Transitioning transgender teenagers are not new. This Dutch clinic has been helping them for decades

Relationships between and physicians last a long time at Amsterdam's Center of Expertise on Gender Dysphoria. Some of today's adult patients have been visiting the clinic since the age of 5, when their parents first noticed signs of gender dysphoria — the experience of distress that can occur when a person's gender identity does not match the sex they were assigned at birth. For some very young children, the negative feelings subside with the passage of time and they no longer identify as transgender. But for other children, the distress persists into the years leading up to puberty.

These youth can come to the clinic to discuss embarking on a treatment protocol that begins with a diagnostic phase that lasts around six months. During this time, the young people speak with clinicians, fill out questionnaires, and receive mental health support. After that, youth who are interested in a medical transition will be prescribed puberty blockers. From there, they may need to wait a couple of years until becoming eligible for hormones that initiate the development of secondary sex characteristics aligned with their gender identity. At 16, individuals assigned female at birth can get mastectomies. At 18, patients can meet with their physicians to discuss other gender-affirming surgeries, such as hysterectomies, vaginectomies, and phalloplasties (the surgical construction of a penis) for trans men, and vaginoplasties (the surgical construction of a vagina) for trans women.

Annelou de Vries, a child and adolescent psychiatrist at the clinic, has worked with hundreds of transgender children, some of whom have gone on to medically transition as adults. Being able to follow them for so long, providing therapy over a course of years, is "an opportunity you usually don't have in psychiatry," she said.

For many years, the clinic — widely known as "the Dutch clinic" — was one of the few places in the world where children could receive transgender medical care. VU University Medical Center, which has since merged with the Academic Medical Center to create Amsterdam University Medical Centers, originally offered multidisciplinary support to trans adults starting in the 1970s. When a 12-year-old showed up in 1987 and was soon followed by more children, the staff developed its stepwise treatment protocol for teenage patients. De Vries and her colleagues eventually published studies showing the protocol's effectiveness, and these studies continue to be highly influential, both in the Netherlands and internationally.

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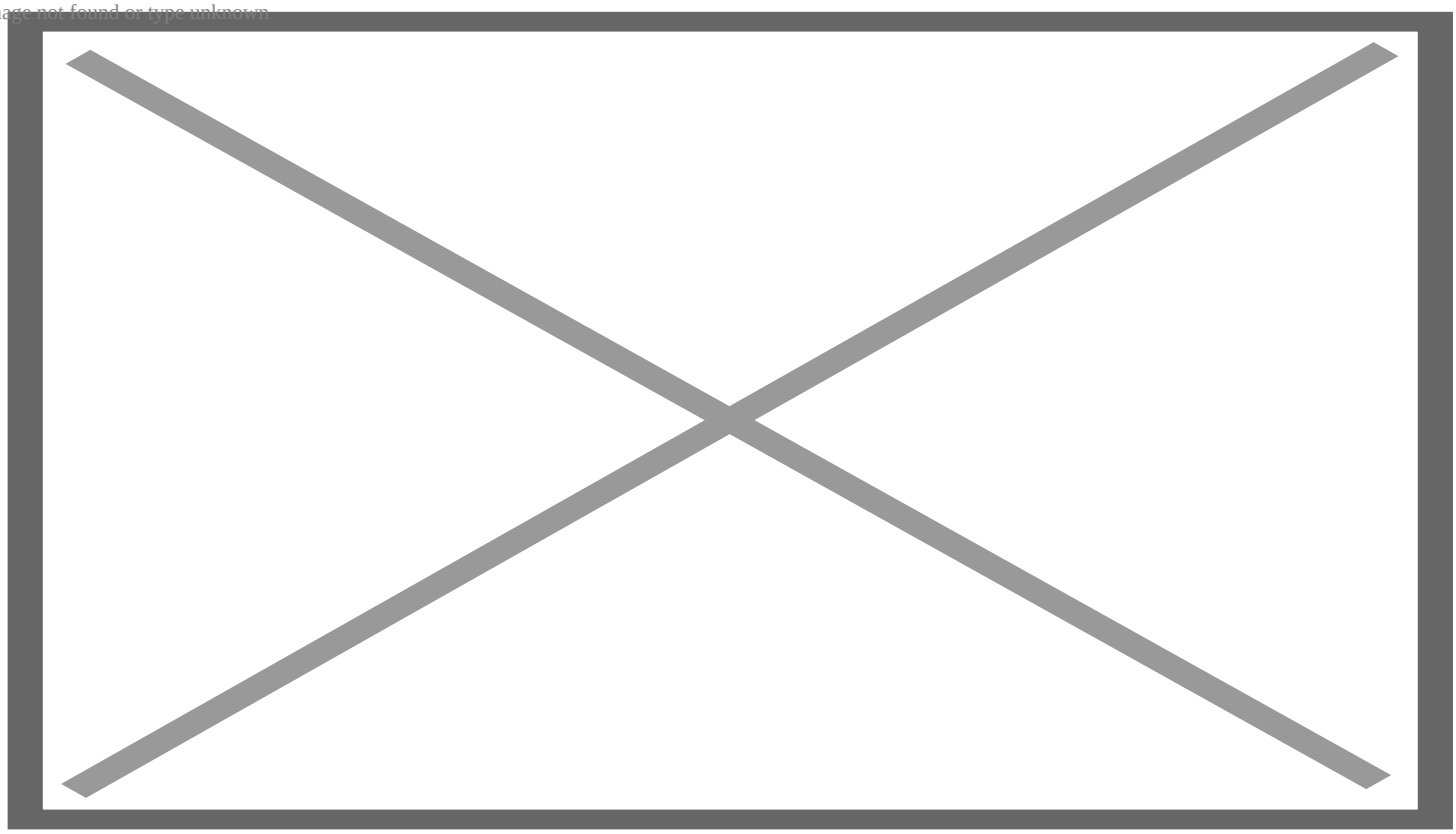


But pediatric transgender medicine is a new field with a lot of questions yet to be answered by science. What is the long-term impact of blocking puberty on a young person's health? Can practitioners correctly determine which youngsters will still identify as trans when they are adults? Do the psychological assessments contribute to children's suffering by delaying access to puberty blockers and hormones? Why has the number of teens coming forward to receive transgender medical care, particularly those assigned female at birth, risen so dramatically in recent years?

As researchers attempt to answer these questions, the Dutch clinic's model, along with similar approaches in the U.S., has faced criticism from all sides. Right-wing politicians, religious conservatives, and some health care associations are calling for medical treatment of teens to be banned or avoided if at all possible; meanwhile, some activists and physicians say the protocol is too slow. They criticize physicians like de Vries and her colleagues for acting as gatekeepers who place unnecessary hurdles on the path of gender transition.

