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METHODS

We computed the infant death rate \(\left(\frac{\text{deaths} < \text{age 1 year}}{\text{population} < \text{age 1 year}}\right)\) in the same calendar year\(^{22}\) from 1960 to 1967\(^{23}\) and 1968 to 1980\(^{22}\) US national mortality data. We stratified the individual-level mortality records and census denominator data by age, gender, and race/ethnicity and aggregated them to the county level.

We classified states into 3 groups: (1) abortion legalized in 1970 (n = 4; Alaska, Hawaii, New York, Washington), (2) a model penal code enacted between 1967 and 1972 that, as stated at the time, reformed (i.e., made less stringent but did not repeal) the state’s abortion laws (n = 14; California, Colorado, New Mexico, Oregon, Maryland, Delaware, Georgia, North Carolina, South Carolina, Arkansas, Virginia, Kansas, Vermont, Florida), and (3) abortion kept illegal prior to Roe v Wade (the remaining 32 states plus the District of Columbia).\(^{3,4,8,11,24}\)

Because the mortality data contained no socioeconomic information,\(^{18}\) we linked these data to county median family income obtained from US Census decennial 1960 to 1980 data (missingness <1%), which we adjusted for inflation and regional cost of living.\(^{18,25}\) For Alaska, which has a small population and lacks county divisions, we analyzed data as 1 county.\(^{18}\) We used linear interpolation for intercensal years and then assigned counties to income quintiles, weighted by county population size, which varies greatly.\(^{18}\)

The only racial/ethnic categories available were White and non-White for 1960 to 1967 and White, Black, and other for 1968 to 1980.\(^{18,22,23}\) For the 1960 to 1967 data, we followed standard practice by reclassifying non-White persons as Black.\(^{15}\) This approach is reasonable because in 1960, 92% of US non-White persons were Black, and the mortality rates of these 2 groups were almost identical.\(^{15}\) One state (New Jersey) did not identify race/ethnicity in 1962 and 1963, precluding use of its data for those 2 years (<3% of the US population).\(^{23}\)

RESULTS

Figure 1 shows infant death rates for 1960 to 1980 for the total US population, overall and by county median family income quintile, in 3 sets of states, stratified by legal status of abortion. In all 3 sets of states, the fastest decline in rates, as measured by the APC, occurred between 1970 and 1973; these declines were evident in the bottom 3 and top 2 income quintiles, and the largest decline occurred in the lowest income quintile in the states that legalized abortion (APC = −11.6; 95% confidence interval \([CI]\) = −18.7, −3.8; Table A, available as a supplement to the online version of this article at http://www.ajph.org).

The only other period in which declines in the APC occurred in both income strata was in the mid-to-late 1960s; these declines were smaller and did not vary by state abortion law status (Figure 1; Table A) and were especially evident for Black and White infants in the lowest 3 income quintiles (Figure 2; Table B, available as a supplement to the online version of this article at http://www.ajph.org).

DISCUSSION

Our descriptive analysis newly extends and integrates previous strands of research that separately examined US trends in infant mortality rates in the 1960s and 1970s in relation to legalization of abortion,\(^{3-8}\) abolition of Jim Crow laws,\(^{12-14}\) and the War on Poverty.\(^{15,17,18}\)

Presenting a reverse mirror to present-day rising restrictions on abortion rights,\(^{1,2}\) conjoined with rising economic inequality,\(^{28,29}\) and voter intimidation,\(^{30,31}\) the results imply that research is warranted on how currently rising restrictions on abortions\(^{1,2}\) may be affecting US...
infant mortality rates and racial/ethnic and economic inequities in these rates.32-34

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Contributors
N. Krieger originated the study, designed and supervised the analyses, led interpretation of the results, and wrote the first draft of the article. All authors designed the study and wrote the article. S. Gruskin helped conceptualize the study and interpret results. N. Singh and M. V. Kiang conducted the analyses and interpreted results. J. T. Chen obtained the mortality, population, and income data; assembled the study database; and interpreted the results. J. T. Chen, J. Beckfield, and B. A. Coull designed the statistical analyses. P. D. Waterman helped assemble the study database and interpret results. J. Gottlieb helped assemble the state-level policy data to contextualize the study findings.

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Human Participant Protection
Because our analyses are based solely on publicly available de-identified preexisting coded data aggregated to the US county level, our study was exempted from institutional review board review by the Harvard School of Public Health human subjects committee.

References
FIGURE 2—US infant death rates by county income quintile for the Black and White population (3-y moving average) and joinpoint analysis of annual percentage change in rates, stratified by (a) abortion legalized in 1970, (b) abortion law reformed between 1967 and 1972, and (c) abortion illegal: 1960–1980.