
**Extreme gender ideology drives the United States to provide transgender medical care to younger children, while Europe goes a safer and more scientific route.**

Do No Harm

# BACKGROUNDER

The belief that biological sex and gender are socially constructed has made its way into American classrooms,[1] courtrooms,[2] bathrooms,[3] and boardrooms.[4] The mainstreaming of this belief system has coincided with a substantial increase in the number of children receiving transgender medical care. Between 2017 and 2021, the number of children known to be on puberty blockers or cross-sex hormones more than doubled.[5]

Skeptics have raised the alarm, pointing out that the surge in sex reassignment interventions (i.e., puberty blockers, cross-sex hormones, and sex reassignment surgeries) might be explained, at least in part, by social contagion. According to this argument, the increase in interventions for adolescents is caused not by an authentic increase in the incidence of gender incongruence but by the spread of gender ideology across all facets of American life. This concern is exacerbated by the degree to which the medical establishment allows such ideology to compete with or even usurp the scientific method as a guide to research and medical practice.[6]

The American approach to transgender medical treatment for children is known as "gender affirmation," which assumes that gender incongruence can manifest as early as age four and that questioning a minor's gender self-definition is harmful and unethical. The American Academy of Pediatrics has embraced an affirm-only/affirm-early policy since 2018,[7] and most states abide by its guidance despite withering medical and scientific criticism. Gender-affirming care remains the standard across most of the United States.

Yet Northern and Western Europe, which share the United States' broad support for transgenderism, reject the gender-affirming care model for children. In fact, several countries, including the United Kingdom, Sweden, and Finland, have explicitly abandoned it in recent years in part due to fear that medical intervention has become overprescribed (studies show that only 12% to 27% of cases of childhood gender dysphoria persist into adulthood).[8] In a sharp departure from the gender affirmation model employed in the United States, these countries now discourage automatic deference to a child's self-declarations on the grounds that the risks outweigh the benefits, while also calling for months-long psychotherapy sessions to address co-occurring mental health problems. Notably, in the United Kingdom, the Cass Review attributed the lack of safeguards for children at the largest pediatric gender center to the "affirmative model," which "originated in the USA."[9]

The different approaches between the United States and Western and Northern Europe lead to a concerning reality: In the U.S., much younger patients are eligible for invasive surgeries and/or potentially irreversible and medically harmful dispensation of puberty blockers and cross-sex hormones.

This report identifies the different legal requirements for gender change-related treatments and actions between the U.S. and Western and Northern European countries. Most information contains references with web links to original sourcing. Some information was procured through consultation with local experts, often though not exclusively an individual affiliated with a gender clinic. In the interest of their privacy, their identities are kept anonymous.

Overall, our policy review reveals the United States is the most permissive country when it comes to the legal and medical gender transition of children. Only France comes close, yet unlike the U.S., France's medical authorities have recognized the uncertainties involved in transgender medical care for children and have urged "great caution" in its use.

Given the growing body of evidence and the European consensus, which is grounded in medical science and common sense, the United States should reconsider the gender-affirming care model to protect the youngest and most vulnerable patients.

# LEGAL REQUIREMENTS TO CHANGE GENDER

**CONTEXT:** *Many countries now allow individuals to change the gender listed for them on government-issued documents. The requirements imposed for civil registries to recognize individuals as belonging to a gender other than their biological sex sheds light on the degree to which gender affirmation is established in law.*

| COUNTRY | REQUIREMENT |
|---|---|
| United States | Requirements vary from state to state, with the option not available in some. Birth certificate changes are prohibited in Montana, Oklahoma, Tennessee, and West Virginia.[10] Driver's license changes are permitted in all states, but requirements vary. In Massachusetts, for example, a gender change on a driver's license is a matter of self-determination.[11] Tennessee, however, requires "a statement from the attending physician that necessary medical procedures to accomplish the change in gender are complete."[12] U.S. State Department and Social Security Administration documents (i.e., passports and Social Security records) allow for self-determination.[13] |
| Belgium | Gender-changes in the civil registry are self-determined.[14] |
| Denmark | Gender changes in the civil registry are self-determined.[15] |
| Iceland | Gender changes in the civil registry are self-determined.[16] |
| Ireland | Gender changes in civil registry are self-determined.[17] |
| Finland | An applicant must have "medical expert evidence of being transsexual" and have "undergone sterilization or is for other reasons infertile."[18] |
| France | Individuals wishing to change their gender in the civil registry must prove that they socially live as the other gender. Evidence may include family testimonies, photographs, and medical certificates. One piece of evidence is not enough.[19] |
| Luxembourg | "The applicant must demonstrate, by producing sufficient evidence, that the gender status currently recorded in the civil register does not reflect their gender identity. Such evidence may include: The fact that the person's gender expression matches the gender being applied for; The fact that the person is identified by their family, friends and professional or other personal entourage as the gender being applied for; The fact that the person has previously obtained a change in first name to match the gender being applied for."[20] |
| Netherlands | The government requires a statement from a doctor, psychologist, or psychotherapist which affirms "that you (the applicant) have declared to this expert that you have the permanent conviction that you belong to another gender than stated on your birth certificate. And that you understand the repercussions of your decision to change your gender identification."[21] |
| Norway | Gender changes in civil registry are self-determined.[22] |
| Sweden | Changes require a medical diagnosis of transsexualism. Moreover, "anyone who wants to change their legal gender ... must have been in contact with a gender clinic for at least two years before an application can be sent to the Legal Council."[23] |
| United Kingdom | Applicants must have a diagnosis of gender dysphoria from a doctor, live as "affirmed" gender for at least 2 years, and intend to live in that gender for the rest of one's life. The requirement that one have a dysphoria diagnosis can be waived if the applicant has been living in their affirmed gender for at least 6 years and had gender affirmation surgery. [24] |

# MINIMUM AGE TO CHANGE GENDER IN CIVIL REGISTRY

**CONTEXT:** *Some countries allow individuals to change their gender identity on government-issued documents. But not all of them let minors do this, and practices vary across the countries that permit it.*

| COUNTRY | REQUIREMENT |
|---|---|
| United States | The United States has a piecemeal approach, as both states and the federal government are custodians of civil registration. There is no minimum age for changing gender on passports[25] or in Social Security Administration (SSA) documentation.[26] For minors, changes to either require the consent of both parents. Some states, including New York, California, Colorado, Connecticut, New Jersey, Pennsylvania, and Washington, permit minors to change their birth certificate gender markers with parental consent.[27] |
| Belgium | Minors aged 16 or 17 must obtain parental consent and consultation with a psychiatrist.[28] |
| Denmark | The limit is currently 18, though in 2022, the government proposed removing age limits and requiring consent for those under the age of 15.[29] |
| Iceland | Iceland has no age restrictions, though individuals younger than 18 need parental consent.[30] |
| Ireland | An individual who is 16 or 17 must have parental consent, approval from a medical practitioner, and an application to the High Court, otherwise, the requirement is 18 years of age.[31] |
| Finland | The minimum age requirement is 18.[32] |
| France | The minimum age requirement is 18.[33] |
| Luxembourg | There is no age limit. For youth under age 5, applications are sent to the Ministry of Justice. For youth over age 5, applications are sent to the "competent district court." Parental consent is required until age 18.[34] |
| Netherlands | The minimum age requirement is 16.[35] |
| Norway | Changes are possible, with parental consent, from age 6. Without parental consent, a person must wait until age 16.[36] |
| Sweden | The minimum age requirement is 18, though there is ongoing debate about lowering it to 16.[37] |
| United Kingdom | There is no age minimum, though parental consent is required up until age 18.[38] |

# LEGAL GENDER OTHER THAN MALE OR FEMALE

**CONTEXT:** *Some countries recognize a gender other than male or female, thereby tacitly endorsing the idea that gender and sex are social constructs.*

| COUNTRY | REQUIREMENT |
|---|---|
| United States | Twenty-two states as well as the District of Columbia allow individuals to place an X (rather than an M or F) on a driver's license; 16 states plus D.C. allow it on birth certificates. Passports offer an X gender option.[39] |
| Belgium | The government only recognizes male and female, though pending rule changes would remove gender altogether from identity cards.[40] |
| Denmark | Denmark allows an X marker on IDs, but the civil registry is binary. [41] |
| Iceland | Government allows for third gender and/or nonbinary designations.[42] |
| Ireland | Ireland allows a third option on passports but not in the civil registry.[43] |
| Finland | Male and female are the only recognized genders.[44] |
| France | Male and female are the only recognized genders.[45] |
| Luxembourg | Male and female are the only recognized genders.[46] |
| Netherlands | Gender neutral designation on official documents is possible, but only through request to a district court.[47] |
| Norway | The X designation is not allowed, though as of August, 2022 it was under consideration.[48] |
| Sweden | Male and female are the only recognized genders.[49] |
| United Kingdom | Male and female are the only recognized genders.[50] |

# NOTABLE REQUIREMENTS FOR MEDICAL TRANSITION

**CONTEXT:** *Recognizing that gender-affirming care is largely irreversible and that only 12% to 27% of cases of childhood gender dysphoria persist into adulthood,[51] countries impose various barriers to medical intervention. These barriers are intended to screen out cases that are unlikely to persist or in which mental distress would not be improved through gender-affirming care.*

| COUNTRY | REQUIREMENT |
|---|---|
| United States | Diagnosis of dysphoria is required for insurance purposes, but an individual paying out of pocket could medically transition without such a diagnosis.[52] A diagnosis is typically, though not exclusively, made by a psychologist or psychiatrist. Testosterone is a controlled substance, so depending on state law there are restrictions on which practitioners can prescribe it. Clinics that use WPATH guidance impose few or no other limitations to receiving hormonal or physical treatment. For example, the transgender clinic at the University of California San Francisco advises that "Medical providers who feel comfortable making an assessment and diagnosis of gender dysmorphia, as well as assessing for capacity to provide informed consent (able to understand risks, benefits, alternatives, unknowns, limitations, risks of no treatment) are able to initiate gender affirming hormones without a prior assessment or referral from a mental health provider… Prescribing gender affirming hormones is well within the scope of a range of medical providers, including primary care physicians, obstetricians-gynecologists, and endocrinologists, advanced practice nurses, and physician assistants. Depending on the practice setting and jurisdiction, other providers with prescriptive rights (naturopathic providers, nurse midwives) may also be appropriate to prescribe and manage this care."[53] |
| Belgium | Those seeking gender-affirming healthcare must have a referral letter from a psychologist, psychiatrist, or sexologist before they can receive care from an endocrinologist.[54] |
| Denmark | Treatment requires diagnosis of dysphoria and treatment by an interdisciplinary team. "When carrying out gender reassignment treatment – as well as in the evaluation hereof – the team must have relevant medical specialist qualifications including obstetrician-gynecologists or endocrinologists (medical specialist doctor in internal medicine in the field of endocrinology). … In relation to the investigation and treatment of gender identity for individuals under the age of 18, the team must be comprised of relevant medical specialists qualified in pediatrics (pediatric endocrinology, growth, and reproduction) as well as in child and adolescent psychiatry."[55] |
| Iceland | Individuals who want hormone treatment are observed for at least 6 months to ensure that they are psychiatrically fit to receive treatment.[56] |
| Ireland | Individual seeking gender-affirming surgery or hormones must receive a dysphoria diagnosis and live full time as their preferred gender identity for a significant period of time. An individual seeking sex-reassignment surgery must obtain the approval of a psychiatrist or psychologist.[57] |
| Finland | The dysphoria of a minor seeking hormone treatment must be deemed "severe" and "permanent." Prescription of puberty blockers or cross-sex hormones to minors requires that no contraindications to early treatment are identified.[58] |
| France | An endocrinologist or general practitioner can prescribe hormones, but surgery requires consent from the national health insurance fund, an endocrinologist, and a surgeon.[59] |
| Luxembourg | A psychiatrist must diagnose an individual with transgenderism and rule out other potential pathologies for that individual to receive gender-affirming care. An individual must be seen by a psychiatrist for at least one year before qualifying for surgery.[60] |

