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## A Generational Shift: Race and the Declining Lifetime Risk of Imprisonment

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### Abstract

Mass incarceration fundamentally altered the life course for a generation of American men, but sustained declines in imprisonment in recent years raise questions about how incarceration is shaping current generations. This study makes three primary contributions to a fuller understanding of the contemporary landscape of incarceration in the United States. First, we assess the scope of decarceration. Between 1999 and 2019, the Black male incarceration rate dropped by 44%, and notable declines in Black male imprisonment were evident in all 50 states. Second, our life table analysis demonstrates marked declines in the lifetime risks of incarceration. For Black men, the lifetime risk of incarceration declined by nearly half from 1999 to 2019. We estimate that less than 1 in 5 Black men born in 2001 will be imprisoned, compared with 1 in 3 for the 1981 birth cohort. Third, decarceration has shifted the institutional experiences of young adulthood. In 2009, young Black men were much more likely to experience imprisonment than college graduation. Ten years later, this trend had reversed, with Black men more likely to graduate college than go to prison. Our results suggest that prison has played a smaller role in the institutional landscape for the most recent generation compared to the generation exposed to the peak of mass incarceration.

### Keywords

Incarceration; Life course; Race and ethnicity; Inequality

### Introduction

The U.S. incarceration boom was one of the most significant and stratifying societal changes of the past half-century. From 1972 to 2009, the number of individuals incarcerated in prisons increased by more than 700% (Bureau of Justice Statistics (BJS) 1982; Carson 2020), disproportionately impacting Black men. At the height of the prison boom, the incarceration rate for Black men was 6.5 times that of White men (West and Sabol 2008). Within this context, a large body of research demonstrates that incarceration is a decisive life event that impacts employment and marriage prospects (Pager 2003; Wakefield and Uggen 2010), lessens health and well-being (Massoglia and Pridemore 2015), harms families and

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children (Wakefield and Wildeman 2013), diminishes democratic participation (Manza and Uggen 2008), and limits upward mobility (Western 2006).

Incarceration became an increasingly common life course event during the prison boom. Whereas prisons had historically been reserved for a small subset of violent and habitual offenders, the scope and scale of the incarceration boom reshaped the pathways to adulthood for a generation of young minority men. As Irwin and Austin (1997:156) observed, “For many young males, especially African Americans and Hispanics, the threat of going to prison or jail is no threat at all but rather an expected or accepted part of life.” In line with this view, Pettit and Western (2004) empirically demonstrated that 22% of Black men born between 1965 and 1969 could expect to serve time in prison by age 35. Indeed, incarceration was so pervasive for this cohort that it was more common than other events historically associated with passage through the life course, such as serving in the military or obtaining a college degree. Using a similar approach and projecting forward, Bonczar (2003) estimated that if incarceration rates remained unchanged, 1 in 3 Black males born in 2001 could expect to serve time in prison in their lifetime. As a point of reference, this proportion compares with 1 in 17 for White males.

These estimates of the lifetime risk of incarceration remain widely cited and highly influential.<sup>1</sup> However, the empirical and social reality on which these estimates were based has shifted markedly. Since 2007, the national incarceration rate has declined by 20% (see Figure 1)—the first sustained reduction in incarceration in nearly a century. These declines were more pronounced and more enduring for Black men, for whom incarceration rates dropped by 44% between 1999 and 2019 (see Figure 1). In short, the central assumption undergirding some of the most influential and commonly cited estimates of the lifetime prevalence of incarceration—that incarceration rates remain unchanged—has not held.

Yet, the literature on race and decarceration remains nascent. The Bureau of Justice Statistics has published official reports on trends in declining incarceration rates (Carson 2020), including notable race- and ethnicity-specific trends, which have received limited news coverage (Bushway and Kalra 2021; Humphreys and Yankah 2021; Lane and Humphreys 2019). Scholars also started exploring trends related to declining incarceration, including aging prison populations (Luallen and Kling 2014; Porter et al. 2016) and cohort differences in incarceration for particular locales (Shen et al. 2020). Still, little sustained empirical research has focused on how the contemporary landscape of U.S. corrections alters our understanding of incarceration risk throughout the life course of the most recent generations (for an exception, see Roehrkasse and Wildeman 2022). This article adds to this developing literature by making three principal contributions.

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<sup>1</sup>Pettit and Western (2004) and Bonczar (2003) have been cited a combined 1,600 times since 2015, according to Google Scholar. A few prominent examples of the contemporary use of these statistics – particularly the estimate that 1 in 3 black men born in 2001 would be incarcerated in their lifetime – outside of academia include a report to the United Nations by The Sentencing Project (2018:1), a Brennan Center for Justice report (Ifill and Lee 2019:45), and commentary by Senator Bernie Sanders in 2015 (Kessler 2015). Notable legal advocacy groups also include these statistics in their online materials, including the American Civil Liberties Union (<https://www.aclu.org/issues/smart-justice/mass-incarceration>) and the Anti-Defamation League (<https://www.adl.org/resources/backgrounders/resolution-on-criminal-justice-reform>).

First, we empirically assess the scope of decarceration over the past two decades. Although some researchers have begun to recognize the reality of declining incarceration rates (Sabol and Johnson 2022; Sabol et al. 2019), the field lacks awareness and engagement regarding the breadth of these trends, with some suggesting that we are witnessing “the beginning of the end” of mass incarceration (Clear and Frost 2013) and others describing these declines as modest in magnitude (Ghandnoosh 2019; Zimring 2020) or concentrated among just a few states (Pfaff 2017). Moreover, research has devoted even less attention to the degree of racial and ethnic variation and state-level variation in declining incarceration rates. To address this gap, our analysis begins with a necessary empirical reevaluation of recent trends in incarceration rates. We demonstrate that incarceration has undergone a widespread reduction across every state and for every racial, ethnic, and gender group (except White women), with Black men and women experiencing the greatest declines.

These foundational findings inform our second major contribution: we apply multiple-decrement life table methods to age-, gender-, race-, and ethnicity-specific correctional and mortality data to estimate the prevalence of incarceration for the most recent generations of individuals born from 1981 through 2001. Given the contemporary salience of race and incarceration in public, political, and scholarly discourse, estimates that accurately reflect the current reality of the lifetime risk of incarceration are critically important. The results are unambiguous. We empirically demonstrate that assertions that 1 in 3 Black males born at the turn of the century will go to prison are no longer accurate. Rather, based on current incarceration rates, our results suggest that the correct estimate for this cohort—assuming that current rates of incarceration remain stable—is 1 in 5. As incarceration rates declined considerably year over year, so too did the lifetime risk of imprisonment. Indeed, between 1999 and 2019, the lifetime risk of incarceration declined by approximately one half for Black men and by roughly 20% for Hispanic men.

Against this backdrop, our third contribution considers the role of prisons in the institutional outlook for recent cohorts coming of age. Just as the prison boom transformed the institutional landscape for minority men as they became adults (Pettit and Western 2004), this landscape has shifted again with a substantial waning of incarceration rates. We find that the experience of prison became significantly less prevalent among Black and Hispanic men and that engagement with other key institutions became comparatively more common. This finding is most evident in rates of educational attainment. In 2009, by the age of 25, Black men were substantially more likely to serve a stint in prison (17.4%) than to obtain a bachelor’s degree (12.8%). By 2019, however, this relationship had flipped: a bachelor’s degree (17.7%) was considerably more common than incarceration (12.0%). Taken together, these findings significantly recalibrate our understanding of race and the generational burden of incarceration.

## Data

To estimate incarceration rates and risks for state and federal prisons, we compile data from the Bureau of Justice Statistics, the National Institutes of Health (NIH), and the Centers for Disease Control and Prevention (CDC). Consistent with previous studies (Bonczar 2003; Pettit and Western 2004; Roehrkasse and Wildeman 2022), we estimate the risk of

incarceration in state and federal prisons.<sup>2</sup> All data sets on the incarcerated population exclude jail inmates and admissions to local jails. To assess the composition of individuals admitted to or currently incarcerated in state and federal prisons, we rely on three data sets from the BJS. The first data set is the National Prisoner Statistics (NPS) program (BJS 2021a), which includes yearly counts of the total number of individuals currently held in, admitted to, and released from state and federal adult prisons. We calculate incarceration rates from the NPS data on race-, ethnicity-, and gender-specific counts of the prison population for every state from 1990 through 2019. The Prisoners series of the NPS also includes national-level age-, gender-, race-, and ethnicity-specific counts of individuals incarcerated in state and federal prisons annually from 1999 through 2019 (BJS 2021b). We use these data to calculate overall and age-specific incarceration rates at the national level.

The NPS also includes national-level, gender-specific annual counts of the number of prison *admissions*,  $A$  (in equation 1 below), which we use to estimate age-specific incarceration *risks*.<sup>3</sup> Although data quality has improved for the count of *current prisoners* by demographic groups, limited data are available on the joint distribution of age, race, ethnicity, and gender of *admissions* to state and federal prisons.<sup>4</sup> To estimate the exact age distribution of *admitted prisoners*,  $a_x$  (in equation 1 below), we use the restricted-use version of the National Corrections Reporting Program (NCRP) data set (BJS 2021d). The NCRP is an individual-level data set of all individuals admitted to state prisons that includes 47 states for most of this observation period.<sup>5</sup> During the observation period, the NCRP data set contains information on an average of 622,000 individuals admitted to state prisons every year, whereas the average number of total admissions to state and federal prisons officially reported by the BJS is 668,000.<sup>6</sup> Thus, the NCRP data set includes about 93% of all prison admissions in the United States. Given its large sample size and exceptional coverage, we use the observed exact-age distribution of admitted prisoners from the NCRP data to estimate the exact-age distribution of all admitted prisoners.<sup>7</sup>

<sup>2</sup>We use the terms *incarceration* and *imprisonment* interchangeably to refer to institutionalization in state and federal prisons, excluding jails.

<sup>3</sup>In this regard, the underlying empirics of our analysis differ from those of Roehrkasse and Wildeman (2022), who drew on incarceration data from inmate surveys for 1986, 1991, 1997, 2004, and 2016 and thereby excluded several intersurvey years. Beyond data, our analysis differs from theirs in three key ways. First, we examine state-level variation and age variation in decarceration, whereas their analysis focuses solely on national trends. Second, we examine annual trends in both synthetic and real cohorts for 21 single-year birth cohorts born between 1981 and 2001, whereas their estimates for recent incarceration risk focuses on one synthetic cohort from 2016 and their real cohort analysis is restricted to four older five-year birth cohorts born before 1985. Thus, we have the unique ability to (1) demonstrate the extent to which recent declines in incarceration have already altered the life course for young Black men relative to earlier generations and (2) estimate annual changes in risk. Third, we examine how the prevalence of imprisonment has changed relative to other major life course events.

<sup>4</sup>In 2022, the BJS revised their Corrections Statistical Analysis Tool—Prisoners to include admissions counts by age, race, ethnicity, and gender. However, the data include only five broad age categories. These broad age categories obscure considerable heterogeneity in admissions counts within categories. Thus, we leverage the exact age distributions estimated from the NCRP.

<sup>5</sup>Connecticut, Idaho, and Vermont are missing data in the NCRP for most of the observation period. Connecticut provides 0 years of data; Idaho and Vermont provide data only after 2007 and 2016, respectively.

<sup>6</sup>In an alternative analysis, we excluded prison admissions with sentences of less than one year of incarceration from the NCRP data, retaining 550,000 prison admissions annually (82% of all prison admissions). Our results were substantively unchanged.

