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Preventing Unplanned Pregnancy: Lessons from the States

Isabel V. Sawhill

Katherine Guyot

Economic Studies at BROOKINGS

Executive Summary

In the context of a looming debate about women's reproductive health, this paper reviews what we have learned about strategies for reducing unplanned pregnancies and births, especially at the state level. Our primary findings and conclusions are:

- Unintended pregnancies are at an all-time low in the U.S. but still represent about 45% of all pregnancies. (Unintended pregnancies include those that women themselves say they did not want or that occurred earlier than they desired. We use "unintended" and "unplanned" interchangeably in this paper.)

- About 40% of unplanned pregnancies end in abortion, while the other 60% result in a birth. The result is that about one-third of all births are unplanned.

- Unintended pregnancies and births are most common among young unmarried women, especially teens and the most disadvantaged. However, these groups have also seen the largest declines in unintended pregnancy rates in recent years.

- The reasons behind these declines remain somewhat obscure, but two potential reasons stand out. The first is changes in social norms around women's roles, with more women expected to work, to get some postsecondary education, and to support their families, making unplanned childbearing more costly and the benefits of delay much greater. The second reason is greater access to and use of the most effective forms of contraception, such as long-acting reversible contraceptives. Other factors that could have played a role include the Great Recession and a decline in sexual activity.

- Low-income women tend to have the least access to contraception through employer-sponsored health insurance, and many rely on publicly subsidized family planning services. Two key federal programs that provide contraceptive coverage for low-income women include Title X family planning grants and Medicaid. The Affordable Care Act (ACA) also increased access to contraception. Efforts to curtail those services are now underway, fueled mainly by religious or moral beliefs.

- State initiatives, often in collaboration with philanthropic funding, have played a positive role in preventing unplanned pregnancies by expanding access to family planning services. Studies of programs in Missouri, Colorado, Iowa, Delaware, and Utah suggest that such efforts have had some success. They have involved some combination of training providers, making the most effective forms of contraception more available or affordable, screening for pregnancy intentions in health visits, or educating potential users via the internet, TV, or social marketing campaigns.

- These state initiatives have not only led to declines in unplanned pregnancies but have also contributed to declining abortion rates and lower government costs for health care and social assistance.

- Efforts to provide women with affordable reproductive health care remain contentious on both the right and the left. Conservatives point to the need for less casual sex outside of marriage and often have religious reasons for opposing birth control; liberals worry that these efforts may discriminate against poor women or women of color and ignore the need for opportunity-enhancing policies that would give less advantaged women a reason to delay. States are dealing with these issues in pragmatic ways and showing what can be accomplished in the process.

- While the controversies persist, most people agree that empowering women to have only the children they want has positive benefits for everyone, in the form of better pregnancy outcomes, improved child well-being, more opportunities for women and their partners, reductions in costs to governments, and lower abortion rates.

Introduction

Nearly half of pregnancies in the United States are unintended. This fraction has declined in recent years, from 51% in 2008 to 45% in 2011, the latest year of data available.[1] Still, unintended pregnancy remains a persistent challenge to the well-being of women, children, and families. This paper reviews the evidence on policies aimed at preventing unintended pregnancy, with a particular focus on recent state initiatives to increase access to and information about effective methods of contraception.

The Benefits of Reducing Unintended Pregnancy

A broad literature has found that giving individuals greater control over the timing and incidence of childbirth confers educational and labor market benefits to both adults and adolescents, and ultimately to the children they may have in the future. Reductions or delays in fertility associated with the rise of the birth control pill in the mid-to late-20th century[2] increased educational investments among women and men,[3] increased women's labor force participation rates and annual hours of work,[4] and narrowed the gender wage gap.[5]

In addition, unwanted and seriously mistimed births[6] are associated with a variety of adverse birth outcomes, such as delayed prenatal care and increased likelihood of low birthweight.[7] Some evidence also suggests a link between unwanted pregnancy and maternal depression,[8] but identifying a causal effect is challenging.

More intentional childbearing can increase the probability that a child is born into a stable family situation and avoids poverty.[9] Increased access to family planning services in the 1960s and 1970s reduced the likelihood of a child being born into poverty by as much as 7 percent, and increased college completion rates among children whose mothers had access to these services by 2 to 7 percent.[10]

Using the Social Genome Model, a microsimulation model, Sawhill, Karpilow, and Venator (2014) estimate that preventing all unwanted births and delaying all mistimed births to align with mothers' intentions could increase their children's eventual high school and college graduation rates by 7 and 8 percentage points, respectively.[11] Another simulation model, Familyscape, suggests that if one in four non-contracepting unmarried women under age 30 were to begin using contraception, child poverty rates would fall by at least half a percentage point in one year.[12] Finally, as Sawhill (2014) documents, unplanned pregnancies are a major driver of the growth of single-parent families, the growth of which was responsible for an estimated 25% increase in the child poverty rate between 1970 and 2012.[13]

Of course, the causal relationship between poverty and unintended pregnancy goes in both directions. Poor lifetime prospects cause young women to see little reason to postpone having children.[14] Unlike their more advantaged peers, they have less to lose by having a baby early. For this reason, many argue that the best way to reduce unplanned pregnancies is to improve the lives of the disadvantaged, including poor women and women of color. All of this is true, and it would be a mistake to think that reducing unplanned pregnancies need not be combined with providing opportunities. Anti-poverty and opportunity-enhancing policies provide the *motivation* to get an education and advance in the job market. Contraceptives provide *the means* to do so.

At the same time, as noted below, a very high proportion of low-income women say that they do not want to get pregnant or would prefer to delay childbearing. Helping them achieve their own intentions should improve their lives. Efforts to improve opportunities and reduce poverty will be more effective if they are combined with efforts to improve access to affordable and effective forms of contraception. The call for universal access to health care is now widespread, and this should include access to reproductive health care as part of the package.

In addition to enabling women to get ahead, reductions in unwanted and mistimed pregnancies reduce public spending. Medicaid and CHIP paid for an estimated 68% of all unplanned births in 2010, costing an estimated $21 billion.[15] The ultimate savings to public insurance from averting all unintended pregnancies are somewhat lower, at $15.5 billion,[16] since many of these babies will still be born in later years—though often after their parents are self-supporting and in jobs with employer health coverage. These estimates do not

include savings from public assistance programs such as TANF or SNAP but do include the public cost of medical care for children up to age 5.

Discussions of unintended pregnancy are inevitably related to the availability of abortion, easily the most contentious issue of the modern era. In May 2019, several states passed highly restrictive abortion bills that are expected to go to the Supreme Court as a challenge to *Roe v. Wade*. We will not focus on abortion in this paper, except to comment that, all else equal, reducing unplanned pregnancy also reduces abortion. About 42 percent of unplanned pregnancies were aborted in 2011.[17] The overall abortion rate declined by 25% between 2008 and 2014, at least in part because of declines in unintended pregnancy.[18] Efforts to address the issue of unplanned pregnancy should thus be a source of common ground for those who oppose access to abortion and those who support it.

In sum, helping women to prevent unintended pregnancy improves their opportunities, drives down abortion rates, and reduces public spending. Increasing access to family planning services is one promising avenue through which public policy can achieve further reductions in unintended pregnancy.

Over the last decade, several state-level initiatives have sought to further reduce unintended pregnancy rates by expanding access to and awareness of effective contraceptive methods, with promising results. These programs have involved some combination of training providers, making the most effective forms of contraception more available and affordable, screening for pregnancy intentions in health visits, or educating potential users via the internet, TV, or social marketing campaigns. We discuss state-level initiatives in detail below.