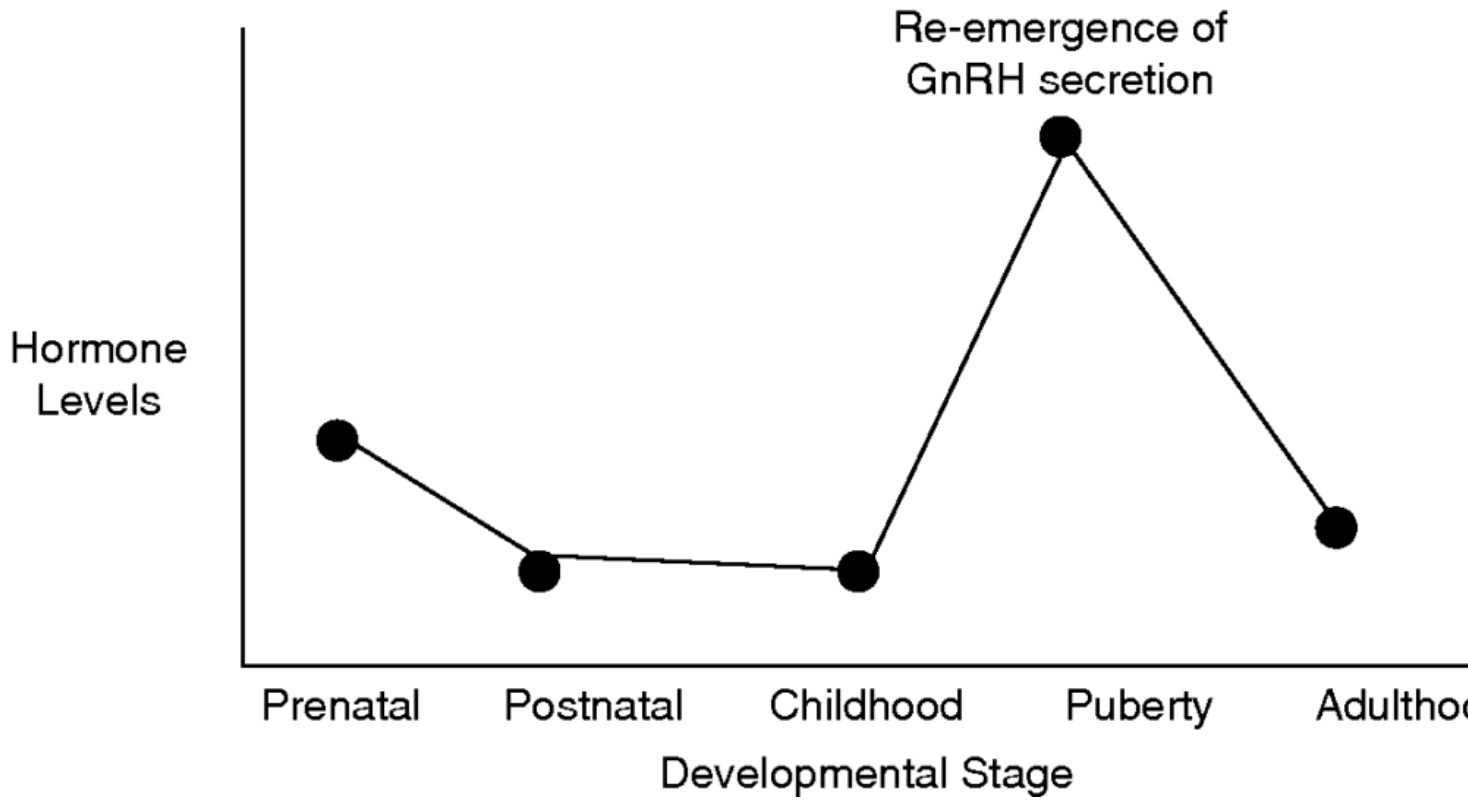
The Dutch physicians were pioneers whose work shaped a new understanding of children and adolescents, says Diane Ehrensaft, a developmental and clinical psychologist affiliated with the University of California San Francisco Benioff Children's Hospitals, where she helped launch the Child and Adolescent Gender Center in 2010. Yet like many U.S. practitioners, when she came across the protocol, Ehrensaft believed that some aspects were overly conservative. In particular, Ehrensaft notes that the Dutch protocol requires children to undergo the first stages of puberty before transition. "We think that

potentially puts children through unnecessary distress or trauma to go through a seriously unwanted puberty for the sake of making sure they know who they are," she said.

Across the globe, views and clinical practices vary. While the U.K.'s National Health Service, for example, involves therapists and other multidisciplinary professionals in evaluating children or teens who may have gender dysphoria, an independent interim report published earlier this year noted that for individuals who are neurodiverse or may have complex problems related to mental health, therapeutic support prior to starting hormone blocking treatment did not appear to be "integral to the current NHS process." And in the United States, where the number of gender clinics has, in de Vries' words, exploded, many clinicians favor swifter assessments and the provision of puberty blockers, hormones, and gender affirming surgeries for young people at or near the moment they present with gender dysphoria. The careful therapeutic assessments that the Dutch clinic provides between each intervention, these clinicians now say, are too conservative — and possibly harmful to some young patients who could benefit from more immediate interventions.

De Vries and her colleagues are aware of these differing philosophies, as well as the criticisms of the Dutch clinic's more methodical approach to childhood gender transition. But they also believe that the scientific uncertainties obligate practitioners to provide sensitive all-encompassing support, and they argue that their stepwise and often slower pace allows them to do just that, while also providing children and their families needed room to more fully explore identity in all its complexity.

"We need time," de Vries said. "And we take time."



Gonadotropin-releasing hormone levels during life. Credit: Neuroscience of Adolescence

The Dutch clinic opened its doors to transgender adults in the 1970s, at a time when minority rights were gaining traction in the Netherlands. The clinic's health care providers gained experience working with this population of patients, and a step-by-step protocol was devised for individuals wishing to medically transition. First, patients would live as the other gender for about 18 months. Then, they could decide whether to embark on a regimen of hormonal medication. Finally, after starting hormones, patients could decide whether to undergo surgery: a penectomy and then vaginoplasty for trans women; mastectomies and potentially a phalloplasty for trans men. (Phalloplasty proved so difficult that one surgeon described the penis as "the genital almost impossible to mimic," according to Alex Bakker, a transgender historian and author of the book "The Dutch Approach," which documents 50 years of transgender health care at the Dutch clinic.)

All of these decisions were made in consultation with the clinic's psychologists, and the clinicians aimed to ensure patients would not regret their choices. "The risk that people would regret their treatment has always been the most powerful brake on our work," Jos Megens, a former care coordinator who worked at the clinic for 40 years, told Bakker.

Around 1987, the clinic received its first child with gender dysphoria, a 12-year-old who was assigned female at birth. The patient, who was deeply unhappy and suicidal, was seen by Henriette Delemarre-van de Waal, a pediatric endocrinologist who specialized in treating children with precocious puberty, a condition in which children hit puberty earlier than is typical (before age 8 in girls and 9 in boys).

At the time, a hormone-blocking drug called triptorelin, which stalls the release of testosterone or estrogen, was used to treat children with precocious puberty. Delemarre-van de Waal thought the medication could help the child with gender dysphoria. The patient started on the puberty blocker and a few years later was referred to Peggy Cohen-Kettenis, a psychologist who worked with adult trans patients at the University Medical Center in Utrecht. The patient later underwent surgery as a trans man.

Delemarre-van de Waal and Cohen-Kettenis continued working together, and along with another endocrinologist, Louis Gooren, they developed a systematic treatment for teens — what's now known as the Dutch protocol. "We did so because we felt it did not make any sense to keep the first few adolescents waiting for their treatment," Cohen-Kettenis, who is now retired, wrote to Undark by email.

The protocol included a rigorous diagnostic process that included both mental health support and a battery of questionnaires to help assess conditions like gender dysphoria and body image issues while ruling out the presence of other psychological problems. Once the child had completed this diagnostic process and experienced the early stages of puberty, they became eligible for puberty blockers. Waiting until the onset of puberty helped ensure an accurate diagnosis, said de Vries. While many children may experience dysphoric feelings in childhood, the team's research found that youngsters who continued to experience these feelings in adolescence were likelier to continue to identify as trans as adults — making early puberty a pivotal phase in figuring out the best pathway.