## NOTABLE REQUIREMENTS FOR MEDICAL TRANSITION

| COUNTRY | REQUIREMENT |
|---|---|
| Netherlands | Puberty suppression requires a diagnosis of gender identity disorder, persistent dysphoria since childhood, and no "serious comorbid psychiatric disorders that may interfere with diagnostic assessment."[61] |
| Norway | If diagnosed with transsexualism, the patient undergoes a "real-life experience" for a minimum of 12 months, during which the person lives in accordance with their gender identity. After the real-life experience, and endocrine and other metabolic examinations, hormones are prescribed. Patients are assessed for surgery after 1–3 years of hormone therapy.[62] |
| Sweden | Requires diagnosis of gender dysphoria (DSM-5) and treatment from an interdisciplinary medical team. The key prerequisite for hormonal treatment of youth is the prepubertal onset of gender dysphoria that is long-lasting (a 5-year minimum is mentioned), persists into adolescence, and causes clear suffering.[63] |
| United Kingdom | Surgery requires having socially transitioned at least 12 months before the procedure. Puberty blockers and hormonal treatments require assessment from a multi-disciplinary team "over a period of time" and recommendation from two specialists involved in the client's care, including a consultant endocrinologist and a senior psychosocial clinician.[64] |

# MINIMUM AGE FOR PUBERTY BLOCKERS

**CONTEXT:** *Puberty blockers suppress the release of sex hormones so that gender-questioning youth do not sexually develop in a way that diverges from their gender identity. For gender-questioning youth young enough to receive them (they are not administered to individuals who have reached full sexual maturation), puberty blockers are the first medical intervention administered. Blockers are known to decrease bone density[65] and contribute to infertility when administered alongside cross-sex hormones.[66] They may also inhibit cognitive development.[67]*

| COUNTRY | REQUIREMENT |
|---|---|
| United States | Some states restrict minor access to puberty blockers, and lawmakers in others seek such restrictions.[68] The most permissive states do not impose restrictions, and blockers can be administered from the earliest stages of puberty. According to The New York Times, "Many physicians in the United States and elsewhere are prescribing blockers to patients at the first stage of puberty — as early as age 8."[69] In most states, puberty blockers cannot be administered before age 18 without parental consent. Oregon is a notable exception: Children are legally entitled to receive puberty blockers from age 15 and up, and they receive Medicaid assistance in doing so.[70] |
| Belgium | Puberty blocks are available with parental consent from Tanner Stage II and without parental consent at age 18.[71] |
| Denmark | Puberty blockers can be prescribed from age 12 with parental consent[72] and from age 15 without parental consent.[73] |
| Iceland | There is no minimum age for puberty blockers with parental consent, so minimum age is a matter of clinical judgement. Adolescents 15 and younger must obtain parental consent, though they can appeal to the ombudsman for children and receive government permission to bypass parental consent.[74] |
| Ireland | Available "under 16 years old" with consent, and from 16 without consent.[75] |
| Finland | Available from "about age 13" with parental consent, and from 18 without consent.[76] |
| France | In theory, puberty blockers could be prescribed for minors at any age, though in practice it is not done until Tanner Stage II.[77] Blockers are available without consent from age 18.[78] |
| Luxembourg | No official guidance exists. In practice, adolescents almost always receive blockers in a neighboring country.[79] |
| Netherlands | According to protocol, blockers are available from age 12 without consent,[80] though younger cases have been recorded. Blockers are available without consent from age 16.[81] |
| Norway | Puberty blockers are available with consent once physiological signs of puberty manifest.[82] The are available without consent from age 16.[83] |
| Sweden | Puberty blockers can be prescribed from age 12 with parental consent and from 18 without consent.[84] |
| United Kingdom | Blockers are available from the earliest stages of puberty, with or without parental consent.[85] Instances of children under 16 receiving blockers without consent are reportedly rare.[86] |

# MINIMUM AGE FOR CROSS-SEX HORMONES

**CONTEXT:** *Medical intervention can include cross-sex hormone therapy, whereby sex hormones (estrogen or testosterone) are administered to alter a person's secondary sex characteristics to better align with their gender identity. Observational analysis indicates that biological males who receive hormone therapy might be at elevated risk for cardiovascular problems.*[87] *Some changes that hormones manifest are irreversible.*[88]

| COUNTRY | REQUIREMENT |
|---|---|
| United States | Some states restrict minors' access to gender-affirming hormone treatment, and lawmakers in other states are considering restrictions. In some states, the practice has been documented with parental consent in children under the age of 13.[89] Oregon is the most permissive state, with individuals able to access cross-sex hormones from age 15 without consent and with Medicaid assistance.[90] |
| Belgium | Cross-sex hormone are available from age 16 with consent[91] or 18 without consent.[92] |
| Denmark | Available from age 16 with or without parental consent.[93] |
| Iceland | Available from age 16 with or without parental consent.[94] |
| Ireland | Available from age 16 with or without parental consent.[95] |
| Finland | Available from age 16 with consent[96] or 18 without consent.[97] |
| France | There are no age restrictions on the use of cross-sex hormones, but clinicians generally will not administer them before Tanner Stage II.[98] Use of hormones under age 18 requires parental consent.[99] |
| Luxembourg | No official guidance exists. Patients almost always receive hormones in a neighboring country. |
| Netherlands | Cross-sex hormones are available from age 16 with or without consent, though younger cases have been documented in adolescents with consent.[100] |
| Norway | Available from age 16 with or without consent.[101] However, consent is required for individuals 16-18 if the treatment is considered irreversible.[102] |
| Sweden | Available from age 16 with consent.[103] Available from age 16 without consent so long as the individual is deemed sufficiently mature.[104] |
| United Kingdom | Age 16 regardless of consent, but individuals must have been receiving puberty blockers for at least one year.[105] |

# MINIMUM AGE FOR SEX-REASSIGNMENT SURGERY

**CONTEXT:** *For some gender-questioning individuals, intervention culminates with sex-affirming surgeries, including mastectomy (breast removal), hysterectomy (uterus removal), vaginoplasty (vagina creation), and phalloplasty (penis creation). These dramatic physical alterations are largely irreversible.*

| COUNTRY | REQUIREMENT |
|---|---|
| United States | Some states restrict minors' access to sex reassignment surgery, and lawmakers in other states are considering it. The World Professional Association for Transgender Health issued more liberal guidance in June 2022, which recommends some surgeries from the age of 15.[106] "Gender-affirming" mastectomy has been performed on children as young as 12.[107] |
| Belgium | Sex-reassignment surgery is not performed before age 18.[108] Parental consent is not a factor since surgery is not performed on individuals under the age of consent. |
| Denmark | Not performed before age 18.[109] Parental consent is not a factor since surgery is not performed on individuals under the age of consent. |
| Iceland | Not performed before age 16.[110] Parental consent is not a factor since surgery is not performed on individuals under the age of consent. |
| Ireland | Officially, sex-reassignment surgery is not performed before age 16. In practice, it not available until 16.5, as individuals must receive cross-sex hormones for at least six months beforehand. Parental consent is not a factor since surgery is not performed on individuals under the age of consent. |
| Finland | Not performed before age 18.[111] Parental consent is not a factor since surgery is not performed on individuals under the age of consent. |
| France | Theoretically permissible from age 14, but researchers say that to their knowledge, torsoplasties are the only surgeries that have been performed on trans youth.[112] Without parental consent, surgery is not available until age 18. |
| Luxembourg | Sex-reassignment surgery is not available before age 18. Parental consent is not a factor since surgery is not performed on individuals under the age of consent.[113] |
| Netherlands | Mastectomies are available from age 16, and all other procedures from age 18. Parental consent is not a factor since surgery is not performed on individuals under the age of consent.[114] |
| Norway | Mastectomies are performed from age 16 with consent.[115] All other procedures are unavailable until age 18.[116] |
| Sweden | Not performed before age 18. Parental consent is not a factor since surgery is not performed on individuals under the age of consent.[117] |
| United Kingdom | Not performed before age 18. Parental consent is not a factor since surgery is not performed on individuals under the age of consent.[118] |

# NUMBER OF YOUTH GENDER CLINICS

**CONTEXT:** *Some countries relegate the assessment and treatment of minors with gender dysphoria to a handful of clinics or even one. These clinics are not immune from problems—the lone pediatric gender clinic in the United Kingdom is being shuttered because of unsafe practices—but centralizing care has the benefit of greater oversight and accountability.*

| COUNTRY | REQUIREMENT |
|---|---|
| United States | More than 60 pediatric gender clinics and 300 clinics provide hormonal interventions to minors.[119] |
| Belgium | There are two facilities in the country where patients can be reimbursed for puberty blockers or sessions with a psychologist, which are required for anyone seeking blockers.[120] |
| Denmark | Hormone therapy is administered to individuals of any age at one of three locations. These clinics are responsible for assessment and coordination of treatment.[121] |
| Iceland | The assessment and treatment for minors is administered through one hospital.[122] |
| Ireland | The assessment and treatment for individuals of all ages is administered through one hospital.[123] |
| Finland | The assessment and treatment for individuals of all ages is administered through two hospitals.[124] |
| France | Care is decentralized. Any doctor can prescribe treatment for medical transition.[125] |
| Luxembourg | There is one gender clinic in the country, though treatment is more commonly sought abroad.[126] |
| Netherlands | One clinic provides sex reassignment interventions to 95% of the population.[127] |
| Norway | Assessment and treatment for individuals of all ages is administered through one hospital.[128] |
| Sweden | Assessment and treatment for individuals of all ages is administered through four hospitals. Three of the four hospitals provide surgery.[129] |
| United Kingdom | Care for adolescents has been exclusively handled at the Tavistock clinic, which is scheduled to close in 2023 after a review deemed it unsafe.[130] Once it closes, assessment and treatment for adolescents will be handled through two clinics.[131] |

