Does Curriculum Matter? The Effects of HIV/AIDS Education Mandates on Teen Fertility*

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Abstract

How does sex education and its curriculum affect fertility? We study this question using a natural experiment in which the AIDS epidemic prompted states to mandate HIV/AIDS education, with some states also adopting broader sex education mandates. We compare cohorts of women in treated states who were in school when the mandates were introduced to those who had recently graduated, relative to women in states without mandates. We find that HIV/AIDS education mandates increased teen births by 4.9 per 1,000 women, reducing age at first birth without affecting lifetime fertility. The results are driven by states that did not implement broader sex education curricula, suggesting that restrictive curricula may unintentionally increase teen births by reducing stigma around sexual activity while failing to provide adequate information on contraception.

JEL codes: I18, J13, J18

Keywords: Teen fertility; sex education; education mandates.

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1 Introduction

Teen birth rates in the U.S. have declined steadily since the second half of the twentieth century, falling by about 85% from 96 births per 1,000 teen girls in 1957 to 13 births per 1,000 in 2023 (Congressional Research Service, 2025). Several factors may explain this trend, including improved access to contraception (Goldin and Katz, 2002; Bailey, 2006; Lindo and Packham, 2017; Myers, 2017; Kelly et al., 2020), shifting gender norms (Akerlof et al., 1996; Kearney and Levine, 2015b), and welfare cuts (Kearney and Levine, 2015a). The introduction of sex education in schools may also have contributed to the decline. Yet the impact of sex education on teen fertility is theoretically ambiguous. While sex education programs may reduce teen pregnancy by promoting informed decision-making, they may also increase births if they normalize sexual activity without providing adequate information about birth control.

The debate over sex education remains heated in the U.S., yet evidence on how it affects teen pregnancy is limited due to three key challenges. First, causal identification is difficult because sex education is often introduced endogenously, making it difficult to separate policy effects from underlying trends. Second, sex education curricula vary across states, with some opting for abstinence-based programs focused on promoting abstaining from sexual activity until marriage as the primary method of preventing pregnancy, while others embraced comprehensive curricula to provide information on contraception, sexually transmitted diseases, and relationships. Finally, no systematic database exists on sex education mandates and the exact timing of their introduction, limiting the scope for policy analysis.

This paper brings new evidence to the debate by studying state mandates that introduced sex education during the AIDS epidemic. We leverage plausibly exogenous variation in the timing of mandates, which were urgently passed to tackle widespread misinformation during the epidemic. Only three states and D.C. had compulsory sex education prior to 1980, while

21 states and D.C. implemented mandatory HIV/AIDS education between 1987 and 1988. This rapid expansion reflects the pressure states faced in responding to the public health crisis.

Our setting also allows us to explore the heterogeneous effects of sex education curricula. Curricula varied depending on the type of mandate that states introduced. Thirteen states implemented only HIV/AIDS-specific mandates which emphasized instruction that included basic information on HIV/AIDS, but typically omitted information on contraceptive use. In contrast, eight states and D.C. implemented sex education mandates, offering instruction on a broader framework of sexual health covering anatomy, contraception, and sexually transmitted infections. Moreover, given that our study period is before the rise of the internet and social networks, we estimate the effects of policies that shape the primary source of information on sex education for adolescents.

We construct a novel dataset on HIV/AIDS and comprehensive sex education mandates by systematically searching archival state databases. We link it to data on sexual behavior from the National Survey of Family Growth and birth outcomes from the National Vital Statistics System of the National Center for Health Statistics.

We implement a difference-in-differences strategy, comparing cohorts of women in treated states who were in school when the mandates were implemented to slightly older cohorts of women who had already graduated, relative to cohorts in control states without mandates. Treated states passed HIV/AIDS education mandates between 1987 and 1988, while control states either never passed a mandate or did not pass a mandate until at least 1998. Identification assumes that women in treated and control states would have followed similar trends in outcomes in the absence of the mandates. We show that this parallel trends assumption holds over the pre-mandate period.

We find that HIV/AIDS education mandates *increased* teen first births by 4.9 per 1,000 women aged 15 to 19 (a 2.2% increase on a base of 221 births per 1,000) for cohorts still

attending school relative to already-graduated cohorts, compared to women in control states. We find no increase in births by age 44, suggesting a shift in the timing of first births rather than changes in completed fertility. These effects are driven almost entirely by states that implemented HIV/AIDS education without accompanying broader sex education mandates. Teen births increase by 5.8 per 1,000 (a 2.7% increase) in these states, while we find no corresponding increases in states that adopted broader sex education curricula.

Our findings suggest that curriculum content matters. One possible explanation is that programs focused solely on HIV/AIDS omit information on contraception, inadvertently making sex less taboo and leading teenagers to become sexually active without adequate knowledge of pregnancy prevention. In states that also implemented sex education mandates, the additional instruction reduced the risk of early sexual initiation by emphasizing associated risks, and further reduced unplanned pregnancies by teaching effective contraceptive use. Consistent with this mechanism, we find suggestive evidence that teenagers in states with only HIV/AIDS education mandates were more likely to engage in sex and less likely to use contraception than those who also received sex education.

To rule out local AIDS incidence as a potential confounder, we show that our results are robust to the inclusion of state-by-year controls for local AIDS incidence. Local AIDS incidence gradually increased in the late 1980s, making it unlikely to explain the sharp increase in teen births among cohorts who were in school. Consistent with our findings, Spencer (2024) finds that while local AIDS incidence increased births for white women aged 30 to 44, it had no direct impact on teen births.

A large literature studies the decline in teen birth rates in the U.S. over the past six decades (Akerlof et al., 1996; Goldin and Katz, 2002; Bailey, 2006; Kearney and Levine, 2015b; Lindo and Packham, 2017; Kelly et al., 2020; Myers, 2017). Kearney and Levine (2015a) identify the role of welfare cuts, family planning expansions, and unemployment in lowering teen births during the 1990s. While the literature identifies several drivers of the

long-run decline, we show that sex education contributed to a temporary *increase* in teen births during the late 1980s and early 1990s.

A second body of work examines the effect of sex education programs on adolescent behavior (Dawson, 1986; Marsiglio and Mott, 1986; Oettinger, 1999; Kohler et al., 2008; Lindberg and Maddow-Zimet, 2012), but causal evidence remains limited due to endogenous selection into programs. Early studies typically compare the outcomes of individuals who did and did not receive sex education, controlling for observables. Comparing outcomes between siblings, Oettinger (1999) finds that participation in sex education programs introduced in the 1970s is associated with an increased likelihood of earlier sexual activity and pregnancy.

More recent studies attempt to address selection using experimental or quasi-experimental designs, but often face limitations related to scale or identification. Kirby (2008) reviews evidence from U.S. programs and finds mixed results, with some evidence of delayed sexual initiation increased contraception use. Sabia (2006) uses the size of school budgets as an instrument for sex education programs and finds no effects of sex education in the late 1990s. Atkins and Bradford (2021) instruments for state-level sex education policies using those of neighboring states and finds that abstinence-based programs in the 2000s increased sexual activity and reduced contraception use, while comprehensive programs had the opposite effect. Closest to our approach, Carr and Packham (2017) use a difference-in-differences design to study abstinence-based programs introduced by 5 states in the 2000s and report no significant effects on teen birth or abortion rates.

Our contribution is to leverage plausibly exogenous variation in the timing of statewide mandates during the AIDS epidemic to estimate the causal effects of sex education on adolescent outcomes at the population level. Because many states adopted mandates in a short period, our setting captures large-scale policy changes rather than localized interventions. We study a major expansion of sex education into classrooms, in contrast to prior work that focuses on incremental changes to existing curricula.

We examine an era in which school-based instruction was a primary source of information on sex, minimizing confounders from alternative information channels. With the internet as a more important source today, one limitation is our results may not generalize to the present. Nevertheless, our findings underscore the importance of comprehensive sex education that provides accurate information on contraception to complement online information sources which may serve to reduce stigma around sexual activity.

Our findings relate to the literature studying the effects of health education provision on adolescent behavior. Prior U.S. studies have shown that teenagers respond to information on the difficulties of being a teen mother (Kearney and Levine, 2015b), contraception use (Buckles and Hungerman, 2018), and the dangers of smoking and vaping (Song and Park, 2021; Noar et al., 2022). In the context of sub-Saharan Africa, two randomized controlled trials of abstinence-based AIDS programs find that these programs did not decrease teen pregnancy (Duflo et al., 2015; Dupas, 2011). Duflo et al. (2015) show that HIV/AIDS programs focused on abstinence before marriage led to more early pregnancies within marriage and fewer early pregnancies outside of wedlock, as more girls switch to monogamous relationships–where unprotected sex is more likely–due to increased perceived STI risk from casual relationships. Our findings contribute to this literature by evaluating HIV/AIDS education programs in a developed context.

The remainder of the paper is organized as follows. Section 2 provides background information on sex and HIV/AIDS education mandates. Section 3.1 describes the data, and section 3.2 outlines the empirical strategy. Section 4 presents the results, section 5 discusses mechanisms and limitations. Section 6 concludes.

2 Historical Context

2.1 The AIDS Epidemic and State Sex Education Mandates

Over the course of the 1980s, the AIDS epidemic escalated into a major public health crisis. The first reported AIDS case in the U.S. occurred in 1981. Early in the epidemic, a limited understanding of AIDS and its transmission—through the exchange of bodily fluids—fueled widespread uncertainty. Most early cases were among gay men and drug users, and stigma surrounding these two groups further compounded misconceptions about transmission.

The AIDS epidemic sparked a national reassessment of the role and content of sex education in American schools. In a 1986 report, the U.S. Surgeon General C. Everett Koop stressed the urgent need for sex education in schools to address the misconceptions surrounding HIV/AIDS.[1] Although three states and D.C. had enacted sex education mandates in the 1970s, and some schools offered instruction voluntarily, topics such as homosexuality and non-reproductive sexual activity remained contentious. Following the Surgeon General's report, thirteen states passed HIV/AIDS-specific education mandates, while an additional eight states and D.C. incorporated HIV/AIDS education into broader sex education mandates between 1987 and 1988 (see Table 1). As a result of the mandates, HIV/AIDS prevention and transmission became required curriculum, meaning that some sexual content previously omitted or downplayed in classrooms had to be taught.

Figure 1 shows a sharp rise in the share of each birth cohort receiving HIV/AIDS education before age 18, beginning with those born around 1969.[2] Individuals in these cohorts were 18 years old or younger and still in school in 1987, when states first began mandating HIV/AIDS education. While only about 20% of those born in 1969 reported receiving such

[1] In his report, he wrote, "There is now no doubt that we need sex education in schools and that it must include information on heterosexual and homosexual relationships. ... We have to be as explicit as necessary to get the message across. You can't talk of the dangers of snake poisoning and not mention snakes."

[2] Data are from the National Survey of Family Growth (NSFG), the only dataset we know of that consistently tracks sex education during this period.

instruction, the share rose to 95% by the 1980 cohort. This national trend is consistent with the introduction of mandates driving increased HIV/AIDS instruction in schools. By 1976 birth cohorts and onward, about 90% reported receiving instruction—suggesting voluntary adoption in schools even in non-mandate states.

