

# Letters

## RESEARCH LETTER

### HEALTH AND THE 2024 US ELECTION

#### Rape-Related Pregnancies in the 14 US States With Total Abortion Bans

Many US women report experiencing sexual violence, and many seek abortion for rape-related pregnancies.<sup>1</sup> Following the US Supreme Court's 2022 *Dobbs v Jackson Women's Health Organization* (*Dobbs*) decision overturning *Roe v Wade*, 14 states have outlawed abortion at any gestational duration.<sup>2</sup> Although 5 of these states allow exceptions for rape-related pregnancies, stringent gestational duration limits apply, and survivors must report the rape to law enforcement, a requirement likely to disqualify most survivors of rape, of whom only 21% report their rape to police.<sup>3</sup>

Post *Dobbs*, 10 or fewer legal abortions occurred monthly in each of the total abortion ban states.<sup>4</sup> We estimated rape-related pregnancies by state to assess how abortion bans affected survivors of rape.

**Methods** | Because to our knowledge no recent reliable state-level data on completed vaginal rapes (forced and/or drug/alcohol-facilitated vaginal penetration) are available, we analyzed multiple data sources to estimate reported and unreported rapes in states with total abortion bans (Table 1<sup>5</sup>). We also estimated the number of resulting pregnancies based on findings from prior research on rape-related pregnancy rates (eMethods in Supplement 1). This study followed the relevant sections of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline. The institutional review boards of our institutions did not consider analyses of publicly available data human participants research.

To estimate the contemporary incidence of vaginal rape nationally, we analyzed the US Centers for Disease Control and Pre-

vention's (CDC's) 2016 to 2017 National Intimate Partner and Sexual Violence survey (which used special methods to accurately ascertain reported and unreported rapes). We adjusted for the fraction of survivors who were female individuals aged 15 to 45 years using data from the Bureau of Justice Statistics' (BJS) annual survey on criminal victimization (which is known to underestimate rapes<sup>5</sup>)<sup>3</sup> and further adjusted for the percentage of rapes that are vaginal.<sup>1</sup> We calculated 95% CIs using measures of uncertainty from the CDC survey. The CDC and BJS surveys do not include state-level data; thus, we apportioned the 2022 nationwide rape estimate among states based on the US Federal Bureau of Investigation's most recent Uniform Crime Reports, which include rapes reported to law enforcement in 2019.

To estimate rape-related pregnancies, we multiplied the state-level estimate of vaginal rapes by the fraction likely to result in pregnancy (eMethods in Supplement 1)<sup>6</sup> and then adjusted for the number of months between July 1, 2022, and January 1, 2024, that a total abortion ban was in effect. We used Stata, version 16.1 (StataCorp), to analyze the BJS survey data and Microsoft Excel for other calculations.

**Results** | In the 14 states that implemented total abortion bans following the *Dobbs* decision, we estimated that 519 981 completed rapes were associated with 64 565 pregnancies during the 4 to 18 months that bans were in effect (Table 2). Of these, an estimated 5586 rape-related pregnancies (9%) occurred in states with rape exceptions, and 58 979 (91%) in states with no exception, with 26 313 (45%) in Texas.

**Discussion** | In this cross-sectional study, thousands of girls and women in states that banned abortion experienced rape-related pregnancy, but few (if any) obtained in-state abortions legally,<sup>4</sup> suggesting that rape exceptions fail to provide reasonable access to abortion for survivors. Survivors of rape who become pregnant in states with abortion bans may seek a self-managed abortion or try to travel (often hundreds of miles) to a state where abortion is legal, leaving many without a practical alternative to carrying the pregnancy to term.

Table 1. Characteristics of Data Sources on Rape Victimization

Characteristic	CDC NISVS	BJS NCVS	FBI UCR
Reproductive-aged women distinguishable from other survivors of rape	No	Yes	No
Accuracy of rape estimates <sup>a</sup>	More accurate	Poor	Poor
Year of most recent available data	2016/2017	2022	2019
Data include reported and unreported rape	Yes	Yes	No
State-level data available	No	No	Yes
Uncertainty measures (standard errors or 95% CIs) available for relevant variables	Yes	Yes	No

Abbreviations: BJS, Bureau of Justice Statistics; CDC, US Centers for Disease Control and Prevention; FBI, Federal Bureau of Investigation; NCVS, National Crime Victimization Survey; NISVS, National Intimate Partner and Sexual Violence Survey; UCR, Uniform Crime Reports.

<sup>a</sup> The NISVS includes a broader definition of rape, which adheres more closely to

current legal (and publicly accepted) definitions, compared with the NCVS or UCR. Specifically, unlike the other data sources, the NISVS includes rape incidents that occurred "When you were unable to consent to sex or stop it from happening because you were too drunk, high, drugged, or passed out from alcohol or drugs."<sup>5</sup>

**Table 2. Completed Vaginal Rapes and Estimated Number of Pregnancies Resulting From Rape Among Girls and Women Aged 15 to 45 Years Since Implementation of Abortion Bans<sup>a</sup>**

State	No. of months abortion ban in effect between July 1, 2022, and January 1, 2024	Estimated completed vaginal rapes during ban period (95% CI) <sup>a</sup>	Estimated rape-related pregnancies during ban period (95% CI) <sup>b</sup>
States with a rape exception			
Idaho	16	11 565 (9301-15 502)	1436 (1155-1925)
Indiana	4	8845 (7114-11 856)	1098 (883-1472)
Mississippi	17	11 346 (9125-15 208)	1409 (1133-1888)
West Virginia	15	10 105 (8127-13 545)	1255 (1009-1682)
North Dakota	8	3124 (2512-4187)	388 (312-520)
Subtotal	NA	44 985 (36 179-60 298)	5586 (4492-7487)
States with no rape exception			
Alabama	18	33 259 (26 748-44 580)	4130 (3321-5535)
Arkansas	18	37 489 (30 149-50 249)	4655 (3744-6239)
Kentucky	17	23 877 (19 203-32 005)	2965 (2384-3974)
Louisiana	17	34 525 (27 766-46 277)	4287 (3448-5746)
Missouri	18	46 913 (37 729-62 881)	5825 (4685-7808)
Oklahoma	18	36 475 (29 335-48 891)	4529 (3642-6071)
South Dakota	18	10 325 (8304-13 840)	1282 (1031-1718)
Tennessee	16	40 214 (32 341-53 902)	4993 (4016-6693)
Texas	16	211 919 (170 431-284 052)	26 313 (21 162-35 270)
Subtotal	NA	474 996 (382 006-636 677)	58 979 (47 433-79 054)
Total		519 981 (418 185-696 975)	64 565 (51 925-86 541)

Abbreviation: NA, not applicable.

<sup>a</sup> Completed vaginal rape is forced and/or drug-facilitated or alcohol-facilitated vaginal penetration.

<sup>b</sup> Based on a per-vaginal rape pregnancy rate of 12.4% (eMethods in Supplement 1).

Our estimates have limitations. We used CDC data, the most accurate available national data on rapes, but such highly stigmatized experiences are difficult to measure accurately in surveys. Our adjustment for secular change since the 2016/2017 CDC survey assumes that the BJS' undercount was proportionally similar in 2016 and 2017 and 2022. The 95% CIs should be interpreted cautiously because we used multiple data sources to obtain our estimates.

Nonetheless, the large number of estimated rape-related pregnancies in abortion ban states compared with the 10 or fewer legal abortions per month occurring in each of those states indicates that persons who have been raped and become pregnant cannot access legal abortions in their home state, even in states with rape exceptions.

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