# NOTABLE CHANGES IN PROTOCOLS FOR TREATING MINORS

**CONTEXT:** *The concern that children are too quickly referred for gender-affirming medical treatment has arisen in several European countries. Given questions about the wisdom and judgement of children to make life-altering and permanent decisions about their health, officials have revised policies and guidance about gender-affirming care.*

| COUNTRY | REQUIREMENT |
|---|---|
| United States | No major medical organization has reversed its guidance.[132] Some states, however, have issued their own guidance to prohibit minors' access to sex reassignment interventions. For example, treatment is banned in Florida following November 2022 guidance issued by the Florida Board of Medicine and the Florida Board of Osteopathic Medicine.[133] |
| Belgium | No changes[134] |
| Denmark | No changes[135] |
| Iceland | No changes[136] |
| Ireland | No changes yet, but the adult national gender service is urging the Department of Health to drop its support for the World Professional Association for Transgender Health (WPATH) model, noting that a "significant number" of patients who have graduated from the youth to the adult gender service are autistic and exhibit "unclear gender identity."[137] |
| Finland | In 2020, the Finnish Health Authority (PALKO/COHERE) "deviated from WPATH's 'Standards of Care 7' by issuing new guidelines that state that psychotherapy, rather than puberty blockers and cross-sex hormones, should be the first-line treatment for gender-dysphoric youth. This change occurred following a systematic evidence review, which found the body of evidence for pediatric transition inconclusive."[138] |
| France | "The National Academy of Medicine in France has issued a press release in which it cautions medical practitioners that the growing cases of transgender identity in young people are often socially-mediated and that great caution in treatment is needed. The Academy draws attention to the fact that hormonal and surgical treatments carry health risks and have permanent effects, and that it is not possible to distinguish a durable trans identity from a passing phase of an adolescent's development."[139] |
| Luxembourg | No changes[140] |
| Netherlands | No changes[141] |
| Norway | No changes[142] |
| Sweden | In December 2022 the Swedish National Board of Health and Welfare published updated guidance that urges greater caution in administering hormonal treatments or sex reassignment surgeries to minors. Such treatments should only be administered to minors in "exceptional" cases and must be tracked for research purposes. Insufficient evidence, an unexplained increase in dysphoria diagnosis among girls ages 13-17, and occurrences of detransition are specifically cited as reasons for greater caution.[143] |
| United Kingdom | An official review from the former president of the Royal College of Pediatrics and Child Health deemed the Tavistock youth gender clinic "not a safe or viable long-term option" for children. The National Health Service has begun to implement several notable changes, including: the start of closing the Tavistock youth gender clinic; repudiating the affirmation model in favor of one that treats claims of dysphoria with greater skepticism and uses psychotherapy as the first intervention; discouraging the use of social transition in prepubescent children; limiting the use of puberty blockers to formal research settings; clarifying that a true multidisciplinary team is comprised not only of "'gender dysphoria specialists,' but also of experts in pediatrics, autism, neurodisability and mental health, to enable holistic support and appropriate care for gender dysphoric youth."[144] |

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# States May Protect Minors by Banning "Gender-Affirming Care"

Legal Memo Gender

# States May Protect Minors by Banning "Gender-Affirming Care"

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Authors: Sarah Perry and Thomas Jipping

S*ummary*

The U.S. Supreme Court has held that parents have a constitutional right to direct the upbringing of their children that must be weighed against state interests such as state authority to regulate the practice of medicine. These interests are particularly strong with respect to novel or experimental medical interventions and drugs that have not been found to be safe and effective. Courts should also be very cautious about creating substantive rights that place "outside the arena of public debate and legislative action" issues about which vigorous debate and action are underway. Medical interventions for gender dysphoria in minors are clearly in this category and not, as the Supreme Court has required, "deeply rooted in this Nation's history and tradition."

**Key Takeaways**

The U.S. Supreme Court has recognized that parents have a constitutional right to direct their children's upbringing in specific contexts such as education.

Courts should resist creating substantive rights not in the Constitution's text, especially when an issue is the subject of public debate and legislative action.

Controversial medical interventions for minors' gender dysphoria are not, as the Supreme Court requires, "deeply rooted in [America's] history and tradition."



The American Psychiatric Association defines "gender dysphoria" as "psychological distress that results from an incongruence between one's sex…and one's…psychological sense of [his or her] gender."REF "Gender-affirming care"—which prioritizes a person's claimed "gender identity" over his or her sex—has

social, legal, medical, and surgical components.REF It is "sometimes referred to as transition-related care"REF because it is intended to facilitate an individual's movement away from his or her sex and toward a desired gender identity.

The U.S. Food and Drug Administration (FDA) has approved a group of drugs, called GnRH agonists, that suppress production of the hormones estrogen and testosterone. The FDA has approved this category of drugs to treat abnormally early puberty in minors, endometriosis, and prostate cancerREF but "has never approved them for gender dysphoria" for either adults or minors.REF They are nonetheless increasingly being prescribed for minors who wish to "make the[ir] body look and feel more like that of the opposite sex."REF

While many drugs are prescribed for "off-label" uses, doing so "circumvents the FDA's authority to examine drug safety and efficacy, especially when the patients are children."REF This is particularly hazardous when the promotion and off-label use of a drug are part of a high-profile political or cultural campaign. That appears to be the case with "gender-affirming" medical interventions.

Several European countries that uncritically embraced "gender-affirming care" for minors have already reconsidered or reversed course as the lack of evidence supporting the safety and effectiveness of these drugs becomes more widely known and evidence of negative long-term health consequences accumulates.REF In the United States, the FDA is being sued for allegedly concealing records regarding the off-label use of puberty blockers and cross-sex hormones on minors.REF In addition, nearly two dozen states have enacted laws prohibiting "gender-affirming" interventions for minors in most circumstances.REF

Parents who seek to obtain such interventions for their children have filed lawsuits in several of these states, arguing that banning such treatment for minors violates the parents' constitutional right, protected by the Fourteenth Amendment, to direct the upbringing of their children.REF This Legal Memorandum will evaluate that contention by examining the foundation and recognition of the parental rights involved and whether those rights extend to obtaining a specific type of medical intervention, such as those referred to as "gender-affirming care," for minor children.

**The Fourteenth Amendment and Substantive Rights**

The Fourteenth Amendment prohibits states from "depriv[ing] any person of life, liberty, or property, without due process of law."REF The Supreme Court of the United States has held that, while framed in procedural terms, the Due Process Clause also protects substantive rights.REF This interpretive approach is called substantive due process.

Opening this door is potentially problematic. America's Founders created a written Constitution so that its limits on government "may not be mistaken or forgotten."REF That purpose is made more difficult if the Constitution is said also to contain unwritten limits on government in the form of unenumerated substantive rights that only judges can discern. Nevertheless, as Supreme Court Justice Samuel Alito

recently noted, “[b]y its terms, the Due Process Clause is about procedure, but over the years, it has become a refuge of sorts for [substantive] constitutional principles.”REF

This path arguably gives the judiciary more power than the Founders designed it to have. The Constitution is the “supreme law of the land,”REF and as the Supreme Court acknowledged in Marbury v. Madison, “[its] framers…contemplated that instrument as a rule for the government of courts, as well as of the legislature.”REF The Constitution cannot be such a rule, at least not fully, if judges can, in effect, add provisions that the Framers neither put there nor may even have contemplated.

The “natural human tendency to confuse what the [Fourteenth] Amendment protects with our own ardent views about the liberty that Americans should enjoy”REF makes substantive due process a “treacherous field.”REF The Supreme Court, therefore, has repeatedly urged the “utmost care whenever we are asked to break new ground in this field, lest the liberty protected by the Due Process Clause be subtly transformed into the policy preferences of the Members of this Court.”REF The Supreme Court has identified a few limiting principles that help avoid this result.
Substantive rights protected by the Due Process Clause are limited to those that are, “objectively, deeply rooted in this Nation’s history and tradition…and ‘implicit in the concept of ordered liberty,’ such that ‘neither liberty nor justice would exist if they were sacrificed.’”REF
Rights said to meet these criteria must be carefully or specifically describedREF rather than generally or vaguely stated. The Supreme Court “has always been reluctant to expand the concept of substantive due process” and has focused on “how [a] petitioner describes the [unenumerated] constitutional right at stake.”REF It has subjected both enumerated and unenumerated rights to a “careful analysis of the history of the right at issue.”REF

In addition to caution about creating any unenumerated substantive rights, the Supreme Court has held that, whether or not appearing in the text, constitutional rights are not absolute. Advocates of gun control, for example, often quote from Justice Antonin Scalia’s opinion in District of Columbia v. HellerREF that “the right secured by the Second Amendment is not unlimited.”REF President Biden has quoted these words in remarks about gun restrictions,REF and the Giffords Law Center to Prevent Gun Violence highlights them with a large bold font on its website.REF

In annual surveys of civic knowledge, freedom of speech is typically the only First Amendment right that a majority of Americans can identify.REF Even freedom of speech, however, has its limits. It has become axiomatic that, as Justice Oliver Wendell Holmes originally put it, “[t]he most stringent protection of free speech would not protect a man in falsely shouting fire in a theatre and causing a panic.”REF

Unenumerated constitutional rights are similarly limited. In Roe v. Wade, for example, the Court held that the general “right of privacy,” which it had previously recognized,REF “is broad enough to encompass a woman’s decision whether or not to terminate a pregnancy.”REF That right, however, “cannot be said to be absolute.”REF Similarly, the “fundamental right of parents to make decisions concerning the care, custody, and control of children,”REF while “perhaps the oldest of the fundamental liberty interests recognized by [the Supreme] Court,”REF is “[not] beyond limitation.”REF

**Foundation and Recognition of Parental Rights**

In his Commentaries on the Laws of England, William Blackstone wrote of parents' common-law duty to provide for the maintenance, protection, and education of their children.REF Professor Robert Sedler explains that this duty was later codified in state laws and became the basis for an unenumerated Fourteenth Amendment right of parents to direct the upbringing and care of their children.REF The Supreme Court has similarly observed that the "history and culture of Western civilization reflect a strong tradition of parental concern for the nurture and upbringing of their children. This primary role of the parents in the upbringing of their children is now established beyond debate as an enduring American tradition."REF

Blackstone emphasized that the duty of parents to provide a suitable education for children was "of far the greatest importance of any."REF Similarly, consistent with the necessary caution in navigating this "treacherous field" of substantive due process, the Supreme Court's first recognition of parents' right to direct the upbringing of their children was limited to "the power of parents to control the education of their own."REF Several precedents inform this analysis.

In Meyer v. Nebraska,REF a teacher challenged a state law that prohibited any person, "individually or as a teacher…in any private, denominational, parochial, or public school" from teaching "any subject to any person in any language than the English language" until after the eighth grade.REF The Nebraska Supreme Court affirmed the teacher's conviction for using German to teach reading, holding that the statute "comes reasonably within the police power of the state"REF and did not violate the Fourteenth Amendment.