<sup>7</sup>In Table A1 (online appendix), we compare the age distributions from the NCRP with official BJS estimates of the age distributions published in the Prisoners series report for 2012. These official BJS estimates of the age distribution of admitted prisoners by race, ethnicity, and gender are available only for 2012 and include only broad age categories. The NCRP data, however, are available annually and include individuals' exact ages. Our estimates of the age distribution from the NCRP data are nearly identical to the official BJS estimates in 2012.

Finally, the proportion of admissions that are first-time prison admissions,  $f_x$  (in Eq. (2) below), is estimated separately by age category, race, ethnicity, and gender using multiple inmate surveys from the BJS (BJS 2021c). These include the Surveys of Inmates in State Correctional Facilities (SISCF), the Surveys of Inmates in Federal Correctional Facilities (SIFCF), and the Survey of Prison Inmates (SPI). The SISCF and SIFCF were conducted in 1997 and 2004. The SPI was conducted in 2016 and replaced the SISCF and SIFCF surveys. Estimates of the first-time admissions rates are linearly interpolated between survey years and extrapolated beyond survey years at the level of the most recent survey year.<sup>8</sup> Whereas prior estimates of the lifetime risk of incarceration rely on these intermittent inmate surveys for almost all of the parameters in their life table estimates (Bonczar 2003; Roerkhasse and Wildeman 2022), our analysis only uses these inmate surveys to estimate a single parameter in our demographic models:  $f_x$ , the proportion of prison admittees that are first-time admittees. The remainder of our data are official administrative counts or estimates from the BJS, which are available annually throughout the observation period.

For population data, we use state-, age-, gender-, race-, and ethnicity-specific population estimates from the Surveillance, Epidemiology, and End Results (SEER) program (NIH 2021),<sup>9</sup> which are available annually from 1990 through 2019. We limit the population counts to individuals aged 18 or older to capture the risk of incarceration in state and federal prison facilities. For mortality data, we use estimates of year-, age-, race-, ethnicity-, and gender-specific death rates from the CDC Wide-ranging Online Data for Epidemiologic Research (WONDER) system (CDC 2021).<sup>10</sup> For estimates of the prevalence of nonincarceration life course events, we use the American Community Survey (ACS; Ruggles et al. 2021).

## Methods

The analysis involves three primary methodological approaches. First, we calculate the annual rate of incarceration per 100,000 adults using observed counts of prisoners and estimates of the adult population by race, ethnicity, gender, age, and state from 1990 through 2019. Second, we estimate the prevalence of the life course events—bachelor’s degree attainment and marriage—using the three-year estimates from the ACS for 2009 and 2019 (Ruggles et al. 2021). These life course estimates are compared against the prevalence of incarceration, a strategy previous research has used to assess the social role of prisons in the life course (Pettit and Western 2004). Because the ACS sampling design includes all institutionalized individuals, including individuals in state, federal, and local correctional institutions, our estimates of key life course transitions include the incarcerated population. Third, we estimate annual multiple-decrement life tables for the risk of first-time

<sup>8</sup>Given the time gap between the 2004 and 2016 surveys, we check the validity of our interpolation strategy in several ways. Table A2 (online appendix) provides a detailed description of these five robustness checks and shows that our results remain substantively unchanged.

<sup>9</sup>The NIH SEER population data are derived from official U.S. Census Bureau population estimates. For recent examples in *Demography* using the SEER population data, see Foote (2015), Barrecca et al. (2018), and Tilstra et al. (2022).

<sup>10</sup>For the multiple-decrement life table analysis, we use the age-specific population estimates from the CDC WONDER life tables to ensure identical denominators for the official CDC death rates and the estimated incarceration rates. The correlation between the age-specific population estimates from SEER data and CDC WONDER is at least .999 for all race, ethnicity, and gender groups. Results shown are identical with either set of population estimates.

admission to state or federal prisons at the national level from 1999 through 2019 using the incarceration and death rates by age, gender, race, and ethnicity.

The comprehensiveness and quality of our data allow us to directly observe the number of prisoners by age, race, ethnicity, and gender and directly estimate the number of admittees by age, race, ethnicity, and gender annually from 1999 through 2019. Previous research on the lifetime risk of incarceration relied on inmate surveys available for only two years (2004 and 2016) within our observation period to estimate the demographic composition of admitted prisoners. These studies then used survey weights to transform the survey estimates into estimated counts of admissions by age category, race, ethnicity, and gender (Bonczar and Beck 1997; Bonczar 2003; Roerkhasse and Wildeman 2022). Our approach, on the other hand, leverages annual data sets, including the official BJS admissions counts from the NPS and age distributions from the restricted-use NCRP data, which include individual-level data on the exact age, race, ethnicity, and gender for more than 622,000 prison admissions annually. Thus, our approach is a meaningful methodological advancement in accurately estimating the age-specific risk of incarceration for single-year birth cohorts, which also allows us to estimate annual changes in these risks.

We next formally present the models used in our estimation procedures. All life table estimates rely on national data for state and federal prisons and are estimated separately for all individuals, men, White men, Black men, and Hispanic men. First, we estimate the number of admissions by exact age:

$$A_x = a_x \times A, \quad (1)$$

where  $a_x$  is the estimated age distribution of admitted prisoners from the NCRP,  $A$  is the observed total count of admitted prisoners from the NPS,<sup>11</sup> and  $A_x$  is the estimated age-specific count of admitted prisoners.

To calculate the lifetime risk of incarceration, we estimate the risk of being incarcerated for the *first time* by age, which means eliminating individuals who were previously in prison from the observed prison admission counts (Bonczar 2003; Pettit and Western 2004). The proportion of admissions that are first-time prison admissions is likely to vary significantly by age, with older individuals having a higher likelihood of prior incarceration. Thus, we separately estimate the proportion of current admissions that were first-time admissions for each age group, race, ethnicity, and gender using representative surveys of the inmate population (SISCF, SIFCF, and SPI). For each demographic group, we multiply the proportion of first-time admissions by the estimated number of admissions to arrive at an estimated number of *first-time* prison admissions:

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<sup>11</sup>Race- and ethnicity-specific counts of the total number of admitted prisoners require estimation. The NPS data include the total number of admissions by gender each year. We multiply this number by the racial and ethnic composition of male or female prisoners from the Prisoners series reports to estimate the number of admissions by race, ethnicity, and gender. Thus, we make the logical inference that the racial and ethnic composition of admissions is comparable to the racial and ethnic composition of current inmates. Based on observed data for admissions and prisoners in 2012—the only year for which the BJS produces this estimate of the racial and ethnic composition of prison admissions—this assumption is accurate. In 2012, 32% of male prisoners were White, 37% were Black, and 22% were Hispanic. For male prison admissions in 2012, 32% were White, 37% were Black, and 23% were Hispanic.

$$F_x = A_x \times f_x, \quad (2)$$

where  $A_x$  is the estimated age-specific count of admissions,  $f_x$  is the estimated proportion of admissions that were first-time admissions at age  $x$ , and  $F_x$  is the estimated age-specific count of first-time prison admissions.

We divide the count of first-time prison admissions by population counts to produce the crude annual rate of first-time prison admissions for each demographic group. Following convention (Pettit and Western 2004), we adjust the population number to account for the number of individuals who were previously incarcerated and survived to age  $x$ :

$$M_x^I = \frac{F_x}{C_x - P_x}, \quad (3)$$

where  $F_x$  is the estimated age-specific count of first-time prison admissions,  $C_x$  is the age-specific population count from CDC WONDER,  $P_x$  is the estimated count of previously incarcerated individuals surviving to age  $x$ , and  $M_x^I$  is the estimated crude rate of first-time incarceration at age  $x$ .<sup>12</sup> We estimate the crude rate of death using the following basic demographic formula:

$$M_x^D = \frac{D_x}{C_x}, \quad (4)$$

where  $D_x$  is the count of deaths from CDC WONDER,  $C_x$  is the population count from CDC WONDER, and  $M_x^D$  is the estimated crude rate of death.

These age-, gender-, race-, and ethnicity-specific estimates of the first-time incarceration and death rates serve as the empirical foundation for our multiple-decrement life table analyses. The remainder of the methodology follows standard demographic procedures for estimating a multiple-decrement life table from observed crude rates (Preston et al. 2001). We convert the first-time incarceration rates and death rates into probabilities of experiencing incarceration for a given age, race, ethnicity, and gender after accounting for the competing nature of the multiple-decrement processes. The first step in this conversion is calculating the total crude rate of decrement from both deaths and first-time prison admissions ( $M_x$ ):

$$M_x = M_x^I + M_x^D, \quad (5)$$

Next, we convert this crude rate to a probability using the conventional demographic approach (Preston et al. 2001):

<sup>12</sup>We estimate the number of previously incarcerated individuals in the population using the following formula:

$P_x = C_x \times r_{x-1}^I \times s_x$ , where  $C_x$  is the population count for age  $x$ ,  $r_{x-1}^I$  is the cumulative probability of incarceration at age  $x-1$ , and  $s_x$  is the probability of surviving from age 18 to age  $x$ . Stated differently, we estimate the number of individuals in the population aged  $x$  who would have been incarcerated by age  $x$  and survived.

$$q_x = \frac{n \times M_x}{1 + (n - a) \times M_x}, \quad (6)$$

where  $q_x$  is the probability of exiting the life table (dying or being incarcerated) at age  $x$ ,  $n$  is the width of the age interval, and  $a$  is the number of years survived during the interval among those exiting the life table. In this analysis, we estimate single-year life tables ( $n = 1$ ). Consistent with the literature (Pettit and Western 2004), our analysis assumes that the decrements are approximately evenly distributed throughout the year, which implies  $a = 0.5$ .

Then we estimate the probabilities of decrement to death and first-time prison admission separately by multiplying the proportion of the crude rates to death and incarceration by the overall probability of exiting the life table:

$$q_x^I = \frac{M_x^I}{M_x} \times q_x, \quad (7)$$

$$q_x^D = \frac{M_x^D}{M_x} \times q_x, \quad (8)$$

where  $q_x^I$  is the probability of first-time incarceration at age  $x$  and  $q_x^D$  is the probability of dying at age  $x$ . From the probability of first-time incarceration, we can calculate the number of decrements to incarceration in the life table as follows:

$$d_x^I = q_x^I \times l_x, \quad (9)$$

where  $l_x$  is the number of individuals in the life table alive at age  $x$  and  $d_x^I$  is the number of individuals experiencing first-time incarceration at age  $x$ . Finally, we calculate the cumulative risk of incarceration by age  $x$  as follows:

$$\text{Cumulative Risk of Incarceration} = r_x^I = \frac{\sum_{x=18}^x d_x^I}{l_0}, \quad (10)$$

where  $\sum_{x=18}^x d_x^I$  is the sum of all first-time incarcerations from age 18 through age  $x$ ,  $l_0$  is the radix, and  $r_x^I$  is the cumulative risk of being incarcerated for the first time by age  $x$ . This cumulative risk is the parameter of interest from the life tables.

In this analysis, we estimate three types of life tables: real, synthetic, and projected. Within each type, we estimate the lifetime risk of incarceration for all individuals, all men, White men, Hispanic men, and Black men. We estimate the life tables for 21 single-year birth cohorts of individuals born in 1981–2001. Throughout the analysis, we refer to cohorts based on the year they turned 18 and were thus at risk of incarceration. Thus, those born in 1981 are referred to as the *1999 cohort*.

In the first type of life table, we estimate the risk of incarceration for *real* cohorts of individuals. The first real cohort we examine was born in 1981, reached age 18 in 1999, and



turned 38 in 2019. We also estimate the real cohort risk of incarceration by ages 20, 25, 30, and 35 for cohorts who reached those ages by 2019. We focus on the risk of incarceration by age 25 to demonstrate the effect of declining incarceration rates for multiple real cohorts of young individuals.