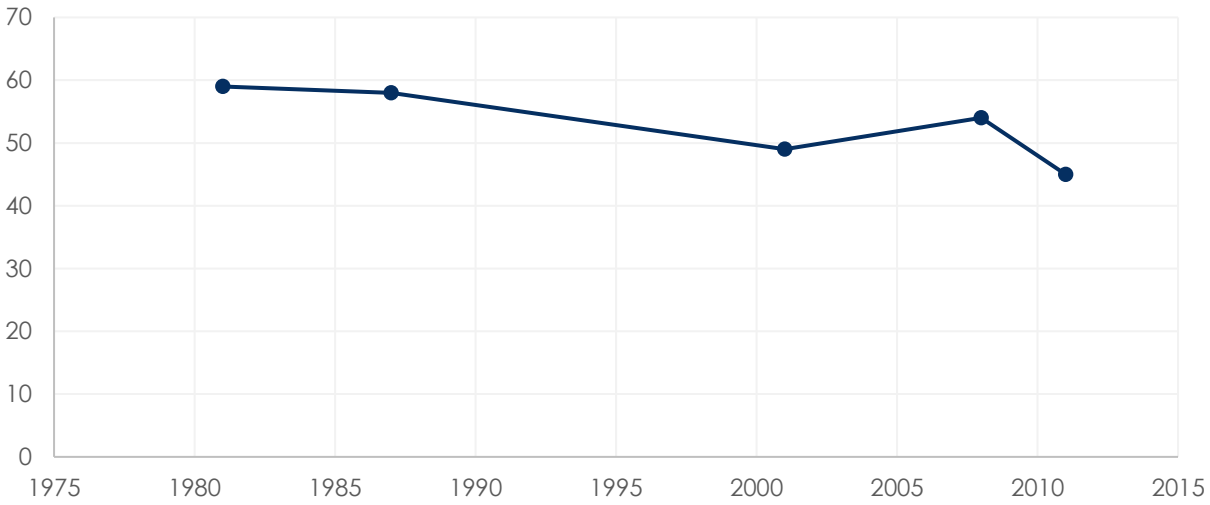
At the federal level, a series of planned regulatory changes would expand employer exemptions from the ACA's contraceptive coverage provision and withhold federal family planning funds from clinics that provide or refer patients for abortions.[19] These changes, paired with additional limitations on contraceptive access in some states, threaten to impede progress in preventing unintended pregnancy.

With access to both contraception and abortion now threatened, what happens to unintended pregnancies, abortion, government costs, and above all the well-being of families and children, may increasingly rest with individual states.

Trends in Unplanned Pregnancies and Births

The incidence of unintended pregnancy has declined over the last four decades, despite a recent peak in 2008. Overall, the number of unintended pregnancies per 1,000 women between the ages of 15 and 44 dropped from 54 in 1981 to 45 in 2011.[20] [21]

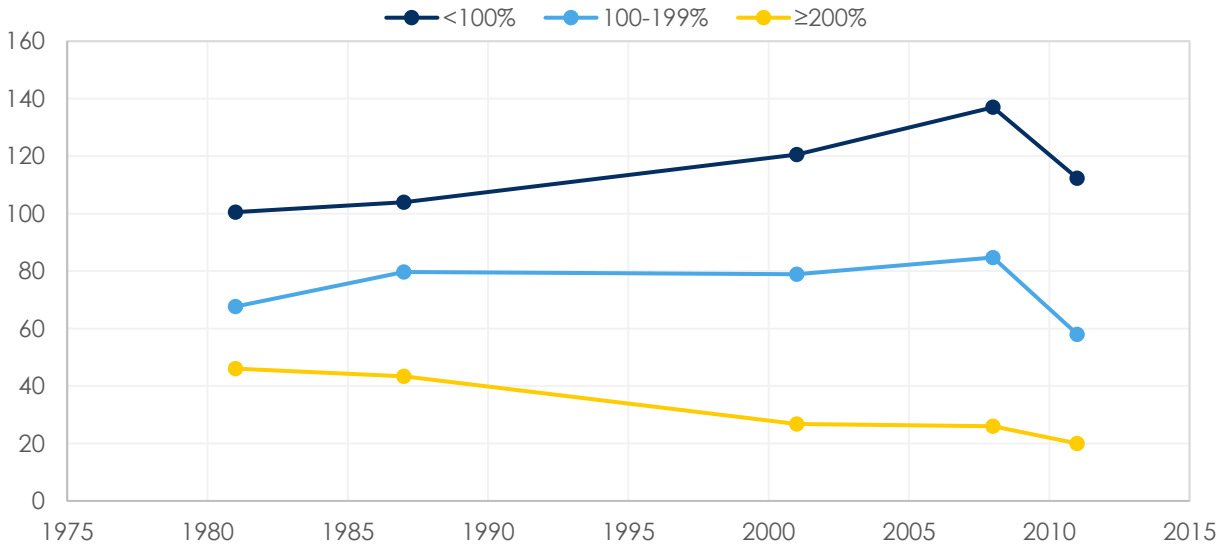
Figure 1: Unintended Pregnancy Rate (per 1,000 women ages 15-44)



Source: Finer and Zolna (2016).

These aggregate trends obscure important heterogeneity across demographic groups. Unintended pregnancy rates for women aged 15 to 19 have been declining since the 1990s, whereas declines after 2008 were seen for all age groups. Both the increase in unintended pregnancy rate prior to 2008 and the subsequent decline were particularly pronounced among women below the federal poverty level (FPL), who have rates of unintended pregnancy that are roughly five times as high as those with incomes above 200% FPL.[22] Declines among women above 200% FPL have been underway at least since 1981.

Figure 2: Unintended Pregnancy Rates by Income as a Percentage of the Federal Poverty Level



Source: Finer and Zolna (2016).

This paper focuses on the incidence of unintended pregnancy rather than pregnancy outcomes, but it is important to note that recent declines in unintended pregnancy have contributed to corresponding declines in unintended births and in abortions.[23] Trends in unintended births have tracked trends in unintended pregnancy quite closely, and the fraction of births that are unintended is currently at its lowest point on record, at an estimated 35% in 2016.[24]

The fraction of unintended pregnancies that end in abortion (about 40%) has been stable in recent years.[25] Since there were fewer unintended pregnancies per 1,000 women in 2011 than in 2008, the number of abortions has also declined. Between 2008 and 2014, the abortion rate dropped from 19.4 to 14.6 abortions per 1,000 women aged 15 to 44.[26]

Reasons for the Decline

The most important reasons for the decline in unintended pregnancies and births appear to be 1) social norms and the changing status of women, 2) greater use of contraception, especially the most effective forms, 3) declining sexual activity among young people, particularly teenagers, 4) economic fluctuations that have reduced fertility, at least temporarily.

Social Norms and the Changing Status of Women

Recent declines in fertility have occurred in the context of longer-term changes in women's roles and in the acceptability of sex and childbearing outside of marriage. Over the past 60 or 70 years, women have achieved major breakthroughs in education and employment. Women are now more educated than men and have a labor force participation rate that is 70% higher than it was in 1950.[27] At the same time, far fewer are marrying young, sex outside of marriage is more common, and the proportion of children born outside of marriage is far higher. Put differently, women now have more opportunities but also more responsibilities—especially for children. In 1967, the proportion of mothers who were the sole or primary breadwinners for their families was only 12%; now it is 41%.[28]

One possible explanation for the rise and subsequent decline of unplanned pregnancies is that rising age at first marriage, greater sexual freedom, and reduced stigma of having an unwed birth initially led to a rise in unintended pregnancies and births, most of them outside of marriage. The result was more single parents and more child poverty. Women who have come of age during a period when the need for additional education beyond the high school years is much greater and the expectation of work much stronger, are less likely than their older counterparts to see early motherhood as optimal.

