

## Supplementary Online Content

Hailu EM, Riddell CA, Bradshaw PT, Ahern J, Carmichael SL, Mujahid MS. Structural racism, mass incarceration, and racial and ethnic disparities in severe maternal morbidity. *JAMA Netw Open*. 2024;7(1):e2353626. doi:10.1001/jamanetworkopen.2023.53626

**eFigure.** Study Sample Inclusion Flowchart

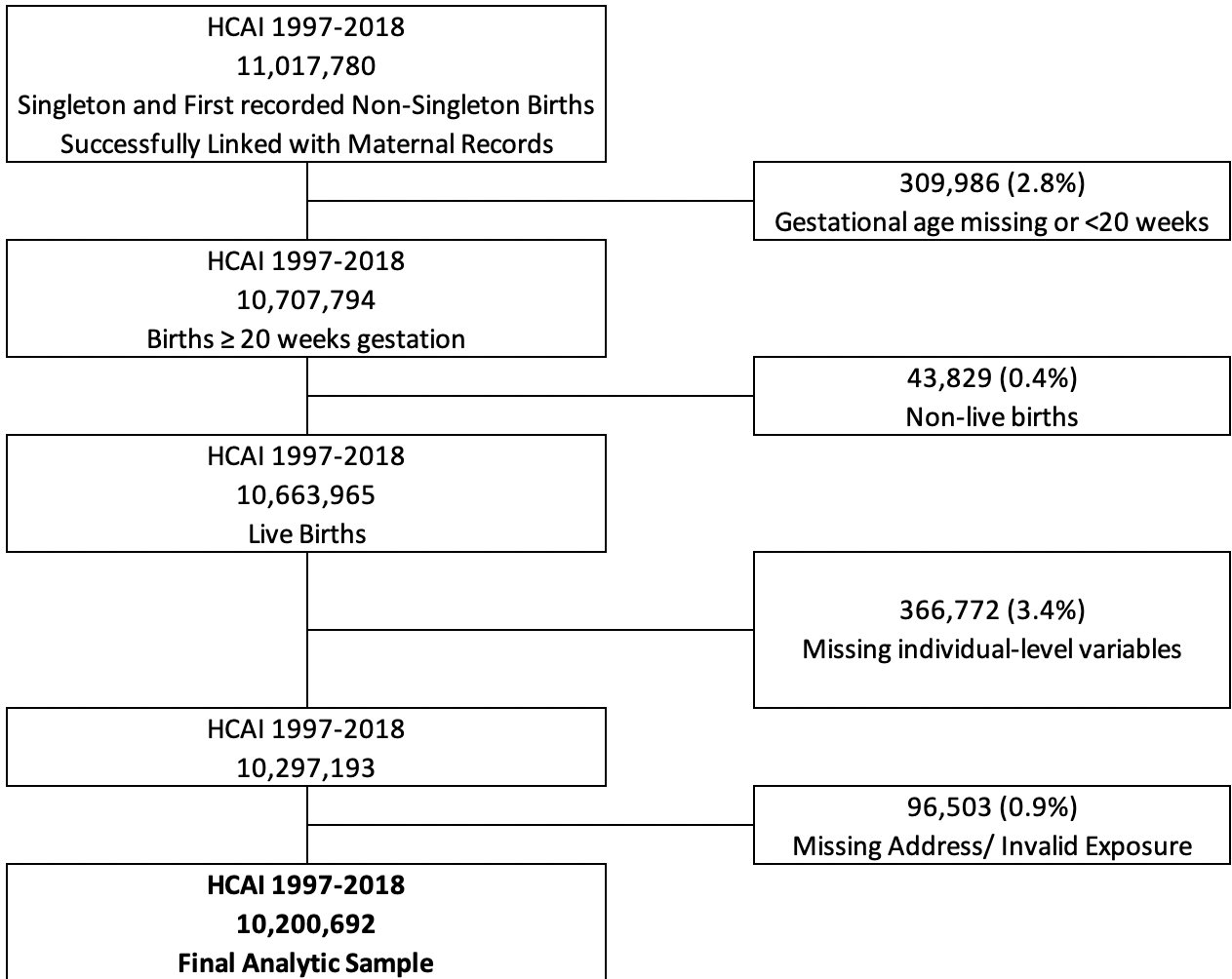
**eTable 1.** Associations Between Black-White Inequity in County Jail Incarceration Rates and Severe Maternal Morbidity Accounting for Temporal Trends, California 1997-2018

**eTable 2.** Associations Between Black-White Inequity in County Jail Incarceration Rates and Non-Blood Transfusion Severe Maternal Morbidity, California 1997-2018

**eTable 3.** Associations Between Black-White Inequity in County Jail Incarceration Rates and Severe Maternal Morbidity (including blood transfusion-only cases), California 1997-2018

This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure 1: Study Sample Inclusion Flowchart



