

News in focus



STEFANI REYNOLDS/BLOOMBERG/GETTY

Access to abortion is one of the most polarizing issues in the United States.

WHY HUNDREDS OF SCIENTISTS ARE WEIGHING IN ON A HIGH-STAKES ABORTION CASE

Studies suggest that a reversal of the landmark decision *Roe v. Wade* would be detrimental for many.

By Amy Maxmen

An upcoming case in the US Supreme Court might hasten the end of abortion across roughly half of the United States. More than 800 scientists and several scientific organizations have provided evidence to the court showing that abortion access is an important component of reproductive health care.

The researchers, some of whom have studied the impact of abortion for many years, are rebutting arguments made to the court that

abortion has no beneficial effect on women's lives and careers – and might even cause them harm. "The scientific community is eager to weigh in on such an important issue, especially given five decades of evidence concerning the importance of abortion access," says Stephanie Toti, a director at the Lawyering Project, a group based in New York City that advocates for abortion access in the United States. She adds, "This case is a big deal."

The case, to be heard by the Supreme Court on 1 December, is between the state of Mississippi, which has issued a ban on abortion after 15

weeks of pregnancy, and the Jackson Women's Health Organization, the only clinic in the state that provides abortions. In lower US courts, the clinic has successfully argued that the ban violates *Roe v. Wade*, the landmark 1973 Supreme Court decision that enshrined the federal right to an abortion until the point that a fetus can live outside the womb – a 'viability standard' typically set at 22 or 24 weeks of pregnancy. But state officials are now taking the case to the highest court, seeking to end the precedent set by *Roe* so that individual states can set their own rules on the legality of abortion.

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Legal analysts say the Mississippi case is the first in the Supreme Court in 30 years that could directly overturn or significantly undermine *Roe*. Some analysts think that is likely to happen, judging from the court's current composition. Former US president Donald Trump promised to appoint Supreme Court justices who would reverse *Roe*, and succeeded in replacing three justices during his presidency: there are now six conservative justices who have said that they disagree with abortion precedents, and three liberal justices.

With much at stake, many people on both sides of the abortion debate – including scientists, religious leaders and athletes – have filed a total of more than 130 'amicus', or 'friend of the court', briefs to the Supreme Court in advance of the Mississippi case, *Dobbs v. Jackson Women's Health Organization*. A handful of the briefs are authored by hundreds of researchers in public health, social science, health equity and economics, who urge the court to uphold abortion rights on the basis of dozens of peer-reviewed studies examining the effects of abortion on well-being.

Reliable data

State restrictions, dictating, for instance, that teenagers obtain parental consent for abortion, have been fought in courts for decades. The most recent major Supreme Court decision on abortion – *Planned Parenthood v. Casey* in 1992 – determined that judges must weigh the reasons for new regulations against the obstacles they create for people seeking abortions. But data to help inform such decisions have been lacking.

This gap was noted by former conservative Supreme Court justice Anthony Kennedy in a 2007 case that upheld a ban on one abortion procedure. Ruling in favour of the restriction, Kennedy decided that it was protecting women from depression and a loss of self-esteem. "While we find no reliable data to measure the phenomenon, it seems unexceptionable to conclude some women come to regret their choice," he said in his opinion. (*Nature* recognizes that transgender men and non-binary people might become pregnant and seek abortion care. We use 'women' in this story to reflect how participants are described in the court briefs and studies we cite.)

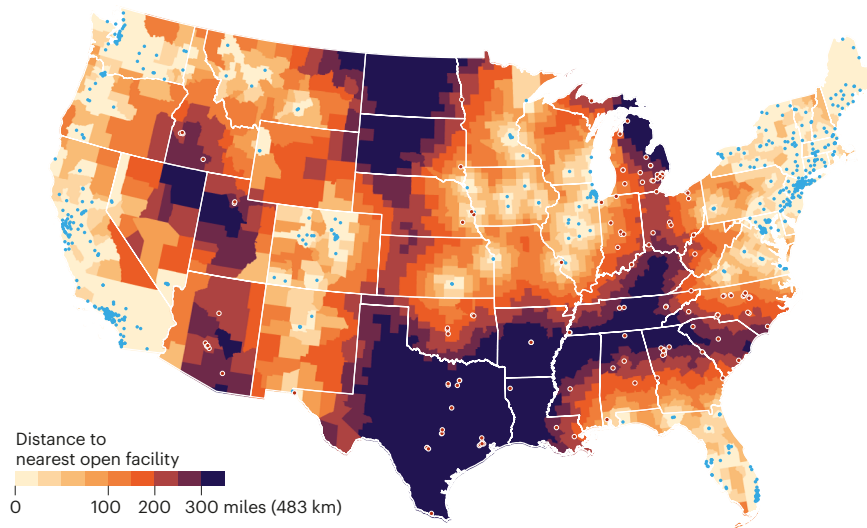
But as he wrote those words, studies to supply such data were in the works. Chief among them was an initiative to compare women who had abortions with those who wanted them, but were turned away from clinics for various reasons, including a lack of doctor availability. Called the Turnaway Study, the effort followed about 1,000 women in the United States for five years after they sought abortions. The women were similar in terms of physical, mental and economic well-being initially, but their situations diverged as time passed¹.