2.2 HIV/AIDS and Sex Education Mandates

Instructional content in schools depended on whether a state implemented an HIV/AIDS-specific mandate or a broader sex education mandate. We searched archival databases to collect the relevant state statutes, which we reproduce in Appendix Section B.

HIV/AIDS education mandates required basic information on HIV and AIDS to be taught in classrooms, including the transmission and prevention of HIV. These mandates often required abstinence-based instruction that emphasize abstinence as the primary or sole method of prevention against pregnancy or sexually transmitted diseases, such as AIDS. For example, Florida's 1988 statute states: "Throughout instruction in Acquired Immune Deficiency Syndrome, a school shall (a) teach abstinence from sexual activity outside of marriage as the expected standard for all school age children, (b) include that abstinence from sexual activity is a certain way to avoid out-of-wedlock pregnancy..."; New York's 1987 emergency measure requires that content "shall stress abstinence as the most appropriate and effective premarital protection against AIDS."

In contrast, sex education mandates require a broader curriculum on sexuality and relationships, covering topics such as anatomy and contraception. For example, Iowa's 1988 statute required content on AIDS to be combined with content on "current crucial health issues, human sexuality, self-esteem, stress management, and interpersonal relationships," while D.C.'s comprehensive sex education mandate required "instruction on human sexuality and reproduction which shall include... information on human anatomy, physical changes during adolescence, menstruation, intercourse, pregnancy, childbirth, ..., contraception, abor-

tion, ..."

The mandated first age of instruction and frequency of sex education classes varied by state. Many states left these decisions to local discretion, while some, like Iowa and Delaware, mandated age-appropriate instruction from kindergarten through grade 12, and others, like Alabama and West Virginia, began in grades 5 or 6. Given that younger students received less explicit instruction and over half of states did not specify a starting grade, we do not analyze variation in the timing of first instruction.

These mandates generally applied only to public schools; private schools retained autonomy over their curriculum, though they were encouraged to provide AIDS education. Historical data on sexual activity and births do not report whether individuals attended private or public schools, so we cannot separately examine outcomes. We also lack detailed information on school-level curricula and textbooks, preventing us from verifying compliance with state mandates or evaluating the effectiveness of specific instructional approaches.

2.3 Trends in U.S. Teen Birth Rates

The U.S. teen birth rate remains high by international standards, with 17 births per 1,000 women aged 15 to 19 in 2022, compared to rates ranging from around 6 to 11 births per 1,000 in countries such as Canada, the U.K., and Australia (UNICEF, 2024). Although rates have fallen from a peak of 96.3 births per 1,000 teen girls in 1957, temporary increases occurred in the late 1980s—coinciding with HIV/AIDS education mandates—and again in the mid-2000s (see Appendix Figure A.1a).

Appendix Figure A.1b plots trends separately for treatment and control states. Treatment states had higher teen birth rates in the early 1970s but experienced faster declines, such that by the onset of the AIDS epidemic their rates were lower than those in control states. Trends appear broadly parallel in the early 1980s. While both groups experienced increases in teen birth rates in the late 1980s, the rise is somewhat larger in treatment states, consistent with

our findings in the analysis below.

3 Data and Empirical Strategy

3.1 Data

State Laws Mandating HIV/AIDS and Sex Education. We assemble a state-level panel on the effective dates of HIV/AIDS education and sex education mandates (see Table 1). Using information from the Alan Guttmacher Institute (Alan Guttmacher Institute, 2023), we identify states that adopted these mandates and verify the year in which each mandate became binding using archival state statute databases.[3] Table 1 shows the 21 states and D.C. which adopted HIV/AIDS or sex education mandates between 1987 and 1988.

Sex Education and Sexual Behavior. To the best of our knowledge, the National Survey of Family Growth (NSFG) is the only survey that consistently collected information on respondents' exposure to sex education during the relevant period. We use restricted individual-level NSFG data with masked state identifiers. Although we do not observe each respondent's state of residence, we know whether and when their state implemented HIV/AIDS and sex education mandates. We accessed the data through the National Center for Health Statistics Research Data Center. The NSFG also collected responses on teen sexual behavior, including whether they had sex by age 18, whether they used protection at first sex, and their fertility and marriage by age 18.

Fertility Outcomes. Our main outcome of interest is age-specific first birth rates, which measure rates of first births before each age for each birth cohort in each county. We use the all-county natality files from the National Center for Health Statistics (NCHS), which

[3]Kentucky and Montana passed mandates, but we were unable to verify their effective dates and exclude these two states from our estimation sample.

includes information on the age of the mother, birth order of the child, and county of birth. We also obtain data on the size of the female population from the Survey of Epidemiology and End Results (SEER).

The age-specific first birth rate by age j for county c for cohorts who turned 18 in y, denoted $FirstBirthRatej_{cy}$, is defined as follows:

$$FirstBirthRatej_{cy} = \frac{\sum_{a=15}^{j} FirstBirth_{acy}}{Population18_{cy}}, \tag{1}$$

where $FirstBirth_{acy}$ is the number of first births at age a for women in county c who turned 18 in y, and $Population18_{cy}$ is the female population at age 18 for the cohort of women in county c who turned 18 in y. The numerator sums the number of first births to women of each county and birth cohort within the specified age range.

We compute age-specific total birth rates following the same construction, summing all births to women of each county and birth cohort within the specified age range and dividing by the female population of age 18 in the corresponding country.

Abortions. We calculate teen abortion rates (number of abortions per 1,000 women aged 15–19) for each state and each year, using abortion data from CDC's Abortion Surveillance reports. The CDC consistently reports the number of abortions by women ages 15–19 for 24 reporting states over our estimation period.

State and County-Level Variables. We control for state-level unemployment and social welfare programs using the National Welfare Data from the University of Kentucky Center for Poverty Research. We also obtain county-level republican vote share in the 1988 presidential election from ICPSR. Data on AIDS incidence is not available at the state or county level. Instead, we aggregate Center for Disease Control and Prevention (CDC) data on AIDS cases at the metropolitan statistical areas (MSAs) to the state level. Over 80% of reported AIDS cases were in MSAs, so our state-level measure captures the majority of

AIDS cases being reported in the U.S. at the time.

3.2 Empirical Strategy

Treatment and Control States. We identify 21 treated states that introduced HIV/AIDS education mandates effective in 1987 and 1988, as shown in Table 1.[4]

Our control group includes the twenty states that either never introduced HIV/AIDS education mandates or introduced mandates only effective in 1998 or later, at least a decade after the first treatment mandates. This restriction excludes from our main estimation sample states that introduced mandates effective between 1989 and 1997, as these states may have already begun offering HIV/AIDS education in schools before enacting the mandate, complicating the timing of exposure.

Table 2 reports summary statistics for treatment and control states in our baseline sample. Treatment and control states are similar in terms of AIDS incidence rates, population sizes, median household income, share of welfare recipients (AFDC and TANF), share rural, share below poverty line, share black, and republican vote share in the 1984 presidential election. However, treated states have higher unemployment rates (7.3 vs. 5.8 percent, $p = .001$). We find no clear evidence of selection on observables between states adopting only HIV/AIDS mandates and those adopting sex education mandates. States with only HIV/AIDS education mandates appear broadly similar to those that adopted sex education mandates across most characteristics, with the exception that the latter group tends to have smaller populations.

Event studies. The full-count natality data give us statistical power to estimate the

[4]We exclude Washington D.C. from our estimation sample due to limited data availability. Appendix Figure A.2 Panel A provides a map of treatment and control states.

following event study regressions:

$$BirthRatej_{cy} = \sum_{k \neq -1} \beta_k \left[Treat_{s(c)} \times \mathbb{1}(k = y - MandateYear_{s(c)}) \right] + \delta_c + \delta_y + \gamma X_{s(c)y} + \varepsilon_{cy}, \quad (2)$$

where $BirthRatej_{cy}$ is the age-specific birth rate by age j in county c for cohorts who turned 18 in year y. $Treat_{s(c)}$ is a dummy for county c belonging in state s which introduced either an HIV/AIDS education mandate in 1987 or 1988, δ_c and δ_t are county and birth cohort fixed effects, and $X_{s(c)y}$ are state-level controls. Regressions are weighted by county-cohort population at age 18, and standard errors are clustered at the state level.

k measures the number of years that a given cohort spent in school after the mandate was introduced, and is calculated as the cohort's assumed year of graduation y (year at age 18) minus the year the mandate was implemented $MandateYear_{s(c)}$. Cohorts with $k < 0$ have already graduated high school when the mandate comes into effect and were not exposed to HIV/AIDS education. As k for $k > 0$ increases, cohorts receive more years of HIV/AIDS education and from an earlier age.

The coefficients of interest are the β_ks. The coefficients estimate the effect of HIV/AIDS education mandates on birth rates for cohorts that attended school for k years after the mandate went into effect. We restrict the observation window to cohorts that graduated 5 years before to 8 years after the introduction of the mandate. We omit the cohort that graduated one year prior to the introduction of the mandate ($k = -1$), so that the β_ks can be interpreted relative to this pre-mandate cohort as a baseline. Cohorts with $k \in \{0, 3\}$ are ages 18 to 15 in descending order when the mandate is introduced, and receive between zero and three years of HIV/AIDS education. We refer to cohorts with $k > 3$ as "fully treated" because they begin to receive HIV/AIDS education by at least the age of 15.[5]

[5]HIV/AIDS education mandates differed greatly across states regarding the earliest grade of mandatory

To account for other policies and socioeconomic changes that could have affected sex education, teen sexual activity, and fertility, we control for unemployment rate, share of welfare recipients, welfare benefit levels, share of food stamp recipients, and share of households under the poverty line at the state level. We additionally control for AIDS incidence at the state level, and report the results in the Appendix.

Identification relies on the parallel trends assumption, which in our context requires that birth rates in treated and control states would have evolved in parallel in the absence of HIV/AIDS education mandates. We examine this assumption by testing for pre-trends in the event study graphs. We examine additional threats to identification related to selection into treatment in Sections 4.3.

Difference-in-Differences. Our sample sizes are more limited for data on reported sex education, sexual behaviors, and abortions. Hence, we use a staggered difference-in-differences approach to compare outcomes between women who are attending school when HIV/AIDS mandates are introduced and women who had graduated, in treated versus control states. For teen sexual behaviors, we estimate:

$$Y_{isy} = \beta \left(Treat_s \times Post_{sy} \right) + \delta_s + \delta_t + \gamma X_{isy} + \varepsilon_{isy}, \tag{3}$$

where Y_{isy} are outcomes for individual i from state s who turned 18 in y; $Treat_s$ is a dummy for state s introducing a HIV/AIDS education mandate; $Post_{sy}$ is a dummy for cohort y in state s still in school when the mandate came into effect (i.e., aged 18 or younger); δ_s and δ_t are state and birth cohort fixed effects; and X_{isy} are controls.