After a patient started taking puberty blockers, they were eligible for hormones at age 16 (this age has

since been reduced to 15 at the Dutch clinic). And then when the patient turned 18, they had the option of surgery.

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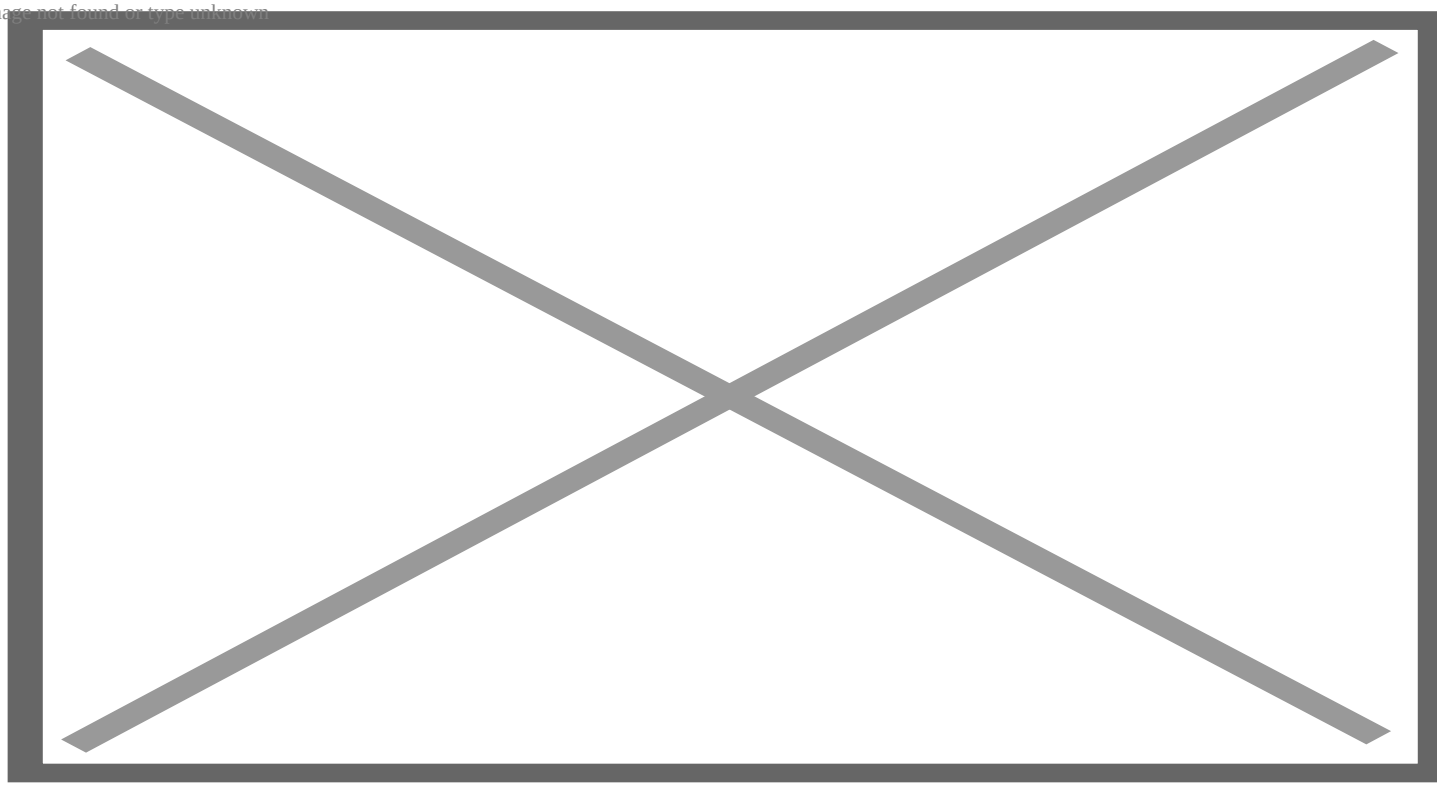

Percentage of assessed adolescents diagnosed with a GD diagnosis. Credit: Arnoldussen et. al.

The protocol was innovative and experimental. Still, the physicians felt reasonably certain of the near-term benefits. In individuals assigned male at birth, blockers prevent the development of an Adam's apple, lowering of the voice, and masculinization of the face; in those assigned female, blockers forestall breast-growth and menstruation. For those wishing to continue their gender transition, blockers may reduce the need for surgeries later on and allow young patients to change their mind should they wish.

Like many other physicians at the time, Cohen-Kettenis assumed that gender dysphoria was a rare phenomenon, and the number of children coming to the clinic was relatively small. "Although we were aware that we did something that was new," she said, "we did not realize that our approach would become so widespread."

After a decade of treating young people, physicians at the Dutch clinic began to publish their protocols and results. In 1998, Cohen-Kettenis published a case report describing the experience of that first young patient who had taken the blocker triptorelin from the age of 13. As an adult, a year after surgery to remove his ovaries and breasts, the patient described himself as happy with his life. He had no regrets about treatment.

Ten years later, Cohen-Kettenis, Delemarre-van de Waal, and Gooren co-authored a paper titled "The Treatment of Adolescent Transsexuals: Changing Insights." The paper described how protocols for

pediatric transgender medicine were shifting in the Netherlands, and it outlined the arguments for and against the treatment of teenagers. In favor was the clear and immediate reduced suffering in patients; more time for patients and their families to make decisions; reduced suffering for a patient who develops sexual characteristics that do not match those of their desired gender; easier surgeries in most cases; and a lower likelihood that teens will access medicines illegally online or from older peers.

But then there was the difficulty in definitively diagnosing which children will still identify as trans when they are adults; concerns about interfering with the bone and brain development that occur in puberty; complications in male-to-female surgery because an undeveloped penis yields insufficient tissue for an optimal vaginoplasty; and questions about whether young people were equipped to give informed consent. Nearly all of these questions remain central to debates about the treatment today, along with fresh concerns as trans kids grew up — what risks does the protocol pose to fertility and how can it be preserved?

In 2014, de Vries, who had done her doctoral thesis at the Dutch clinic, led a seminal study, publishing early results in the journal Pediatrics. For this study, de Vries and her colleagues aimed to survey every adolescent treated by the center from 2004 to 2011 who was prescribed puberty blockers and continued with gender re-assignment surgery. This included a total of 70 teenagers, although some could not participate in the study for various reasons. One patient had also died from a rare postsurgical infection, leaving a total of 22 trans women and 33 trans men.

The group was assessed three times: once before they began puberty suppression around age 13; then when cross-sex hormones were introduced around age 17; and lastly, a year after gender reassignment surgery, when the patients' mean age was 21. The surveys included carefully developed questionnaires to study how these patients were doing on variables like gender dysphoria, body image, and psychological functioning. Participants also completed IQ tests.

All the young adults who had taken puberty blockers went on to further treatment. None expressed regret. The young people's psychological functioning improved steadily over time, and a significant proportion of the group (58 percent) went on to pursue higher education compared with the general population (31 percent). The protocol's authors concluded that the treatment "provided these formerly gender dysphoric youth the opportunity to develop into well-functioning young adults."

Whether the results affirmed the idea that most gender dysphoric young people ought to be offered medical interventions, or simply underscored the utility of the Dutch approach in identifying those patients most likely to benefit from such interventions, is difficult to parse, but the paper was nonetheless highly influential.