Research from the Urban Institute's Survey of Family Planning and Women's Lives shows that in 2016, more than 80% of women of reproductive age believed that an unplanned birth would negatively impact at least one area of a woman's life—particularly her education, job, income, and mental health.[29] Women with at least some college education and those above 138% FPL were substantially more likely to report negative perceptions of the effects of an unplanned birth than women with a high school degree or less and those under 138% FPL. These findings are cross-sectional, so any conclusions drawn about trends will be speculative. But they do lend credence to the idea that as women make strides in higher education and the labor market, they perceive the opportunity cost of early motherhood to be greater.

The sharp decline in teen pregnancy rates among women across all demographic groups since the early 1990s is one indicator that younger cohorts realize that becoming a parent before one is ready is far from ideal. They increasingly realize that completing one's education, securing a decent job, and finding a stable partner before having children all contribute to a better life for oneself and one's children. Instead, as more women delay marriage and childbearing for educational and job-related reasons, the demand for birth control – the likelihood that it will be used if available -- has likely increased. But what has happened to the supply – to its availability and effectiveness?

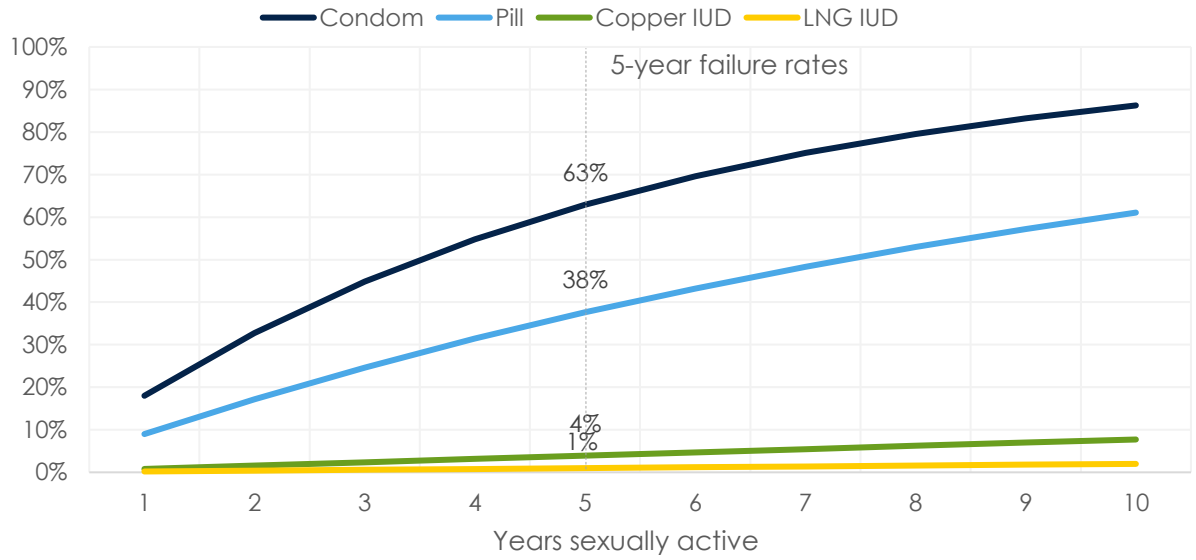
Contraceptive Access and Effectiveness

The availability and effectiveness of contraception are additional explanations for the decline in unintended pregnancies. More effective forms of contraception, such as long-acting reversible contraceptives (LARCs), and expanded access to all kinds of contraception through health insurance and federally funded family planning clinics, may have played a

role, along with wider dissemination of information, especially through TV, the internet, and social media.

The oral contraceptive pill ("the pill") has long been the method of choice among women using reversible contraception (see Figure 4 below). If used perfectly, the pill prevents more than 99% of pregnancies in a given year, but this requires not missing a dose, taking the pill at a regular time, obtaining a prescription (typically from a doctor), and remembering to refill that prescription. For the typical user, the pill is only about 91% effective over a year's time.[30] Given imperfect use, the probability that a typical pill user will experience an accidental pregnancy over a five-year period cumulates to about 38%.[31]

Figure 3: Cumulative Contraceptive Failure Rates for Typical User of Condom, Pill, and IUD



Source: Analysis by Sawhill and Venator (2014) using data from Trussel (2011).

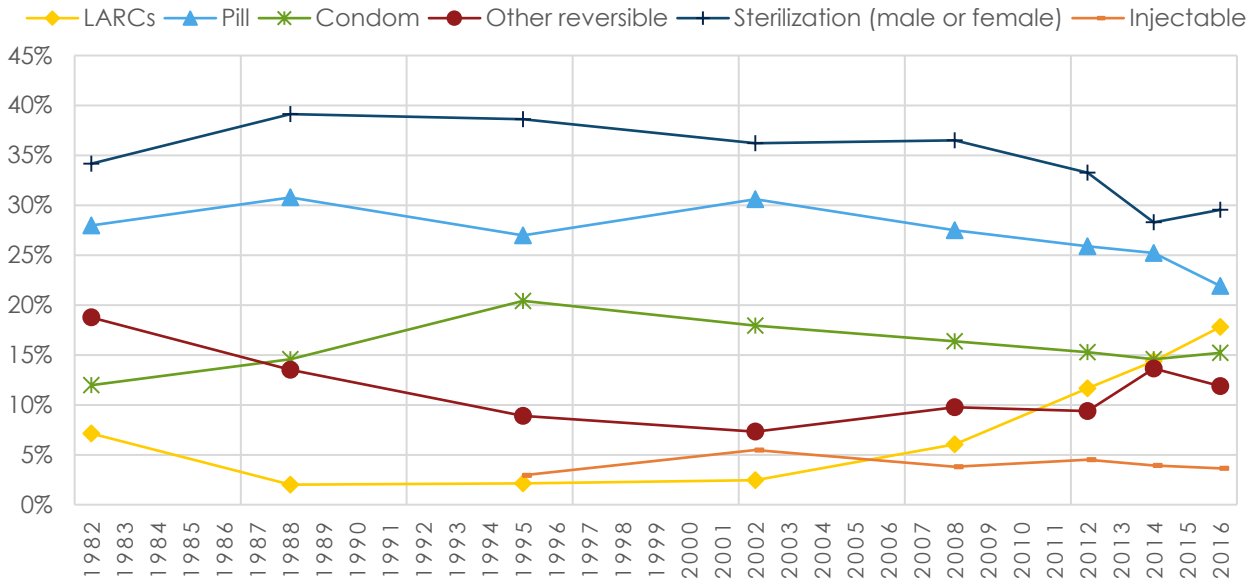
Nevertheless, the pill is more effective than condoms and other commonly used methods, such as withdrawal, and dramatically more effective than using no method at all. Even though about 90% of sexually active women of reproductive age use some method of contraception (including less effective methods, like withdrawal), fully half of unintended pregnancies are due to a failure to use any contraception.[32] Most of the remaining half are due to using contraception inconsistently.

For those who choose them, long-acting reversible contraceptives (LARCs) remove the problem of user error because, once placed, they do not require action on the part of users for many years. IUDs and implants can last between 3 and 5 years, or 10 years for the copper IUD. As a result, LARCs are more than 99% effective.

We analyzed data from the National Survey of Family Growth (NSFG) from 1982 to 2016 to investigate changes in contraceptive use among women between the ages of 15 and 44.[33] The proportion of sexually active women who use some form of contraception has remained stable at around 90% over this entire period.[34] However, this figure includes all contraceptive methods regardless of effectiveness, including withdrawal and natural family planning. Among women using some form of contraception, there has been substantial switching between methods over this period. Switching to more effective methods could help to explain declines in unintended pregnancy. Method effectiveness and consistency of use can have large impacts.

