day) scale. Scores were summed across the two items in each index. Respondents who scored a 3 or higher on the PHQ or the GAD-2 were considered to have depression and anxiety, respectively.

We use two measures of household-level financial hardship from the CHHPS: not caught up on rent and difficulty paying expenses. To determine whether households were behind on rent, respondents were asked “is this household currently caught up on rent?” Respondents who answered “no” were coded as being not caught up on rent (1=not caught up on rent). To assess whether households were having difficulty paying expenses, respondents were asked “In the last 7 days, how difficult has it been for your household to pay for usual household expenses, including but not limited to food, rent or mortgage, car payments, medical expenses, students loans, and so on?” Households that responded that it has been “somewhat” or “very” difficult to pay for expenses were coded as having difficulty paying expenses (1=difficulty paying expenses). We include these measures of household financial hardship in our analyses because

renter households who are not caught up on rent and/or having difficulty paying usual household expenses may be at particularly high risk of eviction and especially vulnerable to state-level eviction moratoria.

Information about whether and when states had active eviction moratoria in place comes from the COVID-19 US state policy database. Our measure of state-level eviction moratorium is time-varying and is coded as “1” if the state had an eviction moratorium in place and “0” if it had no active eviction moratorium in place.

We also include measures of respondents’ race-ethnicity (series of dummy variables indicating non-Hispanic White, non-Hispanic Black, Hispanic, Asian, and other), educational attainment (series of dummy variables indicating high school or less, some college, and bachelor’s degree or higher), and marital status (series of dummy variables indicating married, unmarried, and never married). We also include several other measures of household structure, including whether the household has children (1=yes), the number of children in the household, and the total number of individuals in the household.

All models will include survey year-week fixed effects.

## *Methods*

We begin with descriptive statistics, paying particular attention to racial-ethnic disparities in mental health and financial hardship. To examine the associations between household financial hardship, mental health, and racial-ethnic disparities in mental health (hypotheses 1 and 3), we will estimate stepwise multilevel linear probability models for each outcome that account for the nesting of households in states by including a random effect for state. First, we will estimate models predicting depression and anxiety including the covariates (including race-

ethnicity) but without the markers of household financial difficulties. In the second set of models, we will build on the basic models by including two measures of household financial difficulty separately. These models will allow us to test whether there is an association between household financial difficulties and mental health (hypothesis 1) and whether racial disparities in financial difficulties contribute to racial-ethnic disparities in the outcomes (hypothesis 3).

To test whether the associations between household financial difficulties and mental health varies across states with and without eviction moratoria (hypothesis 2), we will first include the measure indicating the presence of an active state-level eviction moratoria. In subsequent models, we will also add an interaction of the state-level eviction moratoria measure with the household financial hardship measures to examine whether the associations between household financial difficulties and mental health vary by state. These models will take the following generic form:

$$y_{ij} = \beta_0 + \beta_1 \text{race-ethnicity}_{ij} + \beta_2 \text{financial hardship}_{ij} + \beta_3 \text{active eviction moratoria}_j + \beta_4 \text{financial hardship}_{ij} * \text{active eviction moratoria}_j + \beta_5 X_{ij} + \beta_6 \text{week-year} + e_{ij}$$

In the equation above, we model mental health outcome  $y$  of individual  $i$  in state  $j$  as a function of race-ethnicity ( $\beta_1$ ), the two household financial hardship measures (separately) ( $\beta_2$ ), whether the state has an active eviction moratoria ( $\beta_3$ ), and the covariates ( $\beta_5$ ), including week-year fixed effects ( $\beta_6$ ). In these models, we also allow the association between the household financial hardship measures and mental health to vary according to whether the respondent's state has an active eviction moratoria ( $\beta_4$ ).

We will also run models stratified by race-ethnicity to assess whether the moderating role of state-level eviction bans varies by race-ethnicity (hypothesis 4). All descriptive statistics and multivariable models will be weighted to account for survey design effects.

Concerns regarding selection and unmeasured confounding can arise when estimating the links between household financial hardships and mental health, as well as state eviction bans and mental health. To address these issues, we will run supplementary models using inverse probability of treatment weights (IPTWs) with regression adjustment. To better account for potentially unmeasured differences between households reporting financial difficulties and those not reporting financial difficulties, we will first calculate propensity scores for households that indicate their probability of reporting each of the financial hardships (not being caught up on rent and difficulty paying expenses). We will then use these calculated propensity scores to weight observations. The use of IPTWs balances treatment across the covariates by giving more or less weight to respondents with covariates that are over- or under-represented in the data. In this way, in the IPTW models, exposure to household financial hardship will behave as if it was randomized with the observed covariates (Robins 1999; Robins, Hernán, and Brumback 2000). We will follow a similar strategy for models using the state eviction moratoria exposures, first estimating states' propensity for implementing the eviction bans and then use those scores to balance "exposure" across the data using IPTWs. The use of IPTWs in these supplemental analyses will reduce concerns about selection, endogeneity, and unmeasured confounding and will improve our ability to make inferences.