The Dutch study results indicated that the treatment had the capacity to greatly improve the lives of young people, one researcher noted. Credit: Bea Hayward for Undark

“There had been so little research of this gender-affirming approach that combines psychological and medical and follows youth over time,” said Erica Anderson, a clinical psychologist, transgender woman, and former president of the U.S. Professional Association for Transgender Health, who does not work directly with the Dutch clinic. The study results indicated that it was possible to identify young people who would benefit from early intervention, and that the treatment had the capacity to greatly improve their lives, says Anderson.

The Dutch study opened the door for young people in the Netherlands and beyond to receive treatment. Alex Vellins, who lives in the U.K., started taking puberty blockers in 2016 at age 14. At age 17, he started hormones. Now a student at Durham University in England, Vellins said the medical protocol developed by the Dutch is “just hugely necessary.” Transition brought him a relief from the pain of living in a female

body. The removal of that pain, he said, makes it possible for him “to have an actual life, and that’s the best thing about it. I am just able to be a normal happy person.”

Aidan Key, an American educator and author who works with schools and other organizations to improve their understanding of gender-diverse children and teens, says that early treatment simplifies the sorts of interventions needed later on and helps kids avoid serious hardship. Further, putting puberty on pause allows youth to take smaller exploratory steps, like wearing different clothes and adopting the pronoun of their preferred gender. “The puberty delay intervention to me is a no-brainer.” He said he describes it to parents as “a gift from the universe.”

The number of teens seeking transgender medical treatment in recent years has skyrocketed in the United States and across Western Europe. The U.K., for example, saw a 3,264 percent rise in referrals over the past decade (from 77 around 2009 to nearly 2,590 by 2019), and youngsters may now have to wait up to two years before being seen at the country’s only specialty clinic focused on children and adolescents, housed at the Tavistock and Portman NHS Foundation Trust. The interim report on the gender identity services available to British youth, released by an independent commission known as the Cass Review earlier this year, recommended that the National Health Service respond to rising demand by creating regional services and expanding the number of providers.

In the United States, no national registry or database exists, but one estimate puts the number of trans teens at 150,000. The first pediatric gender clinic opened in 2007, and now there are more than 50 such clinics in the country. Major medical societies, including the American Academy of Pediatrics, have endorsed trans medical care and support for children and adolescents.

Yet the 2014 paper remains the only long-term study of youth who undergo medical transition, and some practitioners have started to ask whether the original Dutch cohort is representative of today’s patients seeking treatment in a variety of countries, cultural contexts, and health care systems.

Many of the Dutch patients experienced gender dysphoria as young children, while those arriving in today’s clinics in the U.S. and beyond tend to be older and often have a very recent diagnosis of dysphoria. The sheer number of youth seeking transgender medical care is also on the rise across the board, particularly among those assigned female at birth. The Dutch program noted that in the early 2000s, slightly more adolescents assigned male at birth sought treatment at the clinic than those assigned female. By 2016, however, individuals assigned female at birth outnumbered those assigned male nearly 3 to 1. This pattern is being observed in other countries.

The reasons behind these changes are not yet clear, nor is it clear whether the shifting demographics — particularly the trend toward older adolescents seeking treatment — might influence the success rates of youth who receive care, experts say.

Laura Edwards-Leeper helped bring transgender medical care to U.S. adolescents in 2007, when she served as the founding psychologist at the first pediatric gender clinic in the U.S., based at Boston Children’s Hospital. To get the Boston Children’s program up and running, Edwards-Leeper traveled to Amsterdam to learn from her Dutch colleagues. She then adapted the Dutch protocol to better fit the

American context. This meant condensing the assessment into a single 4-hour session rather than spreading it out over several visits. Because the Boston clinic received patients from across the U.S., decisions about medical intervention were made after a local therapist decided the young person was ready and referred them to the specialty clinic.

The assessment wasn't as extensive as in the Netherlands, but the process of working with another practitioner gave Edwards-Leeper confidence. "I always felt good about that because there are two people looking at this, helping to make the decision," she said. "It's not just on me."

As additional clinics sprang up across the country, some practitioners started to ask whether even Boston Children's approach was too slow. The Gender Development Program at Ann and Robert H. Lurie Children's Hospital of Chicago offers an initial hour-long appointment with a psychologist or a social worker and an endocrinologist or a pediatrician with expertise in adolescent medicine. Readiness assessments are conducted by Lurie or by outside experts in a hybrid model. Everything is tailored to the individual family's needs, says Diane Chen, a pediatric psychologist at the clinic. "If they're ready, their family is ready, if everything is stable, then they can move forward quite quickly."

Chen says that emerging data support this approach. She is involved in a large project, funded by the National Institutes of Health, to probe outcomes for youth who receive transgender medical care in a U.S. setting. The study, a collaboration between four gender clinics (including the clinic at Boston Children's), has already enrolled more than 400 participants.

After two years, patients on average are improving in terms of depression and anxiety, positive affect, and life satisfaction, Chen says, describing early results that have not yet been peer-reviewed. "I think that's really important data to get out there," she said, because the youth enrolled in the study are not undergoing the extensive assessment required by the Dutch protocol.

In recent years, a debate has flared over whether and how much psychological assessment is ideal for youth seeking to medically transition. Many practitioners say they provide a gender-affirming model of care, which is intended to offer support to the young person without viewing any one outcome as preferable, to focus on what is best for the individual without forcing them into an identity that doesn't fit. But in practice, the pace and nature of interventions — including assessment and mental health support — vary greatly.

Edwards-Leeper says in the U.S., therapists now fear that if they encourage young people to think more deeply about their gender, the therapists may be labeled transphobic. (She and Anderson voiced this concern in an op-ed published in The Washington Post last year in November.) "It's kind of like that term" — affirmative care — has been "hijacked" by activists, providers, and others who reject the idea that exploration is part of the affirmation process, she said. Affirmative care originally focused on what was the best outcome for the teen, whatever that might be. Now, urging a young person to question themselves is viewed critically by some providers or allies, often those who do not work with adolescents themselves, Edwards-Leeper told Undark.

These concerns were echoed in the U.K. Cass report, which found that British practitioners felt "under

pressure to adopt an unquestioning affirmative approach," at odds with standard clinical practice.

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Yet for some young people whose puberty is encroaching, a delay in medical treatment can be distressing. Vellins says that embarking on blockers at age 14 meant that he did go through some female changes. He characterized the wait for puberty blockers as terrifying. "You know that anything you're experiencing now isn't going to change unless you get surgery so that's why stopping, or even slowing down the process to get hormone blockers is so harmful," he said. There is no neutral option, Vellins says, because allowing puberty to progress will subject the young person to unnecessary surgeries later on, which earlier treatment would have forestalled. "You can't do nothing; you have to decide," he said. "And I think the benefits outweigh the costs because of how crippling dysphoria can be."

In the U.S., paying for care can also be prohibitive, with puberty suppressants costing up to $39,000 per month out of pocket, although there are indications that insurance companies are increasingly willing to cover the treatments.