Next, we leverage two *synthetic* cohorts to examine counterfactual scenarios of incarceration trends to assess the effect of declining incarceration rates on the lifetime risk of imprisonment. The first counterfactual scenario simulates the lifetime risk of incarceration if the age-, gender-, race-, and ethnicity-specific incarceration rates remained at their 1999 rates until 2019. This scenario estimates the risk of incarceration in the absence of declining incarceration rates and reveals any differences between the empirical reality and prior estimates. At the other end of the continuum, the second counterfactual scenario estimates the lifetime risk of incarceration for a synthetic cohort of individuals exposed to the 2019 incarceration rates for the next 20 years. This counterfactual asks, absent any further reductions, how much the extant decline in incarceration rates has lowered the lifetime risk of incarceration for the current generation of youth.

The third type of life table combines real and synthetic cohort methods to estimate the *projected* lifetime risk of incarceration across successive cohorts. For each cohort, we estimate their real cohort risk through 2019 and then estimate the synthetic cohort risk assuming the 2019 incarceration rates hold until they reach age 50. By uniting the real and synthetic cohort estimates, we can estimate lifetime risks of incarceration that retain the important cohort differences in exposure to incarceration over time while also extending the risk period under consideration to age 50. Finally, we use the real cohort risk of incarceration by age 25 to compare incarceration with other significant life course events occurring early in adulthood, including college graduation and marriage.

## Results

### Incarceration Rates

We begin by examining recent trends in declining incarceration rates. Figure 1 shows 1999–2019 incarceration rates for the entire population, men, White men, Hispanic men, and Black men. The national incarceration rate for Black men declined from 5,159 per 100,000 adults in 1999 to 2,881 in 2019—a 44% decrease. Over the same period, the incarceration rate declined by 17% for all men, 14% for White men, and 26% for Hispanic men. As a result of the steeper decline for Black men relative to White men, the racial disparity in male incarceration rates declined from 9.3:1 in 1999 to 6.1:1 in 2019.

Although the prison boom disproportionately affected men, substantial declines in female incarceration also occurred. Indeed, as shown in Figure A1 (online appendix), the reductions in racial disparity among women are even larger. From 1999 to 2019, the incarceration rate declined by 65% (from 300 to 104 per 100,000) for Black women but increased by 71% (from 34 to 58 per 100,000) for White women. Thus, between 1999 and 2019, the female Black–White incarceration disparity fell from 8.8:1 to only 1.8:1.

We now turn to our state-specific analyses, shown in Figures 2 and 3 (see also Table A3, online appendix). The median year that Black male incarceration rates started declining across the 50 states was 1999. The peaks of Black male rates ranged from 1990 to 2014. However, they were heavily concentrated in the late 1990s, with 27 states peaking between 1995 and 1999. Thus, at approximately the same time that scholars began widely discussing and researching the racialized nature of mass incarceration (Garland 2001), the Black male incarceration rate was already declining in most states. From the highest year, the rate declined by at least 40% in 27 states. Notably, these states span the political spectrum, from traditionally conservative states (Texas) to moderate (Maryland) and liberal (Massachusetts) ones. Although other states saw more modest declines, the overall negative trend in Black male incarceration rates is evident across all 50 states. Black–White racial disparities in incarceration rates also declined in 46 states, with a median decline of 36% (see Table A3, online appendix). In 19 states, racial disparities declined by at least 40% over this period. These trends in incarceration rates demonstrate that prison became considerably less common for Black men, both in the absolute rate and relative to White men. Still, Black–White racial disparities remain stark, ranging from 1.7:1 in Hawaii to 14.1:1 in Wisconsin, the highest in the nation.

To explore geographic variation in imprisonment further, Figure 3 shows the distribution of state-level changes in incarceration rates from 1999 to 2019 for the total population, White men, and Black men. Over the 20 years, Black male incarceration rates declined significantly in almost every U.S. state, with a mean state-level *decrease* of 34%. By contrast, only about half of the states had declining White male incarceration rates over the same period, while the other half saw increases in White male imprisonment, yielding a mean state-level *increase* of 1% for White men. Similarly, the overall incarceration rate decreased by an average of only 2% across the states. Thus, this period saw a bifurcated process of incarceration across the states, with marked declines in Black male incarceration rates and stagnation of White male incarceration rates.

We formally examine the state-level distribution of these incarceration trends using Shapiro–Francia and Shapiro–Wilk tests for normal distributions in Table A4 (online appendix). As Zimring (2020: chapter 1) noted, although state changes in imprisonment vary, a normal distribution in the same direction suggests a uniform national trend in incarceration over time. For White men, we find evidence of a normal distribution, but it is centered near 0, with an equal number of state-level increases and decreases. This finding suggests that there has been no consistent national trend in incarceration for White men in recent decades. However, the evidence is notably different for Black male incarceration rates, and the model rejects the null hypothesis of a normal distribution. Interestingly, it is not a normal distribution because states are more heavily concentrated at larger declines in incarceration. In other words, although the Black male incarceration rate dropped in nearly all states after 1999, this decline does not appear to be a uniform national trend because many states experienced particularly stark declines and only a few states experienced more modest declines.

Moving beyond state-level variation, we next consider variation by age for Black men. Figure 4 shows the age-specific incarceration rates for Black men in 1999–2019. During

this period, incarceration rates for young Black men declined drastically. Among those aged 20–24, it was 7,596 per 100,000 in 1999, compared with 2,572 in 2019—a 66% decline. Black men aged 25–29 had the highest incarceration rate in 1999 at 9,443 per 100,000, but by 2019, the rate for this group had declined by 58% to 3,944. In contrast to these dramatic declines, older Black men experienced increased incarceration rates over this period. Most notably, the rate for those older than 55 increased by 128% from 523 to 1,195 per 100,000, although this rate was still quite low relative to that of the younger age groups. Note that Black men aged 55 in 2019, who were aged 35 in 1999, experienced the height of mass incarceration during their youth. Thus, their increased involvement in the criminal justice system at older ages is most likely driven by greater exposure to the criminal justice system in young adulthood (Shen et al. 2020; Porter et al. 2016).

Given the institutional path dependence in the age-specific incarceration rates, we should expect that the current generation of young Black men, because of their much lower incarceration rates in their youth, will also experience lower old-age incarceration rates relative to the current generation of older Black men. Moreover, young Black men experienced the sharpest declines in incarceration rates during this period. In line with these trends, recent work has found declining arrest rates for recent cohorts of young men (Neil et al. 2021) and a declining prevalence of delinquency among youth (Baumer et al. 2021). Taken together, these trends suggest population momentum toward accelerating declines in the overall incarceration rate as the generation exposed to the peak of mass incarceration ages out of criminal justice control and the current generation of youth ages through the system.

### Cumulative Risk of Incarceration

These incarceration rates offer important insights into the extent of penal confinement, but they tell us little about the cumulative risk of incarceration. We thus turn to our life table estimates. Table A5 (online appendix) shows the multiple-decrement life table for real cohorts of White and Black men who were born in 1981 and turned 18 in 1999 (hereafter, the *1999 cohort*). This 1999 cohort experienced incarceration at its highest during their early adulthood years, with declines as they grew into middle age. For the 1999 cohort of White men, the risk of incarceration by age 38 was 5.9%. For the same cohort of Black men, the risk of incarceration by age 38 was nearly six times higher: 33.7%.

Next, we estimate the real cohort risk of incarceration by age 25, directly comparing the imprisonment experiences of multiple cohorts of young individuals as they came of age. Because younger individuals are at the highest risk of first-time incarceration, these real cohort incarceration risks capture the most consequential portion of the lifetime incarceration risk. The analysis begins in 2006, when the 1999 cohort turned 25; it ends in 2019, when the 2012 cohort reached age 25. Over this comparatively brief 13-year period, the incarceration risk for young Black men declined dramatically (Figure 5). The estimates indicate that 20.4% of Black men who turned 25 in 2006 had ever been incarcerated, compared with 12.0% who turned 25 in 2019. The risk of incarceration by age 25 declined from 5.9% to 4.3% for men overall and from 2.8% to 1.7% for White men. The risk difference between Black men and White men declined by 41%, from 17.6 percentage

points to 10.3 percentage points. Overall, young Black men experienced the largest absolute declines in the risk of incarceration, even though their risk remains higher than that of any other population.

We also extend this real cohort analysis to ages 30 and 35 (see Table A6, online appendix). Black men's risk of incarceration by age 30 declined from 28.7% for the 1999 cohort to 21.0% for the 2007 cohort, a 27% decline for individuals born just eight years apart. The real cohort risk of incarceration for Black men by age 35 declined from 32.4% for the 1999 cohort to 27.5% for the 2002 cohort, a nearly five-point risk reduction for Black men born three years later.<sup>13</sup> Thus, the risk of incarceration varied substantially by the exact year of birth and declined rapidly over a short period. The ability to detect these annual changes in incarceration risks is one of the primary strengths of our methodological approach.

Further assessing the effect of declining incarceration rates on the risk of incarceration, we estimate synthetic cohort life tables for every year from 1999 to 2019 (see Figure A2, online appendix). We focus on two synthetic cohorts as useful counterfactual scenarios: one for which the 1999 incarceration rates remained stable until 2019, and one for which the 2019 incarceration rates will remain stable for the next 20 years. Table 1 shows the estimated lifetime risk of incarceration by age 38 for the two synthetic cohort scenarios, along with the real cohort estimate for the 1999 cohort.

These counterfactual contrasts are illuminating. The difference between the real cohort of 1999 and the synthetic cohort of 1999 represents the counterfactual effect of declining incarceration rates on the risk of incarceration for the members of the 1999 cohort. That is, it reveals how much the declines in incarceration rates reduced the lifetime risk of incarceration for the 1999 cohort. We estimate this effect by subtracting row B from row A in Table 1. For the entire population, men overall, White men, and Hispanic men, the estimated risk of incarceration for the real and synthetic cohorts of 1999 is nearly identical or slightly *higher* for the real cohort. However, for Black men, the real cohort risk of incarceration (33.7%) is 2.1 percentage points *lower* than the synthetic cohort risk (35.8%).<sup>14</sup> This is the cohort that benefited the least from declining incarceration rates because they entered adulthood at the peak of Black male incarceration rates. Yet, even for this cohort, we estimate that the declines in incarceration rates during their adulthood resulted in 2.1% fewer Black men born in 1981 going to prison, a small but meaningful reduction in prison exposure.

A second and even more timely comparison considers the impact of declining incarceration rates for the cohort of individuals coming of age in 2019. This comparison examines what the contemporary landscape tells us about the lifetime risks of incarceration for this new generation of youths relative to those coming of age just one generation before, who were

<sup>13</sup>Our estimates for the single-year birth cohorts are generally consistent with Roerkhase and Wildeman's (2022) estimate for the five-year 1980–1984 birth cohort. However, because we can estimate the risk of incarceration annually, we detect a notable five-percentage-point reduction in incarceration risk *within* the 1980–1984 cohort: 32.4% for the 1981 birth cohort versus 27.5% for the 1984 birth cohort.

