

Viewpoint: US childhood vaccination rates are at a 10-year low. Here's how fringe science views are seeping into the mainstream

Rates of routine childhood vaccination hit [a 10-year low](#) in 2023. That, according to the Centers for Disease Control and Prevention, puts about 250,000 kindergartners at risk for measles, which often leads to hospitalization and can cause death. In recent weeks, an infant and two young children have been hospitalized amid an ongoing measles outbreak in Philadelphia that spread to a day care center.

It's a dangerous shift driven by a critical mass of people who now reject decades of science backing the safety and effectiveness of childhood vaccines. State by state, they've persuaded legislators and courts to more easily allow children to enter kindergarten without vaccines, citing religious, spiritual, or philosophical beliefs.

Growing vaccine hesitancy is just a small part of a broader rejection of scientific expertise that could have consequences ranging from disease outbreaks to reduced funding for research that leads to new treatments. "The term 'infodemic' implies random junk, but that's wrong," said Peter Hotez, a vaccine researcher at Baylor College of Medicine in Texas. "This is an organized political movement, and the health and science sectors don't know what to do."

Changing views among [Republicans have steered](#) the relaxation of childhood vaccine requirements, according to the Pew Research Center. Whereas nearly 80% of Republicans supported the rules in 2019, [fewer than 60% do today](#). Democrats have held steady, with about 85% supporting. Mississippi, which once boasted the nation's [highest rates of childhood](#) vaccination, began [allowing religious exemptions](#) last summer. Another leader in vaccination, [West Virginia](#), is moving to do the same.

An anti-science movement picked up pace as Republican and Democratic perspectives on science diverged during the pandemic. Whereas 70% of Republicans said that science has a mostly positive impact on society in 2019, less than half felt that way in a [November poll from Pew](#). With presidential candidates lending airtime to anti-vaccine messages and members of Congress maligning scientists and pandemic-era public health policies, the partisan rift will likely widen in the run-up to November's elections.

Dorit Reiss, a vaccine policy researcher at the University of California Law San Francisco, draws parallels between today's backlash against public health and the early days of climate change denial. Both [issues progressed](#) from nonpartisan, fringe movements to the mainstream once they appealed to conservatives and libertarians, who traditionally seek to limit government regulation. "Even if people weren't anti-vaccine to start with," Reiss said, "they move that way when the argument fits."

Even certain actors are the same. In the late '90s and early 2000s, a libertarian think tank, the American Institute for Economic Research, undermined climate scientists with reports that questioned global warming. The same institute issued a statement early in the pandemic, grandly called the "Great Barrington Declaration." It argued against measures to curb the disease and advised everyone — except the most vulnerable — to go about their lives as usual, regardless of the risk of infection. Tedros Adhanom

Ghebreyesus, director-general of the World Health Organization, warned that such an approach [would overwhelm health systems](#) and put millions more at risk of disability and death from covid. “Allowing a dangerous virus that we don’t fully understand to run free is simply unethical,” he said.

Another group, the National Federation of Independent Business, [has fought](#) regulatory measures to curb climate change [for over a decade](#). It moved on to vaccines in 2022 when [it won](#) a Supreme Court case that overturned a government effort to temporarily require employers to mandate that workers either be vaccinated against covid or wear a face mask and test on a regular basis. Around 1,000 to 3,000 covid deaths would have been averted in 2022 had the court upheld the rule, [one study](#) estimates.

Politically charged pushback may become better funded and more organized if public health becomes a political flashpoint in the lead-up to the presidential election. In the first few days of 2024, Florida’s surgeon general, appointed by Republican presidential candidate and Florida Gov. Ron DeSantis, called for a halt to use of mRNA covid vaccines as he echoed DeSantis’ incorrect statement that the shots have “not been proven to be safe and effective.” And vaccine skeptic Robert F. Kennedy Jr., who is running for president as an independent, announced that his campaign communications would be led by Del Bigtree, the executive director of one of the most well-heeled anti-vaccine organizations in the nation and host of a [conspiratorial talk show](#). Bigtree posted a letter on the day of the announcement rife with misinformation, such as a baseless rumor that covid vaccines make people more prone to infection. He and Kennedy frequently pair health misinformation with terms that appeal to anti-government ideologies like “medical freedom” and “religious freedom.”