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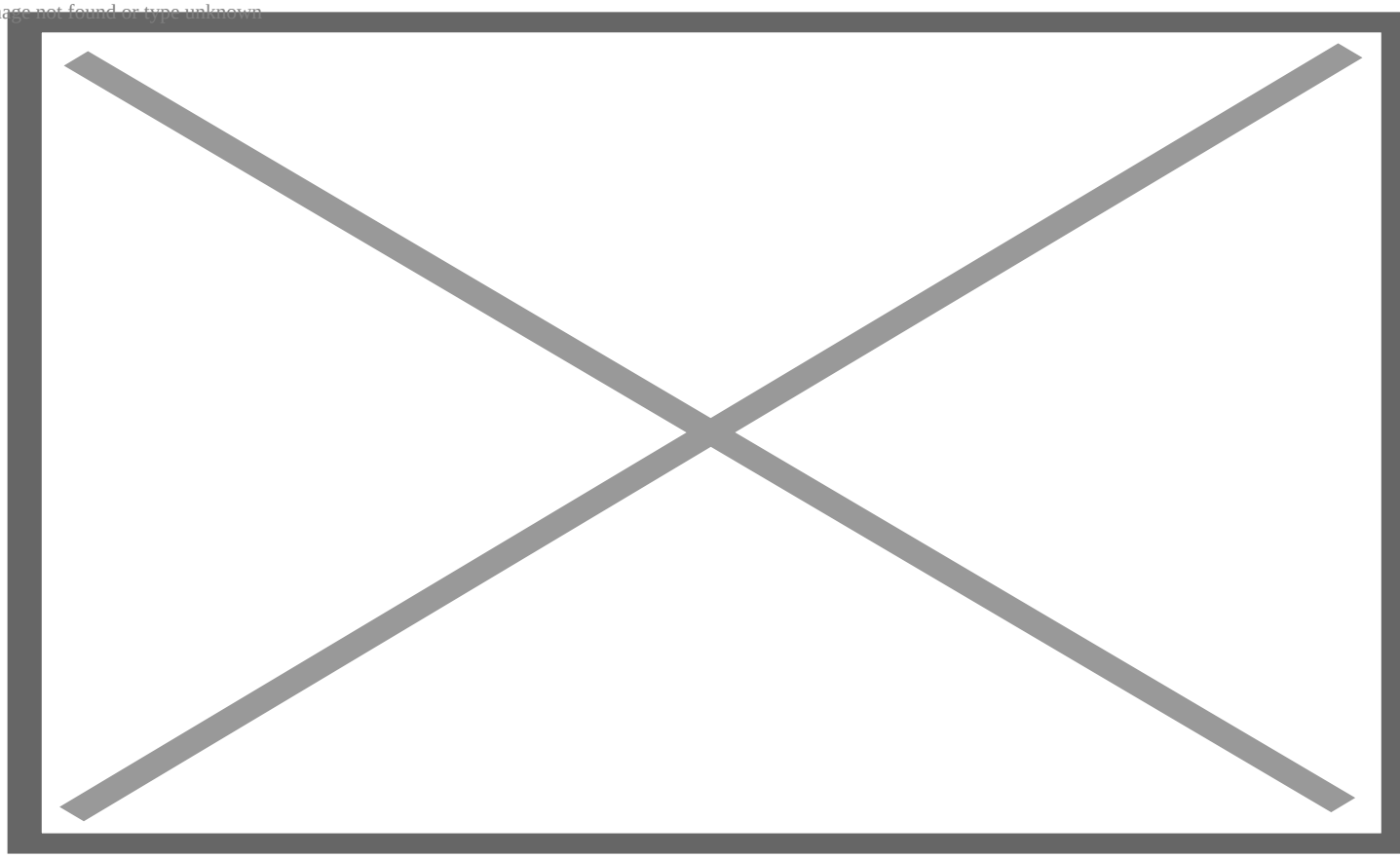

GnRH antagonists show great potential for hormone regulation.
Credit: Jacques Donnez Marie-Madeleine Dolmans

Florence Ashley, a transfeminine legal scholar and bioethicist studying for a doctorate at the University of Toronto, characterized the Dutch approach as “conservative,” and questioned the need to spend so much time discussing whether a patient really wants and needs to transition. In an email to Undark, Ashley — who uses they/them pronouns — wrote that it “stinks of prejudice to place so much emphasis on those who end up regretting transitioning, but pay next to no attention to the ongoing distress of trans teens as well as the great number of trans people who regret not transitioning earlier.”

“Unfortunately, a lot of clinicians are pushing this view of [gender-affirming approaches’] ‘going too far’ without much in terms of analysis, evidence, and bioethical rigor,” Ashley wrote. “The reality is that many have called their practices gender-affirming over the years despite it not being the case.”

Ashley gets to the heart of the difficulty clinicians have long faced, which is to figure out definitively which children will benefit from the treatment. “Because gender is such a personal experience and because trans people are so diverse, clinicians have almost no tools to ascertain who isn’t ‘truly trans,’” they said. Clinicians should “trust the child’s self-understanding,” Ashley added, and provide each child “with the acceptance and support they need to make the best decision for themselves.”

De Vries says she knows the Dutch clinic is now seen as conservative because of the slow and methodical pace of its protocol. But she believes the clinic's approach is more aptly described as "careful."

"We've always been that, and I think we are still."

Not wishing to be seen as gatekeepers, many U.S. clinics dispense medication swiftly, in particular puberty blockers. Edwards-Leeper describes "upsetting" situations when she felt a child wasn't ready but the family went for a consultation at a gender clinic and left with a prescription. "The pendulum has swung so far," she said, "in the United States anyway." Medical transition, she says, raises a number of complicated medical and ethical issues that warrant careful consideration.

The long-term impact of puberty-blocking medications on fertility, for example, is uncertain. For individuals assigned male at birth, sperm preservation may be possible, but those who decide to block puberty early on may not yet be able to produce sperm, according to de Vries. They need to decide whether to allow their innate puberty to advance a little — and risk a lowered voice, beard growth, or extra height — or to renounce genetic parenthood. Those assigned female at birth retain egg-producing capabilities until they have surgery, making the decision to start puberty blockers or hormones less fraught.

"I think a lot of the questions around long-term medical health outcomes we won't be able to answer until the youth who started hormones at 13, 14, 15, are in their 50s, 60s, 70s," said Chen. In a recent paper, she noted the risk of "possible irreversible impairment of future reproductive functioning." And yet, at the same time, both planned and unintended pregnancies have been reported among transgender teens. "We know people who've been on hormones and gotten other people pregnant unintentionally," she said. "It's this awkward paradox of both — we're talking about preserving your fertility if that's important to you and telling you that testosterone/estrogen is not an effective contraception."

Vellins says he experienced side effects from puberty blockers, including hot flashes and suicidal thoughts. Still, he wanted to hold off on taking testosterone while he explored his fertility options. He was prescribed a small amount of estrogen, he says, which alleviated the side effects. When he did move forward with testosterone, the results were a standard male puberty — his voice broke, body hair increased, facial hair came in, and he was sweatier than before. Standard masculine activities, like shaving, felt significant, and he now feels more comfortable in his body, he says.

Practitioners often refer to the standards of care published by the World Professional Association for Transgender Health, which state that puberty suppression can begin at what is called Tanner stage 2, when girls start to develop breasts and boys' genitals enlarge, which could occur as young as 9. The organization is aware that the medical treatment of teens remains controversial, and its committee recently spent more than three years working on revisions.