To examine mechanisms, we also estimate the effects of only HIV/AIDS education man-

classes. Some states did not explicitly mandate an earliest grade, leaving the decision up to school districts, while other states included earliest grades ranging from kindergarten to grades 8. We don't exploit the earliest grade of introduction according to state mandates both because the grade is not specified in many states and the content aimed at younger children typically does not explicitly discuss topics related to sexual health.

dates and broader sex education mandates separately by estimating:

$$Y_{isy} = \beta_1 \left[Treat_s \times Post_{sy} \times (1 - SexEd_s) \right] + \beta_2 \left[Treat_s \times Post_{sy} \times SexEd_s \right] + \delta_s + \delta_t + \gamma X_{isy} + \varepsilon_{isy}, \quad (4)$$

where $SexEd_s$ is a dummy variable for state s implementing a broader sex education mandate.

We restrict the estimation sample to a 5 year before and after the mandates, such that our coefficient of interest β estimates the average effect of HIV/AIDS education mandates over 5 years. We apply survey weights and cluster standard errors at the state level. We include controls for race, age at the time of survey, and self-reported religious attendance at age 14. We have calendar-year data on abortions, hence we augment Equation 3 to include state-year measures of exposure, and replace cohort fixed effects with year fixed effects.

4 Impact of Mandates on Fertility

4.1 Baseline Effects on Fertility

Teen Births. Figure 2 plots estimates of the effect of HIV/AIDS education mandates on the fraction of women having a first birth between ages 15 to 19, based on equation (2). The average treatment effect suggests that HIV/AIDS education mandates increase teen first births by 4.9 per 1,000 women aged 15 to 19 (a 2.2% increase over the baseline mean of 221 births per 1,000) for the first five treated cohorts relative to control cohorts who were already past high school age at the time of the mandate. The largest increase in teen births are observed for cohorts who were close to graduation—those in grades 10 to 12 (ages 16 to 18)—at the time of mandate. These cohorts were at the highest risk of being sexually active and becoming pregnant when the mandate was introduced. For these women, the estimated

effect rises with each additional year of exposure to HIV/AIDS education, consistent with a dosage effect.

For cohorts in grades 9 and below at the time of the mandates, the effect of HIV/AIDS education on teen births is positive but smaller in magnitude, and estimated with less precision. One possible explanation is that schools in control states gradually expanded HIV/AIDS or sex education in response to the epidemic, even in the absence of formal mandates, leading to some contamination of the control group. Consistent with this interpretation, Figure 1 shows that HIV/AIDS education increased rapidly nationwide during this period. Figure A.1b further shows that teen birth rates increased in both treatment and control states in the late 1980s, although the rise is larger in states that implemented mandates. Taken together, these patterns are consistent with more gradual uptake of HIV/AIDS education in control states, which may attenuate estimated differences between treated and control groups.

Figure 3 reports estimates separately for states that implemented only HIV/AIDS education mandates and those that also adopted broader sex education mandates. Teen first births increase by 5.8 per 1,000 (a 2.7% increase relative to the mean) in states with HIV/AIDS-only mandates, while we find no corresponding effects in states that implemented sex education mandates. One potential explanation is that HIV/AIDS-specific mandates, which often emphasized abstinence, provided limited information on contraception and sexual health. As a result, these programs may have increased sexual activity without equipping teenagers with the tools to prevent pregnancy. In contrast, broader sex education mandates include instruction on contraception and the risks associated with early sexual initiation, which may mitigate increases in unintended pregnancies. We explore these mechanisms in Section 5.

Lifetime Fertility. In Figure 4, we examine whether HIV/AIDS education mandates affected lifetime fertility. Panel (a) plots the effect of the mandates on the probability of having a first birth between ages 15 to 44, which we interpret as the probability of ever having a child. The results suggest that the mandates did not increase the lifetime probability of

ever having a child. In fact, lifetime childbearing *decreases* for cohorts who were in grades 6 to 8 (ages 12 to 14) at the time of implementation. One possible explanation is that earlier or more prolonged exposure to HIV/AIDS education may have affected longer-run fertility decisions. However, we interpret these results with caution, as later-life outcomes may reflect other concurrent trends.

Panel (b) shows the effects on the total number of births between ages 15 to 44. We find no increases in completed fertility, suggesting that increased teen childbearing is offset by fewer births later in life. Consistent with Panel (a), cohorts exposed to HIV/AIDS education mandates had lower lifetime fertility, although these longer-run effects should be interpreted with caution.

These results suggest HIV/AIDS education mandates brought forward the timing of first births—increasing teen childbearing—without increasing the overall number of children that women had during their lifetime.

4.2 Heterogeneity

To examine heterogeneous effects, we present results on teen first births by race, urban versus rural residence, and political leaning.

By Race. Figure 5 presents effects separately for white and Black women. We find larger increases in first births among Black teenagers compared to white teenagers, although the difference is not statistically significant. The estimates suggest an increase of 11 teen births per 1,000 Black women aged 15–19 (a 4.1% increase), compared to 3.3 births per 1,000 white women (a 1.6% increase).

One possible interpretation is that differences in baseline access to information may mediate the effects of HIV/AIDS education mandates. Prior work suggests that less-informed teenagers may be more responsive to sex education interventions (Oettinger, 1999). To the extent that Black teenagers had fewer alternative sources of sexual health information,

instruction may have had larger behavioral effects. However, given the lack of statistical precision, these differences should be interpreted with caution.

By Political Orientation. Figure A.3 presents the results for Republican-leaning counties—where the Republican Party received more than 50% of the vote in the 1988 presidential election—compared to non-Republican-leaning counties.

We find that teen births increased by 9.4 per 1,000 (a 4.7% increase) in non-Republican leaning counties, although teen births were on an increasing trend in the pre-period prior to the HIV/AIDS education mandates. While the event studies show some increase in teen first births among cohorts who were in grades 10 to 12 (ages 16 to 18) at the time of the mandate, the coefficient estimates are much smaller and we do not find a statistically significant 5-year treatment effect.

The presence of pre-trends in non-Republican-leaning counties suggests caution in interpreting these differences. One potential explanation is that exposure to the mandates differed across counties by political leaning; higher enrollment in private religious schools in Republican-leaning counties may have limited the reach of public school mandates. In addition, differences in how mandates were implemented and taught in classrooms across counties may have contributed to the heterogeneity in effects.

By Rural and Urban Counties. Figure A.4 presents results for women living in rural versus urban areas. Given that AIDS cases were largely concentrated in urban areas, HIV/AIDS education may have felt more relevant, and thus more impactful, for women living in urban areas. Conversely, sex education mandates might have had larger effects in rural areas, where access to sexual health information outside of schools is more limited.

The larger and more precisely estimated effects in urban counties are consistent with HIV/AIDS education being more salient in areas where the epidemic was more visible. Greater perceived risk may have increased the behavioral response to these mandates. In contrast, we do not detect meaningful effects in rural counties, though the estimates are

imprecise and the presence of pre-trends complicates interpretation. One possibility is that differences in exposure or implementation across rural areas attenuated the impact of the mandates. Overall, these patterns suggest that the effects of HIV/AIDS education mandates may depend on the local context in which they are introduced, particularly the salience of the underlying public health risk.

Taken together, these results point to meaningful heterogeneity in the effects of HIV/AIDS education mandates across populations and local contexts. Baseline access to information, variation in policy implementation, and the salience of the underlying public health risk may all shape responses to these policies. In environments where HIV/AIDS was more visible or where alternative sources of information were limited, mandates may have had larger behavioral effects. At the same time, differences in exposure and implementation—such as variation in school attendance or curriculum emphasis—may attenuate these effects in certain settings. While these patterns should be interpreted with caution given imprecision and the presence of pre-trends in some specifications, they are broadly consistent with the view that the impacts of sex education policies depend critically on both informational environments and local institutional context.

4.3 Sensitivity Analysis

Local AIDS Incidence. One concern is that local AIDS prevalence may confound our estimates. If rising local AIDS incidence led women to marry and have children earlier, as a way to avoid the perceived risk of contracting AIDS through premarital sex, and if these increases coincided with the introduction of sex education mandates, then our estimates might overstate the impact of the mandates on teen birth rates.

To account for the possibility that treated and control states experienced different patterns of local AIDS exposure, we include state-by-year controls for AIDS incidence. Figure A.5 shows that our results remain robust to the inclusion of these controls. In support of our

evidence, Spencer (2024) finds that local AIDS incidence increased birth rates among white women aged 30 to 44 by encouraging monogamy as a way of reducing AIDS risk, but had no direct effect on the behavior or birth rates of teenage women.

To further validate our findings, Figure A.6 plots trends in AIDS incidence for treated states and control states to assess the timing of local AIDS cases. Although local AIDS incidence gradually increased beginning in the early 1980s, there is no sharp increase in AIDS cases around 1987 and 1988 when we observe a sharp increase in teen births. This time trend suggests that AIDS incidence is unlikely to be driving our main results.

5 Discussion

5.1 Mechanisms: Teen Sexual Behavior and Abortions

We investigate the possible mechanisms underlying the rise in teen births among women in states mandating HIV/AIDS education. Table 3 reports the estimated coefficients from estimating equations (3) and (4) for various adolescent outcomes.

The estimates in column (1) suggest that not-yet graduated cohorts in states that introduced HIV/AIDS education mandates were 21.5 percentage points (31.2%) more likely to have had sex by age 18 than recently-graduated cohorts, relative to control states. Column (2) shows that the effect is larger in states with only HIV/AIDS education mandates, although the difference relative to states with broader sex education mandates is not statistically significant. Consistent with Oettinger (1999) and Atkins and Bradford (2021), ours findings suggest that sex education with a restricted curriculum may increase sexual activity by reducing stigma around sex, while providing inadequate information on contraception or the risks of early sexual initiation.

Estimates for contraceptive education, contraceptive use, and abortions are generally imprecise and not statistically significant at the 5% level. This likely reflects limitations in

sample size, and we interpret these results as suggestive rather than conclusive. We highlight three patterns that are informative about potential mechanisms.

First, the results in column (4) suggests that treated cohorts in states with sex education mandates were more likely to receive instruction on birth control compared to similarly treated cohorts with only HIV/AIDS education mandates, consistent with differences in curriculum content across policies.

Second, HIV/AIDS education mandates are associated with increased contraceptive use at first intercourse (columns 5 and 7). The effect appears larger in states with broader sex education curricula compared to states with only HIV/AIDS education, although the difference is not statistically significant.

Third, we do not find that HIV/AIDS education increases abortions among teenagers (column (9). If anything, the estimates for states with sex education mandates are negative, though imprecisely estimated. This pattern suggests that the absence of effects on teen births in these states is unlikely to be driven by increased abortion, and may instead reflect differences in pregnancy risk, potentially through contraceptive use.

Taken together, the estimates are broadly consistent with a framework in which both HIV/AIDS-focused and broader sex education programs reduce stigma around sexual activity, potentially increasing sexual initiation. However, more restrictive programs may do so without providing information on contraception, while more comprehensive programs include instruction on contraceptive use and the risks associated with early sexual activity. Consistent with this interpretation, we find suggestive evidence that while adolescents exposed to HIV/AIDS education mandates are more likely to initiate sexual activity, those in states with broader sex education mandates are more likely to receive instruction on birth control and exhibit higher contraceptive use at first intercourse.