### *Preliminary Results*

Table 1 presented weighted descriptive statistics for the full sample, as well as by household financial hardship and outcome. Overall, we find that more than one in ten (13.4%) renter households reported not being caught up on rent and more than four in ten (41.7%) reported having difficulty paying usual household expenses. Importantly, Black and Hispanic

individuals were overrepresented among those experiencing financial hardship. Black individuals are 13.3% of renter sample but 22.3% of those who reported not being caught up on rent and 16.2% of those who reported having difficulty paying expenses. Hispanic individuals are 14.3% of renter sample but 19.0% and 17.4% of those reporting not being caught up on rent or having difficulty paying expenses, respectively.

Figure 1 shows trends in financial hardship over the period by survey week and race-ethnicity. Across the two measures of household financial hardship, Black individuals reported the highest levels of hardship over a majority of survey waves. Figure 1 also shows temporal variation in overall levels of financial hardship by survey week, as well as temporal variation in the magnitudes of racial-ethnic disparities in financial hardship.

Descriptive statistics in Table 1 also reveal high levels of anxiety and depression among renters, with 43.1% of individuals having anxiety and 33.7% having depression. We document an especially high prevalence of anxiety and depression among renters experiencing financial difficulties. Among those who report not being caught up on rent, 58.7% have anxiety and 50.1% have depression. Among those who report having difficulty meeting usual expenses, 60.2% have anxiety and 49.7% have depression.

Figure 2 shows levels of anxiety and depression by survey wave and race-ethnicity. Across most waves, Asian individuals had the lowest levels of anxiety and depression, and those of “other” race had the greatest risks. Figure 2 also shows substantial temporal variation in mental health risks—as well as racial-ethnic disparities in risks—across the period.

Figure 3 illustrates the overall timeline of state-level eviction bans, showing how many states had active eviction bans at each survey wave. State eviction moratoria were most common in the early months of the pandemic. At the time of the first Pulse survey, 43 states and the

District of Columbia had active eviction bans in place. This rapidly declined over the first 14 survey waves, at which point the number of states with active eviction bans then remained relatively constant.

Figure 4 provides more detail on the timing of these state bans, showing the timing of eviction bans for each state and the District of Columbia separately. A handful of states never implemented their own bans (e.g., Arkansas, Georgia, Missouri, Ohio, Oklahoma, South Dakota, Wyoming), while others had active eviction bans over the entire period (e.g., California, DC, Hawaii, Illinois, Minnesota, New Jersey, New Mexico, New York, Oregon, Vermont, Washington). Still, Figure 4 also reveals substantial heterogeneity in active eviction bans by place and time.

### *Next Steps*

To date, we have cleaned, coded, and merged all study data. In the coming weeks and months, we will conduct our multivariable analyses, including the IPTW models.

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Table 1. Descriptive table of covariates, for full sample and by financial hardship and outcome

	<b>Overall</b>	<b>Not caught up on rent</b>	<b>Having difficulty paying expenses</b>	<b>Anxiety</b>	<b>Depression</b>
<i>Financial Hardship</i>					
Unpaid Rent	13.4%	-	26.4%	18.4%	19.8%
Expense Difficulty	41.7%	81.9%	-	58.4%	60.9%
<i>Mental Health</i>					
Anxiety	43.1%	58.7%	60.2%	-	83.9%
Depression	33.7%	50.1%	49.7%	65.5%	-
<i>Age &amp; Gender</i>					
Age*	40.8	42.4	41.9	40.0	40.1
Female	63.8%	66.8%	68.5%	69.4%	66.8%
<i>Race/Ethnicity</i>					
White	61.6%	44.8%	55.6%	64.1%	62.7%
Black	13.3%	22.3%	16.2%	12.0%	12.7%
Hispanic	14.3%	19.0%	17.4%	14.1%	14.3%
Asian	5.2%	6.6%	4.0%	3.7%	4.0%
Other Race	5.5%	7.3%	6.9%	6.1%	6.3%
<i>Educational Attainment</i>					
HS or less	18.4%	28.9%	24.7%	18.7%	20.7%
Some College	36.5%	45.0%	45.0%	39.5%	41.5%
BA or more	45.0%	26.0%	30.3%	41.7%	37.8%
<i>Marital Status</i>					
Married	33.4%	31.9%	30.2%	29.9%	27.6%
Unmarried	66.6%	68.1%	69.8%	70.1%	72.4%
Never Married	41.9%	37.2%	39.5%	44.1%	45.4%
<i>Family Structure</i>					
Has Kids	38.0%	53.5%	45.7%	38.2%	36.6%
Number of Kids*	1.9	2.0	1.9	1.8	1.8
Household Size*	2.7	3.1	2.9	2.7	2.7