LARCs have experienced a recent surge in popularity. About 18% of contraceptive users relied on LARCs (either IUDs or implants) in 2016, compared to just 2% in the late 1980s and 1990s. The first contraceptive implant went on the market in the U.S. in 1991, so LARC use prior to this reflects only use of the IUD. The Dalkon Shield controversy can explain the decline in IUD use after the 1982 survey. But safety concerns about IUDs appear to be dissipating. In each of the last four waves of the NSFG, LARC use has trended upward.[35] The most recent survey suggests that women are now more likely to use LARCs as their primary contraceptive method than they are to use condoms.[36]

Figure 4: Contraceptive method use among women ages 15-44 using some method



Source: Authors' calculations using National Survey of Family Growth

While the pill is still the most common reversible method, use of the pill has declined in every successive survey year after 2002, dropping by nearly 9 percentage points between 2002 and 2016. Use of condoms as a primary method has also declined since 1995.

The injectable first became available in the 1990s and is still used fairly rarely. Other reversible methods include diaphragms, the patch or ring, natural family planning, withdrawal, foam, inserts, and a few other reversible methods. The slight rise of "other methods" since 1995 can be attributed to increases in the use of withdrawal and natural family planning; the decline prior to 1995 primarily reflects declining use of the diaphragm.

Use of irreversible methods (male or female sterilization) declined by about 7 percentage points between 2002 and 2016, at least partially offsetting the rise in LARCs but also expanding choice since LARCs are fully reversible while sterilization is not.

Figure 4 does not include those reporting no use of contraception. But for those reporting some use, they suggest that the rise in LARCs has been driven by women substituting away from less effective reversible methods, such as the pill or condom, or from irreversible methods. Differences by age group are informative here. Young women (under age 25) have never used irreversible methods in large numbers. Instead, teenagers and young adults appear to be switching from less to more effective reversible methods, which may explain why reductions in unintended pregnancy have been particularly pronounced among young women. Women between the ages of 25 and 44, by contrast, may be substituting from irreversible methods toward highly effective reversible methods.[37]

Evidence suggests that when women are given full information about, and access to, available contraceptive methods, a significant portion will choose a LARC due to their effectiveness, ease of use, and reversibility. In one randomized controlled trial conducted by the Bixby Center at the University of California at San Francisco, involving 40 family planning clinics across the country, women who attended family planning visits at clinics that had received training on contraceptive counseling and LARC insertion were about twice as likely to choose a LARC as women who visited clinics that had not received training, and were about half as likely to become pregnant within 12 months.[38]

It should be emphasized here that choice of a contraceptive method must be entirely voluntary. While LARCs are more effective than other forms of reversible contraception, they are not always the best choice for every individual. At least one study has found that providers are more likely to recommend long-acting reversible contraception to black and Hispanic women of low socioeconomic status.[39] A legacy of discrimination against low-income women and women of color in health care settings[40] has created an understandable sensitivity to concerns that women are being pressured to use contraception, or some particular form of contraception.

At the same time, lack of access to the full range of affordable contraceptives can limit women's autonomy and life prospects. Low-income women tend to have the least access to affordable contraception and the highest rates of unintended pregnancy, suggesting that they have the most to gain from having access to a wider range of contraceptive options. The solution is to provide accurate information about all available contraceptive methods to all patients, and to ensure equitable, patient-centered access to the methods that meet patients' needs and preferences.

Less Sex

Some research suggests that younger cohorts are less sexually active than older cohorts were at the same age. The share of high school students who report that they have ever had sexual intercourse fell from 54% in 1991 to 40% in 2017,[41] and the median age at which individuals first have sex has risen slightly for cohorts born after the mid-1970s.[42]

Some analysts have found that young adults in their twenties are also less sexually active than previous cohorts, prompting concerns about a "sex recession,"[43] though the magnitude of these declines is under debate.[44] While the fraction of young adults reporting no sexual activity in the past year has increased over the last decade, according to data from the General Social Survey, this increase has been much larger for men than for women.[45] [46] Declines in overall sexual *frequency* for both men and women may play some role in explaining reductions in unintended pregnancy. One study found that the frequency of sexual activity has declined modestly since 1989 due to both an increasing number of individuals without a steady or marital partner and a decline in sexual frequency among those with partners.[47]

Economic Explanations

Shorter-run changes in economic conditions have also played a role in shaping recent fertility trends. The correlation noted above between the recent decline in unintended fertility and the onset of the Great Recession implies that economic factors play some role.

An association between economic conditions and *intended* fertility makes sense conceptually: individuals who would otherwise like to have children may try to prevent pregnancy during periods of economic hardship. A large literature has indeed found that fertility falls during economic downturns and may not recover fully alongside the economy.[48]

The relationship between economic downturns and *unintended* fertility is somewhat less clear, as individuals who do not plan to become pregnant should be little influenced by current economic conditions. However, those not wanting to get pregnant may make extra efforts to prevent a pregnancy when times are tough or may simply have less frequent sex. Kearney and Levine (2012) find that high unemployment can explain about 28 percent of the decline in teenage childbearing rates between 2007 and 2010, but very little of the total decline since 1991.

In sum, the Great Recession can likely explain only a modest portion of the decline in unintended pregnancy over the last decade. That the fertility rate has continued to decline in the wake of economic recovery suggests that other factors are at play. But it would not be surprising if there were a reduction in lifetime fertility for the particular cohorts exposed to the Great Recession.

Policy Measures to Reduce Unplanned Pregnancies

The availability of effective forms of contraception is a relatively new development. It was not until 1960 that the FDA approved the pill and not until 1965 that the Supreme Court ruled that prohibiting the sale (or use of) contraceptives to married couples was unconstitutional. Today, 9 out of 10 Americans believe that birth control is morally acceptable,[49] and virtually all sexually active women have used it at some point in their lives. [50] More effective and now-safe forms of contraception, such as the IUD and implant, as well as emergency contraception and injectables, have given women more choices. Both the American College of Obstetricians and Gynecologists and the American Academy of Pediatricians now recommend a LARC as the best choice for almost all women not wishing to have a baby; yet not all clinics or physicians are equipped or have been trained to provide them. In addition, women are not always aware of these choices,[51] and upfront costs can be very high. The initial cost of a LARC can range from about $500 to $1,000.

Today, several options are available to help women access contraception affordably. Medicaid and Title X of the Public Health Service Act are the primary public programs that subsidize contraception for low-income women. Additionally, under the Affordable Care Act, most private health plans are required to cover contraception with no out-of-pocket costs. However, recent efforts at the federal level would restrict Title X funding and expand employer exemptions from the ACA contraceptive coverage provision. We review these proposed changes below.

Title X

The first federal family planning grants were launched in the 1960s as part of the Johnson administration's War on Poverty. These efforts culminated in Title X of the Public Health Service Act of 1970 to provide publicly funded family planning services to low-income and uninsured individuals. Bailey (2012) finds that these early family planning grants were associated with a 2% reduction in the general fertility rate over 10 years in counties that received funding.[52]

Clinics receiving Title X funding must provide family planning services (including contraception) at no or reduced cost to low-income clients, but not all Title X clinics have the resources to stock a full range of contraceptive methods.[5354] Power to Decide has found that about 19.5 million women in need of publicly funded contraception reside in "contraceptive deserts," or counties where the number of health centers offering the full range of methods is not enough to meet the need. More than 1 million live in counties without a single health center that offers a full range of methods.