<sup>14</sup>Our estimate of the synthetic cohort lifetime risk of incarceration based on the 1999 incarceration rates (35.8%) is consistent with the synthetic cohort estimates of Bonczar (2003) based on the 2001 incarceration rates and Bushway et al. (2022) based on the National Longitudinal Survey of Youth 1997.

experienced the peak of the American carceral state. We estimate this effect by subtracting the risk of incarceration for the 1999 cohort (row A) from the risk of incarceration for the synthetic cohort of 2019 (row C). The overall risk of incarceration for all individuals declined from 6.5% for the 1999 cohort to an expected 4.7% for the 2019 cohort—a 28% decline. For all groups, the lifetime risk of incarceration declined significantly. However, the decline among Black men is particularly striking. The synthetic cohort risk of incarceration for the 2019 cohort (18.3%) is 15.4 percentage points lower than the real cohort risk for the 1999 cohort (33.7%). Thus, Black men who turned 18 in 2019 will be 46% less likely to be incarcerated by age 38 than Black men who turned 18 in 1999.<sup>15</sup>

In the span of one generation, the incarceration risk for Black men was cut in half. But the true decline in risk may be even larger as the 2019 cohort ages into adulthood. The synthetic cohort estimate of incarceration risk for the 2019 cohort (18.3% for Black men) is likely an overestimate, given recent trends in the overall and age-specific incarceration rates discussed earlier. The synthetic cohort life table assumes that the current age-specific incarceration rates will remain stable. However, the 2019 cohort is likely to have lower incarceration risks as they age than the older cohorts because of population momentum and reduced exposure to the criminal justice system in their youth. Thus, the decline in incarceration risk will very likely be even larger for the 2019 cohort compared to the 1999 cohort.

We further explore these life course trends by estimating the risk of incarceration by age 50. To assess the most likely incarceration risk by age 50 across successive cohorts, we combine the real and synthetic cohort methods to estimate the projected incarceration risk. Extending the age range to 50 allows for a more comprehensive view of the extent of incarceration in each cohort and is a strong approximation for the lifetime risk of incarceration given the vanishingly few first-time prison admissions after age 50 (Bonczar 2003; Bonczar and Beck 1997). For the 1999 cohort, we estimate the real cohort risk of incarceration until age 38 (33.7%, as shown in Table 1) and then estimate their synthetic cohort risk from ages 39 to 50 based on constant age-specific 2019 incarceration rates. The projected incarceration risk for cohorts is partially constrained by cohorts experiencing the same 2019 rates in the synthetic portion of the estimates, which make up a larger portion of the overall projected risk for more recent cohorts.<sup>16</sup> Thus, the actual experiences of the younger cohorts as they age beyond 2019 will likely result in further declines in their realized incarceration risks.

These projected cohort risks of incarceration are shown in Figure 6 for Black men, with full results for all groups shown in Table A6. In Figure 6, the real cohort portion of the estimates is represented by solid lines, whereas the synthetic cohort portion of the estimate is represented by dashed lines. For the 1999 cohort of Black men (born in 1981), we estimated their risk of incarceration by age 38 as 33.7%. If the 2019 rates remain constant, their risk of incarceration at age 50 will be 36.4%. Thus, most of their lifetime incarceration risk has accrued by age 38. Bonczar (2003) similarly estimated the projected risk of

<sup>15</sup>  $\left[1 - \left(\frac{18.3}{33.7}\right)\right] \times 100 = 46\% \text{ decline}.$

<sup>16</sup>For the 1999 cohort, we observe their real cohort risk of incarceration at ages 18–38 and project the risk at ages 39–50 based on a synthetic cohort projection using the 2019 rates. Thus, the synthetic portion of the risk represents 38% of their overall projected risk. For the 2019 cohort, 100% of their projected risk is from the synthetic cohort estimates.

incarceration across birth cohorts and found that each successive cohort had an *increased* risk of incarceration (cohorts born in 1974, 1986, 1991, and 2001).<sup>17</sup> However, as shown in Figure 6, each of these successive cohorts actually experienced a *decline* in their projected lifetime risk of incarceration. The largest decline was between the 1981 birth cohort (36.4%) and the 1986 birth cohort (29.6%), with a 6.8-percentage-point decline in incarceration risk for the cohort born just five years later. Most of this decline occurred rapidly between the 1981 and 1983 cohorts (36.4% vs. 32.6%; see Table A6). Thus, the lifetime risk of imprisonment for Black men declined by 10% in two years and 19% in five years. The rapid changes in lifetime risk across successive birth cohorts shown here and in our real cohort analysis demonstrate that the pervasiveness of mass incarceration among cohorts of Black men varied significantly depending on their exact year of birth. These changes also suggests that the absolute peak of mass incarceration was relatively short-lived. Over these 20 years, the projected risk of incarceration by age 50 declined by 42% for Black men, from 36.4% to 21.1%.

Table A6 (online appendix) shows that other demographic groups also experienced declines in these projected incarceration risks, but the largest declines occurred for Black men. The incarceration risk by age 50 declined from 7.7% to 5.9% for the overall population, from 13.3% to 9.9% for all men, from 7.2% to 5.1% for White men, and from 15.4% to 12.8% for Hispanic men. Racial disparities also declined over this period but remained high. Relative to White men born in the same year, Black men born in 2001 are projected to be four times as likely to be incarcerated by age 50.

These results provide the most comprehensive recalibration of the reach of the penal system to date. To understand the practical impact of these changes for a cohort of young men, we compare our results with other widely cited estimates. According to Bonczar (2003), had imprisonment rates remained constant, 32.2% of Black men born in 2001 could expect to be incarcerated at some point. After accounting for the substantial declines in Black male imprisonment over the past two decades, we estimate the lifetime risk of incarceration for the 2001 birth cohort of Black men to be 21.1%. According to the CDC, 299,566 Black males were born in 2001 (CDC 2005). Thus, had incarceration remained at 2001 levels, 94,460 Black men born in 2001 were expected to go to prison at some point ( $299,566 \times 0.322 = 94,460$ ). However, we estimate the number of Black men born in 2001 expected to go to prison to be 63,208 ( $299,566 \times 0.211 = 63,208$ ), a difference of 31,252. In other words, relative to Bonczar (2003), we find that over 31,000 fewer black men within the 2001 birth cohort will go to prison in their lives. For perspective, this number is larger than the population of Princeton, New Jersey, as of 2021 (30,872) and almost as large as the total number of Black men incarcerated in California in 2019 (33,624).

Finally, we compare the early adulthood risk of incarceration with the likelihood of other consequential life course events. Table 2 compares the real cohort risk of incarceration by age 25 with the proportion of individuals aged 25 who completed a bachelor's degree, have ever been married, or have served in the military in 2009 and 2019.<sup>18</sup> In both years, men overall, White men, and the population as a whole were more likely to have earned a

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<sup>17</sup>See Bonczar (2003: fig. 3, table 8) for the projected incarceration risks and comparable estimates for previous generations.

bachelor's degree, been married, or served in the military by age 25 relative to their risk of incarceration. Similarly, Hispanic men were more likely to have earned a bachelor's degree or been married by age 25 relative to their risk of incarceration. However, the story is markedly different for Black men. In 2009, Black men aged 25 were more likely to have been in prison (17.4%) than they were to have completed a bachelor's degree (12.8%), ever been married (16.7%), or served in the military (7.7%). Yet, by 2019, the relative likelihood of these life course events had changed considerably. In 2019, Black men aged 25 were significantly more likely to have earned a bachelor's degree (17.7%) and about as likely to have ever married (11.7%) as they were to have been incarcerated (12.0%). Clearly, in both absolute terms and relative to other early-life events, incarceration has become a notably less visible part of the institutional landscape for young Black men as they transition into adulthood.

## Discussion

The U.S. incarceration boom was internationally and historically unprecedented, impacting every U.S. state and dramatically altering the life course for a generation of young Black men (Western 2006). These trends have received extraordinary scholarly attention. Yet, little research has examined how the declines in incarceration over the past two decades altered the lifetime risk of imprisonment. We sought to fill this gap by providing evidence for three empirical claims.

First, there have been sustained and pervasive declines in Black male incarceration. Between 1999 and 2019, the incarceration rate for Black men fell by 44%. These declines were not relegated to a select few jurisdictions; rather, declines in black male imprisonment were evident across all 50 U.S. states. For White men, incarceration trends have been far less pronounced, declining just 14% over the same period. As a result, racial disparities in incarceration are now lower than at any point in decades, although the disparity remains quite large at 6.1:1. However, considerable variation exists across states in the timing and extent of the declines in incarceration for Black and White men, as our empirical results show. Explaining the social, political, and demographic causes of this variation is a fruitful topic for future research.

Second, declining imprisonment rates have reduced the generational burden of incarceration markedly in recent decades. More than 33% of Black men born in 1981 could expect to go to prison by their late-30s. By contrast, we estimate that only 18.3% of Black men born in 2001 will be incarcerated by age 38. Thus, Black men's risk of prison by midlife has almost halved since the turn of the century. We observe similarly stark declines when we estimate the risk for real cohorts by age 25 or project risk further into the life course to age 50. One obvious consequence of these findings is that any contemporary claims suggesting that 1 in 3 Black men born today will be incarcerated in their lifetimes are no longer empirically tenable. Indeed, they ignore the decades-long declines in Black male imprisonment documented here. The peak risk of incarceration for Black men held for less

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<sup>18</sup>We estimate rates of marriage, college graduation, and military service using individuals aged 25 from the ACS three-year samples. Institutionalized individuals (including current prison and jail inmates) are included in the ACS sampling design and have valid information for all the life course events we consider.

than five birth years: the 1986 birth cohort had a 19% lower risk than the 1981 birth cohort. Based on 2019 rates of incarceration, we estimate that 1 in 5 Black men (21.1%) born in 2001 will go to prison at some point in their lives. Our results demonstrate that the lifetime risk of imprisonment is strongly influenced by an individual's exact year of birth and is declining yearly. The era of mass incarceration most heavily affected the imprisonment risk of a single generation of young American men, and the generation of men currently coming of age is facing a distinctly reduced risk of imprisonment.

Recent trends in criminal behaviors and criminal justice contacts across cohorts provide useful context for the cohort declines in incarceration shown in our analysis. Crime rates in the United States have declined rapidly in recent decades, often referred to as “the great crime decline” (Sharkey 2018). The cohort prevalence of self-reported violent and property crimes among youth has also declined precipitously since 1991, suggesting that youth today are less involved in criminal behaviors than previous generations (Baumer et al. 2021). Indeed, “most of the crime reduction since 1980 is due to age and cohort effects, not period effects” (Spelman 2022:664). Cohorts exposed to lower crime rates in their state during adolescence also have lower incarceration rates at older ages (Bjerk and Bushway forthcoming). Similarly, recent evidence demonstrates substantially lower age-specific arrest rates for more recent cohorts (Neil and Sampson 2021; Neil et al. 2021). Relative to individuals of the older generation—who experienced the peaks of crime, arrest, and incarceration during their youth—those of the younger generation are experiencing the lowest rates of crime, arrest, and incarceration in decades. Collectively, these lower rates among the current generation of young Americans will likely translate into even lower rates of incarceration as they age.<sup>19</sup> These processes of institutional path dependence and population momentum suggest that our estimate that 1 in 5 Black men born in 2001 will be incarcerated may still overestimate their true imprisonment risk.

The declining lifetime risk of incarceration leads to our third point: just as mass incarceration forced researchers to include prisons among the key institutional influences in the lives of racial minority men, the scaling back of incarceration has recalibrated the institutional landscape once again for the most recent generation navigating early adulthood. In 2009, Black men were much more likely to have been to prison by age 25 (17.4%) than to have completed a four-year degree (12.8%). Ten years later, this picture is fundamentally different. In 2019, earning a bachelor's degree by age 25 was far more common for Black men than a prison stint (17.7% vs. 12.0%). Importantly, these findings are not dependent on demographic projections. Rather, these estimates reflect actual changes in the life course that have already occurred among real cohorts of young Black men. Given that most of the lifetime incarceration risk occurs by age 30, recent generations of young Black men have already passed through the most consequential window of carceral exposure. Thus, even if incarceration rates were to increase again, these cohort differences would likely persist, especially because comparatively few college-educated men go to prison (Western 2006).