The issue before the U.S. Supreme Court in Meyer was whether this statute "unreasonably infringes the liberty guaranteed…by the Fourteenth Amendment."REF The Court held that it did, overturned the conviction, and struck down the statute. The Court had previously interpreted the Due Process Clause to include "those privileges long recognized at common law as essential to the orderly pursuit of happiness by free men."REF The "established doctrine" at the time the Court decided Meyer was that "this liberty may not be interfered with, under the guise of protecting the public interest, by legislative action which is arbitrary or without reasonable relation to some purpose within the competency of the state to effect."REF

Pierce v. Society of SistersREF challenged a law, adopted by the voters in Oregon, requiring that children between the ages of eight and 16 attend public schools. The Society of Sisters of the Holy Names of Jesus and Mary, which operated schools providing both secular and religious education, and the Hill Military Academy, which provided private education for boys who were five to 21 years old, challenged the law. Citing Meyer, the Supreme Court held as "entirely plain" that the law "unreasonably interferes with the liberty of parents and guardians to direct the upbringing and education of children under their control."REF

The standard, the Court said, was that "rights guaranteed by the Constitution may not be abridged by legislation which has no reasonable relation to some purpose within the competency of the state."REF

The plaintiffs in Meyer could challenge the law because the "unwarranted compulsion…over present and prospective patrons of their schools"REF meant "destruction of their business and property."REF

In Prince v. Massachusetts,REF a Jehovah's Witness challenged her conviction under Massachusetts' child labor law for permitting her nine-year-old niece, over whom she had custody, to sell religious literature. She claimed that the law violated both her First Amendment right to exercise religion and, citing Meyer, her Fourteenth Amendment right to direct the upbringing of a child in her custody. "It is cardinal with us," the Court said, "that the custody, care and nurture of the child reside first in the parents…. But the family itself is not beyond regulation in the public interest…. [T]he state has a wide range of power for limiting parental freedom and authority in things affecting the child's welfare."REF

The Court also held that "[t]he state's authority over children's activities is broader than over like actions of adults" but not unlimited.REF Put in more personal terms, "[p]arents may be free to become martyrs themselves. But it does not follow they are free…to make martyrs of their children before they have reached the age of full and legal discretion when they can make that choice for themselves."REF In this light, the Supreme Court affirmed the conviction.

Troxel v. GranvilleREF involved a challenge to a Washington State law allowing any person to petition a court for visitation rights whenever "visitation may serve the best interest of the child."REF After the father of two girls died, their paternal grandparents petitioned for visitation rights over their mother's objection. The Washington Supreme Court held that the statute violated the mother's Fourteenth Amendment right to rear her children. The U.S. Supreme Court agreed,REF noting that under the "breathtakingly broad" visitation statute, "a parent's decision that visitation would not be in the child's best interest is accorded no deference."REF The Court limited its conclusion to this specific factual context, declining to speculate as to whether a narrower statute that gave more deference to a parent's evaluation of the child's best interest might also be unconstitutional.REF

The U.S. Supreme Court has thus recognized a Fourteenth Amendment right of parents to direct the upbringing of their children but has done so in specific contexts such as education or with reference to particular facts such as the "breathtakingly broad" visitation statute in Troxel.REF This background helps to clarify the novelty of the plaintiffs' claim that banning "gender-affirming care" for minors is unconstitutional. These challenges exist far outside the familiar education context. A "careful description" of their argument is that the Fourteenth Amendment protects their right to obtain a specific kind of medical intervention for someone else and that has not been found to be safe and effective if used as the parents want it used. Each basic element of this claim pushes substantive due process past where it has ever been.

In Abigail Alliance for Better Access to Developmental Drugs v. von Eschenbach,REF terminally ill patients claimed a Fourteenth Amendment right to access experimental drugs that had "passed limited safety trials but had not been proven safe and effective."REF The U.S. Court of Appeals for the D.C. Circuit, sitting en banc, concluded that such a right is not deeply rooted in America's history and tradition.

Rather, “our Nation has long expressed interest in drug regulation, calibrating its response in terms of the capabilities to determine the risks associated with both drug safety and efficacy.”REF

Today, it is the FDA that allows marketing of particular drugs for specific uses by determining that they are safe and effective for those uses.REF The D.C. Circuit concluded that “FDA regulation of post-Phase I drugs is entirely consistent with our historical tradition of prohibiting the sale of unsafe drugs.”REF As will be discussed more fully below, the Supreme Court has never recognized “a general right to receive new medical or experimental drug treatments,”REF even for adults; therefore, “[t]here’s little reason to think that a parent’s right to make decisions for a child sweeps more broadly than an adult’s right to make decisions for herself.”REF

**State Bans on “Gender-Affirming Care”**

Establishing that the general right of parents to direct the upbringing and care of their minor children is not absolute and that courts have not recognized a right to obtain medical care that is experimental or has not been found to be safe and effective makes the answer to the next question clear. Do state laws prohibiting “gender-affirming” medical interventions for minors violate parents’ constitutional rights? The answer is no. These bans are consistent both with the authority of states to regulate the practice of medicine generally and with the traditional understanding of parental rights as recognized by federal courts for more than a century.

Criticisms of “Gender-Affirming Care.” Advocates want to portray “gender-affirming care” as ordinary medical care, no different from familiar drug therapies or surgical procedures. It is not. As noted above, the FDA has not found puberty blockers or cross-sex hormones to be safe and effective for treating gender dysphoria. Clarifying that these interventions are in fact controversial, novel, and unproven provides important context for answering the legal question raised in lawsuits over state prohibitions.

As reported by the UCLA School of Law’s Williams Institute, more than 300,000 high school–aged (ages 13–17) children in the United States today identify as “transgender,”REF comprising the largest share of the overall transgender-identified population.REF Moreover, between 2017 and 2021, the number of children in the United States taking puberty blockers or cross-sex hormones doubled.REF Double mastectomies performed on adolescent girls increased by nearly 400 percent during the same period.REF

As noted above, gender dysphoria is an inherently subjective or impressionistic diagnosis, based as it is on an individual’s “psychological sense of [his or her] gender.”REF This means that factors that would not affect the incidence of other medical conditions might have a profound effect on this precipitous rise in the number of minor children expressing sudden onset gender dysphoria. Many critics, in fact, are exploring the “transgender craze”REF as part of the incursion of gender ideology into every facet of American life. Unfortunately, the medical establishment has not shown the kind of rigorous objectivity that this phenomenon requires. Before this recent surge in the diagnosis of gender dysphoria, up to 94 percent of adolescents with such distress experienced a resolution of symptoms after they passed through puberty.REF Nevertheless, much of the medical establishment has uncritically embraced “gender-affirming care” as the preferred treatment.

The American Academy of Pediatrics (AAP), for example, endorses the World Professional Association of Transgender Health (WPATH) approach to gender dysphoria: the irreversible altering of a minor's secondary sex traits through surgeries and cross-sex hormones. WPATH's guidelines for treating gender dysphoria are highly suspect, however.REF Its Standards of Care for adolescents seeking hormones, for example, are based largely on a single study now known as the "Dutch Study" and its related protocol.REF That protocol was far more restricted and conservative than WPATH's preference, and even the Dutch study has been subjected to withering and widespread criticism for its biased methodology, inapplicability to current clinical practice in Western countries, and unimpressive findings.REF

James Cantor, a researcher at Toronto's Center for Sexual Health, reported in the Journal of Marital & Sexual Therapy that the AAP's policy statement on "[e]nsuring comprehensive care and support for transgender and gender-diverse children and adolescents"REF was deeply flawed. Not only did the AAP statement fail to include any of the actual outcomes literature on cases of "gender diverse" children, but it also misrepresented the contents of its citations, which repeatedly said the opposite of what AAP attributed to them.REF The AAP's affirm-only/affirm-early position regarding the treatment of gender dysphoria in minors has been on shaky ground at least since 2018.REF

Problems with scientific research methods regarding gender dysphoria and the conclusions drawn from them abound. As a result, a medical consensus for minors regarding the bundle of interventions referred to collectively as "gender-affirming care" simply does not exist. One paper posted on the National Institutes of Health website, for example, asserts that "virtually nothing is known regarding adolescent-onset [gender dysphoria]."REF Sweden, the Netherlands, the United Kingdom, Finland, and now DenmarkREF have backtracked from earlier representations that medical interventions were needed for gender-dysphoric minors and now recommend more conservative approaches, including "watchful waiting."REF Notably, in the United Kingdom, one clinical journal attributed the lack of safeguards for children in England's largest pediatric gender clinic to the uncritical "affirmative model," which "originated in the USA."REF

The medical interventions that comprise "gender-affirming care" not only can but are intended to have lifelong consequences. Information on the long-term impact of these treatments, however, is scant. Reuters news service recently reported on this paucity of evidence, noting that:
Puberty blockers and sex hormones do not have U.S. Food and Drug Administration (FDA) approval for children's gender care. No clinical trials have established their safety for such off-label use. The drugs' long-term effects on fertility and sexual function remain unclear. And in 2016, the FDA ordered makers of puberty blockers to add a warning about psychiatric problems to the drugs' label after the agency received several reports of suicidal thoughts in children who were taking them. More broadly, no large-scale studies have tracked people who received gender-related medical care as children to determine how many remained satisfied with their treatment as they aged and how many eventually regretted transitioning.REF

In addition to the lack of affirmative evidence for these treatments, the growing number of adolescents who later regret receiving them illustrates the need for deliberation and careful analysis in pediatric gender medicine. A 2021 study by Dr. Lisa Littman published in the Archives of Sexual BehaviorREF

suggests that the number of detransitionersREF has been underestimated and that these adolescents often have complex, underlying mental health conditions that a reflexive move to transition did not solve.
A majority of respondents had been diagnosed with at least one psychiatric or neurodevelopmental issue.
More than one-third reported experiencing trauma before the onset of gender dysphoria.
Almost half of respondents stated that the medical counseling regarding transition was overly positive about its benefits and lacked any discussion of risks or possible side effects.
Some participants even reported that mental health and medical clinicians pressured them into "gender-affirming" medical transition.REF

The statistics on the comorbidity of gender dysphoria and mental illness similarly reinforce the need for a cautious "wait and see" approach when dealing with adolescent gender dysphoria and related distress. Based on a survey of more 10,000 patients, for example, a 2019 studyREF found that nearly 60 percent of transgender-identified patients in a more than 10,000-patient survey were diagnosed with at least one psychiatric disorder. A recent Heritage Foundation report found that "easing access to cross-sex treatments without parental consent significantly increases suicide rates."REF And a major long-term study out of Sweden revealed that adults who underwent "gender-affirming" surgery were 19 times more likely than the general population to die by suicide.REF

If there is a consensus regarding the best approach to gender dysphoria and "gender-affirming" care, it is evidenced by nearly every clinical and professional association in the world using approaches to helping gender-dysphoric children that are far more conservative than the affirm-and-transition approach favored by prominent American medical associations. In other words, it is groups like the AAP in the United States that are out of step with the consensus when they insist instead that their regime for the affirmation of gender identity is the only acceptable approach. Their approach has led to a proliferation of gender clinics nationwide and an increase in the number of children's hospitals and clinics performing "gender-affirming" chemical and surgical treatments.REF It has also implicated the government's interest in protecting vulnerable minors from irreparable bodily modification and harm.