In more than 40 reports published in

IF ROE IS OVERTURNED

Twelve states with 'trigger bans' and ten others with multiple restrictions might ban abortion almost entirely if *Roe v. Wade* is undermined. In this scenario, an economist estimates that, on average, a woman in the affected states will need to travel 280 miles (450 kilometres) to have the procedure, which would prevent around 100,000 women from accessing abortion care each year owing to economic and other hardships.

- Abortion facility likely to close
- Abortion facility likely to remain open



SOURCE: CAITLIN MYERS/MIDDLEBURY COLLEGE

peer-reviewed scientific journals, researchers analysed what happened to the women, adjusting for potential confounding factors such as age. The overall finding was that, on average, receiving an abortion didn't harm women's mental or physical health, but being denied an abortion resulted in some negative financial and health outcomes.

"The science clearly shows that abortion is incredibly common, and it is important to women living full lives," says Diana Greene Foster, leader of the Turnaway Study and a reproductive-health researcher at the University of California, San Francisco. Recent years have seen the Turnaway and other studies referenced in abortion court cases. For

"The scientific community is eager to weigh in on such an important issue. This case is a big deal."

example, judges have cited a 2018 National Academies of Sciences, Engineering, and Medicine report² finding that abortion is safe. This and other reports find that death rates are nearly 14 times as high for childbirth³ as for legal abortion procedures.

The amicus briefs authored by hundreds of scientists ahead of the Mississippi case address a particular line of argument made by state attorney-general Lynn Fitch and her colleagues in their court filing – namely, that abortion is unnecessary and possibly harmful to women. "*Roe* and *Casey* block the States and the people from fully protecting unborn life, women's health, and their professions," Fitch and her colleagues write.

They argue that abortion access is no longer necessary because women have the ability to succeed in their professional lives without it. This, the brief explains, is due to the availability of highly effective contraceptives; state assistance, such as adoption services; and policies including those that prevent employers from discriminating on the basis of pregnancy.

But half a century of evidence – much of it accumulating in the past decade – runs contrary to these claims, Foster says. Those data appear in the amicus brief that she helped draft with about 100 social scientists who study abortion. It cites, for example, a 2017 report⁴ finding that women who had abortions were no more depressed or anxious than were those who wanted one but couldn't get it, and a 2019 study⁵ of nearly 900 women revealing that those who sought but were unable to get abortions reported higher rates of chronic headaches and joint pain five years later, compared with those who got an abortion.

In addressing whether contraceptives obviate the need for abortion, the research briefs point out that abortion is still common – nearly one in four women in the United States will have an abortion by age 45 (ref. 6). The briefs also discuss how birth control is fallible, and young people and poor people have less access to it.

About one-quarter of people in poverty in the United States are Black. Joia Crear-Perry, president of the National Birth Equity Collaborative in Washington DC, warns that banning abortion would disproportionately harm the physical, mental and economic well-being of Black people with the capacity for pregnancy. In particular, Crear-Perry is concerned that abortion bans will raise the already dire rates of maternal mortality for Black women in the United States – which currently stand

at 44 deaths per 100,000 births, 4 times the global average for high-income countries. The amicus brief that she co-signed with other health-equity researchers and advocates states: “Black women, in particular, who continue to experience the effects of racially-motivated policies and practices that impact their maternal health, must have the right to decide whether to continue a pregnancy to term.”

The empowerment argument

Mississippi’s assertion that abortion access has nothing to do with women’s ability to pursue careers and financial stability is supported by an amicus brief signed by anti-abortion organizations and a group that describes itself as 240 women scholars and professionals, who have degrees in law, medicine and other subjects. “Women do not need abortions to achieve,” says Michele Sterlace-Accorsi, the executive director of the organization Feminists Choosing Life of New York, and a signatory on the brief. It criticizes the Turnaway Study and others that link the right to abortion to women’s health and empowerment, saying that researchers have mistaken correlation for causation.