5.2 Benchmarking Fertility Results

Previous studies of abstinence-based and comprehensive sex education programs suggest that their effectiveness varies widely: some have no impact on teen behavior (Sabia, 2006), others achieve favorable outcomes (Kirby, 2008), and others have unintended consequences (Oettinger, 1999). Using a plausibly exogenous identification strategy of a large-scale change to U.S. sex education policy, we show that sex education mandates with a restrictive curriculum increase teen sexual activity and births, while a more comprehensive curriculum can partially offset this effect by emphasizing the risks of early sexual initiation. A key insight is that restrictive programs such as abstinence-based programs have limited efficacy, and are unlikely to reduce sexual activity and unintended pregnancies, consistent with Kirby (2008) and Atkins and Bradford (2021).

Our empirical approach builds on Carr and Packham (2017) but offers new insights due to differences in context and research design. While Carr and Packham (2017) find that abstinence-based mandates introduced in five states during the 2000s had no impact on teen births, we find that HIV/AIDS-specific mandates introduced in the late 1980s increased teen births. These differences highlight the contributions of our study. First, whereas Carr and Packham (2017) examine policy changes in states with existing mandates, our analysis considers the initial implementation of sex education mandates. Our design allows us to measure the impact of introducing entirely new curriculum material and identify effects that may be missed in analyses of incremental reforms. Second, by focusing on the 1980s when adolescents had limited access to sexual content outside of school, we can more precisely isolate the effects of school-based instruction and mitigate confounding factors, such as social media and the Internet, present in studies of later reforms.

The magnitude of our baseline finding in Figure 3 is within the range reported in previous studies. We find that HIV/AIDS mandates increased teen first births by 2.2%. Oettinger (1999) simulates how teen sexual behavior would change under universal sex education at

age 15 for youths who had not previously received any sex education. In this scenario, the maximum predicted increase in the fraction of women who are sexually active is about 5% at age 16, with smaller increases in pregnancy. These modest predicted effects are consistent with the magnitude of our estimates.

Studies of other policies impacting teen childbearing show similarly modest effects, if at all. Kearney and Levine (2009) find that expanded access to Medicaid family planning in the 1990s and early 2000s reduced teen childbearing by roughly 4%. Likewise, Kearney and Levine (2015b) show that higher local exposure to MTV's 16 and Pregnant is associated with lower teen births by about 4.3%, although subsequent work has questioned these results (Jaeger et al., 2020). These findings suggest that both policy and media interventions can influence teen fertility, but the effects are modest, similar to those estimated in our study.

6 Conclusion

This paper highlights how differences in sex education curriculum may have unintended consequences for teen sexual activity and fertility. We exploit the introduction of HIV/AIDS-specific and accompanying sex education mandates during the AIDS epidemic to estimate the effects of sex education on adolescent outcomes. We find that HIV/AIDS education mandates led to 4.9 additional births per 1,000 women aged 15 to 19 among cohorts still in school at the time of implementation compared to recently graduated cohorts, relative to cohorts in control states. The mandates lowered the age at first birth without increasing either the number of women who became mothers or the number of children that they had.

We find that the increase in teen fertility is driven by states that implemented only HIV/AIDS-specific education mandates without accompanying sex education mandates with broader curricula. Our results are consistent with a framework in which more limited curricula may reduce stigma around sexual activity without providing sufficient information

on pregnancy prevention, while broader curricula include instruction on contraception and sexual health risks. Supporting this interpretation, we provide suggestive evidence that broader sex education is associated with delayed sexual initiation and greater contraceptive use relative to more limited programs.

Our findings should be interpreted in light of the historical context we study. We examine an era in which school-based instruction was likely the primary source of information about sex, providing a clean setting to identify the effects of classroom-based sex education. At the same time, this setting may limit the direct generalizability of our results to the present, when adolescents have broad access to information online. Nevertheless, to the extent that access to informal information sources may already reduce stigma around sexual activity, our findings underscore the importance of comprehensive sex education that provides accurate information on contraception and complements, rather than substitutes for, these alternative sources.

Finally, we document substantial heterogeneity in the effects of HIV/AIDS education mandates across demographic and local contexts. The impacts vary by race, geography, and political environment, suggesting that baseline access to information, differences in policy implementation, and the salience of the underlying public health risk all shape behavioral responses. These patterns highlight that the effects of sex education policies depend not only on curriculum content, but also on the contexts in which they are delivered.

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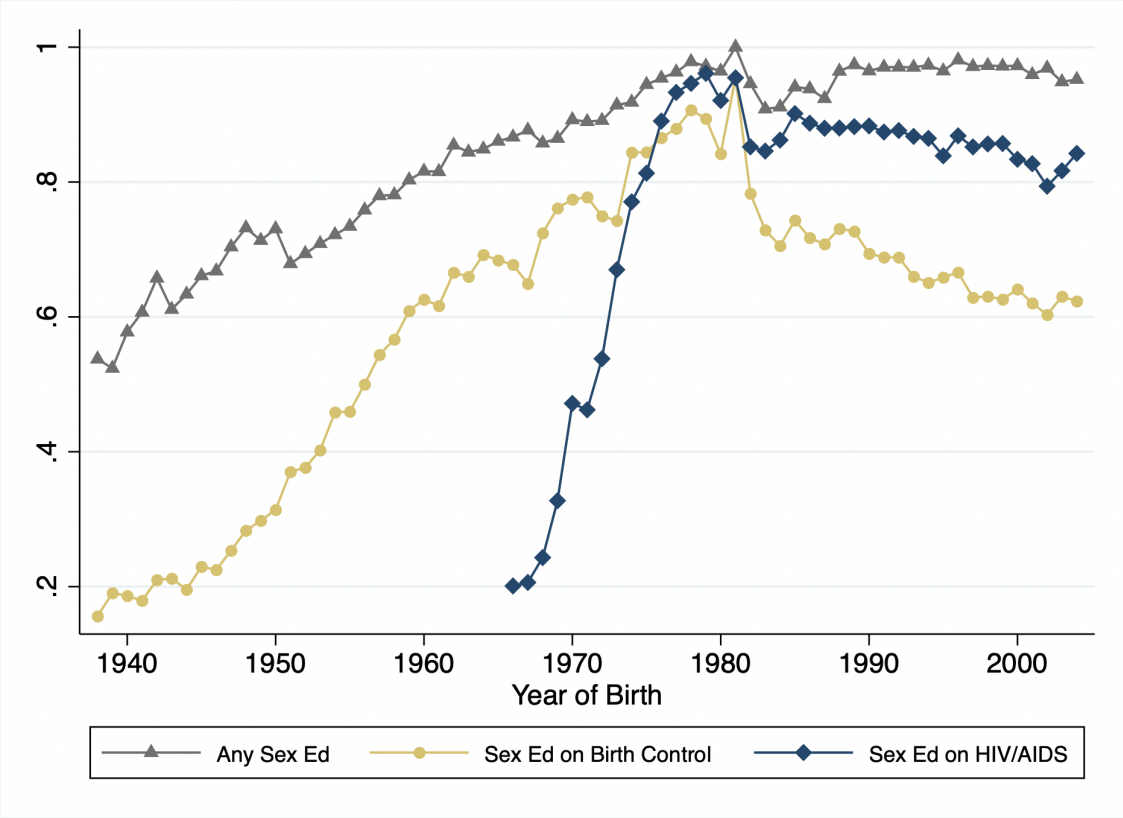
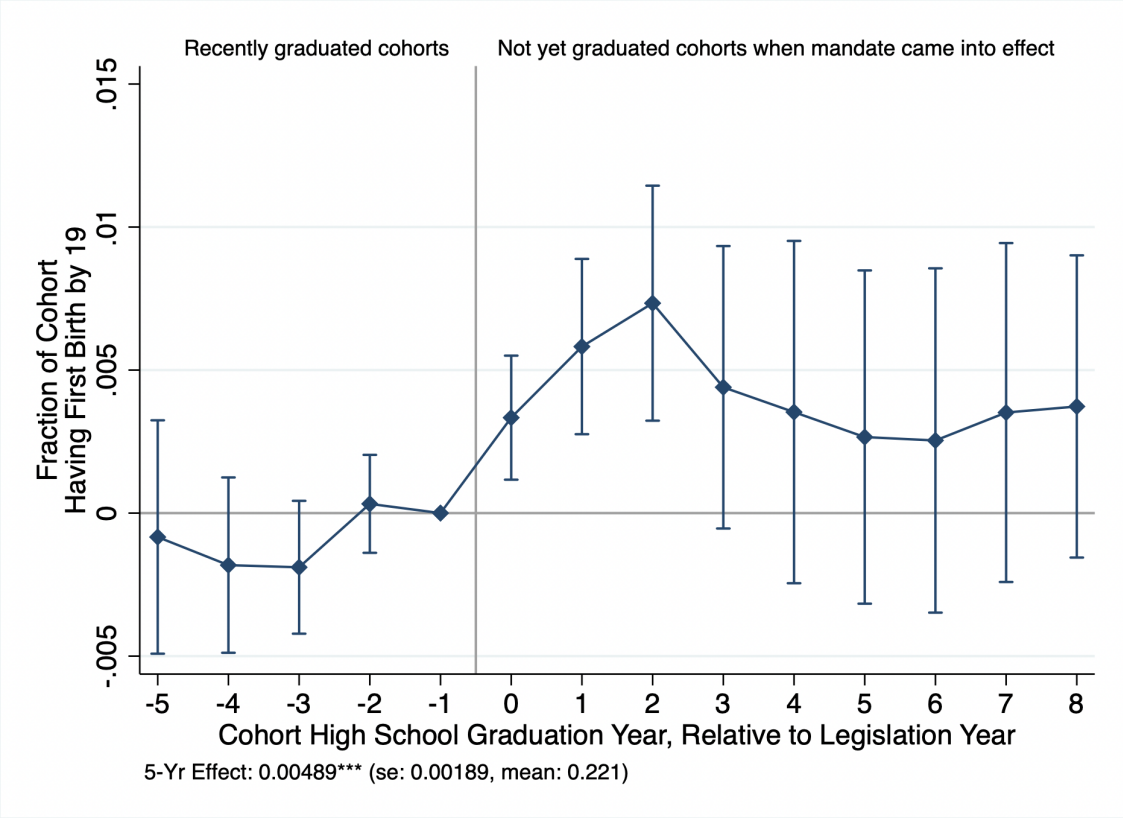
Figure 1: Trends in Reported Sex Education by Birth Cohort