State Authority to Ban "Gender-Affirming" Medical Treatment for Minors. In response to the proliferation of "gender-affirming" medical interventions across the country, 23 states have enacted restrictions for children under the age of 18.REF Most of these bans restrict any combination of modalities for gender dysphoria, including puberty blockers, cross-sex hormones, and body-altering surgeries for the purpose of changing a child's gender-based appearance.REF One recent case provides insight into whether such bans are constitutional.

The Tenth Amendment provides that "[t]he powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."REF These powers include what is often referred to as a general "police power" to provide for "[p]ublic safety, public health, morality, peace and quiet, [and] law and order."REF As recently as 2022, in Cameron v. EMW Women's Surgical Center, P.S.C., the Supreme Court held that "[p]aramount among the States' retained sovereign powers is the power to enact and enforce any laws that do not conflict with federal law."REF A state's opportunity to exercise its sovereign power to enact laws governing its own citizens "should not be

lightly cut off."REF This includes the creation of rights not found in the Constitution's text or deeply rooted in the nation's history or tradition that prevent states from exercising their reserved police power.

The Supreme Court made this plain in Dobbs v. Jackson Women's Health Organization,REF a case challenging a Mississippi ban on most abortions after 15 weeks of pregnancy. States had used their police power to prohibit abortion for more than 150 years before the Supreme Court, in Roe v. Wade,REF blocked that power by creating a fictitious constitutional right to abortion. In Dobbs, the Supreme Court overruled both Roe v. WadeREF and Planned Parenthood v. Casey,REF holding that "the Constitution does not confer a right to abortion."REF The result returned "authority to regulate abortion" to "the people and their elected representatives."REF

The states' police power includes regulating the medical professionREF by proscribing certain procedures or setting standards for performing them and by regulating, restricting, or prohibiting certain medical treatments altogether.REF As the Supreme Court held in Dobbs, these laws are constitutional "if there is a rational basis on which the legislature could have thought that [they] would serve legitimate state interests."REF Protecting minorsREF from catastrophic harm certainly falls within this category of interest and is not limited only to medical interventions that are, as is the case currently with "gender-affirming care," experimental or when their safety and efficacy have not yet been established.

The states' power to protect minors in this context also means that public policy issues that the Constitution does not clearly withdraw can be addressed through public debate and representative democracy. Abortion advocates attempted to constitutionalize abortion after failing to achieve their objectives in state legislatures.REF Gender activists today are using the same strategy to remove decisions about "gender-affirming" interventions from the people and their elected representatives. Yet like abortion, this issue has more than just a legal dimension; it raises profound moral, social, and cultural concerns that are not the domain of science and medicine. They are, rather, the kind of matters that are rightly addressed through the political process.

The Court in Dobbs relied on its 1997 decision in Washington v. GlucksbergREF for the way to determine whether a right not found in the Constitution's text prevents the state from enacting a particular law. In Glucksberg, the Court held that the Fourteenth Amendment's Due Process Clause does not protect a right to assisted suicide. That right, the Court explained, was not "deeply rooted in this Nation's history and tradition" and therefore could be regulated through the democratic process.

In addition, the Court offered counsel that is relevant to this analysis. Courts should not derive fundamental rights "from abstract concepts of personal autonomy."REF In fact, "the mere novelty" of an asserted right was "reason enough to doubt that [the Constitution] sustains it."REF That aptly describes an asserted right to "gender-affirming" puberty blockers, cross-sex hormones, and sex-trait modifying surgeries on minors. These are not only novel and controversial; they have not been approved either separately or jointly by the relevant regulatory authority as safe and effective for treating gender dysphoria, and far from reflecting a widespread medical consensus, they are out of step with the practices in other countries where health authorities have conducted systematic reviews of the scientific evidence.

This is strong support for the conclusion that the Constitution does not protect a parental right to obtain "gender-affirming" care for minors.

**Litigation Involving State Bans on "Gender-Affirming" Medicine for Minors**

As of this writing, parents of minor children seeking "gender-affirming care" have challenged bans in at least 14 states: Florida, Georgia, Montana, Texas, North Dakota, Alabama, Idaho, Arkansas, Indiana, Oklahoma, Tennessee, Nebraska, Missouri, and Kentucky.REF Three federal appellate courts have reached different conclusions on the constitutionality of these state bans. In each case, plaintiff parents assert an unlimited Due Process Clause substantive right of parents to choose any medical treatment for their children, claiming that there is a well-settled, universal consensus regarding chemical and medical treatment of gender dysphoria in minors or adolescents. In addition, on behalf of their children, they claim that these statutes violate the Constitution's guarantee of equal protection by discriminating against transgender individuals.

Brandt v. Rutledge.REF An Arkansas statute prohibits "gender transition procedures"REF for minors. The law defines those procedures as including "any medical or surgical procedure…intended to [a]lter or remove physical or anatomical characteristics or features that are typical for the individual's biological sex" or "[i]nstill or create physiological or anatomical characteristics that resemble a sex different from the individual's biological sex."REF Youth plaintiffs argued that the ban discriminated on the basis of sex and transgender status and therefore violated the Fourteenth Amendment's Equal Protection Clause; parent plaintiffs claimed that the ban violated their right under the Due Process Clause; and physician plaintiffs asserted that the law violated their First Amendment right to freedom of speech.

The Eighth Circuit affirmed the lower court's injunction against the law, concluding that it likely violated the Equal Protection Clause.REF It therefore did not address the Due Process Clause or free speech claims. Judge Jane Kelly, writing for the three-judge panel, held that the state statute discriminated on the basis of transgender status and therefore should be evaluated under the "heightened scrutiny" standard usually applied to sex discrimination.REF That standard required the state to prove that the ban on "gender-affirming" care was "substantially related to an important interest"REF in preventing these procedures. Arkansas argued that its "interest in protecting children from experimental medical treatment and regulating ethics in the medical profession"REF was sufficient.

Judge Kelly wrote that "the biological sex of the minor patient is the basis on which the law distinguishes between those who may receive certain types of medical care and those who may not"REF and was unable to find any "exceedingly persuasive justification" from the government that was sufficient to meet the heightened scrutiny standard.REF Notably, she cited the controversial WPATH standards, uncritically emphasizing that puberty-suppressing hormones might be "appropriate for adolescents at the onset of puberty who have exhibited persistent gender nonconformity and who are already addressing any coexisting psychological issues."REF

Eknes-Tucker v. Governor of Alabama.REF Alabama's Vulnerable Child Compassion and Protection ActREF has language similar to the Arkansas statute. It provides that "no person shall engage in or cause"

the prescription or administration of puberty-blocking medication or cross-sex hormone treatment to a minor "for the purpose of attempting to alter the appearance of or affirm the minor's perception of his or her gender or sex, if that appearance or perception is inconsistent with the minor's sex." Transgender minors and their parents challenged the law on both due process and equal protection grounds.

The district court ruled in the plaintiffs' favor, concluding that the Fourteenth Amendment protects a parental right to "treat [one's] children with transitioning medications subject to medically accepted standards" and that Alabama's justifications for the statute did not meet the heightened scrutiny standard under the Equal Protection Clause.REF On August 21, 2023, a three-judge panel of the U.S. Court of Appeals for the Eleventh Circuit unanimously reversed the district court on both issues.

In an opinion written by Judge Barbara Lagoa, the Court of Appeals held that "[t]he plaintiffs have not presented any authority that supports the existence of a constitutional right to 'treat [one's] children with transitioning medications subject to medically accepted standards.'"REF Additionally, the court found that because that right does not exist, the district court applied the wrong standard of judicial review. As the Supreme Court had done in Dobbs after concluding that no constitutional right to abortion exists, the Eleventh Circuit held that the statute has a "strong presumption of validity" and need only be rationally related to a legitimate government interest. The Alabama law easily met that standard, furthering the state's interest in protecting children from unproven and potentially irreversible medical procedures.

Next, the court looked more specifically at whether the general Fourteenth Amendment right of parents to direct the upbringing of their children included an unfettered right to choose transitioning medical treatments for them. It applied the Dobbs/Glucksberg analysis, asking whether such a right "is 'deeply rooted in [our] history and tradition' and 'essential to our Nation's scheme of ordered liberty.'" The court's answer was that "the use of these medications in general—let alone for children—almost certainly is not 'deeply rooted' in our nation's history and tradition."REF

The court's analysis reflected the need to reason forward from sound principles rather than a rush to find some justification for a predetermined conclusion. Because the judges were being asked to break new ground in the field of substantive due process under the Fourteenth Amendment, Lagoa wrote that they were bound to exercise the "utmost care." She pointed out that the lower court had "grounded its ruling in an unprecedented interpretation of parents' fundamental right to make decisions concerning the 'upbringing' and 'care, custody, and control' of one's children" and then had compounded the injury by applying the wrong judicial review standard.REF

L.W. v. Skrmetti.REF Statutes in Tennessee and Kentucky prohibit certain medical treatments for minors with gender dysphoria. Specifically, Tennessee bans puberty blockers, cross-sex hormones, and sex-transition surgery. Transgender minors and their parents challenged the laws on both due process and equal protection grounds. In Tennessee, the district court enjoined the law, concluding that it violated the parents' "fundamental right to direct the medical care of their children" and also failed to meet the heightened scrutiny standard under the Equal Protection Clause.REF

The U.S. Court of Appeals for the Sixth Circuit consolidated the two cases and, as the Eleventh Circuit had done, reversed the district court decisions on both issues.REF Writing for the 2–1 majority, Chief Judge Jeffrey Sutton inquired whether the people of this country "ever agreed to remove debates of this sort—over the use of innovative, and potentially irreversible, medical treatments for children—from the conventional place for dealing with new norms, new drugs, and new public health concerns: the democratic process."REF "Life-tenured federal judges," Sutton wrote, "should be wary of removing a vexing and novel topic of medical debate from the ebbs and flows of democracy by construing a largely unamendable Constitution to occupy the field."REF Citing Glucksberg, he cautioned that "[c]onstitutionalizing new areas of American life is not something federal courts should do lightly, particularly when 'the States are currently engaged in serious, thoughtful' debates about the issue."REF

In both cases, the plaintiff parents claimed that the Constitution was not neutral about legislative regulation on this issue but instead affirmatively gave them the right to choose new and possibly irreversible medical interventions for minors.REF The Sixth Circuit disagreed, holding that the government's interests in "regulating health and welfare," protecting "the integrity and ethics of the medical profession," and "preserving and promoting the welfare of the child" come with "broad power to 'limit[] parental freedom,'…when it comes to medical treatment."REF

Particularly relevant to "gender-affirming care," the court emphasized that this "presumption of legislative authority to regulate healthcare gains strength in areas of 'medical and scientific uncertainty.'" Otherwise, "[courts] will impose a constitutional straitjacket on legislative choices before anyone knows how that 'medical and scientific uncertainty will play out."REF As noted above, one of the safeguards against courts improperly creating substantive rights through the Due Process Clause is that a proposed right must be described carefully and concretely. The Sixth Circuit followed this counsel in Skrmetti, with Sutton writing that the plaintiffs were "climbing up the ladder of generality to a perch—in which parents control all drug and other medical treatments for their children—that the case law and our traditions simply do not support."REF

**Conclusion**

For a century, the U.S. Supreme Court has recognized that parents have a fundamental right to direct the care and upbringing of their children. The Court has done so only in certain contexts, such as education and visitation, and has also held that this right must be weighed against state interests such as traditional police power regarding the practice of medicine. While most parents may have the best interests of their children at heart, state interests are particularly strong with respect to novel or experimental medical interventions, drugs that have not been found to be safe and effective, and situations in which an active debate regarding public policy in a specific context is being conducted.