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<sup>19</sup>Individuals with prior arrests are more likely to be incarcerated because criminal courts punish individuals with criminal histories more harshly. Estimates of the cohort prevalence of incarceration in North Carolina suggest that higher age-specific incarceration rates for older men today are driven by their lengthier criminal histories (Shen et al. 2020). Thus, we would expect that younger generations today will experience substantial declines in their incarceration risk at older ages relative to the current age-specific incarceration risk for individuals at older ages.



Just as the high imprisonment risk for Black men during the prison boom was an “intrinsically important social fact” (Pettit and Western 2004:165), our findings on the declining significance of prison over the life course are equally noteworthy, not just regarding the scope of imprisonment, but also for their implications for broader patterns of inequality. A notable body of research has established the prison boom as a powerful engine of social stratification and racial inequality across multiple social domains (Wakefield and Uggen 2010). Thus, as incarceration rates and risks decline and racial disparities in imprisonment wane, it follows that the prison should play a correspondingly smaller role in reproducing and reinforcing social inequalities in U.S. society. Guided by this insight, a concerted focus on the *consequences of decarceration* is an imperative next step for stratification researchers.

The consequences of decarceration will be particularly relevant for research focused on the vicarious victims of the prison boom. Compared with other widely circulated estimates of the lifetime risk of incarceration, we estimate that more than 31,000 fewer Black men in the 2001 birth cohort will go to prison in their lives. The true impact of this difference is magnitudes larger when one considers their parents, partners, friends, communities, and especially children (Braman 2007; Chung and Hepburn 2018; Turney 2014; Wildeman et al. 2012). Indeed, Wildeman and Wakefield (2014) argued that the consequences of mass incarceration for racial inequality were likely considerably larger for children than for adult men. If this is true, then the substantial declines in Black male incarceration over the past two decades may have significant long-term consequences for racial inequality among children and families. Collectively, the literature on incarceration and stratification suggests that the notable drops in Black male imprisonment should have important implications for, and likely work to reduce, racial inequality in the United States.

Equally important, these drops should also sharpen the understanding of racial inequality. As Pettit (2012:xi–xii) detailed, because inmates are excluded from most federally administered data collection efforts, “decades of penal expansion coupled with the concentration of incarceration among men, blacks, and those with low levels of education have generated a statistical portrait that overstates the educational and economic progress and political engagement of African Americans.” In short, the prison boom obscured our vision when trying to establish the true contours of racial inequality in the United States. However, with markedly fewer “invisible men” in the most recent generation, empirical assessments of racial inequality should be more comprehensive.

Our findings and their implications are all promising signs for those interested in the end of incarceration, but several factors caution against being overly sanguine. Even with the observed declines in incarceration, the United States still has the highest rate of imprisonment in the world (Fair and Walmsley 2021). As a result, incarceration remains disquietingly common by both international and historical standards, and stark Black–White racial disparities in imprisonment endure. In addition, for the first time, estimates of the imprisonment risks for American Indians/Alaska Natives are available, and the evidence suggests that their risk is at least as high as that of Black individuals (Roehrkasse and Wildeman 2022). Recent evidence from New York City also demonstrates a high risk of incarceration in local jails, particularly for men of color (Western et al. 2021), although

the risk of all forms of criminal justice contact (misdemeanor conviction, jail incarceration, felony conviction, and prison incarceration) has declined for recent cohorts (Hepburn et al. 2019). Moreover, these trends in decarceration are reversible. Just as the prison boom was not inevitable, incarceration rates are not guaranteed to continue declining. For instance, the United States experienced spikes in homicide rates during 2020 and 2021, which could lead to greater punitiveness (Asher 2021; Grawert and Kim 2022). As Zimring (2020) noted, there is no law of penal gravity that dictates that incarceration rates must return to historical norms or practices. This notion is precisely why scholars must continue to monitor incarceration trends to understand how the carceral state will influence the next generation of American men.

Mindful of these cautions, we identify three empirical points indicating the potential for the continued contraction of the penal system in the coming decades. First, prison populations declined even further in 2020 and 2021 during the COVID-19 pandemic (Carson et al. 2022). Evidence suggests that these were short-term shifts in the operation of the criminal justice system, not long-term paradigm shifts (Klein et al. 2023; Mitchell et al. 2022; Sawyer 2022). However, the reduction in prison admissions during the pandemic, by definition, reduced the risk of incarceration for at least the duration of the pandemic. Ultimately, the magnitude of the pandemic's impact on the risk of incarceration remains an open empirical question. Second, the trends in age-specific incarceration rates we documented indicate population momentum, with rates declining the fastest for young Black men. This population momentum could lead to an acceleration in the rate of decline in the overall incarceration rate and the lifetime risk of incarceration as younger cohorts—who have a lower criminal propensity and reduced criminal justice contacts—age through the window of exposure to imprisonment. Finally, and most importantly, our findings establish a drastic reduction in the lifetime risk of imprisonment for recent cohorts of young men, particularly young Black men. Absent any further reductions in overall incarceration rates, the extant risk reductions have already altered the life course trajectories for a generation of young men in ways that are unlikely to be reversed for these cohorts. The reduced risk of imprisonment for this generation will have long-lasting consequences for American inequalities, communities, and families.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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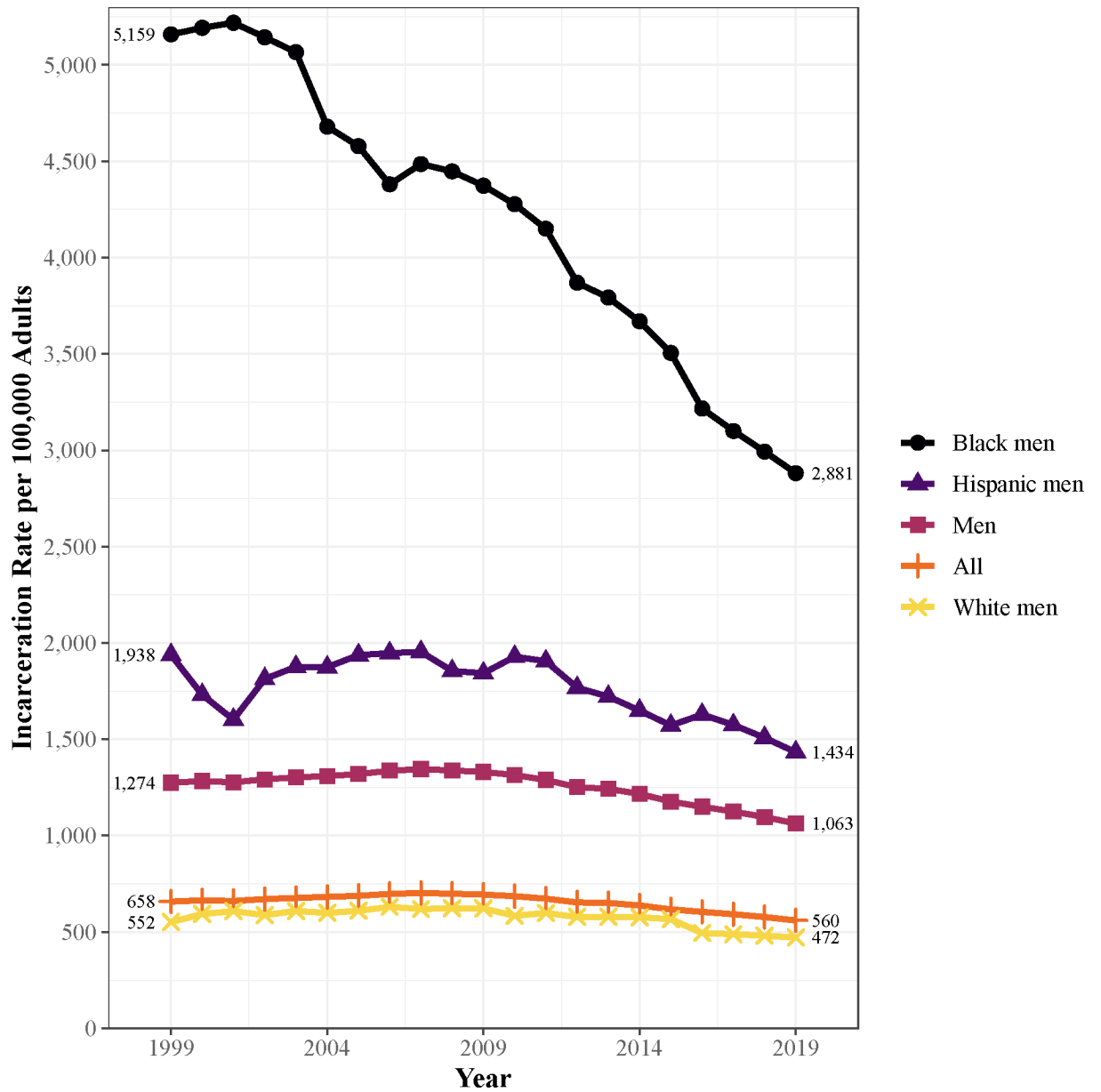
## References

Asher J (2021, September 22). Murder rose by almost 30% in 2020. It's rising at a slower rate in 2021. The New York Times. Retrieved from <https://www.nytimes.com/2021/09/22/upshot/murder-rise-2020.html>