Federal funding for Title X has fallen in real terms over the last four decades, from around $470 million in 1980 (in current dollars)[55] to less than $300 million today.[56] This is despite evidence that every public dollar spent on family planning services results in about $7 in net government savings.[57]

At the same time, many other states have cut family planning funding, particularly to clinics that provide abortion services or are affiliated with abortion providers.[58] Under the Hyde Amendment, federal law already prohibits the funding of abortions except in a few rare circumstances, but some states have used their own funds to cover abortions for those on Medicaid. New restrictions are aimed at limiting funding of clinics that provide family planning or other reproductive services, if they also provide abortions (using other funding) or refer patients to abortion services. Two papers have found that similar funding restrictions and overall budget cuts in Texas, which resulted in the closure of more than 80 family planning clinics across the state, raised births to teenagers and unmarried women.[59]

The Trump administration has recently issued a rule that would deny funds for family planning to clinics that also provide abortion referrals.[60] The rule requires that Title X clinics be physically and financially separate from health centers that provide abortions. In April 2019, a federal judge temporarily blocked the rule from taking effect.[61]

Medicaid

State Medicaid programs have been required to cover family planning services with no out-of-pocket costs since 1972. Medicaid is now the main source of public funding for family planning services, accounting for 75% of public funds spent on contraceptive services and supplies in 2010, compared to 14% in 1999 [62].

Medicaid family planning coverage has traditionally been available only to those with very low incomes, but starting in the mid-1990s, states have had the option to offer these services to individuals whose incomes are slightly above the Medicaid eligibility threshold.[63] Kearney and Levine (2007) found that states that obtained Medicaid income eligibility waivers in the early 2000s reduced births to teenagers and adults by 4% and 2%, respectively.

Since the federal government matches family planning services at 90%, extending eligibility tends to be very cost-effective for states. As of 2019, 22 states have extended Medicaid eligibility for family planning services based on income,[64] generally setting the eligibility threshold at about 200% of the federal poverty level.[65] Additionally, all but 14 states have adopted Medicaid expansion under the Affordable Care Act, extending Medicaid eligibility (not just family planning eligibility) to those at or below 138% FPL.[66]

Affordable Care Act

The contraceptive coverage provision of the Affordable Care Act has expanded coverage for privately insured women by requiring most private health plans to cover FDA-approved contraceptives with no cost-sharing. Multiple studies have identified reductions in out-of-pocket contraceptive costs following the implementation of the provision in 2012.[67]

A key question is whether these changes produced increases in contraceptive use, and particularly LARC use. An early study using national health care claims data found no increase in LARC uptake in the first year after the mandate,[68] but using the same data source updated to 2014, Snyder et al. (2018) find that the odds of LARC insertion increased by 3% for privately insured women of reproductive age post-ACA. Carlin, Fertig, and Dowd (2016) find that reduced cost sharing post-ACA increased uptake of prescription contraceptives by about 2 percentage points among Midwestern women with employer-sponsored coverage, with LARCs driving about one-third of this increase.

As in the case of Title X funding, the fate of the ACA contraceptive coverage provision is uncertain at the federal level as of this writing. Under the Trump administration, the Department of Health and Human Services has issued a set of rules to expand employer exemptions from the contraceptive coverage mandate based on religious or moral objections. These rules would allow any private or nonprofit employer to refuse to provide insurance coverage of contraception due to religious objections, and any nonprofit or "closely held" private employer (representing more than 90% of U.S. businesses) to refuse to provide coverage due to moral objections.[69] A federal court issued an injunction in January 2019 to temporarily prevent these changes from taking effect.[70]

Social Marketing Campaigns

As noted above, one reason that use of the most effective forms of contraception is still quite limited is because women themselves do not know about them or are misinformed about effectiveness and safety. Social marketing campaigns that provide information about the benefits and availability of contraception are one way to overcome this barrier to greater use. Sawhill and Venator (2014) review initiatives that have proven effective at targeting other public health risks, such as smoking and the spread of sexually transmitted infections and propose a similar program to educate the public about the risks of unintended pregnancy and how to prevent it.

A one year-long campaign in Iowa, Avoid the Stork, promoted awareness of the risks of unintended pregnancy using humorous advertisements and promotional events that "featured a large, awkward stork who would interrupt a person's life to

represent the consequences of a pregnancy".[71] A statewide survey found that more than 70% of female respondents between the ages of 18 and 30 recalled seeing materials from Avoid the Stork, and three-quarters of those who recalled the campaign thought it was informative.[72] Unintended pregnancy and abortion rates in Iowa declined over this period, though the campaign coincided with a program to expand access to LARCs, so the effect of Avoid the Stork is difficult to isolate. Some descriptive evidence suggests that increases in LARC use accelerated slightly between 2010 and 2011, when Avoid the Stork was introduced.[73]

The success of social marketing campaigns depends on many factors, from the effectiveness of the messaging and targeting to contraceptive access in the target location. A recent cluster randomized control trial found that a low-cost informational campaign consisting of Facebook advertisements about LARCs did not noticeably increase LARC uptake at Planned Parenthood clinics in Maine, New Hampshire, and Vermont.[74] The intervention ran only for one month (with LARC insertions measured four months later) and did not seek to increase provider training, expand capacity, or reduce costs.

More promising results have emerged from an evaluation of Bedsider.org, a free online resource that provides young women with information about birth control methods, tools to access and use contraception effectively, and "sex-positive" messaging from peers about unintended pregnancy prevention. A random assignment study of more than 2,000 women between the ages of 18 and 29 found that young women who were encouraged to use Bedsider were 3.79 times less likely to report an unplanned pregnancy within 12 months than women in the control group.[75] This difference was partially driven by changes in contraceptive method use among the Bedsider group, who used more effective methods on average as the study progressed.

Online media and certain television programs have also proved effective at influencing behavior and social norms around contraceptive use and childbearing. Two studies of MTV's *16 and Pregnant* have found that, far from "glamorizing" teen childbearing, the reality TV show led to substantial declines in teenage births.[76] Similarly, Guldi and Herbst (2016) found that the rollout of high-speed internet between 1999 and 2007 explains about 7 percent of the decline in teenage births over this period. This was likely due to a combination of increased access to information (e.g. about contraception, or about educational or job opportunities that might motivate young people to delay childbearing) and changes in teenagers' social networks and interpersonal interactions.

What We Can Learn from State Initiatives

Efforts to reduce unintended pregnancy are increasingly taking place at the state and local level. Below, we describe initiatives in Colorado, St. Louis, Iowa, Delaware, and Utah that have increased access to contraception (especially LARCs) by offering greater support to family planning clinics. We have chosen to focus on initiatives in these locations because they have been the subject of research or evaluation, which by and large reveal that investments in contraceptive access have increased LARC use and reduced unintended pregnancy. Similar initiatives have recently been launched in the states of Washington and Virginia.

At a time when the federal government and many states are imposing greater restrictions on reproductive healthcare, these initiatives provide some of the most promising ways to maintain progress in reducing unintended pregnancy and may inform federal policy in the future.

Colorado Family Planning Initiative

The Colorado Family Planning Initiative (CFPI) launched in 2008 with the goal of making LARCs available at no or low cost to low-income women across the state. The initiative, which was funded by a private donor until 2015, helped Title X clinics expand capacity to provide reproductive health services, with a particular focus on LARCs. In 2016, Colorado passed legislation to continue funding these services through the state's ongoing Family Planning Program. Federal funding for reproductive health services has also increased as a result of the state's Medicaid expansion in 2013.

Descriptive data from the Colorado Department of Public Health and Environment finds that use of LARCs among Title X clients increased from 4% to 30% between 2009 and 2014. Over the same period, teenage birth and abortion rates decreased by nearly 50%. Birth and abortion rates for young adults (ages 20-24) decreased by about 20%.