Notes: Descriptive statistics of full sample and stratified by: whether the household reporting being caught up on rent; whether the household reported difficulties paying expenses; anxiety; and depression. Sample restricted to renters under age 65.

\*mean

Figure 1. Rent not paid and difficulty paying expenses by race and Pulse survey wave

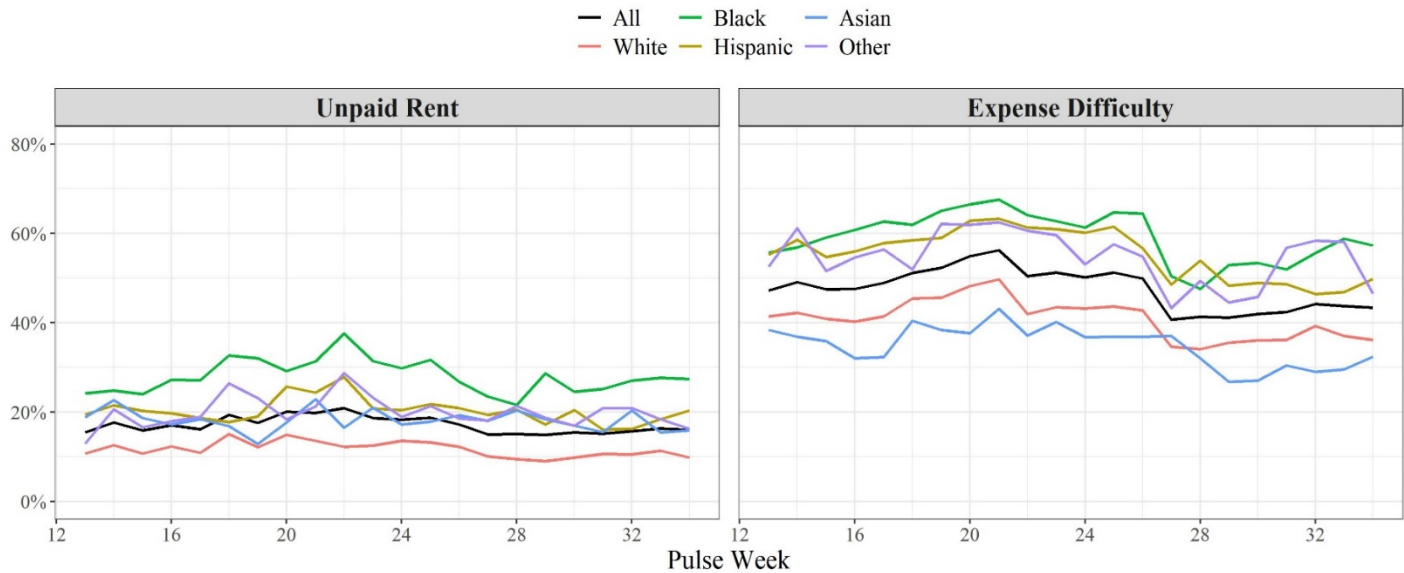


Figure 2. Anxiety and depression by race and Pulse survey wave

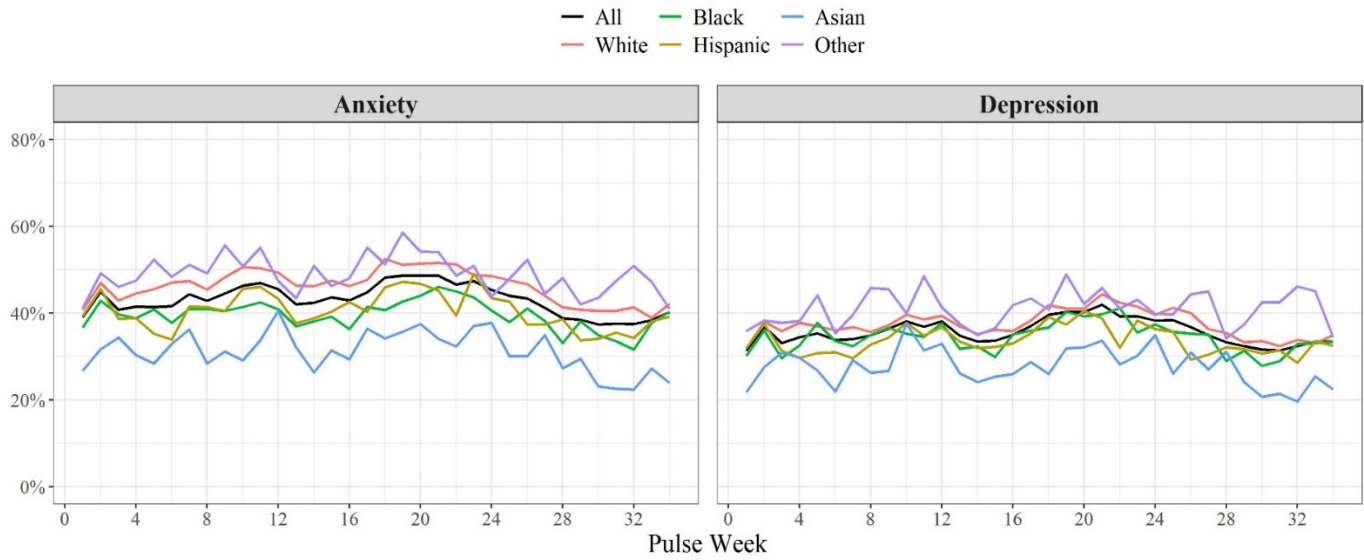