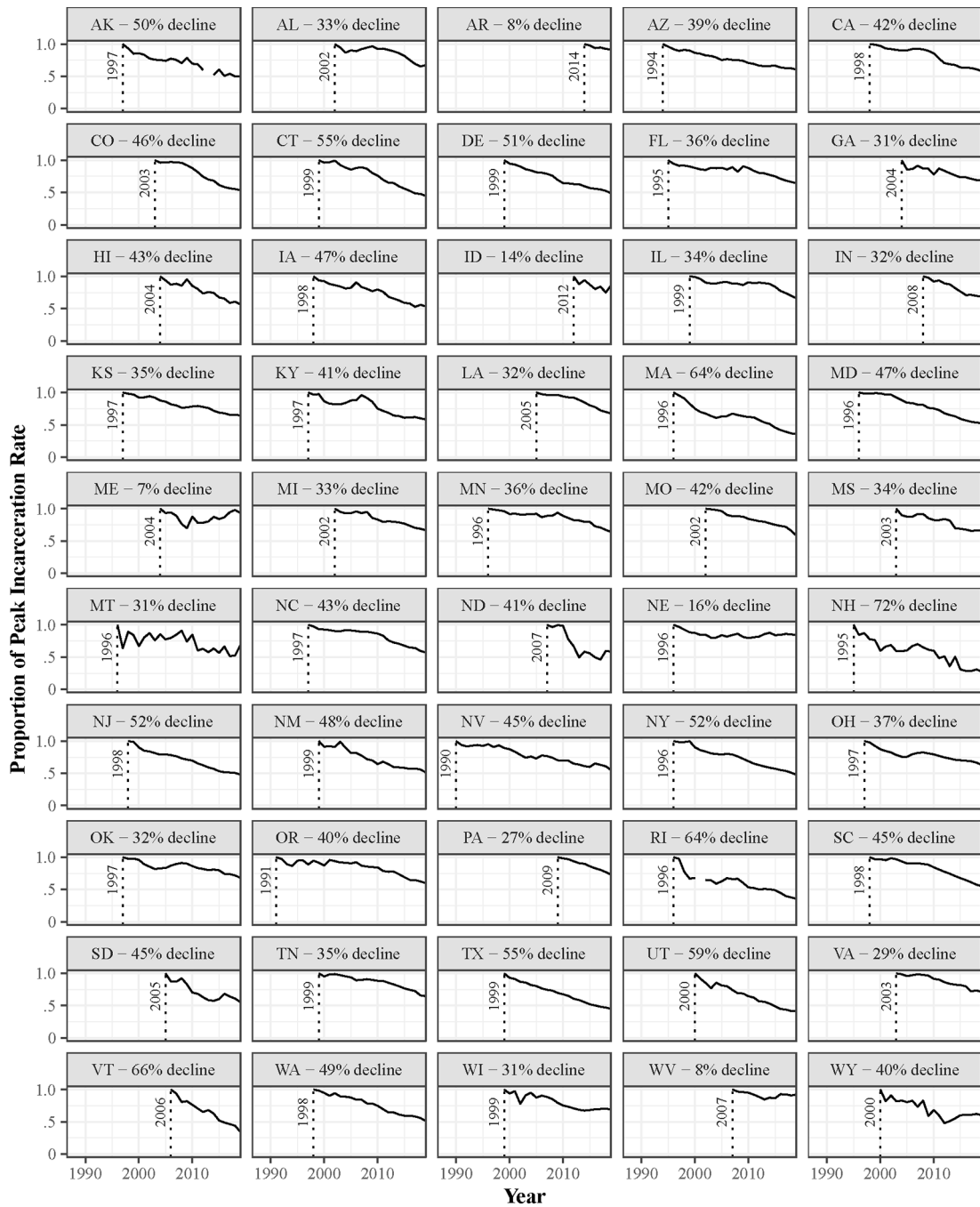
- Barreca A, Deschenes O, & Guldi M (2018). Maybe next month? Temperature shocks and dynamic adjustments in birth rates. *Demography*, 55, 1269–1293. [PubMed: 29968058]
- Baumer EP, Cundiff K, & Luo L (2021). The contemporary transformation of American youth: An analysis of change in the prevalence of delinquency, 1991–2015. *Criminology*, 59, 109–136. [PubMed: 36776699]
- Bjerk D, & Bushway S (forthcoming). The long-term incarceration consequences of coming-of-age in a crime boom. *Journal of Quantitative Criminology*. Advance online publication. 10.1007/s10940-022-09559-4
- Bonczar TP (2003). Prevalence of imprisonment in the U.S. population, 1974–2001 (Bureau of Justice Statistics Special Report, No. NCJ 197976). Washington, DC: U.S. Department of Justice, Office of Justice Programs. Retrieved from <https://bjs.ojp.gov/content/pub/pdf/piusp01.pdf>
- Bonczar TP, & Beck AJ (1997). Lifetime likelihood of going to state or federal prison (Bureau of Justice Statistics Special Report, No. NCJ-160092). Washington, DC: U.S. Department of Justice, Office of Justice Programs. Retrieved from <https://bjs.ojp.gov/content/pub/pdf/Llgsfp.pdf>
- Braman D (2007). *Doing time on the outside: Incarceration and family life in urban America*. Ann Arbor: University of Michigan Press.
- Bureau of Justice Statistics. (1982). Prisoners in 1925–81 (Bureau of Justice Statistics bulletin). Washington, DC: U.S. Department of Justice, Office of Justice Programs. Retrieved from <https://bjs.ojp.gov/content/pub/pdf/p2581.pdf>
- Bureau of Justice Statistics. (2021a). National prisoner statistics, 1978–2020 (Version V1) [Data set]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor]. 10.3886/ICPSR38249.v1
- Bureau of Justice Statistics. (2021b). Prisoner series U.S. Department of Justice, Office of Justice Programs. Retrieved from [https://bjs.ojp.gov/library/publications/list?series\\_filter=Prisoners](https://bjs.ojp.gov/library/publications/list?series_filter=Prisoners)
- Bureau of Justice Statistics. (2021c). Survey of Prison Inmates series [Data set]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor]. Retrieved from <https://www.icpsr.umich.edu/web/NACJD/series/70>
- Bureau of Justice Statistics. (2021d). National corrections reporting program [Data set]. Washington, DC: U.S. Department of Justice, Office of Justice Programs. Retrieved from <https://bjs.ojp.gov/data-collection/national-corrections-reporting-program-ncrp>
- Bushway S, Cabrerros I, Paige JW, Schwam D, & Wenger JB (2022). Barred from employment: More than half of unemployed men in their 30s had a criminal history of arrest. *Science Advances*, 8, eabj6992. 10.1126/sciadv.abj6992 [PubMed: 35179954]
- Bushway S, & Kalra N (2021, August 9). Why we should defend prisons, not the police. *Los Angeles Times*. Retrieved from <https://www.latimes.com/opinion/story/2021-08-09/defund-prisons-police-los-angeles>
- Carson EA (2020). Prisoners in 2019 (Bureau of Justice Statistics Bulletin, No. NCJ 255115). U.S. Department of Justice, Office of Justice Programs. <https://bjs.ojp.gov/content/pub/pdf/p19.pdf>
- Carson EA, Nadel M, & Gaes G (2022). Impact of COVID-19 on state and federal prisons, March 2020–February 2021 (Bureau of Justice Statistics Special Report, No. NCJ 304500). Washington, DC: U.S. Department of Justice, Office of Justice Programs. Retrieved from <https://bjs.ojp.gov/content/pub/pdf/icsfp2021.pdf>
- Centers for Disease Control and Prevention. (2005). Natality public-use data 1995–2002 [CDC WONDER database]. Hyattsville, MD: National Center for Health Statistics. Retrieved from <http://wonder.cdc.gov/natality-v2002.html>
- Centers for Disease Control and Prevention. (2021). Underlying cause of death 1999–2020 [CDC WONDER database]. Hyattsville, MD: National Center for Health Statistics. Retrieved from <https://wonder.cdc.gov/ucd-icd10.html>
- Chung PH, & Hepburn P (2018). Mass imprisonment and the extended family. *Sociological Science*, 5, 335–360.
- Clear TR, & Frost NA (2013). *The punishment imperative: The rise and failure of mass incarceration in America*. New York: New York University Press.

- Fair H, & Walmsley R (2021). World prison population list (World Prison Brief, 13th ed.). London, UK: Institute for Crime & Justice Policy Research. Retrieved from [https://www.prisonstudies.org/sites/default/files/resources/downloads/world\\_prison\\_population\\_list\\_13th\\_edition.pdf](https://www.prisonstudies.org/sites/default/files/resources/downloads/world_prison_population_list_13th_edition.pdf)
- Foote A (2015). Decomposing the effect of crime on population changes. *Demography*, 52, 705–728. [PubMed: 25754687]
- Garland D. (Ed.). (2001). *Mass imprisonment: Social causes and consequences*. New York, NY: Sage Publications.
- Ghandnoosh N (2019). U.S. prison population trends 1997–2017: Massive buildup and modest decline (Policy brief). Washington, DC: The Sentencing Project. Retrieved from <https://www.sentencingproject.org/publications/u-s-prison-population-trends-massive-buildup-and-modest-decline/>
- Grawert A, & Kim N (2022, July 12). Myths and realities: Understanding recent trends in violent crime. Brennan Center for Justice. Retrieved from <https://www.brennancenter.org/our-work/research-reports/myths-and-realities-understanding-recent-trends-violent-crime>
- Hepburn P, Kohler-Hausmann I, & Zorro Medina A (2019). Cumulative risks of multiple criminal justice outcomes in New York City. *Demography*, 56, 1161–1171. [PubMed: 31041605]
- Humphreys K, & Yankah EN (2021, February 26). Prisons are getting whiter. That’s one way mass incarceration might end. *The Washington Post*. Retrieved from [https://www.washingtonpost.com/outlook/prisons-are-getting-whiter-thats-one-way-mass-incarceration-might-end/2021/02/26/28db008c-7535-11eb-948d-19472e683521\\_story.html](https://www.washingtonpost.com/outlook/prisons-are-getting-whiter-thats-one-way-mass-incarceration-might-end/2021/02/26/28db008c-7535-11eb-948d-19472e683521_story.html)
- Ifill S, & Lee JH (2019). Recognize Black humanity. In Chettiar I & Raghavan P (Eds.), *Ending mass incarceration: Ideas from today’s leaders* (pp. 45–48). New York, NY: Brennan Center for Justice.
- Irwin J, & Austin J (1997). *It’s about time: America’s imprisonment binge* (2nd ed.). Belmont, CA: Wadsworth Publishing Company.
- Kessler G (2015, June 16). The stale statistic that one in three Black males ‘born today’ will end up in jail. *The Washington Post*. Retrieved from <https://www.washingtonpost.com/news/fact-checker/wp/2015/06/16/the-stale-statistic-that-one-in-three-black-males-has-a-chance-of-ending-up-in-jail/>
- Klein B, Ogbunugafor CB, Schafer BJ, Bhadracha Z, Kori P, Sheldon J, ... & Hinton E. (2023). COVID-19 amplified racial disparities in the US criminal legal system. *Nature*, 1–7. 10.1038/s41586-023-05980-2
- Lane C, & Humphreys K (2019, April 30). Black imprisonment rates are down. It’s important to know why. *The Washington Post*. Retrieved from <https://www.washingtonpost.com/opinions/2019/04/30/weve-made-remarkable-progress-black-incarceration-now-we-need-know-why/>
- Lualen J, & Kling R (2014). A method for analyzing changing prison populations: Explaining the growth of the elderly in prison. *Evaluation Review*, 38, 459–486. [PubMed: 25015260]
- Manza J, & Uggen C (2008). *Locked out: Felon disenfranchisement and American democracy*. New York, NY: Oxford University Press.
- Massoglia M, & Pridemore WA (2015). Incarceration and health. *Annual Review of Sociology*, 41, 291–310.
- Mitchell KL, Laskorunsky J, Bielenberg N, Chin L, & Wadsworth M (2022). *Examining prison releases in response to COVID: Lessons learned for reducing the effects of mass incarceration* (Report). Minneapolis, MN: Robina Institute of Criminal Law and Criminal Justice.
- National Institutes of Health. (2021). U.S. county population data, expanded races by origin 1990–2020 [Data set]. Bethesda, MD: National Cancer Institute, Surveillance, Epidemiology, and End Results Program. Available from <https://seer.cancer.gov/popdata/download.html>
- Neil R, & Sampson RJ (2021). The birth lottery of history: Arrest over the life course of multiple cohorts coming of age, 1995–2018. *American Journal of Sociology*, 126, 1127–1178.
- Neil R, Sampson RJ, & Nagin DS (2021). Social change and cohort differences in group-based arrest trajectories over the last quarter-century. *Proceedings of the National Academy of Sciences*, 118, e2107020118. 10.1073/pnas.2107020118
- Pager D (2003). The mark of a criminal record. *American Journal of Sociology*, 108, 937–975.
- Pettit B (2012). *Invisible men: Mass incarceration and the myth of Black progress*. New York, NY: Russell Sage Foundation.