“Because gender is such a personal experience and because trans people are so diverse,” one bioethicist argued, “clinicians have almost no tools to ascertain who isn’t ‘truly trans.’” Credit: Bea Hayward for Undark

A draft of the chapter on adolescence, which de Vries co-authored, recommended that clinicians conduct “a comprehensive biopsychological assessment” of gender-diverse young people seeking care, as occurred in the Dutch study. It re-stated that puberty suppression can begin at Tanner stage 2. The draft further proposed that hormonal treatment can begin at age 14, once patients have met several eligibility criteria, including sustained feelings of gender dysphoria, family support, and the ability to provide informed consent. At age 15, youth can undergo “chest masculinization” (or mastectomy); at 16, breast augmentation and facial surgery; and at 17, genital surgeries and hysterectomies. The authors note that evidence does not yet exist for the impact of treatment at these ages.

Earlier guidelines were open to interpretation, says Edwards-Leeper, and she hopes that the updated

guidance will be clearer.

This clarity is needed, Anderson says, because some practitioners offer blockers and hormones to increasingly younger kids while skipping the psychological evaluations entirely. “Some of these providers are completely ignorant of the guidelines, appallingly so,” she said. These providers are generally earnest about “wanting to affirm a child and provide them that care that they think is needed,” said Anderson, “but they’re over-zealous in doing so in a hasty way.” Deviating from accepted standards creates potential problems, says Anderson, ranging from unhappy patients to potential lawsuits.

More recent research published by the Dutch scientists has indicated that among patients who visited the Amsterdam gender clinic between 1975 and 2015, less than 1 percent say they regret gender-affirming surgery. But with increasing numbers of teenage patients around the world undergoing shorter psychological evaluations — or no assessment at all — it is possible that the number who wish to halt or undo their transition, a process called detransitioning or desisting, will change.

“Previous studies of the proportion of people who desist or detransition have been done by the clinics who follow these strict protocols in the Netherlands,” Anderson said. “However, we now have the prospect of people who were not subjected to these rigorous protocols, who are outside the guidelines, and therefore the question is, ‘Well if you don’t follow the guidelines, will there be a higher rate of desistance or detransitioning?’ And in my own opinion, I think there will be.”

Statistics on detransition and regret are few — and highly contested. An analysis of 27 studies of adults found that about 1 percent or less of patients expressed regret about undergoing gender affirming surgery. Of course, regret and detransition are not the same thing. A study by the Stanford-based child and adolescent psychiatrist Jack Turban found that 13 percent of adult trans participants had what he described as a history of detransition, but as Turban noted, “this does not indicate that regret was prevalent.” The U.K. Cass report observes that “some children and young people will remain fluid in their gender identity up to early to mid-20s,” no matter how rigorous the assessment process.

This complex bundle of emotions is reflected in the experience of Elle Palmer, a college student living in Montana, who began to take hormones at the age of 16 and lived as a boy for three years before detransitioning by stopping testosterone medication. She now has more body hair than before and a significantly deeper voice. A YouTuber with almost 34,000 followers, she tells Undark that although she changed her mind, she does not regret the process because it has made her who she is. That said, she does not believe teenagers should be allowed access to puberty blockers, hormones, or gender-affirming surgery, saying their effects are in many ways irreversible.

As a teen, Palmer spent a year and a half desperately trying to convince her parents to have access to treatment, and when her first therapist said she was not a suitable candidate, she found one who was more willing to facilitate gender-affirming care. When her mother said she would not be allowed to transition until she was 25, Palmer threatened to kill herself. She does not know what her parents could have done differently, but thinks the medical community could have offered better support, including better therapy, even though at the time she saw therapy as just “a gate that I had to get through.”

“It’s such a hard situation because I know how hard it feels to be in that mindset” of wanting to medically transition, says Palmer. Nevertheless, she believes adults have a responsibility to say, “‘You don’t understand right now what you’re going to be doing to your body.’”

A cautious approach to transition is at the heart of the Dutch model — but some critics say even this approach is irresponsibly experimental. Michael Biggs, a sociologist at Oxford University, says that many trans-identified youth could actually be gay and lesbian children struggling to come out. To those who say it’s cruel to restrict access to gender medicine, Biggs said, “You can also reverse that and say you’re taking gays and lesbians” who aren’t in need of medication and “putting them on this terrible route” that could damage their fertility and sexuality. The guiding principle, he said, should be “first do no harm. Don’t do harmful intervention.”

The U.K. Cass report also noted that social pressure can go both ways: “We have heard from young lesbians who felt pressured to identify as transgender male, and conversely transgender males who felt pressured to come out as lesbian rather than transgender.”

Biggs is an academic adviser to the Society for Evidence-Based Gender Medicine, a group of international practitioners calling for better evaluation of gender medicine. Therapists and psychiatrists in the organization advocate for greater use of what they term “gender exploratory therapy,” probing the youngster’s mental health and avoiding moving on to hormonal or surgical interventions if at all possible. In an email to Undark, SEGM cited research stating that the proportion of gender dysphoric youth who later desist could be much higher than other estimates suggest. “The key issue,” the group wrote, “is that there is no test to determine which youth will persist and which will desist.”

SEGM has faced criticism from transgender rights activists, and the group has been mentioned in media reports on state bills seeking to restrict health care for transgender youth. The group, however, maintains that it has not been involved with any such legislation: “SEGM is focused exclusively on the evidence base for treating gender-dysphoric youth (children, adolescents, and young adults),” they wrote. “We do not support universal bans on interventions as we think they unnecessarily polarize a complex debate, and we do not take an organizational position on any other issues.”

The group additionally noted that it has “issued statements of concern regarding laws that attempt to curb or ban exploratory therapy of gender-related distress for youth.”

One member, Stella O’Malley, is an Irish author and psychotherapist who was the presenter of a 2018 television documentary called “Trans Kids: It’s Time to Talk.” O’Malley has set up an international support group called Genspect for parents of children with gender dysphoria. A prolific author and podcaster, she also runs groups to help therapists work with detransitioners, as well as support groups for detransitioners and their families.

O’Malley told Undark that she opposes all medical treatment for teens under 18. Psychological interventions have been shown to be highly effective, she says, while significant harm is done by smoothing the way towards medical treatment. “If you came to any of the sessions that I’ll be having later

on today with detransitioners, who've had mastectomies at the age of 19, whose vaginas are absolutely in really serious problems because of the testosterone they took when they were 15 and 16," she said, you would see "the serious impact on these people, who won't have children, who will never have sexual satisfaction, and they're 23."

Palmer, meanwhile, says she has regularly interacted on social media with at least 50 individuals who have detransitioned. Some youth see surgery as the only thing that can make them happy, she says. Then, when the surgery doesn't make them happy, they decide to detransition. Although Palmer did not undergo surgery herself, she says some parts of her body were permanently altered by the hormones she was prescribed. Now she has thicker facial hair, despite laser treatment, and additional hair on her body. "My voice is the biggest one," she said. "There's pretty much nothing I can do."

Palmer also says she spent long periods of time online as a child and, in her videos, she describes being groomed by an older man when she was 11. She struggled with depression and anxiety, and experienced bouts of anorexia — conditions that ought to have been red flags to a therapist. For Palmer, transition was a way of swapping body dysmorphia for gender dysphoria. Transition "basically replaced my eating disorder," she said. "It was like a new obsession with my body. It was like a new way to control my body."

Randomized controlled trials are widely considered the gold-standard for assessing the effectiveness of medical interventions. In this type of study, patients are randomly assigned to an intervention group that receives a treatment, or to a control group that does not receive a treatment. The results can then be analyzed to determine whether the treatment does more harm than good. To date, not a single randomized controlled trial has been conducted on any gender-affirming intervention in youth or adults because, clinicians say, it would be unethical to withhold treatment for one group of teens while giving it to another. Biggs disagrees. "All medicines are meant to go through randomized controlled trials," he said.