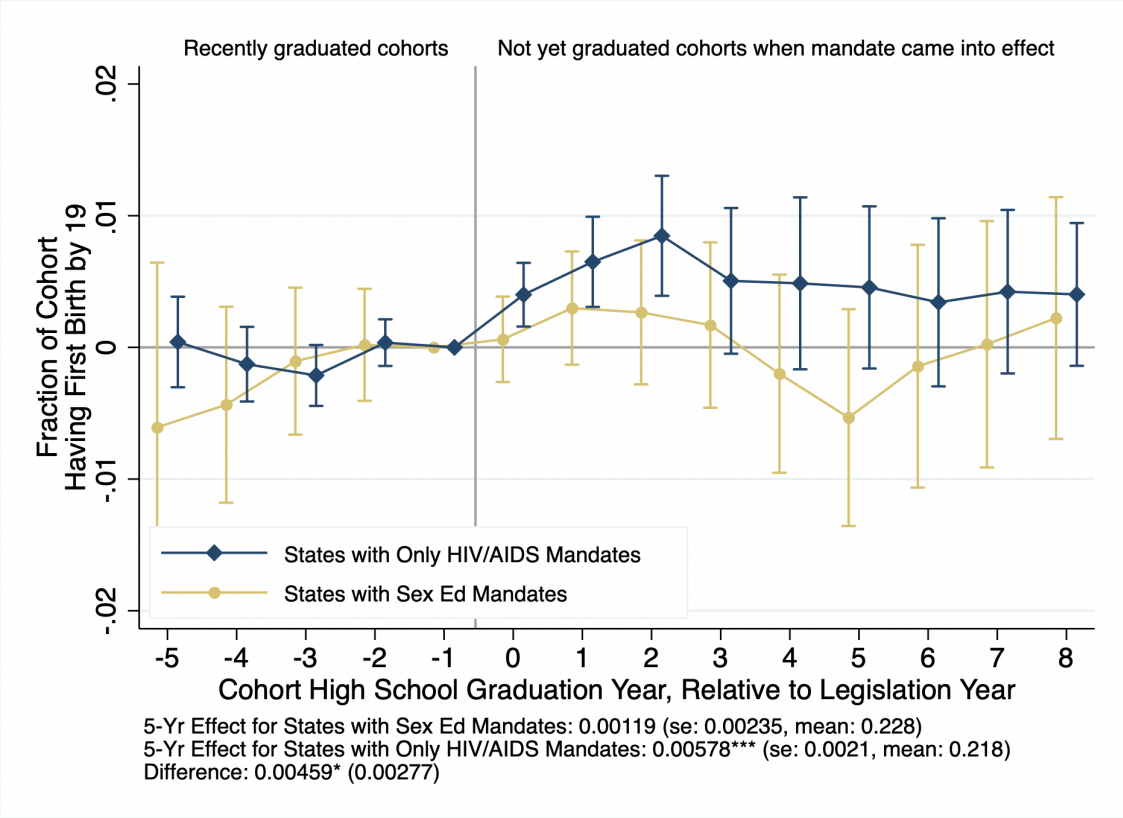
Note: The graph plots the share of each birth cohort who reported having received sex and/or HIV/AIDS education before age 18. Data from the public-use National Survey of Family Growth.

Figure 2: Effect of HIV/AIDS Education Mandates on Teen First Births



Note: The figure plots coefficient estimates β_k based on Equation 2. The outcome is the rate of first births between ages 15–19 at the county-cohort level. Treated states are those that implemented HIV/AIDS education mandates in 1987–1988, and control states are those did not pass such mandates by 1998. The estimate for the average of coefficients for cohorts 0 to 4 following the mandate (with corresponding standard error) is reported below the figure along with the mean outcome. Fertility outcomes computed using natality data from NCHS, and population data from SEER. The 95% confidence intervals are based on robust standard errors clustered at the state level.

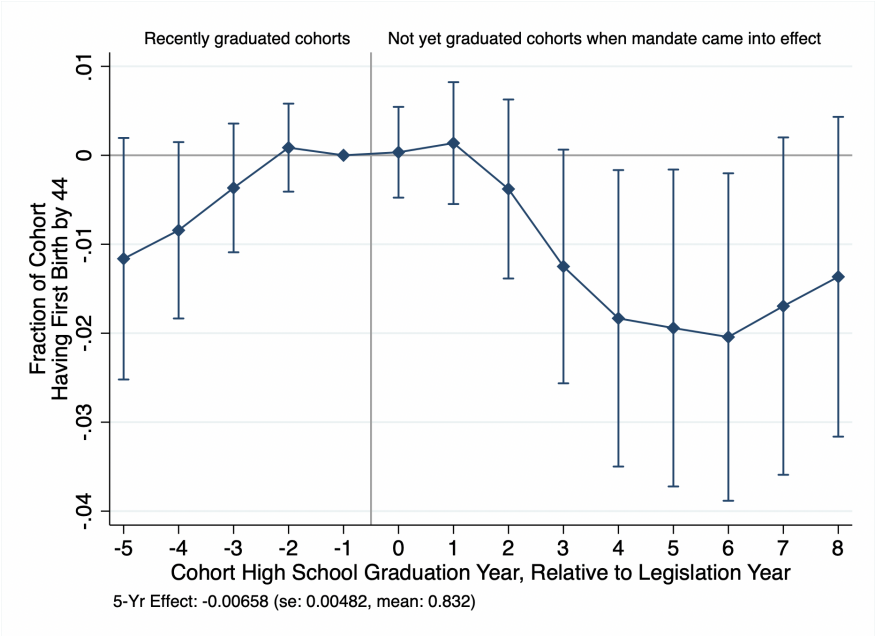
Figure 3: Effect of HIV/AIDS-Specific vs Sex Education Mandates on Teen First Births



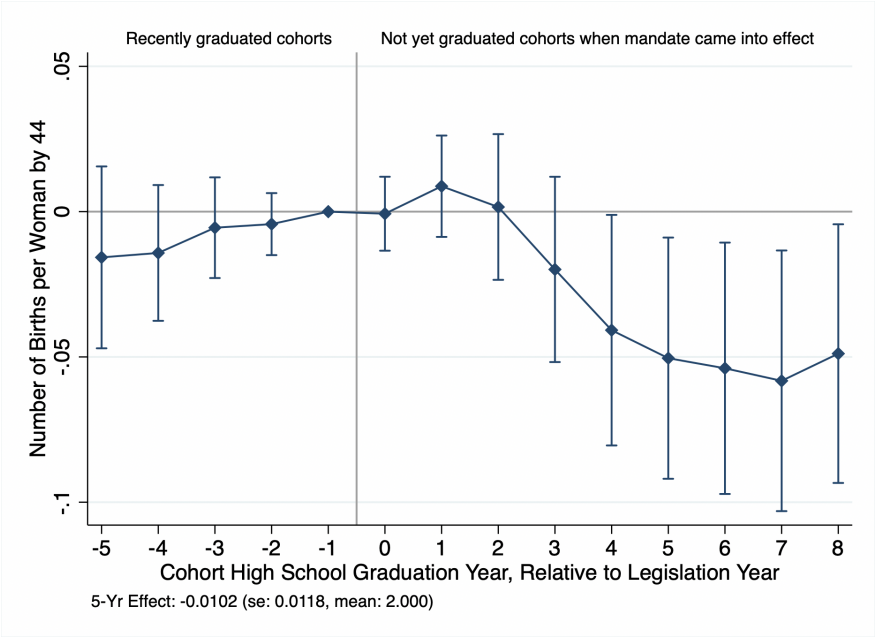
Note: The figure plots coefficient estimates β_k based on Equation 2. The outcome is the rate of first births between ages 15–19 at the county-cohort level. Treated states are those that implemented only HIV/AIDS-specific education mandates in 1987–1988 (in blue) and those that also implemented sex education mandates (in yellow), control states are those did not pass such mandates by 1998. The estimate for the average of coefficients for cohorts 0 to 4 following the mandate (with corresponding standard error) is reported below the figure along with the mean outcome. Fertility outcomes computed using natality data from NCHS, and population data from SEER. The 95% confidence intervals are based on robust standard errors clustered at the state level.

Figure 4: Effect of HIV/AIDS Education Mandates on Lifetime Fertility

(a) First Births by Age 44

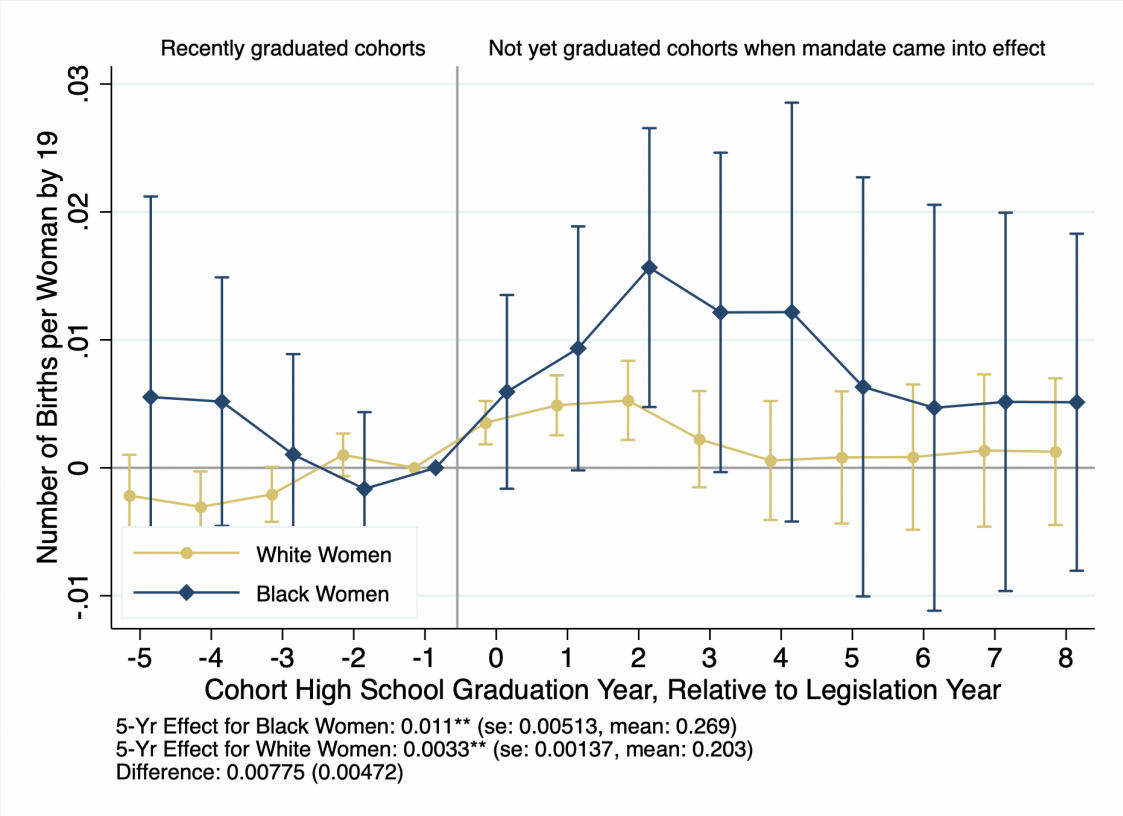


(b) Total Births by Age 44



Note: The figure plots coefficient estimates β_k based on Equation 2. The outcome is the rate of first births between ages 15–44 (Panel A) and the cohort rate of all births between ages 15–44 (Panel B) at the county-cohort level. Treated states are those that implemented HIV/AIDS education mandates in 1987–1988, and control states are those did not pass such mandates by 1998. The estimate for the average of coefficients for cohorts 0 to 4 following the mandate (with corresponding standard error) is reported below the figure along with the mean outcome. Fertility outcomes computed using natality data from NCHS, and population data from SEER. The 95% confidence intervals are based on robust standard errors clustered at the state level.

Figure 5: Effect on Teen First Births **by Race**



Note: The figure plots coefficient estimates β_k based on Equation 2 separately for Black women (in blue) and white women (in yellow). The outcome is the rate of first births between ages 15–19 at the county-cohort level. Treated states are those that implemented HIV/AIDS education mandates in 1987–1988, and control states are those did not pass such mandates by 1998. The race-specific estimate for the average of coefficients for cohorts 0 to 4 following the mandate (with corresponding standard error) is reported below the figure along with the mean outcome. Fertility outcomes computed using natality data from NCHS, and population data from SEER. The 95% confidence intervals are based on robust standard errors clustered at the state level.