Researchers from the University of Colorado have estimated that half to two-thirds of the total decline of 5,020 births to Colorado women aged 15–24 between 2010 and 2014 can be attributed to CFPI, saving the state $66 to $70 million in costs associated with Medicaid, TANF, SNAP, and WIC [77]. Lindo and Packham (2017) estimate that the program reduced the teen birth rate by 6.4 percent in counties with clinics receiving funding compared to more distant counties. Updating this analysis with data at the zip code level, Kelly, Lindo, and Packham (2019) find that the program reduced total births to teenagers by about 20 percent in neighborhoods located near Title X clinics, and reduced births to women in their twenties by 6 to 8 percent.[78] The authors also find that CFPI raised the health of infants born to women under 30 by reducing births that tend to require relatively high levels of hospital care (particularly low birthweight infants), and likely reduced abortions among teenagers.

CFPI's success may have been enhanced by the state's outreach program and by widespread media coverage. About midway through the initiative, Colorado launched an outreach campaign known as Beforeplay to provide information about reproductive health and encourage young people to utilize available reproductive health services, including those offered by Title X clinics. Additionally, some evidence suggests that media coverage in outlets such as the *New York Times* was effective at drawing more women to obtain LARCs at Title X clinics. Kelly, Lindo, and Packham (2019) find that the share of Title X clients having a LARC inserted grew twice as fast between 2014 and 2015 as in each of the previous four years, roughly corresponding to the spike in media coverage that started in late 2014.

St. Louis Contraceptive CHOICE Project

The CHOICE Project provided contraceptive counseling and no-cost reversible contraception to women in St. Louis, Missouri between 2007 and 2011. As in Colorado, the initiative was privately funded. CHOICE has been the subject of a large body of research on contraceptive use, in large part because the program enrolled participants in a longitudinal cohort study and was thus able to track a variety of outcomes for the 9,256 women who took part in the project over 2–3 years.

Among women who chose to participate in the study, 75% chose a LARC when LARCs were made available with no out-of-pocket costs.[79] Most LARC users (77%) continued using this method after two years, compared to 41% of non-LARC users, who are more likely to discontinue use of other methods. Uptake and continuation rates of LARC methods among adolescents were similar to rates for adults,[80] and rates of pregnancy, birth, and abortion among both adults and adolescents enrolled in the study were substantially lower than national averages.[81]

Bailey and Lindo (2017) note that because the study specifically recruited women who were interested in starting a new form of contraception, outcomes should not be considered causal and cannot be compared to those of the general population.[82] But despite the lack of experimental evidence, the CHOICE Project has provided valuable information about the selection and effectiveness of different contraceptive methods among women seeking to avoid pregnancy who have access to a full range of methods with no out-of-pocket costs. As several of the researchers who led the study summarized, "One of the most impactful findings of the CHOICE Project was the quantification of how much more effective LARC methods are at preventing unintended pregnancy than are short-acting methods such as pills, patch and the vaginal ring".[83]

Iowa Initiative to Reduce Unintended Pregnancies

The Iowa Initiative to Reduce Unintended Pregnancies was a privately funded initiative that ran from 2007 to 2013. The initiative increased funding for Title X and other family planning agencies serving low-income women to subsidize LARCs, increase provider training, and promote awareness about available reproductive health services. The program was paired with a humorous social marketing campaign, Avoid the Stork, that ran in 2010 (see "Social Marketing Campaigns" above).

A year before the initiative launched, the state had already obtained a waiver to expand Medicaid-funded family planning services to individuals at or below 200% FPL. Iowa now operates an entirely state-funded Medicaid spin-off program that extends family planning services to those at or below 300% FPL, but that specifically prohibits funds from going to abortion providers.[84] [85]

Descriptively, the percentage of Iowa family planning clients who either adopted or chose to continue use of a LARC increased from less than 1% to 15% between 2005 and 2012.[86] The percent of pregnancies in the state that were unintended dropped from 47.6% to 43.6% between 2006 and 2010.[87] The state's abortion rate also declined over this period, from 8.7 to 6.7 abortions per 1,000 women of reproductive age, even as Iowa expanded access to medical abortion through telemedicine provision starting in 2008.[88] Biggs et al. (2015) find that reductions in abortion were likely driven in part by increased LARC use.

Delaware Contraceptive Access Now (CAN)

Delaware CAN is a partnership between the state of Delaware and Upstream USA, a nonprofit that works to ensure contraceptive access across the U.S. Delaware had the highest share of pregnancies that were unintended of any state except Florida (tied at 48%) in 2014 (Kost, Maddow-Zimet, and Kochhar 2018). Starting in December 2014, Upstream has provided training and technical assistance to the state's healthcare providers, including private practice groups, hospitals, Planned Parenthood clinics, and others. A key goal is to remove barriers to same-day access to the full range of contraceptive options, including LARCs. This does not include the removal of cost barriers beyond what is already covered by Title X, Medicaid, and private insurance. The approach is similar to the one described earlier (the Bixby Center initiative) that found a 50 percent reduction in unplanned pregnancies at the end of one year, based on a randomized controlled study.

Upstream commissioned the research organization Child Trends to examine how contraceptive use changed over the course of the program, using data on method use among clients at risk of unintended pregnancy at Title X clinics. Child Trends used a microsimulation model, FamilyScape 3.0, to project likely changes in unintended pregnancy among Title X clients as a result of changes in contraceptive method use. The researchers note that their analysis is limited due to a substantial amount of missing data on method use, especially prior to the start of Delaware CAN. Additionally, since the study does not incorporate an experimental research design, researchers cannot isolate the impact of Delaware CAN from other factors that may have contributed to changes in method use in Delaware, though they do compare Delaware's method use rates to national figures (much like the researchers who studied the CHOICE Project).

Child Trends found that the percentage of Delaware Title X clients aged 20–39 using LARC methods increased from 13.7% to 31.5% from 2014 to 2017 (Welti and Manlove 2018). Nationally, LARC use among Title X clients in this age group increased from 13.6% to 19.9%. Increased LARC use in Delaware was primarily driven by switching from moderately to highly effective methods and to a small reduction in the percentage of women using no method. The FamilyScape simulation suggests that changes in method use in

Delaware predicts a 24.2% reduction in unintended pregnancy rate among Title X clients, compared to a 3.0% reduction for Title X clients nationwide.

HER Salt Lake Contraceptive Initiative

HER Salt Lake is a partnership between the University of Utah Family Planning Research Group and the Planned Parenthood Association of Utah (PPAU), the only Title X grantee in the state of Utah. The initiative provided free, same-day reversible contraception to clients who visited the four PPAU health centers located in Salt Lake County between September 2015 and March 2017. A second stage of the intervention added a targeted online media campaign to inform potential clients of available services.

Researchers from the University of Utah compared pre- and post-intervention trends in LARC uptake in the four participating health centers to trends in the state's five other PPAU health centers.[89] During the comparison period, HER participating centers and non-participating centers had similar upward trends in IUD and implant use. After the intervention, HER participating centers increased LARC use by an average of 59 IUDs and implants per month over non-participating centers.

Utah voters approved Medicaid expansion in 2018 (covering those with incomes up to 138% FPL), which should substantially increase the number of Utah women who are eligible for Medicaid-funded contraceptive care. The state legislature has since limited this to a partial expansion.[90] In response to these developments, the team behind HER Salt Lake has formed a new initiative, Family Planning Elevated, to help health clinics across the state scale up their services to serve newly eligible populations.