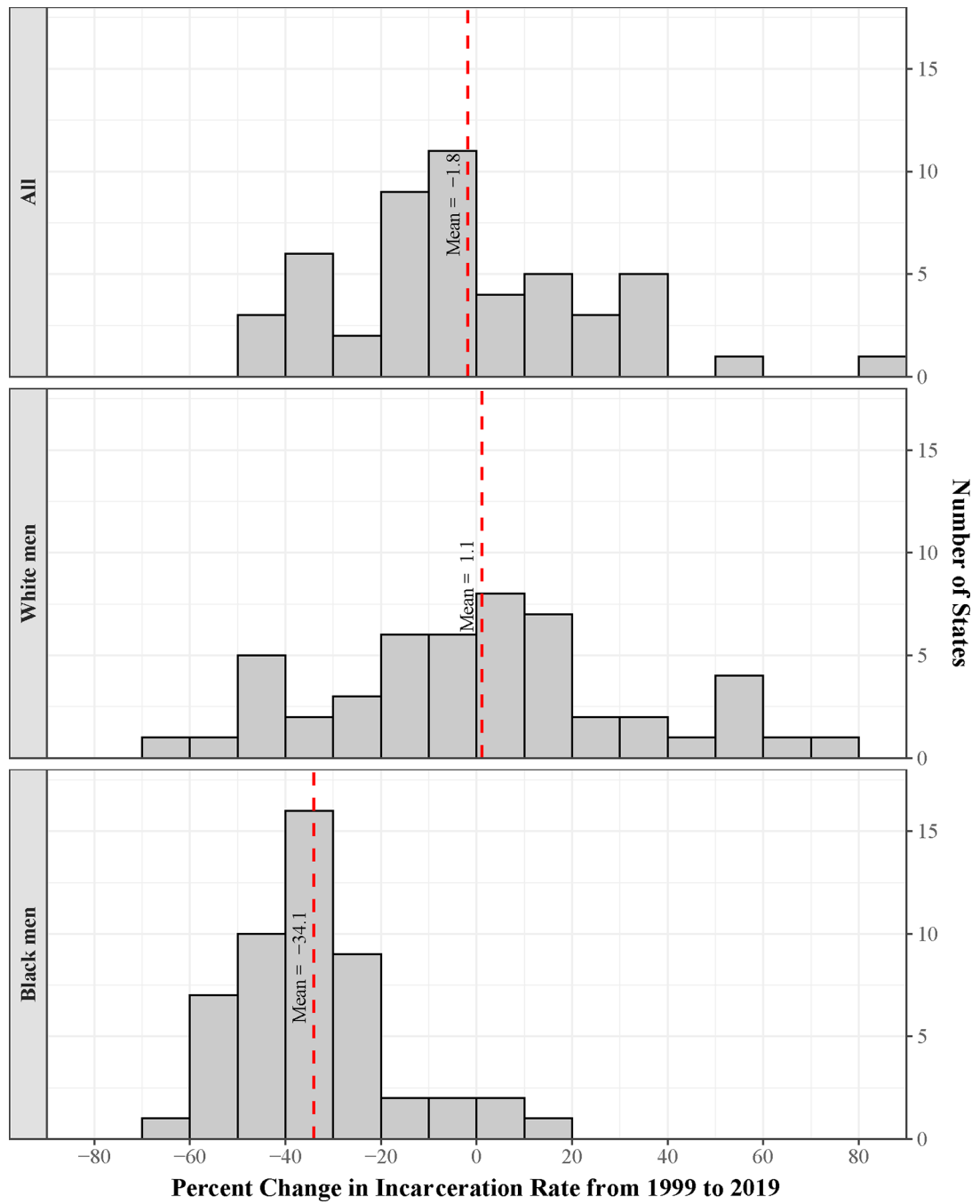
- Pettit B, & Western B (2004). Mass imprisonment and the life course: Race and class inequality in U.S. incarceration. *American Sociological Review*, 69, 151–169.
- Pfaff JF (2017). *Locked in: The true causes of mass incarceration and how to achieve real reform*. New York, NY: Basic Books.
- Porter LC, Bushway SD, Tsao H-S, & Smith HL (2016). How the U.S. prison boom has changed the age distribution of the prison population. *Criminology*, 54, 30–55. [PubMed: 28936228]
- Preston SH, Hueveline P, & Guillot M (2001). *Demography: Measuring and modeling population processes*. Oxford, UK: Blackwell Publishers.
- Roerkhase AF, & Wildeman C (2022). Lifetime risk of imprisonment remains high and starkly unequal in the United States. *Science Advances*, 8, eabo3395. 10.1126/sciadv.abo3395 [PubMed: 36459563]
- Ruggles S, Flood S, Foster S, Goeken R, Pacas J, Schouweiler M, & Sobek M (2021). Integrated public use microdata series: Version 11.0 [Data set]. Minneapolis, MN: IPUMS. 10.18128/D010.V11.0
- Sabol WJ, & Johnson TL (2022). *Justice system disparities: Black–White national imprisonment trends, 2000 to 2020 (Pushing Towards Parity series report)*. Washington, DC: Council on Criminal Justice.
- Sabol WJ, Johnson TL, & Caccavale A (2019). *Trends in correctional control by race and sex (Report)*. Washington, DC: Council on Criminal Justice.
- Sawyer W (2022). *Untangling why prison & jail populations dropped early in the pandemic (Briefing)*. Northampton, MA: Prison Policy Initiative.
- Project Sentencing. (2018). *Report to the United Nations on racial disparities in the U.S. criminal justice system (Report)*. Washington, DC: The Sentencing Project. Retrieved from <https://www.sentencingproject.org/publications/un-report-on-racial-disparities/>
- Sharkey P (2018). *Uneasy peace: The great crime decline, the renewal of city life, and the next war on violence*. New York, NY: W. W. Norton & Company.
- Shen Y, Bushway SD, Sorensen LC, & Smith HL (2020). Locking up my generation: Cohort differences in prison spells over the life course. *Criminology*, 58, 645–677.
- Spelman W (2022). How cohorts changed crime rates, 1980–2016. *Journal of Quantitative Criminology*, 38, 637–671.
- Tilstra AM, Gutin I, Dollar NT, Rogers RG, & Hummer RA (2022). “Outside the skin”: The persistence of Black–White disparities in U.S. early-life mortality. *Demography*, 59, 2247–2269. 10.1215/00703370-10346963 [PubMed: 36367341]
- Turney K (2014). The intergenerational consequences of mass incarceration: Implications for children’s co-residence and contact with grandparents. *Social Forces*, 93, 299–327.
- Wakefield S, & Uggen C (2010). Incarceration and stratification. *Annual Review of Sociology*, 36, 387–406.
- Wakefield S, & Wildeman C (2013). *Children of the prison boom: Mass incarceration and the future of American inequality*. New York, NY: Oxford University Press.
- West HC, & Sabol WJ (2008). *Prisoners in 2007 (Bureau of Justice Statistics Special Report, No. NCJ 224280)*. Washington, DC: U.S. Department of Justice, Office of Justice Programs. Retrieved from <https://bjs.ojp.gov/content/pub/pdf/p07.pdf>
- Western B (2006). *Punishment and inequality in America*. New York, NY: Russell Sage Foundation.
- Western B, Davis J, Ganter F, & Smith N (2021). The cumulative risk of jail incarceration. *Proceedings of the National Academy of Sciences*, 118, e2023429118. 10.1073/pnas.2023429118
- Wildeman C, Schnittker J, & Turney K (2012). Despair by association? The mental health of mothers with children by recently incarcerated fathers. *American Sociological Review*, 77, 216–243.
- Wildeman C, & Wakefield S (2014). The long arm of the law: The concentration of incarceration in families in the era of mass incarceration. *Journal of Gender, Race & Justice*, 17, 367–389.
- Zimring FE (2020). *The insidious momentum of American mass incarceration*. New York, NY: Oxford University Press.



**Fig. 1.** Incarceration rates per 100,000 adults in the United States, 1999–2019. Authors’ calculations are based on race-, ethnicity-, and gender-specific counts of individuals in state and federal prisons and race-, ethnicity-, and gender-specific estimates of the adult population.

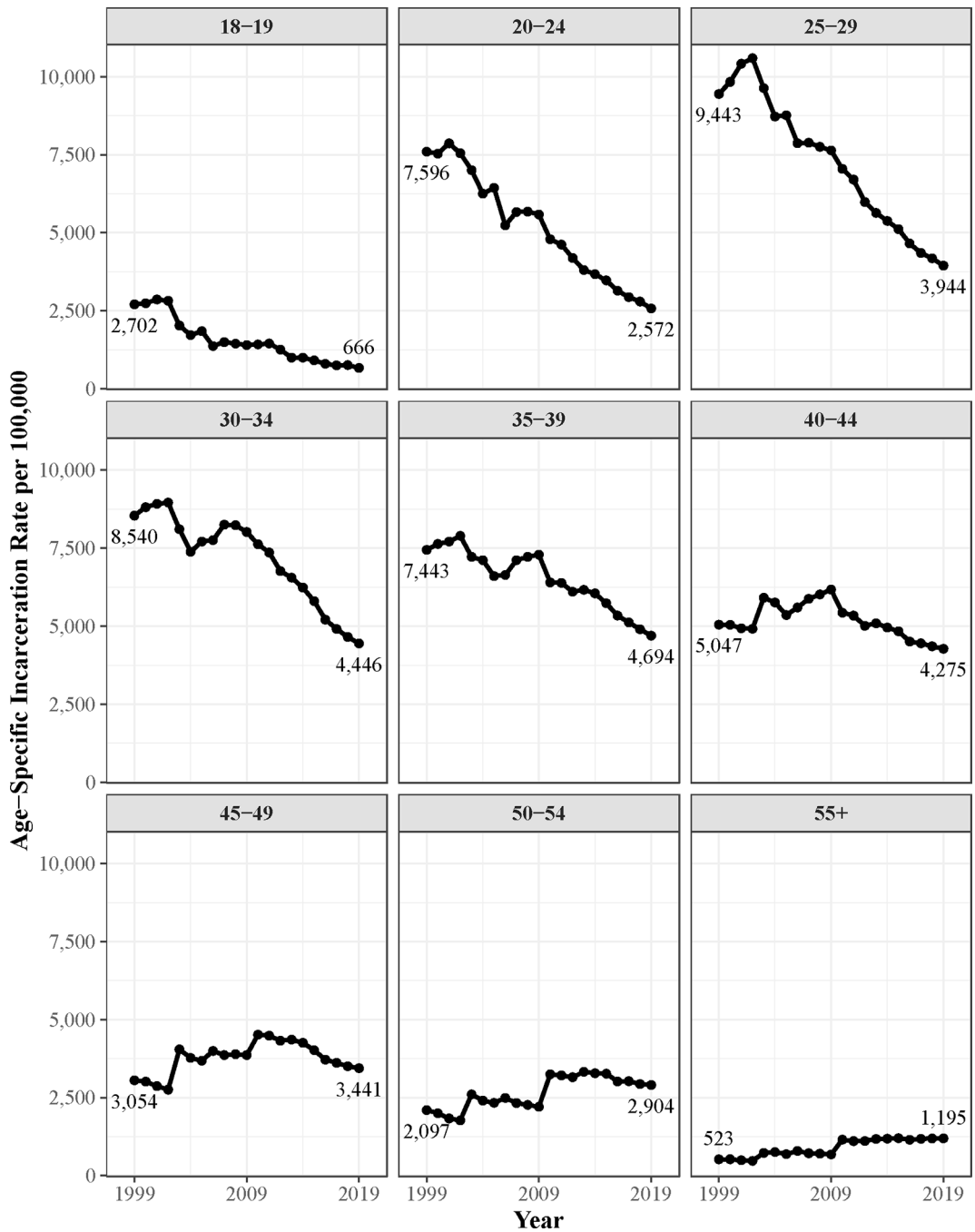


**Fig. 2.** State declines in Black male incarceration rate relative to the state’s peak Black male incarceration rate, United States, 1990–2019. The dotted line represents the peak year. The decline percentage represents the percentage decline in the Black male incarceration rate from the peak year to 2019. Authors’ calculations are based on state-specific counts of Black males in state and federal prisons and state-specific population estimates for Black males.