Table 1: Sex and HIV/AIDS Education Mandates

State	Sex Education	Effective Year	HIV/AIDS Education	Effective Year
Alabama	No		Yes	1987
Alaska	No		No	
Arizona	No		No	
Arkansas	No		No	
California	Yes	2016	Yes	1992
Colorado	No		No	
Connecticut	No		Yes	1988
Delaware	Yes	1987	Yes	1987
District of Columbia	Yes	1979	Yes	1988
Florida	Yes	1990	Yes	1988
Georgia	Yes	1988	Yes	1988
Hawaii	Yes	1995	Yes	1995
Idaho	No		No	
Illinois	No		Yes	1988
Indiana	No		Yes	1988
Iowa	Yes	1988	Yes	1988
Kansas	Yes	2005	No	
Kentucky	Yes	-	Yes	-
Louisiana	No		No	
Maine	Yes	2002	Yes	2002
Maryland	Yes	1970	Yes	1987
Massachusetts	No		No	
Michigan	No		Yes	1987
Minnesota	Yes	1995	Yes	1988
Mississippi	Yes	1998	No	
Missouri	No		Yes	1988
Montana	Yes	-	Yes	-
Nebraska	No		No	
Nevada	Yes	1987	Yes	1987
New Hampshire	Yes	1973	Yes	1988
New Jersey	Yes	2002	Yes	2002
New Mexico	Yes	2009	Yes	1988
New York	No		Yes	1987
North Carolina	Yes	1995	Yes	1987
North Dakota	Yes	2011	No	
Ohio	Yes	1975	Yes	1999
Oklahoma	No		Yes	1995
Oregon	Yes	2009	Yes	2009
Pennsylvania	No		Yes	1999
Rhode Island	Yes	1987	Yes	1987
South Carolina	Yes	1988	No	
South Dakota	No		No	
Tennessee	Yes	1991	Yes	1989
Texas	Yes	1998	Yes	1998
Utah	Yes	2001	Yes	1988
Vermont	Yes	1989	Yes	1989
Virginia	No		No	
Washington	Yes	2008	Yes	1988
West Virginia	Yes	1988	Yes	1988
Wisconsin	No		Yes	1990
Wyoming	No		No	

Source: Assembled from archival state databases.

Table 2: Summary Statistics

	(1) Control States	(2) Treatment States	(3) Treatment States	(4) Treatment States	(5) p-value	(6) p-value
		All	Only HIV/AIDS Mandates	Sex Ed Mandates	(1) vs (2)	(3) vs (4)
Pre-1987 AIDS Incidence	0.011	0.018	0.022	0.010	0.34	0.23
	(0.015)	(0.027)	(0.033)	(0.0089)		
Population	4,009,745	4,751,446	6,301,703	2,232,279	0.56	0.01**
	(3,972,459)	(4,188,922)	(4,525,602)	(1,818,790)		
Unemployment Rate	5.8	7.3	7.7	6.7	0.001*	0.21
	(2.1)	(1.7)	(1.8)	(1.4)		
Median Household Income	15,123	15,329	15,029	15,815	0.66	0.4
	(2,342)	(2,080)	(2,208)	(1,887)		
Share AFDC/TANF Recipients	0.038	0.041	0.043	0.039	0.46	0.62
	(0.016)	(0.015)	(0.015)	(0.014)		
Share Rural	0.32	0.30	0.28	0.33	0.41	0.43
	(0.14)	(0.14)	(0.11)	(0.18)		
Share Below Poverty Line	0.12	.012	0.12	0.11	0.47	0.54
	(0.034)	(0.031)	(0.033)	(0.030)		
Share Black	0.094	0.10	0.10	0.10	0.66	0.94
	(0.092)	(0.087)	(0.079)	(0.10)		
Share Republican Vote in 1984	.56	.51	.50	.53	0.15	0.63
	(0.046)	(0.13)	(0.16)	(0.072)		
Unique States	21	21	13	8		

Note: Covariates are measured in 1980, unless otherwise noted. Data from CDC Wonder AIDS Database, University of Kentucky National Welfare Data, and the 1980 Census.

Table 3: Mechansims

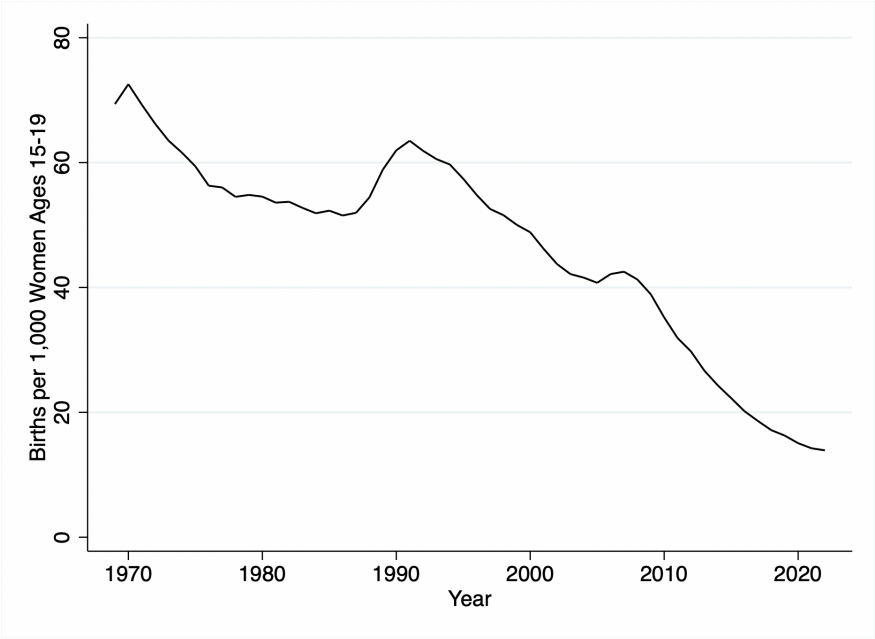
VARIABLES	(1) Had Sex by 18 (p.p.)	(2) Had Sex by 18 (p.p.)	(3) Had Sex Ed on Birth Control (p.p.)	(4) Had Sex Ed on Birth Control (p.p.)	(5) Used Birth Control (p.p.)	(6) Used Birth Control (p.p.)	(7) Used Condom (p.p.)	(8) Used Condom (p.p.)	(9) Abortions (/1000 women)	(10) Abortions (/1000 women)
Treat × Post	21.5***	22.4***	5.82	4.00	17.5*	16.7	21.2	20.7	-0.0567	0.189
	(7.56)	(7.75)	(6.33)	(6.48)	(9.95)	(11.5)	(16.7)	(15.4)	(1.134)	(1.235)
Treat × Post		-6.99		13.6		5.38		2.90		-1.913
× Sex Ed		(10.1)		(10.4)		(13.9)		(27.6)		(1.476)
Mean dep. var.	68.9	68.9	72.5	72.5	58.9	58.9	34.1	34.1	35.5	35.5
Observations	4,002	4,002	3,987	3,987	2,914	2,914	2,914	2,914	288	288

Note: The table reports coefficient estimates β based on Equation 3. Treated states are those that implemented only HIV/AIDS-specific education mandates in 1987–1988 and those that also implemented sex education mandates, and control states are those did not pass such mandates by 1998. Outcomes include whether respondents had sex by age 18 (columns 1–2), received any sex education (columns 3–4), used birth control at first sex (columns 5–6), used condoms at first sex (columns 7–8), and abortions per 1000 women aged 15–19 (columns 9–10). For columns (1)–(8), data from the National Survey of Family Growth (NSFG) 1982, 1995, 2002, 2006–2010, regressions weighted by sample weights. For columns (9)–(10), data from CDC's Abortion Surveillance reports, sample includes the 24 states that consistently reported abortions for women ages 15–19 between 1982–1993, regressions weighted by population of women ages 15–19. Standard errors clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1.