New Initiatives

A few other states have recently launched (or plan to launch) similar initiatives to reduce unintended pregnancy by improving contraceptive access. The Washington Department of Health has partnered with Upstream USA, the same organization working with Delaware, to provide training and technical assistance to the state's health care providers for four years starting in 2019. In 2018, the governor of Virginia announced that the state would use funds from its TANF block grant to award $6 million to select health care providers to make LARCs available to women whose incomes are below 250% of the federal poverty level, for those who choose them. The Virginia legislature later attempted to limit funding for the program in the state's budget, but the governor vetoed this amendment in May 2019, so the program is set to continue.

Concluding Thoughts

In recent years, reductions in unplanned pregnancy have led to roughly parallel reductions in unplanned childbearing, with positive benefits for women's health and children's well-being. But unplanned pregnancy rates remain high. For example, among unmarried women under the age of 30, the great majority of pregnancies are unintended. Even higher rates are experienced by low-income women and women of color.[91] A large fraction of these unintended pregnancies are not carried to term. However, with about a dozen states now placing severe restrictions on abortion in hopes that the Supreme Court will overturn *Roe v. Wade*, unplanned childbearing could very well rise again.

The public remains deeply divided over the issue of abortion, with roughly equal numbers identifying as "pro-life" versus "pro-choice," though about two-thirds report that they would not like to see the Supreme Court overturn Roe versus Wade, and almost 80% support abortion remaining legal in at least some circumstances.[92] The public is almost unanimous, on the other hand, in supporting the use of contraception.[93] Some of the states highlighted in this paper have shown what can be accomplished by ensuring that more women have access to the most effective forms of contraception. Not only have these efforts reduced unplanned pregnancy, but they have substantially reduced abortion rates as well—not to mention government costs for Medicaid and other assistance programs. It is surprising, in this context, that more states are not focusing on reducing unplanned pregnancies as the most effective and broadly acceptable way to reduce unplanned childbearing.

Given the current direction of federal policy and an increasingly conservative set of judges, women's reproductive choices and the well-being of children and families may increasingly depend on state action. Based on the evidence presented in this paper, we recommend greater efforts to train providers, inform young people about their options, and make the most effective forms of contraception widely available at little or no cost.

Notes

[1] Finer and Zolna, 2016, p. 843–52.

[2] Myers (2017) finds that access to abortion was likely a more important factor in explaining reductions in births among young women than policies governing contraceptive access.

[3] Katz and Goldin, 2002.

[4] Bailey, 2006, p. 289–320.

[5] Bailey, Hershbein, and Miller, 2012, p. 225–54.

[6] Seriously mistimed births are those that occur at least two years before they were intended.

[7] Any causal relationship between intendedness and infant health is difficult to untangle from the effects of maternal demographic characteristics that are correlated with both. Early literature reviews have generally found mixed evidence that intendedness impacts birth outcomes, see Gipson, Koenig, and Hindin, 2008, p. 18–38 and Logan et al., 2007.. Lindberg et al. (2015) suggest that this ambiguity may arise in part from imprecise measurement of intendedness, particularly in the distinction between slightly and seriously mistimed births. The studies cited above define unintended pregnancies as those that are unwanted or seriously mistimed, and control for maternal demographic characteristics using a variety of methods.

[8] Cheng et al., 2016, p. 421–29.

[9] We do not have causal estimates from RCTs of these relationships, and probably never will, but better estimates of the long-term effects of reducing unplanned pregnancies and births should be a high priority. Quasi-experimental studies and microsimulation models suggest this is an underappreciated strategy for improving the lives of children and families.

[10] Bailey, Malkova, and McLaren, 2016; Bailey, 2013.

[11] These results are based on regression-based estimates of the effects of birth timing on mothers' education, labor market experiences, and marriage prospects linked to estimates of how these latter variables affect their children's life trajectories.

[12] Karpilow et al., 2013.

[13] This estimate is based on a shift-share analysis between 1970 and 2012 adjusted for the selection bias embedded in the shift-share approach. The shift share analysis looked at what the child poverty rate would have been if there had been no increase in single parent families over this period. The adjustment for selection is based on research by Thomas and Sawhill, Journal of Policy Analysis and Management, 2002.

[14] Edin and Kefalas, 2005; Kearney and Levine, 2014.

[15] Sonfield and Kost, 2015.

[16] Ibid.

[17] Finer and Zolna, 2016, p. 843–52.

[18] Jones and Jerman, 2017, p. 1904–9.

[19] Behn, Pace, and Ku, 2019; North, 2019, https://www.vox.com/policy-and-politics/2019/2/22/18236227/abortion-planned-parenthood-gag-rule-trump..

[20] Henshaw, 1998; Finer and Zolna, 2016, p. 843–52..

[21] The latest data available on unintended pregnancy from the Guttmacher Institute are from 2011. These data correct for underreporting of pregnancies not carried to term in the National Survey of Family Growth using data from a census of abortion providers conducted by Guttmacher. It is possible to calculate more current estimates of unintended *births* using other data sources, because births can be observed without measuring the number of pregnancies that are aborted. See Buckles, Guldi, and Schmidt (2019) for recent estimates of unintended births. Since this paper focuses instead on unintended *pregnancy*, which includes pregnancies that end in birth, miscarriage, or abortion, we use the latest estimates from Guttmacher for accuracy.

[22] Finer and Zolna, 2016, p. 843–52.

[23] Pregnancy can end in three ways: birth, abortion, or miscarriage. We do not report trends on miscarriage.

[24] Buckles et al. (2019) predict the share of all births the Natality Detail Files that are unintended based on their analysis of the National Survey of Family Growth, which they use to measure the association of certain demographic characteristics with unintended births. They define unintended births as those that are unwanted or occurred two years or more before the woman desired.

[25] Finer and Zolna, 2016, p. 843–52.

[26] Jones and Jerman, 2017, p. 1904–9.

[27] U.S. Bureau of Labor Statistic, accessed May 28, 2019, https://fred.stlouisfed.org/series/LNS11300002.

[28] Glynn, May 10, 2019, https://www.americanprogress.org/issues/women/reports/2019/05/10/469739/breadwinning-mothers-continue-u-s-norm/.

[29] Johnston et al., 2017, p. 18.

[30] James Trussell, 2011, p. 397–404.

[31] The probability that a person does not get pregnant at all over a given period of time is equal to the success rate of her contraceptive method raised to the power of the number of years she is using that method. Sawhill and Venator (2014) then subtract this multiyear "success rate" from 100 percent to get the failure rate, graphed below (Figure 3). This assumes that there is an equal chance of not getting pregnant in every year of use and that successful users and failed users (where success is not getting pregnant during a year using birth control) have the same rate. While the chart only shows two forms of IUDs, the failure rate for subdermal implants (the other form of LARC) is similarly low.

[32] Guttmacher Institute, 2018.

[33] 1982 was the first year in which the NSFG sampled women who had never been married or had children. Starting in 2006, the NSFG began sampling women continuously as opposed to periodically. We refer to estimates from the 2006-2010, 2011-2013, 2013-2015, and 2015-2017 surveys using the midpoint year of each survey, as is standard for analyses of the NSFG. In the most recent wave, the NSFG added women between the ages of 45 and 49 to the sample; we limit our analysis to the subsample between the ages of 15 and 44 for consistency with prior surveys.

[34] This includes women who report having had sexual intercourse in the three months prior to their interview and who are not sterile for non-contraceptive reasons. When we show charts on the use of specific contraceptive methods, we limit the sample to women using some form of contraception regardless of sexual activity.

[35] One recent study found that LARC uptake surged among privately insured women in the month after the 2016 election (see Pace et al., 2019, p. 444–46) likely due to fear of losing contraceptive coverage (see Caron, 2019, https://www.nytimes.com/2019/02/04/health/iud-birth-control-trump.html).

