

New Arkansas Law—and Similar Bills—Endanger Transgender Youth, Research Shows

The legislation runs counter to evidence that puberty blockers and hormone treatments are safe and save lives

By Sara Reardon on April 9, 2021



Credit: Nadia Bormotova *Getty Images*

This week Arkansas became the first state to ban physicians from giving hormones or puberty-delaying drugs to transgender people under age 18. Doctors who do so could be stripped of their licenses and sued. The law is called the Save Adolescents from Experimentation (SAFE) Act. It became official on Tuesday afternoon, when the state's Republican-controlled legislature voted to override Governor Asa Hutchinson's attempted veto.

Nineteen other states have introduced similar legislation, and some of the bills outline strict penalties. Under one that passed Alabama's Senate in March, physicians who

administer the treatments to minors will face up to 10 years in prison.

The state senate sponsor of the Arkansas bill, Alan Clark, has said that puberty blockers and hormone treatments are “at best experimental and at worst a serious threat to a child’s welfare.” But medical and scientific organizations say his claim is wrong. They include the American Medical Association, the American Psychological Association, the American Psychiatric Association, the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry (AACAP) and the Endocrine Society. These groups represent thousands of clinicians and researchers nationwide. Among them, the AACAP recently argued that “state-based legislation regarding the treatment of transgender youth that directly oppose the evidence-based care ... is a serious concern” that endangers young people.

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Experts say claims that gender-affirming medical treatments are experimental or risky are flawed on several levels. Puberty blockers—a class of drugs called GnRH agonists that dampen the effects of sex hormones—have been used safely for decades to delay puberty in children who start it too early. In transgender youth, the drugs are used to prevent the development of permanent sex characteristics such as breasts and voice changes at the onset of puberty—generally age nine or older. Gender-affirming hormones—testosterone or estrogen—are not usually given until a person is in their teens. These hormones promote the development of sex characteristics that are different from those of the sex that an individual was assigned at birth.

Data are starting to emerge about the long-term effects of these treatments in young people diagnosed with gender dysphoria, defined as distress resulting from a difference between one’s gender identity and the sex that individual was assigned at birth, from a few studies. Teams in the Netherlands and the U.S. have been following groups of transgender adolescents from the time they begin treatment. Thus far, this research has found hormone treatments and puberty-blocking drugs to be safe.

Crucially, the therapies also lower the high rate of suicide attempts and mental illness among transgender youth. Such evidence suggests that withholding treatment is not an

ethical option, according to Guy T'Sjoen, an endocrinologist at the University of Ghent in Belgium, who collaborates with the team in the Netherlands. "It's not doing nothing; it's very harmful," he says.

The Netherlands group was the first to study puberty blockers in transgender children. And Annelou de Vries, a child and adolescent psychiatrist at VU University Medical Center in Amsterdam, says she has not seen any major side effects in the approximately 1,500 adolescents treated at her clinic. Last June her team published a study showing that 178 transgender adolescents receiving blockers had better psychological functioning and fewer suicide attempts, compared with 272 transgender youth who did not receive early care.

That is an important result, says Joshua Safer, an endocrinologist at Mount Sinai Hospital in New York City, given that around 40 percent of transgender adolescents consider suicide, according to one nationwide survey. Delaying puberty, he says, is a cautious approach that allows physicians to slow the development of sex characteristics without giving gender-affirming hormones to young adolescents. State laws banning the practice could cost lives, Safer says. "If we actually deny care to people, they would suffer," he says. "Going after puberty blockers sounds like sabotage to me."

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The U.S. research team, which is funded by the National Institutes of Health, is seeing similar outcomes. Its study, which is the largest to prospectively follow transgender youth from the onset of treatment, was launched in 2015 and has recruited nearly 400 people. About 100 of them are early adolescents who are receiving puberty blockers at the average age of 11. And more than 300 are late adolescents receiving hormone treatment at the average age of 16. In a paper published last year, the team found that youth who received treatment at an earlier age were mentally healthier than those who did not receive it until later.

The U.S. researchers acknowledge some confounding factors in the study. Young adolescents who go on puberty blockers tend to have support from their parents, which also helps improve mental health. And it will be many years before they can see effects

that do not appear until old age. Still, “everything we’ve looked at thus far is incredibly encouraging,” says Johanna Olson-Kennedy, a pediatrician at Children’s Hospital Los Angeles, who is heading part of the NIH-funded study.

As their investigation progresses, Olson-Kennedy and her colleagues are trying to get as much information as they can about how gender-affirming treatments affect the body, which will help physicians better target treatment to individuals and know what to watch for. One major medical concern about puberty blockers is their effect on bone growth. The drugs prevent the accumulation of bone mineral in growing children, which is why physicians try not to administer them to adolescents for very long. But a study by the Netherlands team found that transgender boys’ bone density returned to normal within a few years. And more recently, the NIH-funded study found that transgender girls tended to have lower bone density before starting treatment, possibly because they were less physically active than cisgender boys their age.



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“It’s true, at present, there are still many things we don’t know for sure,” de Vries says. “But if we have to wait until we know everything, we will never be at that point.”

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