As a result, courts should be cautious about creating substantive rights that "place the matter outside the arena of public debate and legislative action." Medical interventions for gender dysphoria in minors are clearly in this category. The FDA has not approved puberty blockers or cross-sex hormones to treat gender dysphoria; criticism of what little science exists in this area continues to accumulate; and several

Western nations that, like the United States, uncritically embraced "gender-affirming" interventions have pulled back to a more cautious approach.

Using life-altering drugs and radical surgeries to alter a minor's appearance is not, as Glucksberg and Dobbs require, deeply rooted in America's history and tradition. The two federal appeals courts to address the issue properly came to this conclusion. A third considered only an associated claim—that a state law banning "gender-affirming" care for minors violated the Constitution's Equal Protection Clause because it discriminated based on transgender status. As a result, the third court never considered the constitutionality of the parent plaintiffs' claimed right to choose "gender-affirming care" for their children over the state's objection.

When the expected circuit split on the precise issue of parental rights under the Due Process Clause occurs,REF the Supreme Court will likely have to address the issue once again.

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# Sweden puts brakes on treatments for trans minors

Stockholm (AFP) – Sweden, the first country to introduce legal gender reassignment, has begun restricting gender reassignment hormone treatments for minors, as it, like many Western countries, grapples with the highly-sensitive issue.



With the number of diagnoses soaring, the medical community faces the dilemma of weighing precaution against the risks associated with not offering treatment to those suffering from "gender dysphoria".

Sweden decided in February 2022 to halt hormone therapy for minors except in very rare cases, and in December, the National Board of Health and Welfare said mastectomies for teenage girls wanting to transition should be limited to a research setting.

"The uncertain state of knowledge calls for caution," Board department head Thomas Linden said in a statement in December.

So-called puberty blockers have been used in young teens contemplating gender transition to delay the onset of unwanted physical changes.

Like many other countries, Sweden has seen a sharp rise in cases of gender dysphoria, a condition where a person may experience distress as a result of a mismatch between their biological sex and the gender they identify as.

According to the Board of Health and Welfare, approximately 8,900 people were diagnosed with gender dysphoria in Sweden between 1998 and 2021, in a country of around 10 million.

In 2021 alone, about 820 new cases were registered.

*The rising trend in gender dysphoria cases is particularly visible among 13- to 17-year-olds born female © Jonathan NACKSTRAND / AFP*

The trend is particularly visible among 13- to 17-year-olds born female, with an increase of 1,500 percent since 2008.

"It used to be a male phenomenon and now there is a strong female over-representation," psychiatrist Mikael Landen, chief physician at Sahlgrenska University Hospital in Gothenburg, told AFP.

Landen, who contributed to the scientific study on which the Board of Health based its decision, said the reasons for this increase remain largely a "mystery".

"Tolerance has been high in Sweden for at least the last 25 years, so you can't say it has changed," he said when asked if it was simply a result of a more accepting society.

# Western debate

The profile of those diagnosed is often complex, according to Linden, as gender dysphoria often occurs in those also suffering from other diagnoses, such as attention deficit and eating disorders or autism.

In May 2021 -- before the Swedish authorities' decision to restrict gender reassignment hormone treatments -- the prestigious Karolinska Hospital in Stockholm chose to restrict such hormone treatments to research projects only.


*The prestigious Karolinska University Hospital near Stockholm began restricting gender reassignment hormone treatments before the government chose to do so © Jonathan NACKSTRAND / AFP*

Other countries are weighing the same questions.

Neighbouring Finland took a similar decision in 2020, while France has called for "the utmost reserve" on hormone treatments for young people.

The UK meanwhile saw a high-profile court case in 2020.

Keira Bell, who regretted her transition from female to male, filed a complaint against the public body responsible for gender dysphoria treatments, claiming she had been too young at age 16 to consent to the treatments.

She ultimately lost her case.

Sweden's recent rollback is all the more notable as it was first in the world to authorise legal gender transition in 1972, paving the way for sex reassignment surgery to be covered by its universal healthcare system.

Rights groups have expressed concern.

Elias Fjellander, president of the youth branch of RFSL, the country's main organisation championing LGBTQ rights, says Sweden's decision risks leading to increased suffering.

"These people might need more care and invasive procedures in the future, because the decision could not be made earlier, even though the medical need was there," he said.

Twenty-year-old Antonia Lindholm, a trans woman who began her transition as a teenager, agreed.

"I think hormones save a lot of people," she told AFP.

"If I were 13 today, I wouldn't have a chance" of getting this treatment, Lindholm added.

## Regret

But others who have had hormone treatment support the Swedish position.

Mikael Kruse, 36, changed his gender in his late 20s but had a change of heart and finally "detransitioned".

"I think it's good to take a break to understand what's going on," he told AFP.

For seven years, the Swede lived as a woman, but that never resolved his discomfort.

A new diagnosis revealed he had Asperger's Syndrome as well as Attention Deficit Disorder, and the suffering he thought was related to his gender was due to different factors.

"All the pieces of the puzzle fell into place," Kruse said.

For Carolina Jemsby, co-director of the Swedish documentary The Trans Train which brought the care of adolescents into the limelight in 2019, the current debate shows it is "more complex than the healthcare system and society had hoped".

"One aspect of this dilemma is that it has become a political issue," she told AFP.

"It does a disservice to this group who need scientifically proven medical care to help them and give them a better life, and a better ability to live who they are."

In 1972 Sweden introduced an act to allow people to legally change their gender thus becoming, according to the government, "the first country in the world to introduce a formal option in law to be assigned with a new legal gender".

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# Current Concerns About Gender-Affirming Therapy in Adolescents

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## Abstract

**Purpose of Review** Results of long-term studies of adult transgender populations failed to demonstrate convincing improvements in mental health, and some studies suggest that there are treatment-associated harms. The purpose of this review is to clarify concerns about the rapid proliferation of hormonal and surgical care for the record numbers of youth declaring transgender identities and seeking gender reassignment procedures.

**Recent Findings** Systematic reviews of evidence conducted by public health authorities in Finland, Sweden, and England concluded that the risk/benefit ratio of youth gender transition ranges from unknown to unfavorable. As a result, there has been a shift from "gender-affirmative care," which prioritizes access to medical interventions, to a more conservative approach that addresses psychiatric comorbidities and psychotherapeutically explores the developmental etiology of the trans identity. Debate about the safety and efficacy of "gender-affirming care" in the USA is only recently emerging.

**Summary** The question, "Do the benefits of youth gender transitions outweigh the risks of harm?" remains unanswered because of a paucity of follow-up data. The conclusions of the systematic reviews of evidence for adolescents are consistent with long-term adult studies, which failed to show credible improvements in mental health and suggested a pattern of treatment-associated harms. Three recent papers examined the studies that underpin the practice of youth gender transition and found the research to be deeply flawed. Evidence does not support the notion that "affirmative care" of today's adolescents is net beneficial. Questions about how to best care for the rapidly growing numbers of gender-dysphoric youth generated an intensity of divisiveness within and outside of medicine rarely seen with other clinical uncertainties. Because the future well-being of young patients and their families is at stake, the field must stop relying on social justice arguments and return to the time-honored principles of evidence-based medicine.

**Keywords** Transgender · Gender dysphoria · Gender incongruence · Puberty blockers · Gender-affirming care · The Dutch protocol

## Introduction

The fundamental basis for concern about "gender-affirming" interventions for adolescents, and socially transitioned children who will soon be adolescents, is how they will fare in the ensuing decades [1•]. There are significant knowledge gaps about the balance of benefits and harms as patients live their lives.

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Medicine has provided treatments for transgender-identified adolescents for over 25 years [2–6]. These treatments emerged in the late 1980s to early 1990s in large part in response to the suboptimal outcomes of transitioned adults, with the hope that early gender transition may improve outcomes [3]. Despite claims of the lifesaving nature of gender transition for adults, none of the many studies convincingly demonstrated enduring psychological benefits. The longest-term studies, with the strongest methodologies, reported markedly increased morbidity and mortality and a persistently high risk of post-transition suicide among transitioned adults [7, 8••, 9].

The lack of credible evidence of benefits of gender transition has come into focus for today's transgender-identified youth, whose numbers have sharply increased. The presentation of gender dysphoria has markedly changed in recent years [10]: the sex ratio of youth presenting in medical settings has

reversed from primarily male to primarily female [11], with the preponderance of youth whose transgender identity emerged for the first time in adolescence and in the context of significant pre-existing mental illness and neurocognitive disorders [12]. These changes began to manifest around 2006 but became pronounced around 2014–2015 [13]. Nonetheless, many clinicians and policymakers promulgate that science long ago established the benefits of gender transition for these adolescents [14–18].

There has never been a dispute about whether medical and surgical interventions can feminize or masculinize secondary and some primary sex characteristics. For children and adolescents, the debate is not whether such transformations are possible, but "at what age can youth meaningfully consent," "upon fulfilling which criteria," and perhaps most importantly, "just because we can – should we?" [1•]. Such questions have provoked an intensity of divisiveness within and outside of medicine rarely seen with other clinical uncertainties [18–22]. This passion reflects decidedly different prioritization of *scientific evidence*, *medical ethics*, and *social values*. We elaborate on each below.

## Disagreement About the Scientific Evidence

While several European countries recognized deficiencies in the evidence supporting the highly medicalized "gender-affirming" approach to treating gender-dysphoric youth [1•, 33••, 34••, 35, 36], in North America, the narrative that "gender-affirmative care has been scientifically proven" has been remarkably resilient [23••]. Its justification rests on several key assumptions misrepresented as proven facts [15, 24]:

1. The emergence of a trans identity is the result of reaching a higher level of self-awareness.
2. Whether the trans-identity emerges in very young children, older children, teens, or mature adults, it is authentic and will be lifelong.
3. All gender identity variations are biologically determined and inherently healthy.
4. The frequently co-occurring psychiatric symptoms are a direct result of gender incongruence (the so-called "minority distress" model).
5. The only way to relieve, or prevent, psychiatric problems is to alter the body at the earliest signs of puberty.
6. Psychological evaluations and attempts to address psychiatric comorbidities should only be used to support transition.
7. Attempts to resolve gender dysphoria with psychotherapy range from ineffective to harmful.
8. Gender-dysphoric youth must have unquestioning social, hormonal, and surgical support for their current gender identities and desired physical appearance.
9. All individual embodiment goals, even those that do not occur in nature, must be fulfilled to the full extent technically possible.
10. Science has proven the benefits of early gender transition, and low rates of regret and detransition further validate the practice.