More than 150 economists disagree. Some of the studies described in the economists’ amicus brief find that abortion legalization in the 1970s helped to increase women’s educational attainment, participation in the labour force and earnings. That remains true, the brief says. For example, one study⁷ posted last year assessed about 560 women of comparable age and financial standing periodically after they either got an abortion or were unable to get an abortion they sought. After five years, the group that was turned away from an abortion had experienced a 78% increase in overdue debt and an 81% increase in publicly recorded financial events, such as bankruptcies and evictions. Meanwhile, the overdue debt of women who had received an abortion remained stable, and their publicly recorded financial events had declined modestly.

“Mississippi is arguing that there is no evidence that abortion access matters to people’s lives, and that is just wrong,” says Caitlin Myers, an applied macroeconomist at Middlebury College in Vermont, and a signatory on the brief.

The Supreme Court will decide the case by the end of June 2022. Even if the justices don’t overturn *Roe*, they could effectively end the precedent by erasing its viability standard, which permits abortion until a fetus can survive outside of the womb. If the court shifts this standard on the basis of arguments about when a fetus becomes a person, the research filed to the justices might not matter. Because this question is not something that science clearly defines, Toti says, courts generally haven’t debated it.

With this in mind, some researchers are forecasting what the future might look like in the United States if *Roe* is overturned or significantly curtailed by the Supreme Court. In one

unpublished analysis, Myers modelled what will happen if abortions are banned in 12 states with pre-emptive ‘trigger bans’ – which will automatically block abortion if *Roe* is overturned – and in 10 other states with several types of abortion restriction. She estimates that, on average, a woman in these states who seeks an abortion will need to travel 450 kilometres (280 miles) to a clinic (see ‘If *Roe* is overturned’), and each year the distance will present an insurmountable obstacle for around 100,000 of them, who don’t have the means to travel far.

Laurie Sobel, a researcher at KFF, a non-partisan health-policy research organization based in San Francisco, California, is working on a similar assessment. KFF refrains from taking political positions, but Sobel says the

evidence for the potential repercussions of this court decision is clear. “This could have a devastating impact on women that would be real and very severe in many states.”

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SCIENTISTS WORLDWIDE WATCH UK COVID INFECTIONS

Relaxation of restrictions – especially in England – is revealing the limits of relying on vaccines alone.

By Luke Taylor

The COVID-19 pandemic in the United Kingdom has often foreshadowed what came later elsewhere. The highly contagious Alpha variant was first detected there, and the country then reported high caseloads of the more-contagious Delta strain before this variant dispersed around the rest of the world. The United Kingdom also saw a wave of infections that seems to have preceded a similar glut now sweeping Western Europe.

Furthermore, England was among the first regions in Western Europe to lift almost all of its COVID-19 restrictions, following one of the world’s fastest vaccine roll-outs. It ended the legal requirements for social distancing and mask use on 19 July, with Wales and Scotland – which set their own public-health policies – lifting most of their restrictions on 7 and 9 August, respectively. Northern Ireland followed on 31 October.

As one of the first countries to trust high vaccine coverage and public responsibility alone to control the spread of SARS-CoV-2, the United Kingdom has become a control experiment that scientists across the world are studying.

“We are watching the increase in cases closely, trying to dissect what is going on and how that might influence our situation right now,” says Rafael Radi, a biochemist and

coordinator of Uruguay’s COVID-19 Scientific Advisory Group.

Nature spoke to scientists around the world about what they hope to learn from the UK experience.

Can vaccines alone prevent infections from surging?

The United Kingdom was hit by three million infections between July and October this year – comparable to when the country was under a strict lockdown in late 2020. This is despite 79.5% of those aged 12 years and older having received two vaccine doses as of 31 October.

UK infection rates are higher than those in countries in continental Europe, where COVID-19 restrictions were relaxed later or remain in place. In the 7 days between 17 October and 23 October, Spain recorded 286 infections per one million people, and Germany 1,203. The United Kingdom registered 4,868 over the same week.

The surge in infections shows that vaccines alone cannot contain the virus, say scientists calling for the introduction of ‘soft’ public-health measures to avoid another lockdown.

“The vaccines are amazing and doing exactly what they’re supposed to do,” says Susan Butler-Wu, director of medical microbiology at the LAC+USC Medical Center in Los Angeles, California. “But why don’t we want to give them the best chance by combining them with