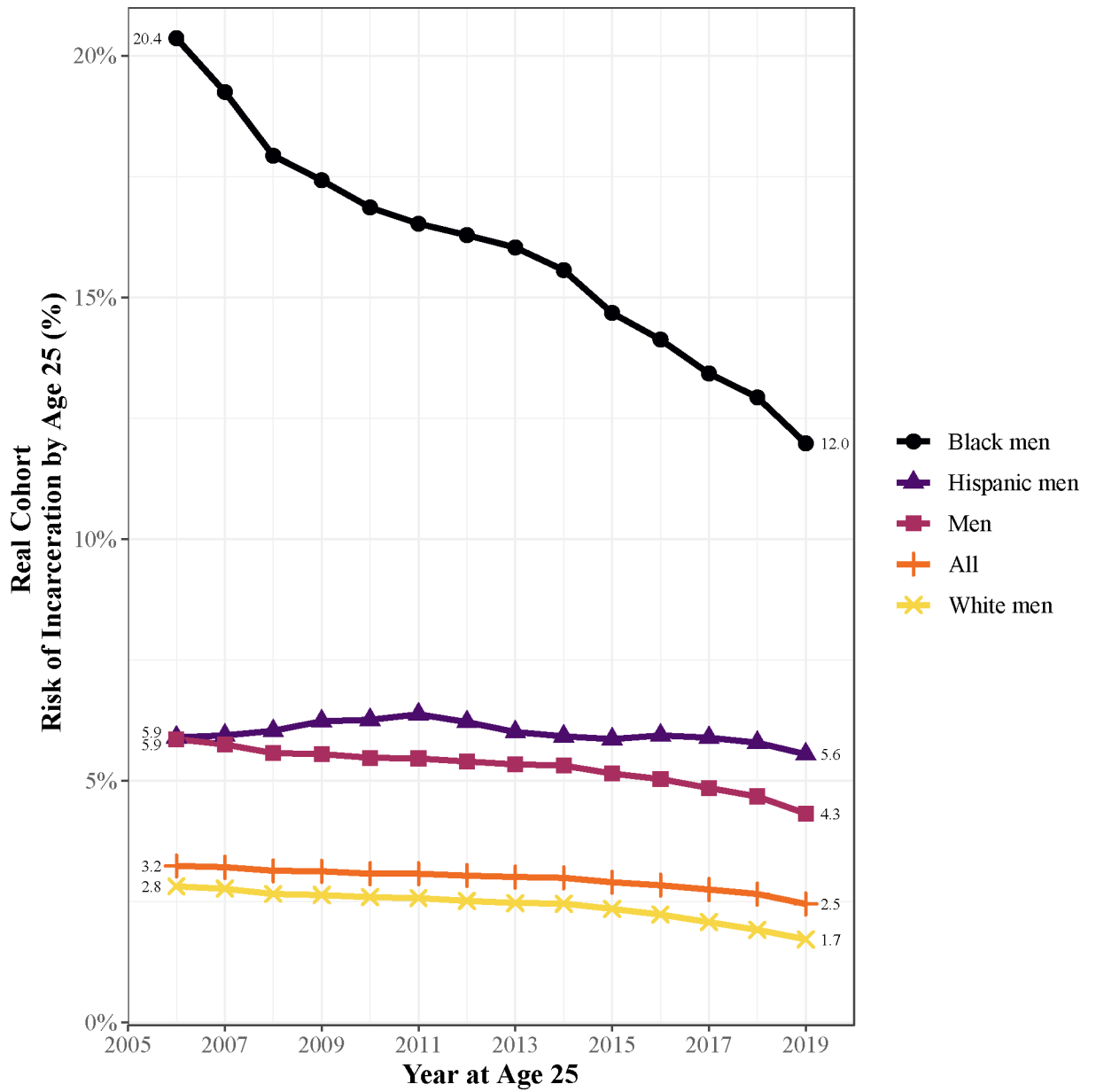


**Fig. 3.** Histograms of state-level percentage change in the incarceration rate in the United States from 1999 to 2019. The dashed red line represents the mean percentage change across 50 states. Authors' calculations are based on state-specific counts of individuals in state and federal prisons and state-specific population estimates.

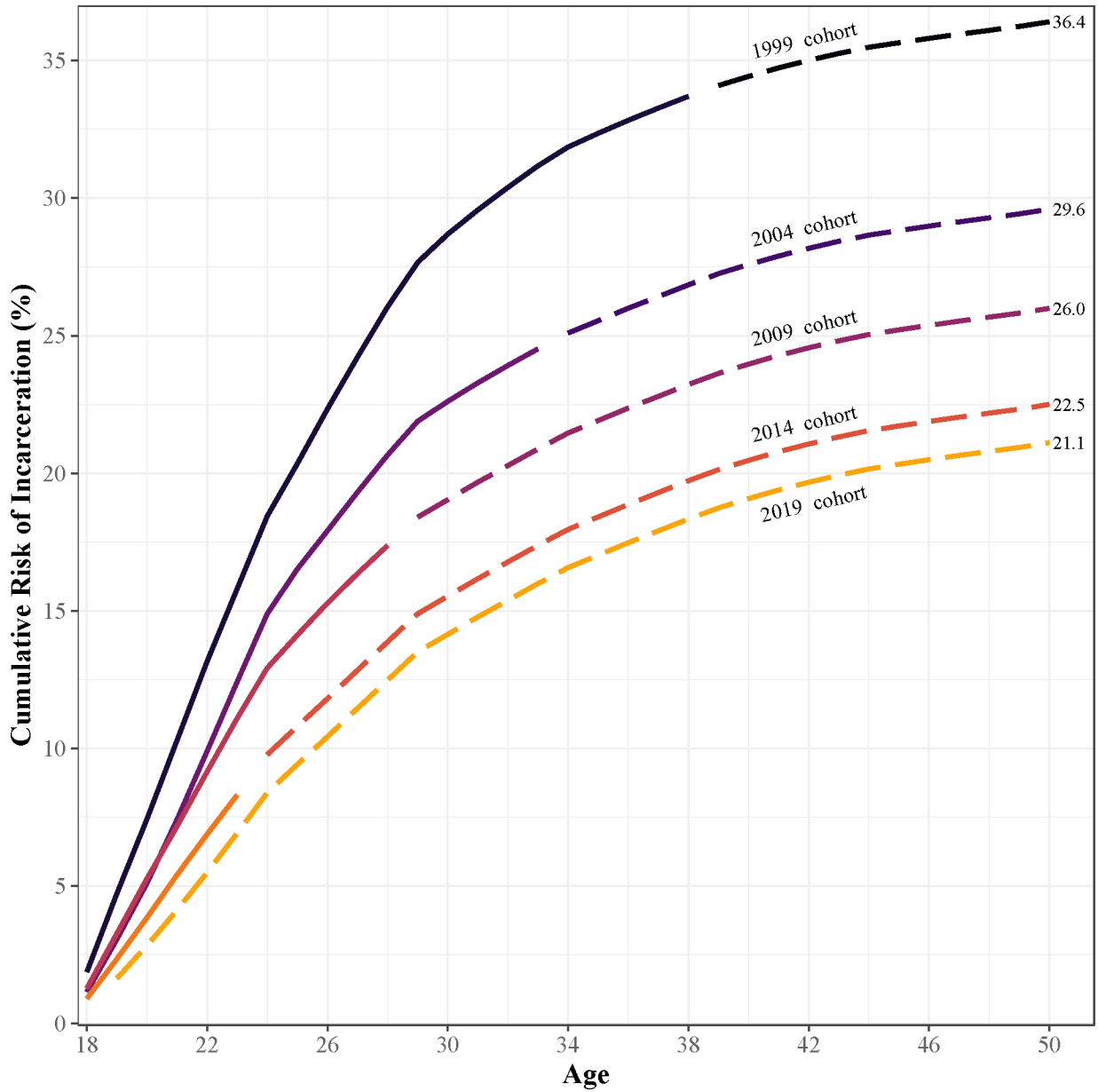




**Fig. 4.** Age-specific incarceration rates for Black men in the United States, 1999–2019. Authors’ calculations are based on age-specific counts of Black males in state and federal prisons and age-specific population estimates for Black males.



**Fig. 5.** Real cohort risk of incarceration by age 25 in the United States, 2006–2019. Authors’ calculations are from multiple-decrement life tables for real cohort risks of incarceration in state or federal prison.



**Fig. 6.** Real and projected cumulative risk of incarceration for Black men in the United States, 1999–2019. Authors’ calculations are from multiple-decrement life tables for real and synthetic cohort risks of incarceration in state or federal prison. Solid lines are real cohort estimates of incarceration risk by age. Dashed lines represent estimates that required projections based on synthetic cohorts. For cohort–age combinations that reached the age before the end of the observation period (birth year + age = 2019), the estimates shown here are real cohort estimates. For all other cohorts, we assume the 2019 incarceration rates would hold until the individuals reach age  $x$ . Thus, these estimates combine the real cohort estimates through 2019 and the projected synthetic cohort estimates for all years beyond 2019. For example, to estimate the risk of incarceration by age 50 for the 1999 cohort (born in 1981), we begin with our real cohort estimate by age 38 in 2019 and assume the 2019

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incarceration rates held from age 39 until they reach age 50 in 2031. See Table A6 (online appendix) for more details.

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**Table 1**

Risk of incarceration by age 38 and effects of declining incarceration rates: Real and synthetic cohort analyses for the United States, 1999 and 2019

Scenario	Risk of Incarceration by Age 38				
	All	Men	White Men	Hispanic Men	Black Men
A Real Cohort 1999–2019 (%)	6.5	11.3	5.9	12.8	33.7
B Synthetic Cohort 1999 (%)	5.8	10.1	4.6	12.7	35.8
C Synthetic Cohort 2019 (%)	4.7	7.9	3.8	10.1	18.3
A – B Effect of Declining Incarceration Rates for 1999 Cohort	0.7	1.1	1.2	0.1	–2.1
C – A Effect of Declining Incarceration Rates for 2019 Cohort	–1.8	–3.4	–2.1	–2.6	–15.4
C – B Effect of Declining Incarceration Rates on Synthetic Cohort Risk	–1.0	–2.3	–0.8	–2.5	–17.4

*Notes:* Authors' calculations from multiple-decrement life tables for real and synthetic cohort risks of incarceration in state or federal prison. Differences represent percentage-point differences.

**Table 2**

Prevalence of life course events by age 25 in the United States, 2009 and 2019: Percentages

<b>Life Course Event</b>	<b>All</b>	<b>Men</b>	<b>White Men</b>	<b>Hispanic Men</b>	<b>Black Men</b>
2009					
Ever incarcerated	3.1	5.6	2.6	6.2	17.4
Bachelor's degree	28.1	23.6	29.3	8.1	12.8
Ever married	32.8	27.1	28.7	32.8	16.7
Served in the military	4.9	7.7	9.0	4.5	7.7
2019					
Ever incarcerated	2.5	4.3	1.7	5.6	12.0
Bachelor's degree	33.1	29.2	34.4	15.4	17.7
Ever married	23.0	18.7	20.7	21.4	11.7
Served in the military	3.8	6.2	7.2	4.6	6.0

*Notes:* Authors' calculations. Ever incarcerated is based on a multiple-decrement life table for real cohort risks of incarceration in state or federal prison by age 25. Other life course events are based on ACS three-year weighted estimates restricted to individuals aged 25.

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