These unproven or disproven assumptions [24] have created a narrative that has misled physicians, parents, and patients to conclude that meeting a young gender dysphoric individual's desired body modification goals provides the only chance for a full, successful, happy life. It has positioned invasive medical interventions for children and adolescents as a civil right, rather than as medical interventions.

The most fundamental of these assumptions are that a teenager's *transgender identity, once expressed, is permanent*; that it will cause *lifelong suffering* if no medical interventions are offered; and that "gender-affirming" *interventions are safe and effective* at improving short-term and long-term psychological outcomes. All three premises are deeply flawed, as we explain below.

### Identity Development in Teenagers Is Far from Complete

Answering the question, "Who am I?" is the primary "developmental task" of adolescence [25]. Children and adolescents are too young to assume their current gender identity is permanent. Adults should know that young people's sexual orientations and gender identities fluctuate as they gain more life experiences [26].

Among the many facets of identity, the development of sexual orientation is particularly relevant as gay, lesbian, and bisexual individuals often have extended periods of suffering from gender dysphoria in their younger years [27]. The current overall crisis in mental health among youth and especially girls [28] may introduce further complexity into the identity development process. As many as 70% or more of youth who present with gender identity concerns for the first time in adolescence had psychiatric diagnoses prior to presenting with gender dysphoria [29]. The strong connection between a trans identity in adolescence and the presence of neurocognitive diagnoses [29, 30] deserves additional consideration, as individuals on the autism spectrum are often gender nonconforming. These factors may play a role in the emergence of a transgender identity as a maladaptive mechanism for understanding their distress.

The natural arc of adolescence is the eventual resolution of identity confusion and consolidation of a healthy, multifaceted identity. Problematically, every stage of "gender-affirming" care disrupts the natural course of identity development.

## Goals Have Shifted from Reducing Suffering to Achieving Personal "Embodiment Goals"

For decades, gender specialists told the public that gender/sex incongruence created such suffering that these interventions are often "lifesaving." In 2022, the justification for these interventions changed. WPATH "Standards of Care 8" explicitly instructed providers to rely on the "Gender Incongruence" ICD-11 diagnosis [31], which does not require the presence of distress [32].

This recommendation came with an extensive list of medical procedures that WAPTH deems medically necessary for nonbinary patients, including the construction of a neovagina while retaining penis and testicles, and "nonbinary mastectomies" that preserve some of the female breast tissue but resize and reposition the nipple and areola to make the breast appear more masculine. Procedures ranging from "flat front" obliteration of sex organs for those with a eunuch gender identity, to uterine transplantation for male-to-female individuals wishing to pursue childbearing, are also listed as medically necessary [31, p. 136].

Although achieving body modification goals can be very satisfying to patients, clinicians should not confuse it with improved functioning in relational, sexual, educational, substance dependence, and vocational aspects of life—the domains of mental health. Nor can it be claimed to be "lifesaving."

## Medical and Surgical Gender Transition Has Not Resulted in Credible Mental Health Improvements

Despite the promise that gender transition is key to ameliorating the suffering of gender-dysphoric youth, systematic reviews of evidence failed to find trustworthy evidence of such improvements. The well-known National Institute for Health and Care Excellence (NICE) reviews, commissioned by the NHS, the UK's health authority, evaluated the first two stages of medical gender transition for youth: puberty blockers and cross-sex hormones [33••, 34••]. In both reviews, the studies that reported positive findings were found to be unreliable due to poor methodology.

In the case of puberty blockers, the reviews found no evidence of improvements in key areas of mental health:

> "The results of the studies that reported impact on the critical outcomes of gender dysphoria and mental health (depression, anger and anxiety), and the important outcomes of body image and psychosocial impact (global and psychosocial functioning), in children and adolescents with gender dysphoria are of very low certainty using modified GRADE. They suggest little change with GnRH analogues from baseline to follow-up. Studies that found differences in outcomes could represent changes that are either of questionable clinical value, or the studies themselves are not reliable and changes could be due to confounding, bias or chance" [33••, p. 13].

For cross-sex hormones, the review found that improvements in mental health were *highly uncertain* and had to be carefully weighed against the risks of hormonal interventions [34••]. Having conducted their own systematic review of evidence [35], the Swedish health authority came to the even starker conclusion that for most adolescents, the risks of hormones outweigh the benefits [87••]. The Finnish health authority, and the Florida health authority, came to similar conclusions after their own systematic reviews/overviews of systematic reviews [36, 37••].

Since the practice of gender-transitioning youth did not begin to be widely scaled until about 2015, the existing systematic reviews of evidence for young people are limited by very short-term follow-up. Therefore, it is informative to look at studies that followed lifelong trajectories of individuals who medically transitioned decades ago, although they represent a different demographic group (most transitioned when they were older). Unfortunately, these long-term data do not show that hormonal and surgical transitions result in lasting mental health improvements in transgender-identified individuals, and some evidence even suggests the possibility of treatment-associated harms [7, 40•].

A well-known 30-year Swedish follow-up study compared medically transitioned individuals to cisgender age-matched peers on key measures of morbidity and mortality [7]. The study found sharply elevated rates of suicide among transitioned adults (19 times higher than controls overall, and 40 times higher for female-to-male individuals [7, Table S1]) and significantly elevated all-cause morbidity and mortality, with survival curves between transitioned adults and their cisgender matched controls markedly diverging at the 10-year mark and beyond.

A more recent long-term Swedish study also failed to find that either hormones [39••] or surgery [8••, 40•] improved long-term mental health outcomes of gender dysphoric adults. Originally, the surgical outcomes showed some promise [39••]; however, the methodology was found to be deeply flawed [8••], and upon reanalysis of the surgery data, it emerged that not only did those who refrained from surgery fare no worse, but they also had half as many serious suicidal attempts [40•]. This difference did not reach the threshold of statistical significance, but the apparent doubling in serious suicide attempts among surgically transitioned individuals, as compared to gender-dysphoric controls who did not have surgery, is clinically meaningful and problematic.

Yet another long-term Dutch follow-up of transitioned individuals concluded that "suicide death risk is higher in trans people than in the general population" and that suicide deaths occurred during every stage of transitioning"—from those who were still in the evaluation phase, to those who underwent complete gender transition [41, p. 486].

Two recent US-based publications highlighted high rates of mental health problems, including depression, anxiety, substance abuse disorder, suicidality, cardiovascular disease, obesity, cancer, and sexually transmitted infections such as HIV, HPV, syphilis, and hepatitis C in community samples of adults who identify as transgender [42, 43]. Although community samples can suffer from extensive methodological problems [44], there is little debate about the high burden of physical and mental health illness in this population. The explanations offered for these health disparities focus on minority stress, discrimination, and barriers to obtaining health care including fear of mistreatment in health facilities [42, 43]. Conspicuously absent from the discussion is the possibility that the mental health of some trans persons may be intrinsically compromised.

The position that poor mental health problems are either merely co-occurring with, or a direct result of the experience of "gender incongruence"—with no acknowledgement of the possibility of reverse causation —is reinforced in the WPATH "Standards of Care 8" Assessment section for adults, which states that uncontrolled mental health problems should only rarely impede the provision of hormones and surgery [31, p. 37]. While the adolescent chapter acknowledges the difficulties of working with adolescents who have psychiatric illnesses, the focus is on controlling problems just enough to ensure that young patients can provide valid consent to gender reassignment, participate in postoperative care, and adhere to ongoing hormone treatment [31]. The predominance of pre-existing mental health problems prior to the onset of gender dysphoria in youth [29], and the implications for the future durability of a transgender identity as youth mature, is not considered. In 2022, two prominent gender specialists expressed concern that trans-identifying adolescents are too quickly diagnosed and rushed to irreversible body-modifying interventions [45, 46].

## Collision of Ethical Principles

When treating transgender-identified adolescents, clinicians invariably confront three ethical principles—above all, do no harm (nonmaleficence); act in the patient's best interests (beneficence); and respect of patient autonomy [47]. These principles uncomfortably collide in the minds of many clinicians. There seems to be no simple resolution.

To avoid *harm*, clinicians conceptualize the specific physiologic, medical, social, and psychological dangers that parents and patients need to understand, attempt to avoid, or accept. Here are examples from each danger category associated with medical gender transition: sexual dysfunction and infertility [49, 50]; shortened lifespan due to increased medical morbidity [7, 51]; difficulties in romantic partnerships [52, 53]; substance abuse and addiction [54]. Advocates of the medical transition of youth point to the harms of "doing nothing" to stop natural puberty, which subjects youth to distress and necessitates more invasive procedures later in life to "undo" the irreversible effects of puberty on the body [55]. Unlike the risks of transition-associated harms which have been demonstrated, avoidance of *future harms* by undergoing a medical transition in adolescence remains at best an unproven theory. Blocking puberty at Tanner stage 2 not only removes the possibility of fertility preservation [15], but also greatly complicates future genital surgeries due to insufficient tissue [56]. The death of one of the 70 youths in the famous "Dutch study" [5] due to complications from genital surgery was likely a direct consequence of early puberty blockade [57•].

To ensure *beneficence*, clinicians need to understand the benefits of gender transition, when they appear, and the extent to which they endure over time. Initially, a high level of satisfaction is expected as desired changes such as softened skin or, conversely, facial hair appear [58••]. Surgery can further improve appearance and satisfaction, although its rate of complications is significant [59, 60], and it does not clearly improve mental health [7, 8••]. However, at some point, the interventions reach their limit. While the face, chest, and/or genitals can be surgically altered, overall skeletal size or hand size will continue to appear incongruent, and dysphoria may persist [61].

To respect patient *autonomy*, clinicians need to determine when an adolescent has the cognitive maturational capacity and life experience to consent to potentially irreversible medical and surgical interventions. However, because of the maturational capacities of children or young adolescents, it is the parents who are actually exercising the autonomy. This can be seen in families in which parents support transition and those who do not. As soon as parents consent to the first stage of gender transition, a child's future medical transition trajectory is virtually assured [62•, 63•]. While children "assent" to the interventions, recent research about the capacity of adolescents to make decisions related to future reproductive function is not reassuring [64].

## Clash of Value Systems

Absent certainty about the optimal treatment of the high number of youth currently presenting with gender dysphoria [23••], decisions are made based on core values.

Those who insist that a young person has the right to receive any medical intervention they desire now, and the right to regret that intervention later, privilege *autonomy* above all else. The "patient autonomy" argument is compromised by the very young age of the many affected patients, and a common tendency among gender-affirming providers to exaggerate the benefits of the practice, while downplaying the risks and uncertainties [1•, 20].