While the debate is polarized, many researchers and clinicians agree on one thing: Key questions are still unanswered.

The 2014 Dutch study and Chen's study in the U.S. are both longitudinal, meaning they will assess how patients who receive treatment do over time. In the meantime, uncertainties remain about the long-term effects of puberty blockers and hormones on bones, brain, and sexual function. In November, Swedish national media reported 13 cases of serious side effects and medical injuries, including one 11-year-old who had developed osteoporosis after taking blockers for 4.5 years.

And although topics like patients' romantic relationships, masturbation activity, and intercourse have been assessed, patients' ability to orgasm as adults remains unexplored by researchers. (For de Vries, this is "a very interesting and so far not studied question.")

The assumed harms of forgoing treatment — a highly sensitive subject — are also contested. Research published in the journal Pediatrics made headlines in 2020 when it indicated that access to puberty suppression treatment was associated with lower lifetime odds of suicidal ideation. Some clinicians point to flaws in the study's design, which is retrospective and surveys a different population than those currently receiving treatment. "We are concerned — all of us are concerned about the self-harm of young

people," Anderson stressed. But, she said, "It's misguided to say to parents — and some providers do this — if you don't affirm your child and allow them to go on puberty blockers and hormones, they'll commit suicide."

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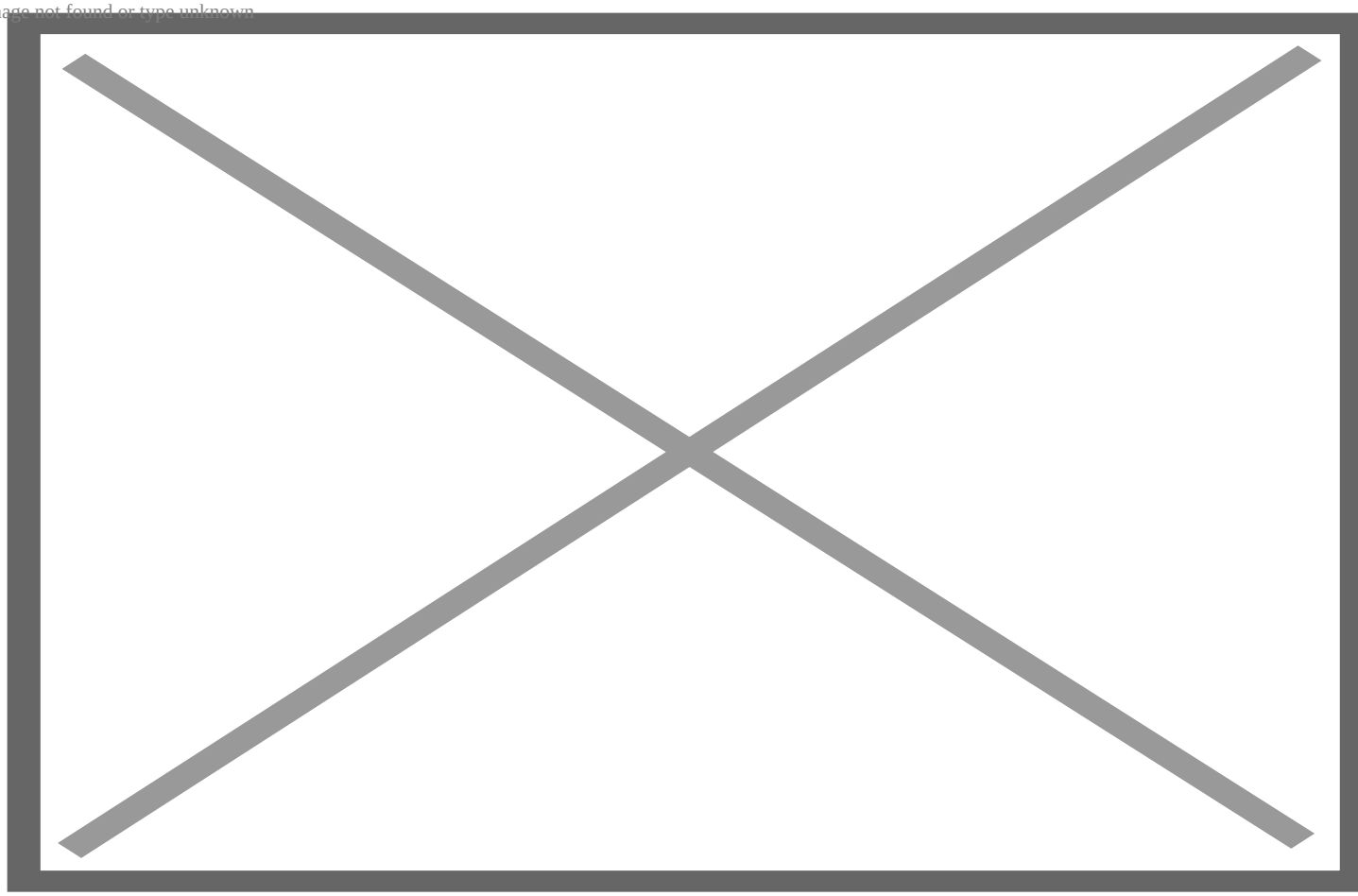


Number of people at risk (left y?axis) and the number of suicides (right y?axis), between 1972 and 2017. From a study of gender dysphoria. Credit: C. M. Wiepjes, et al.

In this dynamic and fast-moving field, real-world conditions are changing, along with scientific protocols and government regulation. As children in numerous countries appear to be hitting puberty at younger and younger ages — a separate phenomenon that is yet to be fully explained — the treatment regimen may need to be extended, increasing or altering the impact of potential side effects of medicines like puberty blockers, de Vries said. A 2019 paper, part of the NIH-funded U.S. study, states that the minimum age for the gender-affirming hormone cohort was decreased from 13 to 8 years "in order to ensure that potential participants who might be eligible for hormones based on their Tanner stage would not be excluded due to age alone."

But this approach is not embraced by all U.S. practitioners. Ehrensaft, one of the study's authors, wrote that prescribing testosterone or estrogen for 8-year-olds "is definitely not a practice that we engage in at our clinic."

Meanwhile, the numbers of teens seeking care has risen exponentially. While this may in part derive from greater social openness, there could be other reasons, too. In a 2018 paper, Lisa Littman, currently president and director of the Institute for Comprehensive Gender Dysphoria Research, surveyed parents who reported that during or after puberty, their children had experienced a rapid-onset of gender dysphoria. (The term "rapid onset of gender dysphoria" was coined by Littman and is not a formal mental health diagnosis.)

The survey results indicated peer pressure and internet usage among teens might be contributing to the increasing numbers of trans-identified youth. These hypotheses provoked an outcry from the trans community, with some pointing out that the internet allows trans teens who are closeted to find a community in which they can express themselves freely.

Anderson says a colleague jokingly referred to the survey results as "recent onset of parents' surprise." But Anderson, who is now in private practice, acknowledges that peer influence occurs, and says that the pandemic, with kids spending more time online, has fueled an increase in the number of teens coming to her former clinic. (She wrote about this phenomenon in a January opinion piece for the San Francisco Examiner.) "I don't think there's a simple answer," she said.

In recent months, a number of European countries have issued broad policy statements that seem to suggest a need to slow down and ask more questions. In February, following a comprehensive review of the evidence, Sweden's National Board of Health and Welfare issued updated recommendations. (An official English-language summary of the recommendations is available here.) The Board determined that for the current group of adolescents who identify as transgender, the risks of puberty blockers and hormones currently outweigh the possible benefits. The Board recommended that treatment should be offered only in research settings and in exceptional cases where the young person meets all of the eligibility requirements of the original Dutch protocol.