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A product of a Democratic dynasty, Kennedy’s appeal appears to be stronger among Republicans, a [Politico analysis](#) found. DeSantis said he would [consider nominating Kennedy](#) to run the FDA, which approves drugs and vaccines, or the CDC, which advises on vaccines and other public health measures. Another Republican candidate for president, Vivek Ramaswamy, [vowed to gut the CDC](#) should he win.

Today’s anti-science movement found its footing in the months before the 2020 elections, as primarily Republican politicians rallied support from constituents who resented pandemic measures like masking and the closure of businesses, churches, and schools. Then-President Donald Trump, for example, mocked Joe Biden for wearing a mask at the presidential debate in September 2020. Democrats fueled the politicization of public health, too, by blaming Republican leaders for the country’s soaring death rates, rather than decrying [systemic issues](#) that rendered the U.S. vulnerable, such as underfunded health departments and severe economic inequality that put some groups at far higher risk than others. Just before Election Day, a Democratic-led congressional subcommittee released [a report](#) that called the Trump administration’s pandemic response “among the worst failures of leadership in American history.”

Republicans launched a subcommittee investigation into the pandemic that sharply criticizes scientific institutions and scientists once seen as nonpartisan. On Jan. 8 and 9, the group questioned Anthony Fauci, a leading infectious disease researcher who has advised both Republican and Democratic

presidents. Without evidence, committee member Marjorie Taylor Greene (R-Ga.) [accused Fauci](#) of supporting research that created the coronavirus in order to push vaccines: “He belongs in jail for that,” Greene, a vaccine skeptic, said. “This is like a, more of an evil version of science.”

Taking a cue from environmental advocacy groups that have tried to fight strategic and monied efforts to block energy regulations, Hotez and other researchers say public health needs supporters knowledgeable in legal and political arenas. Such groups might combat policies that limit public health power, advise lawmakers, and provide legal counsel to scientists who are harassed or called before Congress in politically charged hearings. [Other initiatives](#) aim to present the scientific consensus clearly to avoid both-sidesism, in which the media presents opposing viewpoints as equal when, in fact, the majority of researchers and bulk of evidence point in one direction. Oil and tobacco companies used this tactic effectively to seed doubt about the science linking their industries to harm.

Kathleen Hall Jamieson, director of the Annenberg Public Policy Center at the University of Pennsylvania, said the scientific community must improve its communication. Expertise, alone, is insufficient when people mistrust the experts’ motives. Indeed, [nearly 40% of Republicans](#) report little to no confidence in scientists to act in the public’s best interest.

In a [study published last year](#), Jamieson and colleagues identified attributes the public values beyond expertise, including transparency about unknowns and self-correction. Researchers might have better managed expectations around covid vaccines, for example, by emphasizing that the protection conferred by most vaccines is less than 100% and wanes over time, requiring additional shots, Jamieson said. And when the initial covid vaccine trials demonstrated that the shots drastically curbed hospitalization and death but revealed little about infections, public health officials might have been more open about their uncertainty.

As a result, many people felt betrayed when covid vaccines only moderately reduced the risk of infection. “We were promised that the vaccine would stop transmission, only to find out that wasn’t completely true, and America noticed,” said Rep. Brad Wenstrup (R-Ohio), chair of the Republican-led coronavirus subcommittee, at a [July hearing](#).

Jamieson also advises repetition. It’s a technique expertly deployed by those who promote misinformation, which perhaps explains why the number of people who believe the anti-parasitic drug ivermectin treats covid [more than doubled](#) over the past two years — despite [persistent evidence to the contrary](#). In November, the drug got another shoutout at [a hearing](#) where congressional Republicans alleged that the Biden administration and science agencies had censored public health information.

Hotez, author of a [new book](#) on the rise of the anti-science movement, fears the worst. “Mistrust in science is going to accelerate,” he said.

And [traditional efforts](#) to combat misinformation, such as debunking, may prove ineffective.

“It’s very problematic,” Jamieson said, “when the sources we turn to for corrective knowledge have been discredited.”

Amy Maxmen is a science journalist in New York City who covers the entanglements of health, climate, policy and the people behind research. Find Amy on X [@amymaxmen](#)

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