[36] Women who report using multiple methods are assigned the method that is the most effective ("highest priority"). Many women who use LARCs or the pill also use condoms (for instance, to protect from sexual transmitted infections), but they will be coded as primarily using the most effective method reported.

[37] Kavanaugh and Jerman, 2018, p. 14–21.

[38] Harper et al., 2015, p. 562–68.
[39] Dehlendorf et al. 2010.

[40] Strasser et al. 2016; Institute of Medicine 2003; Gordon 1976.

[41] Centers for Disease Control and Prevention (CDC). *1991-2017 High School Youth Risk Behavior Survey Data.* Available at http://nccd.cdc.gov/youthonline/. Accessed on 23 May 2019.

[42] Finer and Philbin, 2014, p. e271-279.

[43] Julian, 2018, https://www.theatlantic.com/magazine/archive/2018/12/the-sex-recession/573949/.

[44] Hope, 2019, https://daily.jstor.org/dont-fear-sex-recession/.

[45] Ingraham, 2019, https://www.washingtonpost.com/business/2019/03/29/share-americans-not-having-sex-has-reached-record-high/.

[46] The trend prior to 2008 is extremely noisy (likely due to the small sample size of the GSS), but the fraction reporting no sex did not appear to change between 1989 and 2008.

[47] Twenge, Sherman, and Wells, 2017, p. 2389–2401.

[48] Currie and Schwandt, 2014, p. 14734–39; Chatterjee and Vogl, 2016; Buckles, Hungerman, and Lugauer, 2018; Sobotka, Skirbekk, and Philipov, 2011, p. 267.

[49] Art Swift, "Birth Control, Divorce Top List of Morally Acceptable Issues," Gallup, June 8, 2016, https://news.gallup.com/poll/192404/birth-control-divorce-top-list-morally-acceptable-issues.aspx.

[50] Guttmacher Institute, "Contraceptive Use in the United States."

[51] Adele Shartzer et al., "Knowledge Gaps and Misinformation about Birth Control Methods Persist in 2016," 2016, 16.

[52] Since the rollout of federally funded family planning programs occurred at different times in different counties, Bailey (2012) is able to compare fertility trends in counties that received family planning grants to trends in similar counties that did not.

[53] Zolna and Frost, 2016, https://www.guttmacher.org/report/publicly-funded-family-planning-clinic-survey-2015.

[54] Despite no increases in federal funding, the share of publicly funded clinics offering any LARC method increased from 57% to 75% between 2003 and 2015, according to Zolna and Frost (2016). These services are made possible in large part by Medicaid expansion.

[55] Adjusted for inflation using the CPI-U-RS.

[56] U.S. Department of Health and Human Services, "Funding History," Text, HHS.gov, April 4, 2019, https://www.hhs.gov/opa/title-x-family-planning/about-title-x-grants/funding-history/index.html.

[57] Sonfield, 2014, https://www.guttmacher.org/gpr/2014/12/beyond-preventing-unplanned-pregnancy-broader-benefits-publicly-funded-family-planning.

[58] "State Family Planning Funding Restrictions," Guttmacher Institute, March 14, 2016, https://www.guttmacher.org/state-policy/explore/state-family-planning-funding-restrictions.

[59] Packham, 2017, p.168–85; Lu and Slusky, 2018, p. 1–73.

[60] Department of Health and Human Services, "Compliance With Statutory Program Integrity Requirements," HHS-OS-2018-0008 42 CFR 59 § (2019), https://www.federalregister.gov/documents/2019/03/04/2019-03461/compliance-with-statutory-program-integrity-requirements.

[61] Werner, 2019, https://www.washingtonpost.com/powerpost/house-democrats-move-to-block-trump-administrations-abortion-gag-rule/2019/04/29/d00e3c1e-6ac6-11e9-be3a-33217240a539_story.html.

[62] Ranji, Bair, and Salganicoff, 2016, https://www.kff.org/report-section/medicaid-and-family-planning-medicaid-family-planning-policy/.

[63] Originally, states seeking to expand coverage had to obtain waivers, which are time-limited. The Affordable Care Act now allows states to expand coverage through permanent State Plan Amendments.

[64] This includes only states that have federal approval to extend Medicaid eligibility for family planning. States that operate separate state-funded programs are not included.

[65] "Medicaid Family Planning Eligibility Expansions," Guttmacher Institute, March 14, 2016, https://www.guttmacher.org/state-policy/explore/medicaid-family-planning-eligibility-expansions.

[66] Kaiser Family Foundation, "Status of State Medicaid Expansion Decisions: Interactive Map," May 13, 2019, https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/.

[67] Bearak et al., 2016, p.139–44; Snyder et al., 2018, p. 219–23; Carlin, Fertig, and Dowd, 2016, p. 1608–15; Law et al., 2016, p. 392–97.

[68] Pace, Dusetzina, and Keating, 2016, p.811–17.

[69] Behn, Pace, and Ku, 2019.

[70] Pear, 2019, https://www.nytimes.com/2019/01/14/us/politics/court-trump-birth-control.html.

[71] Sawhill and Venator, 2014, p. 12.

[72] Campo et al., 2012.

[73] Biggs et al., 2015, p. 167–73.

[74] Byker, Myers, and Graff, 2019.

[75] Antonishak, Kaye, and Swiader, 2015, p. 23–36.

[76] Kearney and Levine, 2014; Trudeau, 2016, p. 975–1003.

[77] Colorado Department of Public Health and Environment, "Taking the Unintended out of Pregnancy: Colorado's Success with Long-Acting Reversible Contraception.," Department of Public Health and Environment, January 2017, https://www.colorado.gov/pacific/cdphe/cfpi-report.

[78] Note that the first study measures birth *rates*, while the second measures *total* births.

[79] McNicholas et al., 2014, p. 635–43.

[80] Mestad et al., 2011, p. 493–98; Rosenstock et al., 2012, p.1298–1305.

[81] Peipert et al., 2012, p. 1291–97; McNicholas et al., 2014, 635-43.

[82] This will be true of nonrandomized studies that rely on subsamples of women who visit reproductive health clinics, since these are self-selected groups who may be particularly likely to take actions to avoid unintended pregnancy. Examples of quasi-experimental studies in this field include research on the Colorado Family Planning Initiative, which compare outcomes in counties or neighborhoods that received Title X funding to outcomes in counties or neighborhoods that did not, and research on HER Salt Lake, which compared outcomes at participating centers to those at nonparticipating centers before and after an intervention.

[83] McNicholas et al., 2014, 635-43.

[84] Guttmacher Institute, "Medicaid Family Planning Eligibility Expansions," Guttmacher Institute, 2019, https://www.guttmacher.org/state-policy/explore/medicaid-family-planning-eligibility-expansions.

[85] It is already true that federal funds cannot be used for abortion coverage except in cases of rape, incest, or life endangerment. However, abortion providers may offer other services that are reimbursed by Medicaid. A few states, including Iowa, have sought to restrict any Medicaid funding from going to abortion providers by opting out of the federal Medicaid family planning program and operating separate state-funded programs.

[86] Biggs et al., 2015, 167-73.

[87] "Reducing Unintended Pregnancies in Iowa by Investing in Title X Clinics" (Philliber Research Associates and Bixby Center for Global Reproductive Health, January 2012).

[88] Biggs et al., 2015, 167-73.

[89] Sanders et al., 2018, p. 550–56.

[90] Musumeci and Rudowitz, 2019, https://www.kff.org/medicaid/issue-brief/from-ballot-initiative-to-waivers-what-is-the-status-of-medicaid-expansion-in-utah/.

[91] Karpilow et al., 2013.

[92] Gallup, "Abortion," Gallup.com, accessed June 12, 2019, https://news.gallup.com/poll/1576/Abortion.aspx.

[93] Swift, 2018.

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