Figure 3. Eviction ban timeline by Pulse survey wave

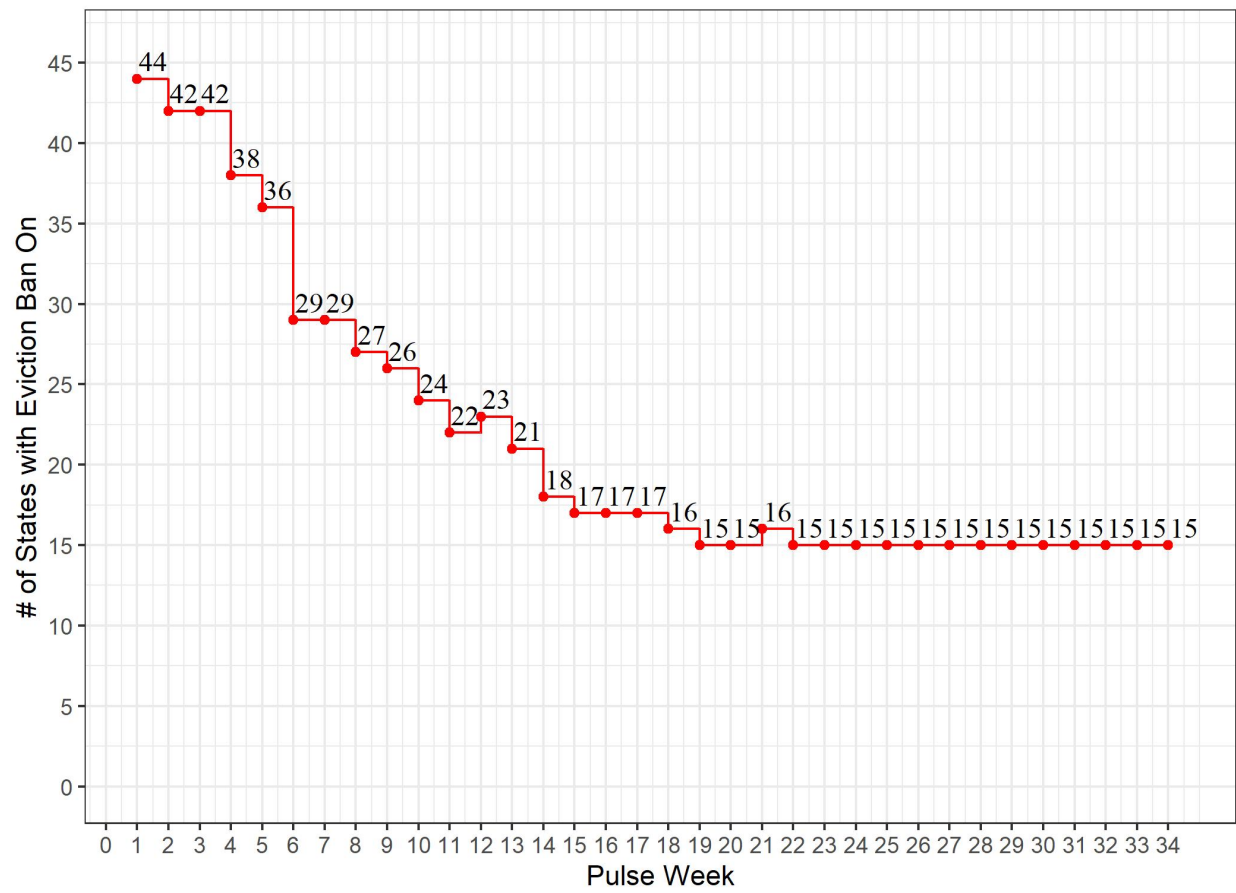
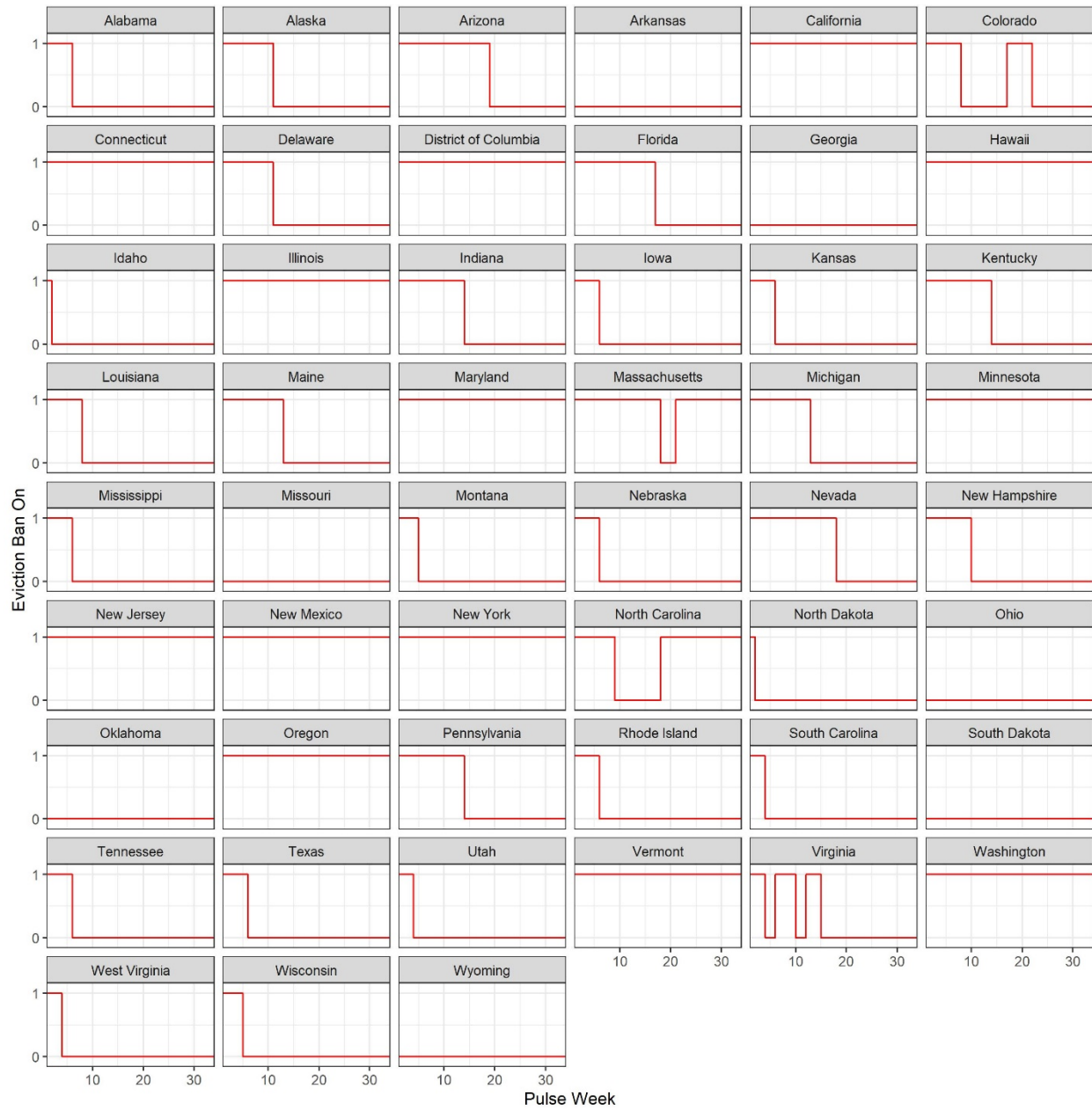


Figure 4. Eviction ban timeline by state and Pulse survey wave



Note: 1=active state eviction moratorium; 0=no active state eviction moratorium