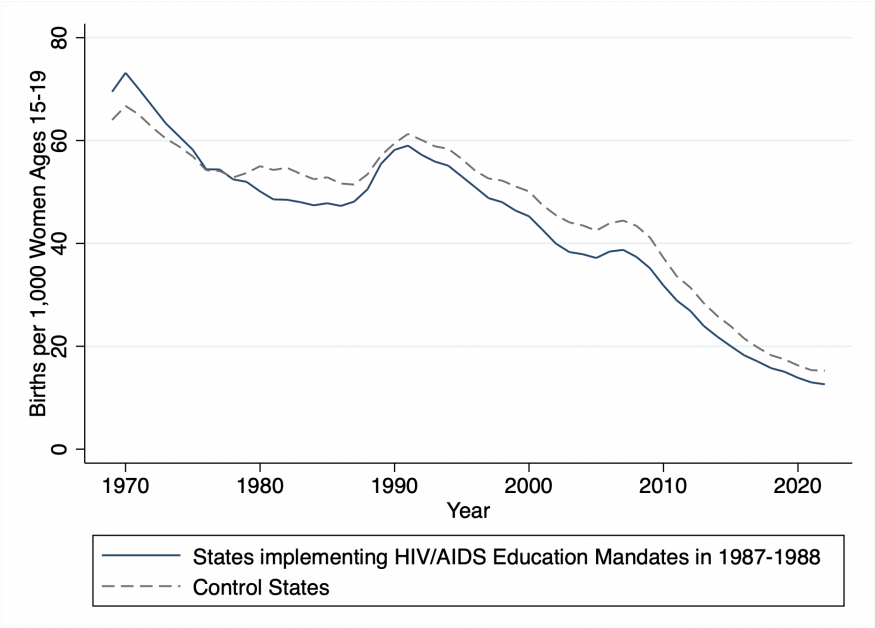
A Supplementary Figures and Tables

Figure A.1: Trends in Teen Births

(a) National Trend

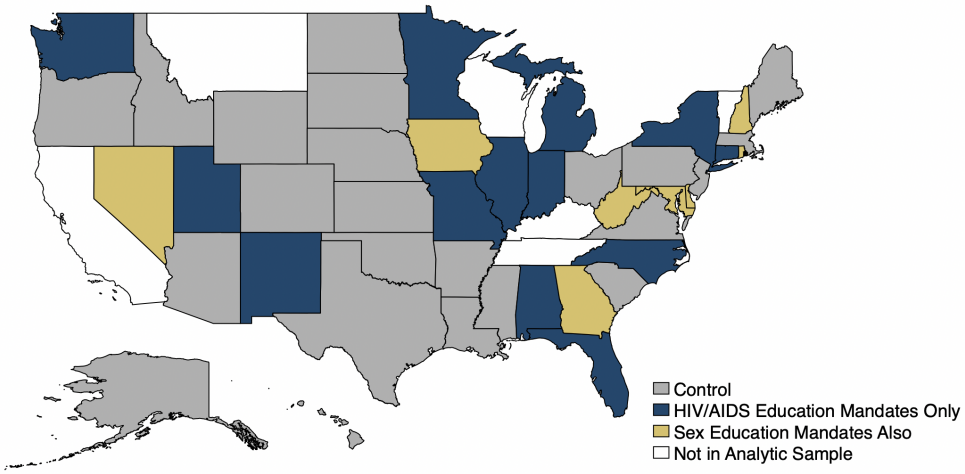


(b) By Treatment and Control States



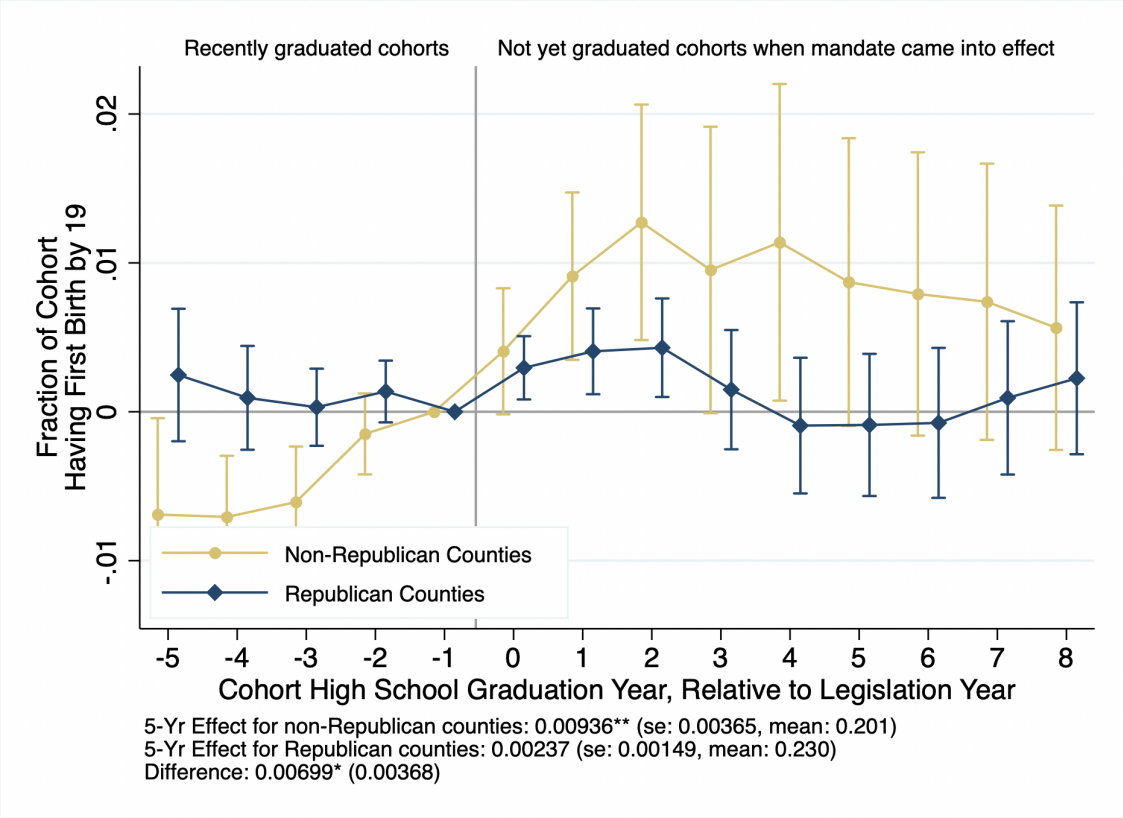
Note: The graph plots the number of births per 1,000 women ages 15-19. Birth rates computed using natality data from NCHS and population data from SEER. In Panel (b), treated states are those that implemented HIV/AIDS education mandates in 1987–1988, and control states are those did not pass such mandates by 1998.

Figure A.2: Map of Treatment and Control States



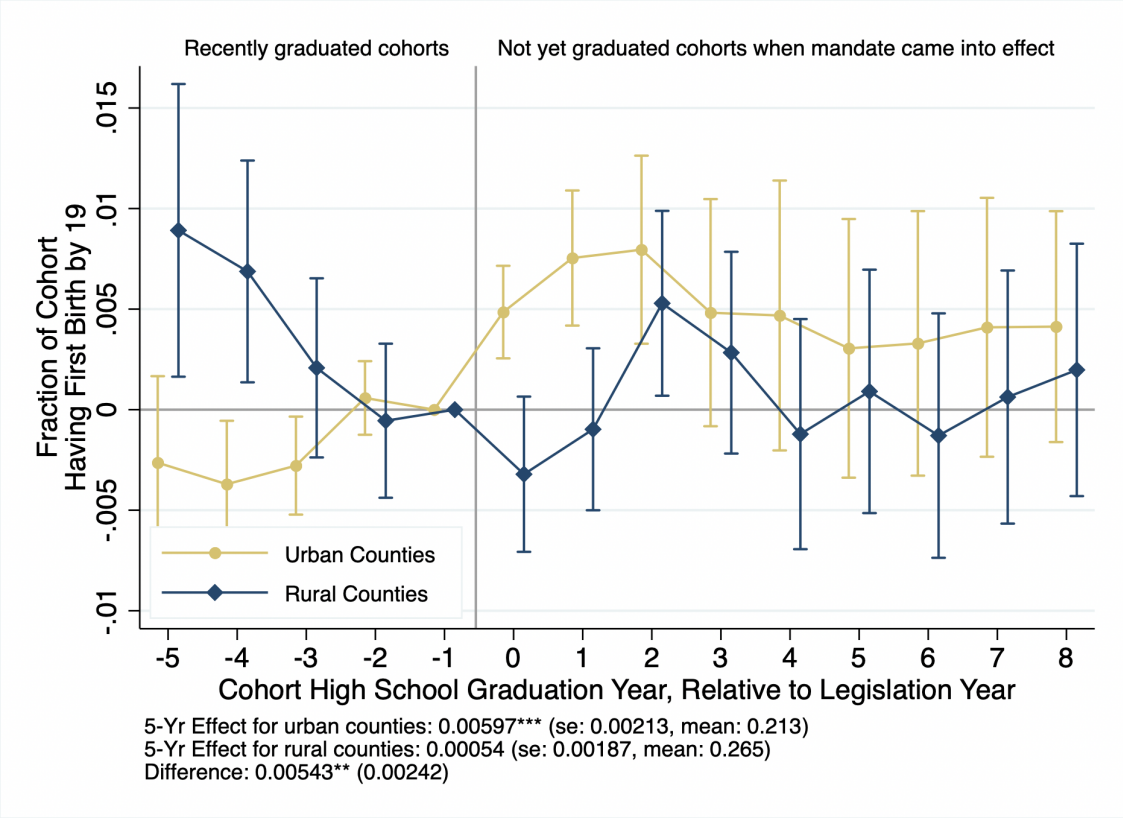
Note: Treated states are those that implemented only HIV/AIDS-specific education mandates in 1987–1988 (in blue) and those that also implemented sex education mandates (in yellow), control states are those did not pass such mandates by 1998 (in grey). States not in the sample are shaded in white. Categorization of states is based on sex and HIV/AIDS education mandates as reported in Table 1 and does not reflect states sampled or not sampled in the NSFG.

Figure A.3: Effect on Teen First Births **by Political Leaning**



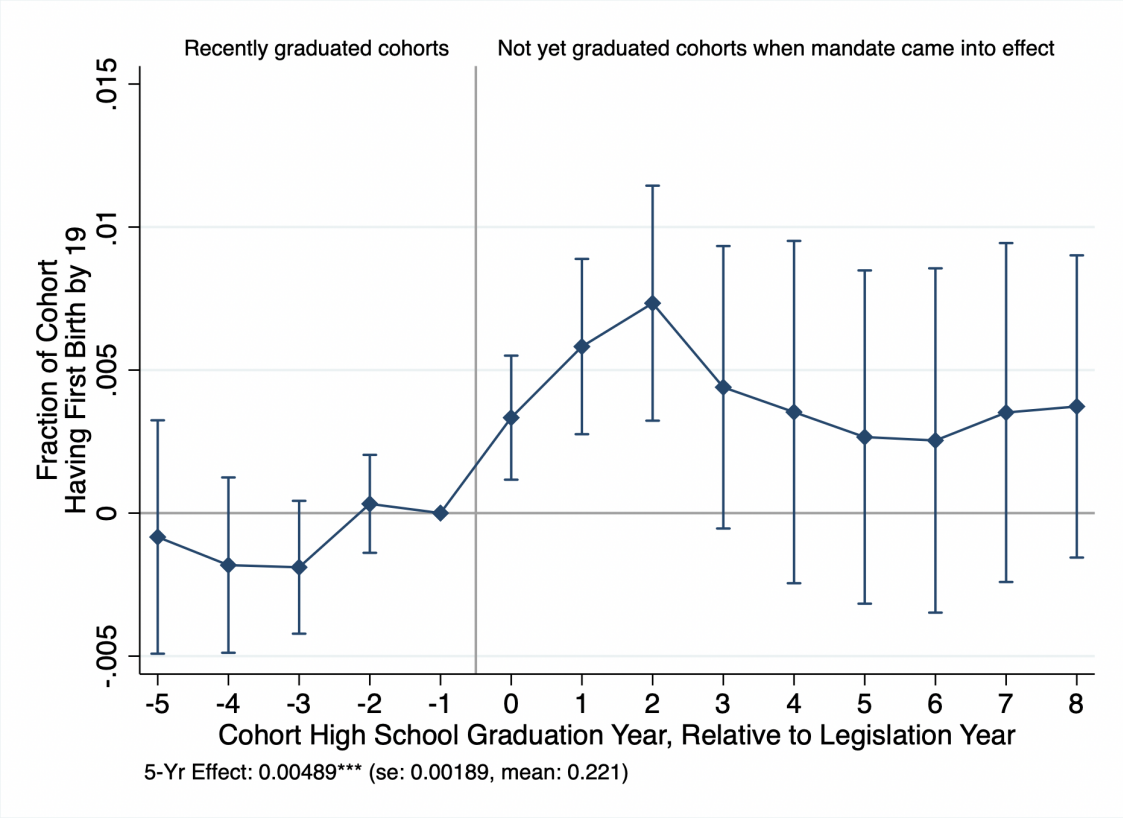
Note: The figure plots coefficient estimates β_k based on Equation 2 separately for women in Republican-leaning counties (in blue) and non-Republican-leaning counties (in yellow). The outcome is the rate of first births between ages 15–19 at the county-cohort level. Treated states are those that implemented HIV/AIDS education mandates in 1987–1988, and control states are those did not pass such mandates by 1998. Republican counties are those where the Republican Party received more than 50% of the vote in the 1988 presidential election. The group-specific estimate for the average of coefficients for cohorts 0 to 4 following the mandate (with corresponding standard error) is reported below the figure along with the mean outcome. Fertility outcomes computed using natality data from NCHS, and population data from SEER. Data on vote shares from ICPSR (Inter-university Consortium for Political and Social Research, 2013). The 95% confidence intervals are based on robust standard errors clustered at the state level.