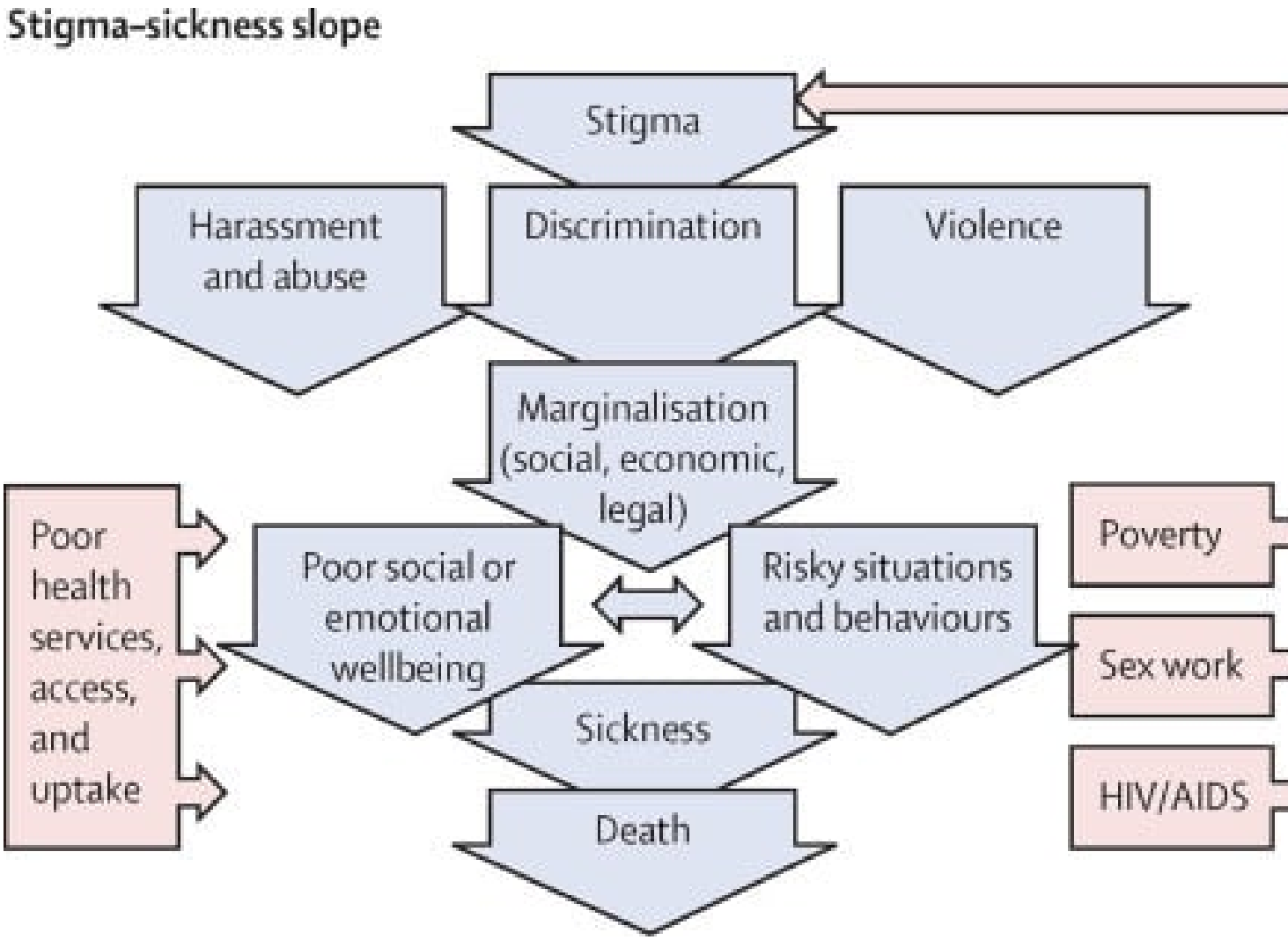
Also in February, France's National Academy of Medicine issued a press release calling for a cautious approach to treatment. The U.K. Cass report noted that a recent national review of puberty blockers and hormones had found the evidence "too inconclusive to form the basis of a policy position."

In the United States, the medical uncertainty has collided with political division. In 2019, The Heritage Foundation, an American conservative think tank, hosted a series of events on the medical risks of gender-affirming care, which, according to the blog of the Harvard Law Review, sparked wider interest among lobbying groups, including Family Policy Alliance, a Christian conservative group, and led to bills against medical treatment for teens being introduced across at least 15 states in just the first months of 2020. In March 2021, Arkansas became the first state to ban access to gender-affirming care for young people under the age of 18 (although a federal judge subsequently blocked the ban).

“Exactly what I have been fearing for the last probably eight years is what we are now seeing,” said Edwards-Leeper. “Kids, adolescents, who are being seen without any kind of assessment, sometimes without any mental health involvement, are going quickly to medical intervention and then are regretting it. Just adding fuel to the conservative agenda to ban services to all trans youth.”

The future of pediatric transgender medicine is contested in other countries, too. The U.K. Cass report found that many professionals did not agree about the nature of gender dysphoria in young people — or how to diagnose and treat it. And last year, Dutch activists set up an Instagram account complaining about the Amsterdam clinic’s long waitlist and its control over diagnosis and medication. To address the growing need, the Dutch health authority helped set up a number of clinics in other parts of the country.

The pressure on practitioners who provide pediatric transgender medicine is different than in most other medical fields, says de Vries. She and her colleagues make complex ethical decisions every single day, and they must justify those decisions in all directions — to patients, their parents, the media, and other scientists, many with diverging and evolving views.



> Stigma and sickness feed into each other. Ethical considerations in gender-affirming care for youth span concerns about meeting obligations to maximize treatment benefit to patients (beneficence), minimizing harm (nonmaleficence), supporting autonomy for pediatric patients during a time of rapid development, and addressing equity. Credit: Sam Winter et. al.

Some of de Vries' current patients first came to see her more than a decade ago, when they were young children. One of them, an 18-year-old trans woman, recalled being diagnosed with gender dysphoria at the age of 5. De Vries says the girl described it as a defining moment in her life. Thirteen years on, however, pre-pubertal children come less frequently to the Dutch clinic. Their feelings of wanting a different body are no longer viewed as a medical condition. De Vries now wonders, "Do you need that recognition at that age?"

It's a fine balance. As the psychiatrist herself acknowledged in a research guideline for other practitioners, the pros and cons of medical treatment are still playing out. Research evidence is limited, and expensive multidisciplinary teams do not exist in every practice, or even region. In a sometimes loud debate, de Vries wrote in the guideline, clinicians should "be humble and careful in the advice and treatments that they provide and open with patients and families about this lack of evidence." Speaking to Undark, she said that, although some people still face challenges after transitioning, and a small proportion may express regret or detransition later, many adults who medically transitioned in their youth are now thriving. "I think it's really unethical," she said, "to stop it altogether."

Frieda Klotz is a journalist based in Brussels covering culture, health, and reproductive medicine. Her writing has appeared in the Guardian, Irish Times, Al Jazeera America, Mosaic Science and other outlets. She has reported on donor conception for Irish national radio, and on male infertility for Undark. Follow Frieda on Twitter @FriedaKlotz

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