\*HCAI: Department of Health Care Access and Information. HCAI linked vital statistics records with maternal birth hospitalization discharge records

eTable 1: Associations between Black-White Inequity in County Jail Incarceration Rates and Severe Maternal Morbidity Accounting for Temporal Trends, California 1997-2018.<sup>a</sup>

	<i>American Indian or Alaska Native</i> (N=43,254)	<i>Asian or Pacific Islander</i> (N=1,369,170)	<i>Black</i> (N=589,692)	<i>Hispanic or Latinx</i> (N=5,177,325)	<i>White</i> (N=3,014,652)	<i>Multiracial or other<sup>b</sup></i> (N=6,599)
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
<b>Non-blood transfusion severe maternal morbidity</b>						
Black-White Inequity in County Jail Incarceration Rates						
Tertile 1 (Low inequity)	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	NE <sup>c</sup>
Tertile 2	0.89 (0.60, 1.32)	0.94 (0.79, 1.11)	1.06 (0.94, 1.20)	1.05 (0.98, 1.13)	0.97 (0.89, 1.06)	NE
Tertile 3 (High inequity)	0.96 (0.65, 1.42)	0.87 (0.73, 1.04)	1.14 (1.01, 1.29)	1.09 (1.01, 1.18)	0.94 (0.86, 1.03)	NE
<b>Severe maternal morbidity (including blood transfusion-only cases)</b>						
Black-White Inequity in County Jail Incarceration Rates						
Tertile 1 (Low inequity)	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Tertile 2	0.84 (0.66, 1.07)	0.95 (0.84, 1.09)	1.02 (0.88, 1.19)	0.96 (0.92, 1.01)	0.97 (0.91, 1.03)	0.81 (0.37, 1.76)
Tertile 3 (High inequity)	0.89 (0.68, 1.16)	0.94 (0.82, 1.07)	1.01 (0.86, 1.19)	0.99 (0.93, 1.04)	0.95 (0.89, 1.01)	0.88 (0.43, 1.77)

<sup>a</sup> Estimates are from mixed effects regression models with random intercepts for counties and year fixed effects, adjusting for maternal age, education, insurance, and county median household income

<sup>b</sup> Multiracial or other category includes individuals who self-identified with at least 2 or more racial groups and those who self-identified as “other” race/ethnicity

<sup>c</sup> NE=not estimable due to high instability given low sample sizes

eTable 2: Associations between Black-White Inequity in County Jail Incarceration Rates and Non-blood Transfusion Severe Maternal Morbidity, California 1997-2018. <sup>a</sup>

	<i>American Indian or Alaska Native</i> (N=43,254)	<i>Asian or Pacific Islander</i> (N=1,369,170)	<i>Black</i> (N=589,692)	<i>Hispanic or Latinx</i> (N=5,177,325)	<i>White</i> (N=3,014,652)	<i>Multiracial or other<sup>b</sup></i> (N=6,599)
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
<b>Black-White Jail Incarceration Inequity</b>						
Tertile 1 (Low inequity)	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Tertile 2	0.90 (0.61, 1.32)	0.94 (0.79, 1.11)	1.08 (0.95, 1.23)	1.14 (1.06, 1.22)	1.03 (0.94, 1.12)	1.22 (0.38, 3.87)
Tertile 3 (High inequity)	0.97 (0.66, 1.43)	0.95 (0.80, 1.13)	1.14 (1.01, 1.29)	1.24 (1.14, 1.34)	1.02 (0.93, 1.12)	0.96 (0.33, 2.79)
<b>Maternal age, y</b>						
<20	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
20-34	0.84 (0.57, 1.25)	1.33 (1.10, 1.62)	1.24 (1.13, 1.37)	0.92 (0.88, 0.95)	1.16 (1.06, 1.28)	0.77 (0.26, 2.28)
≥35	1.78 (1.13, 2.82)	2.40 (1.97, 2.92)	2.10 (1.88, 2.35)	1.59 (1.52, 1.66)	1.81 (1.64, 1.99)	1.16 (0.34, 3.89)
<b>Maternal education</b>						
High school or less	0.95 (0.62, 1.43)	0.99 (0.93, 1.06)	1.00 (0.92, 1.09)	0.97 (0.93, 1.02)	1.00 (0.95, 1.04)	0.99 (0.43, 2.32)
Some college	1.09 (0.72, 1.64)	1.01 (0.95, 1.07)	1.00 (0.92, 1.09)	1.02 (0.97, 1.07)	1.02 (0.98, 1.07)	0.82 (0.34, 1.97)
College graduate	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
<b>Insurance</b>						
Private	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Public/government	1.04 (0.79, 1.36)	1.07 (1.00, 1.13)	1.15 (1.08, 1.22)	1.05 (1.02, 1.08)	1.18 (1.13, 1.24)	2.06 (1.01, 4.22)
Other/unknown/uninsured	0.45 (0.14, 1.44)	0.72 (0.65, 0.79)	1.05 (0.87, 1.26)	0.94 (0.86, 1.02)	1.08 (0.96, 1.22)	1.2 (0.16, 9.22)
<b>County Median Household Income</b>						
Quartile 1 (Low)	0.95 (0.60, 1.49)	0.83 (0.66, 1.03)	0.71 (0.57, 0.89)	0.98 (0.86, 1.12)	0.93 (0.83, 1.04)	0.79 (0.09, 6.84)
Quartile 2	0.71 (0.42, 1.17)	0.76 (0.64, 0.91)	0.74 (0.63, 0.86)	0.97 (0.86, 1.10)	0.99 (0.88, 1.11)	0.58 (0.07, 5.04)
Quartile 3	1.06 (0.73, 1.54)	1.05 (0.92, 1.20)	0.91 (0.84, 1.00)	1.06 (0.94, 1.19)	1.10 (1.00, 1.22)	2.33 (0.96, 5.66)
Quartile 4 (High)	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]