Figure A.4: Effect on Teen First Births **by Urban and Rural Areas**



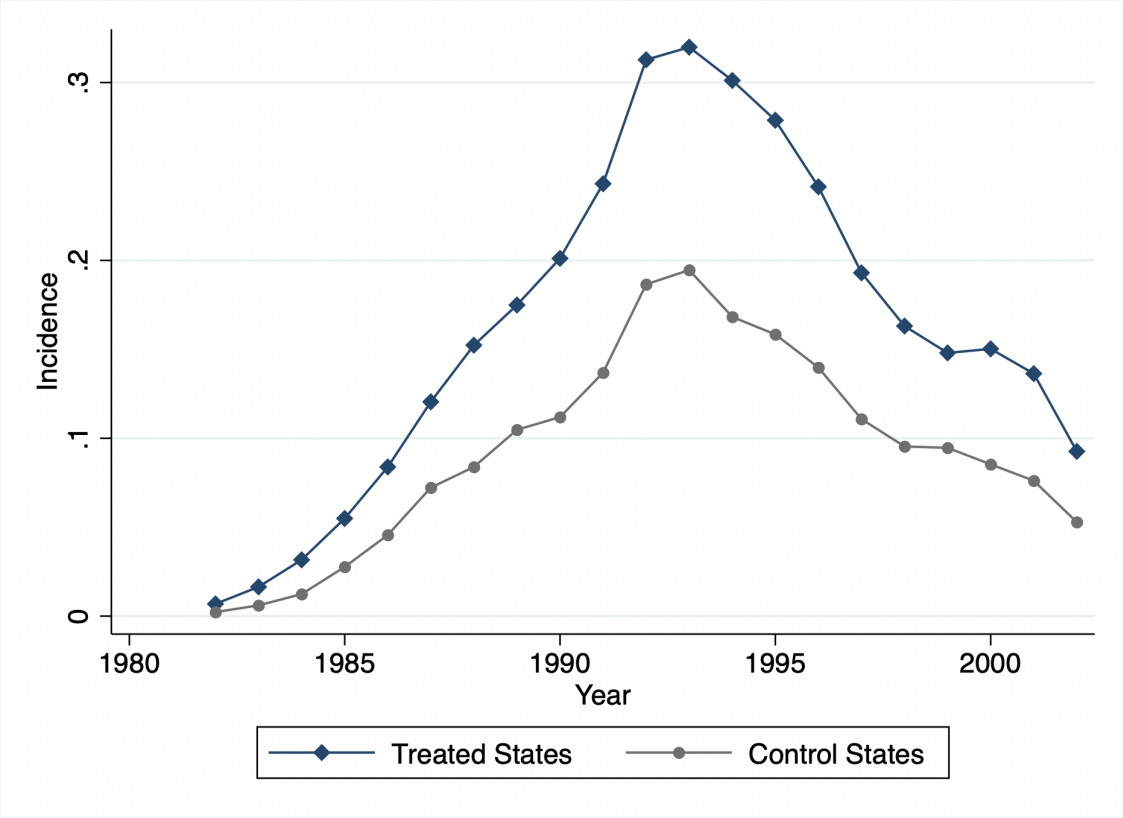
Note: The figure plots coefficient estimates β_k based on Equation The outcome is the rate of first births between ages 15–19 at the county-cohort level. Treated states are those that implemented HIV/AIDS education mandates in 1987–1988, and control states are those did not pass such mandates by 1998. The group-specific estimate for the average of coefficients for cohorts 0 to 4 following the mandate (with corresponding standard error) is reported below the figure along with the mean outcome. Fertility outcomes computed using natality data from NCHS, and population data from SEER. Data on rurality from the 1980 Census, obtained through NHGIS (Manson et al., 2023). The 95% confidence intervals are based on robust standard errors clustered at the state level.

Figure A.5: AIDS Incidence Control



Note: The figure plots coefficient estimates β_k based on Equation 2. The outcome is the rate of first births between ages 15–19 at the county-cohort level. Treated states are those that implemented HIV/AIDS education mandates in 1987–1988, and control states are those did not pass such mandates by 1998. The estimate for the average of coefficients for cohorts 0 to 4 following the mandate (with corresponding standard error) is reported below the figure along with the mean outcome. Fertility outcomes computed using natality data from NCHS, and population data from SEER. The 95% confidence intervals are based on robust standard errors clustered at the state level.

Figure A.6: AIDS Incidence in Treated vs. Control States



Note: Treated states are those that implemented HIV/AIDS education mandates in 1987–1988, and control states are those did not pass such mandates by 1998. AIDS incidence is the total number of AIDS cases (in MSAs) per 1,000 population. Data on AIDS cases from CDC Wonder AIDS Database.

B Sex Education Policy Mandates

13 States with HIV/AIDS-Specific Policies

1. **Alabama** required AIDS education starting in 1987 from fifth grade onward. A 1975 state code (Code of Alabama, 1975, §16-40A-2) requires that any sex education materials taught in schools should emphasize abstinence as "the only completely effective protection against unintended pregnancy, sexually transmitted diseases and infections, and human immunodeficiency virus (HIV) when transmitted sexually."

2. Effective in 1988, **Connecticut** passed C.G.S.A. § 10-19 requiring "ongoing and systematic instruction on acquired immune deficiency syndrome, as taught by legally qualified teachers. The content and scheduling of the instruction shall be within the discretion of the local or regional board of education." The earliest grade of instruction is not specified.

3. **Florida** introduced Section 381.608, Florida Statutes in 1988. A one-half credit course must be taken by all students in either the 9th or 10th grade. The statute reads: "Throughout instruction in Acquired Immune Deficiency Syndrome, ... a school shall (a) Teach abstinence from sexual activity outside of marriage as the expected standard for all school age children. (b) Include that abstinence from sexual activity is a certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems."

4. **Illinois** introduced Public Act 85-680, effective in 1988, required instruction on "the prevention, transmission, and spread of AIDS" from grades 6 to 12.

5. In 1988, **Indiana** introduced IN ST 20-10.1-4-10 requiring schools to "include in its curriculum instruction concerning the disease known as Acquired Immune Deficiency

Syndrome (AIDS)". The content of instruction and grades in which it is taught is left to the discretion of schools.

6. **Michigan** amended Section 1169 of Act No. 451 of the Public Acts of 1976 to read: "the principal modes by which ... acquired immunodeficiency syndrome, are spread and the best methods for the restriction and prevention of these diseases shall be taught in every public school in this state". The curricula content must be approved by local school boards, no earliest grade is stated.

7. **Minnesota** passed Chapter 718-H.F.No. 2245 in 1988 requiring school districts to have a HIV/AIDS program targeting adolescents.

8. **Missouri** approved V.A.M.S. 191.668 for educational programs in public schools on "the transmission and prevention and treatment of the HIV virus... educational programs shall stress moral responsibility in and restraint from sexual activity".

9. **New Mexico** passed 6.12.2.10 in 1988 requiring age-appropriate instruction about HIV to all students from elementary to senior high school grades. The instructional program shall include, but not necessarily be limited to: (a) definition of HIV and acquired immune deficiency syndrome (AIDS); (b) the symptoms and prognosis of HIV and AIDS; (c) how the virus is spread; (d) how the virus is not spread; (e) ways to reduce the risks of getting HIV/AIDS, stressing abstinence; (f) societal implications for this disease; (g) local resources for appropriate medical care; and (h) ability to demonstrate refusal skills, overcome peer pressure, and use decision-making skills.

10. **New York** amended NYCRR §135.3 in 1987 as an emergency measure requiring age-appropriate instruction from K to 12. The content "shall stress abstinence as the most appropriate and effective premarital protection against AIDS".

11. **North Carolina** passed 115C-81 in 1987 mandating instruction on "prevention of AIDS virus infection... in public schools... emphasizing parental involvement, abstinence from sex and drugs, ...".

12. **Utah** amended 53A-13-101 in 1988 that there should be instruction on "the prevention of communicable disease, including acquired immunodeficiency syndrome. That instruction shall stress the importance of abstinence from all sexual activity before marriage and fidelity after marriage as methods of prevention of acquired immunodeficiency syndrome". Instruction should range from grades eight through twelve.

13. **Washington** added a new section to chapter 70.24 RCW in 1988 that requires public schools to establish an AIDS education program. The section notes that "the program of AIDS prevention education shall stress the life-threatening dangers of contracting AIDS and shall stress that abstinence from sexual activity is the only means for prevention of the spread or contraction of the AIDS virus through sexual contact".

8 States & D.C. with Sex Education Policies

1. **Delaware** passed Delaware Administrative Code title 14, § 851 in 1988 on a "K-12 Comprehensive Health Education and Family Life Education Policy" that "establishes a foundation for understanding the relationships between personal behavior and health". Schools are required to include health education "inclusive of a comprehensive sexuality education and an HIV prevention program that stresses the benefits of abstinence from high-risk behaviors".

2. **Georgia** enacted Ga. Code Ann., § 20-2-143 in 1988. The act required "a course of study in sex education and AIDS prevention instruction" in public schools, including instruction "relating to the handling of peer pressure, promotion of high self-esteem, local community values, and abstinence from sexual activity as an effective method of

prevention of pregnancy, sexually transmitted diseases, and acquired immune deficiency syndrome".

3. **Iowa** approved Acts 1988 (72 G.A.) ch. 1018, §§ 1 in 1988. Age-appropriate instruction from kindergarten through grade twelve should include content on "sexually transmitted diseases and acquired immune deficiency syndrome, current crucial health issues, human sexuality, self-esteem, stress management, and interpersonal relationships".

4. **Maryland** introduction regulation on family life education in 1970, and passed regulation on HIV/AIDS prevention education in 1987. These regulation were later repealed and combined under COMAR 13A.04.18 in 1991.

5. **Nevada** amended Nev. Rev. Stat. Ann. § 389.036 in 1987 to include a course on "factual instruction concerning acquired immune deficiency syndrome" and "instruction on the human reproductive system, related communicable diseases and sexual responsibility".

6. **New Hampshire** inserted Chapter 141-F in their statutes in 1988 requiring the development of course related to human immunodeficiency virus. Earlier in 1973, chapter 242:1 and 189:10 required schools to teach "physiology and hygiene insofar as it relates to the effect of alcohol and other drugs and venereal diseases on the human system".

7. **Rhode Island** passed 16-22-17 in 1987 mandating an AIDS education program which "provide students with accurate information and instruction on AIDS transmission and prevention, and ... shall also address abstinence from sexual activity as the preferred means of prevention". Rhode Island also passed 16-22-18 to establish the content of health and family life courses. Courses are required to include programs on "the prevention of pregnancy, sexually transmitted diseases, and sexual violence ... that increases student awareness of the fact that consent is required before sexual activity".

8. **West Virginia** passed West Virginia Code §18-2-9 in 1988 requiring age-appropriate comprehensive sex education instruction from grades six through twelve. The content should include: "the prevention, transmission, and spread of acquired immune deficiency syndrome and other sexually transmitted diseases".

9. **D.C.** amended Section 707 in 1979 to require "instruction on human sexuality and reproduction which shall include... information on human anatomy, physical changes during adolescence, menstruation, intercourse, pregnancy, childbirth, lactation, venereal disease, contraception, abortion, homosexuality, reduction of infant mortality, improvement of pregnancy outcomes, and awareness and prevention of rape and other sex offenses". The course content should be age-appropriate and taught to grade less Pre-K through twelve. In 1988, D.C. amended Title 5 of Chapter 24 such that schools were also required to provide students with AIDS education.