<sup>a</sup> Estimates are from mixed effects regression models with random intercepts for counties, adjusting for maternal age, education, insurance, and county median household income

<sup>b</sup> Multiracial or other category includes individuals who self-identified with at least 2 or more racial groups and those who self-identified as “other” race/ethnicity

eTable 3: Associations between Black-White Inequity in County Jail Incarceration Rates and Severe Maternal Morbidity (including blood transfusion-only cases), California 1997-2018.<sup>a</sup>

	American Indian or Alaska Native (N=43,254)	Asian or Pacific Islander (N=1,369,170)	Black (N=589,692)	Hispanic or Latinx (N=5,177,325)	White (N=3,014,652)	Multiracial or other <sup>b</sup> (N=6,599)
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
<b>Black-White Jail Incarceration Inequity</b>						
Tertile 1 (Low inequity)	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Tertile 2	0.86 (0.67, 1.09)	1.01 (0.88, 1.15)	1.15 (0.99, 1.35)	1.11 (1.06, 1.16)	1.08 (1.01, 1.15)	0.83 (0.38, 1.79)
Tertile 3 (High inequity)	0.88 (0.67, 1.15)	1.11 (0.96, 1.27)	1.20 (1.01, 1.42)	1.20 (1.14, 1.27)	1.09 (1.02, 1.17)	0.87 (0.43, 1.75)
<b>Maternal age, y</b>						
<20	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
20-34	0.98 (0.77, 1.26)	1.09 (0.97, 1.23)	1.22 (1.15, 1.31)	0.85 (0.83, 0.88)	1.07 (1.01, 1.14)	1.15 (0.49, 2.71)
≥35	1.78 (1.32, 2.41)	1.81 (1.61, 2.04)	2.11 (1.96, 2.28)	1.28 (1.24, 1.32)	1.59 (1.49, 1.70)	1.33 (0.51, 3.44)
<b>Maternal education</b>						
High school or less	1.12 (0.84, 1.50)	0.93 (0.89, 0.97)	1.05 (0.99, 1.12)	0.96 (0.93, 0.99)	1.01 (0.98, 1.04)	1.14 (0.65, 2.01)
Some college	1.17 (0.87, 1.57)	1.00 (0.97, 1.04)	1.04 (0.97, 1.10)	1.04 (1.01, 1.08)	1.01 (0.98, 1.04)	0.92 (0.51, 1.64)
College graduate	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
<b>Insurance</b>						
Private	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Public/government	1.25 (1.04, 1.50)	1.16 (1.11, 1.20)	1.28 (1.23, 1.34)	1.17 (1.15, 1.19)	1.28 (1.24, 1.32)	1.5 (0.93, 2.41)
Other/unknown/uninsured	1.14 (0.68, 1.90)	0.91 (0.85, 0.97)	1.22 (1.08, 1.38)	1.08 (1.02, 1.14)	1.13 (1.04, 1.23)	1.5 (0.45, 4.95)
<b>County Median Household Income</b>						
Quartile 1 (Low)	1.07 (0.79, 1.45)	1.01 (0.82, 1.25)	0.97 (0.77, 1.22)	1.31 (1.12, 1.53)	1.06 (0.94, 1.18)	0.94 (0.31, 2.85)
Quartile 2	0.78 (0.55, 1.11)	1.03 (0.85, 1.25)	0.83 (0.67, 1.02)	1.21 (1.04, 1.40)	1.06 (0.95, 1.18)	0.67 (0.22, 2.03)
Quartile 3	0.95 (0.72, 1.25)	1.20 (1.01, 1.44)	1.06 (0.87, 1.28)	1.35 (1.18, 1.55)	1.19 (1.08, 1.31)	1.13 (0.69, 1.85)
Quartile 4 (High)	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]

<sup>a</sup> Estimates are from mixed effects regression models with random intercepts for counties, adjusting for maternal age, education, insurance, and county median household income

<sup>b</sup> Multiracial or other category includes individuals who self-identified with at least 2 or more racial groups and those who self-identified as “other” race/ethnicity