Those who advocate for sharply curbing the practice of medical interventions in gender-diverse minors because they view the practice as a major source of iatrogenic harm, privilege the principle of *non-maleficence*.

The two positions on the issue of youth gender transition also distinctly clash over the value of *beneficence*. Each side claims they are pursuing beneficence, but sharply disagree on the solution: one side insists that the most benefit is derived by undergoing a transition as early in puberty as possible to achieve the best possible cosmetic outcomes, while the other asserts that achieving cognitive maturity, emotional stability, and obtaining life experiences (including sexual experiences) prior to making the decision to undergo irreversible transition will provide the most long-term benefit for affected individuals.

## Significance of Regret and Detransition

Proponents of gender-transitioning youth insist the benefits of the practice are self-evident even if systematic reviews of evidence cannot detect them. To support their view, they quote exceedingly low regret rates of less than 1–2% [65, 66]. This implies that 98–99% of transitioned individuals are happily situated throughout their lives. This conclusion is inaccurate, for three reasons.

*First*, follow-up studies exploring regret and quality of life suffer from very high rates (20–60%) of loss to follow-up [67], which means the most adversely affected, including dissatisfied, sick, or deceased patients, may be lost to follow-up at a disproportionately high rate. *Second*, these rates were obtained from individuals transitioning under much different circumstances than the ones found today. They were mature adults who passed rigorous psychological screenings, which today are viewed as "discriminatory gatekeeping."

*Third*, and perhaps most important, is the question of how these studies defined regret. Each study's methodology differed, but generally speaking, regret has been traditionally defined very narrowly as a request for legal document change or a return to the same clinic that facilitated the original transition to start medical detransition. Even when these criteria were met, not every study would consider someone who wanted to reverse their transition as a regretter. For example, Keira Bell, arguably the most famous young adult regretter, whose case led the UK to reevaluate their approach to gender dysphoric youth, would not have been counted as a regretter in frequently-cited "low regret" studies [65]. This is because the studies required regretters to have had their gonads removed, while the only surgery Keira received was a double mastectomy.

### Regret

Regret is a common, if not universal, human experience. Individuals who underwent medical transition are no exception. Regret does not preclude benefits, which typically appear first. The "honeymoon period" can last from several months to several years [68], with adverse effects emerging 8–10 years following transition [65, 69] among mature adult transitioners. Among the more recently transitioning cohorts comprised primarily of youth, there appears to be a shorter time to regret and a subsequent desire to detransition, around 3–6 years on average, with longer time to regret and detransition among biological males [70•, 71].

There are many contributing factors to regret. Many teens consenting to gender reassignment lack sexual experiences [72] and few anticipate wanting to have children in the future [64]. Later, as sexual dysfunction because of hormones, surgery, or anxiety about physical intimacy becomes a recurrent experience, regret appears. Reproductive regret can be significant, as was evident in the data presented at WPATH Symposium [73, 74••].

Strained intrafamilial bonds, inability to find a stable relationship, the experience of discrimination, need for ongoing medical care, substance use to quell anxiety and depression—matters that they may have been warned about—begin to create waves of regret. Some eventually express regret over not having had a chance to explore their concerns in psychotherapy before they transitioned [70•, 71].

There must be a hierarchy of intensity of regret related to the situations patients ultimately find themselves in. The most extreme form of regret is post-transition suicide and suicide attempts. Individuals who undergo medical detransition to restore the body to its pre-transitioned state are also high on this hierarchy. Lower on this hierarchy are those who regret their transitions but due to the irreversible changes to their bodies' anatomy and function, adaptively choose to make the best of their lives without detransitioning. Regret and acceptance can co-exist.

### Detransition

Physicians providing gender transition of youth claim that they have never met a detransitioned patient. This is not

surprising: recent research with detransitioners indicated that three-quarters do not return to the treating providers to tell them about detransition [70•].

Detransition has become much more visible in recent years [70•, 71, 75–83, 84••, 85]. However, it was only recently that the rates of detransition began to be quantified. According to recent UK and US data, 10–30% of recently transitioned individuals detransition a few years after they initiated transition [82, 83, 84••]. Detransition does not invariably mean regret about the original transition. Not all detransitioned individuals have expressed regret. Those who have, are often angry at themselves for their naïve adolescent certainty and disturbed about medical professionals' unconcerned compliance with their requests. A growing number of malpractice lawsuits by regretful youth [85] is likely in the future.

## The Reversal of "Gender-Affirming Care"

In the last 36 months, there has been sharply increased scrutiny of the practice of youth gender transition worldwide. Systematic reviews of evidence from Europe failed to demonstrate the hoped-for meaningful improvements in youth's mental health functioning and exposed significant risks, including demonstrated risks to bone development [33••, 34••, 35, 36].

Three different studies [1•, 57•, 74••] recently shone a spotlight on the original Dutch research [4, 5], which launched the experimental practice of pediatric gender transition into mainstream medical practices shortly after its publication. The studies argued that the Dutch research failed to demonstrate any clinically significant changes in standard measures of psychological health and that the main finding of the resolution of gender dysphoria was likely invalid due to the reversal of the scale scoring between baseline and follow-up [1•, 74••]. The Dutch research also raised serious ethical questions, as nearly all the youth in the Dutch research who were transitioned and became sterile had been same-sex attracted at baseline [57•]. Overall, the researchers deemed the Dutch studies unfit for clinical or policy decision-making due to the high risk of methodological bias [1•, 74••].

Commensurate with these conclusions, in the last 3 years, three European countries—Finland, Sweden, and England—have reversed their unquestioning belief in "affirmative care" by setting new national health policies that prioritize mental health interventions as the first and often only treatment available outside of clinical research settings [86, 87••, 88].

This reckoning has also begun in France, Australia, and the US state of Florida, and most recently, Norway [89–92]. Many US state laws have been introduced to limit or ban gender transitions of youth [93]. The reluctance of the US medical societies to recognize the apparent problems with medical "gender affirmation" of youth may have contributed to the unfortunate and preventable politicization of this complex issue.

## Conclusions

Fulfilling the diagnostic criteria for gender dysphoria (DSM) or gender incongruence (ICD) in children or adolescents today does not predict its persistence in the future. Doctors may be incorrect in their assumptions about the causes, persistence, and future trajectory of adolescent gender dysphoria. The rapidly rising numbers of gender dysphoric youth treated with hormones and surgeries and the delayed onset of regret mean that the scale of possible iatrogenic harm will not be known for several years.

The evidence base for gender-affirming interventions is sparce and of very low quality. While the evidence of benefits is highly uncertain, the harms to sexual and reproductive functions are certain, and many uncertainties about the long-term health effects exist. As a result, it is hard to ethically justify continuing to use hormones and surgeries as first-line "treatment" for gender dysphoric youth.

Political arguments relying on social justice, civil rights, and freedom of expression are compelling and powerful in the public arena. Few mental health professionals would argue against these vital human rights. Nonetheless, they tend to complicate clinicians' consideration of how to respond to gender dysphoric adolescents and their families.

Parents want to know, "Where is this identity coming from?" "What about my child's previous difficulties?" and critically, "Will transition give my child the best chance for a happy and fulfilling life?" Clinicians are ethically bound to honestly represent the uncertainty of the current state of knowledge, rather than asserting that body modification is the best, safest, and most effective treatment. When a concerned family seeks our counsel, they are seeking our knowledge, not our political ideation and beliefs.

**Author Contribution** Both authors contributed to the conception and design of this review. The first draft of the manuscript was written by Stephen Levine. Both authors contributed to its evolution. E. Abbruzzese provided the majority of the literature review. Both authors critically revised and approved the final manuscript.

**Data Availability** Data sharing is not applicable as no new data were generated or analyzed during this study.

## Declarations

**Conflict of Interest** The authors declare no competing interests.

**Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by any of the authors.

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**group of gender dysphoric individuals who underwent surgery, and a "control" group gender dysphoric individuals who refrained from surgery. The new analysis showed no statistically significant differences in long-term mental health outcomes measures between the two. It also revealed twice as many serious suicidal attempts in the group that underwent surgery compared to the controls, although the difference did not rise to the level of statistical significance, likely because the sample was underpowered.**

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CHILD AND ADOLESCENT MENTAL HEALTH

# All-cause and suicide mortalities among adolescents and young adults who contacted specialised gender identity services in Finland in 1996–2019: a register study

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## ABSTRACT

**Background** All-cause and suicide mortalities of gender-referred adolescents compared with matched controls have not been studied, and particularly the role of psychiatric morbidity in mortality is unknown.

**Objective** To examine all-cause and suicide mortalities in gender-referred adolescents and the impact of psychiatric morbidity on mortality.

**Methods** Finnish nationwide cohort of all <23 year-old gender-referred adolescents in 1996–2019 (n=2083) and 16 643 matched controls. Cox regression models with HRs and 95% CIs were used to analyse all-cause and suicide mortalities.

**Findings** Of the 55 deaths in the study population, 20 (36%) were suicides. In bivariate analyses, all-cause mortality did not statistically significantly differ between gender-referred adolescents and controls (0.5% vs 0.3%); however, the proportion of suicides was higher in the gender-referred group (0.3% vs 0.1%). The all-cause mortality rate among gender-referred adolescents (controls) was 0.81 per 1000 person-years (0.40 per 1000 person-years), and the suicide mortality rate was 0.51 per 1000 person-years (0.12 per 1000 person-years). However, when specialist-level psychiatric treatment was controlled for, neither all-cause nor suicide mortality differed between the two groups: HR for all-cause mortality among gender-referred adolescents was 1.0 (95% CI 0.5 to 2.0) and for suicide mortality was 1.8 (95% CI 0.6 to 4.8).

**Conclusions** Clinical gender dysphoria does not appear to be predictive of all-cause nor suicide mortality when psychiatric treatment history is accounted for.

**Clinical implications** It is of utmost importance to identify and appropriately treat mental disorders in adolescents experiencing gender dysphoria to prevent suicide.

### WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ No previous study has examined all-cause and suicide mortalities of gender-referred adolescents compared with matched controls nor while controlling for psychiatric morbidity.
⇒ The effects of medical gender reassignment on suicide risk in this population are not known.

### WHAT THIS STUDY ADDS

⇒ Gender dysphoria per se does not seem to predict neither all-cause nor suicide mortality in gender-referred adolescents.
⇒ Main predictor of mortality in this population is psychiatric morbidity, and medical gender reassignment does not have an impact on suicide risk.

### HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ It is of utmost importance to identify and appropriately treat mental disorders in adolescents experiencing gender dysphoria to prevent suicide; in addition, health policies need to ensure that accurate information is provided to professionals along these lines.

## BACKGROUND

Gender dysphoria (GD) refers to the distress or impairment in functioning that a person may experience when their gender identity does not align with their biological sex. GD is often accompanied by a desire to obtain hormonal and surgical treatment (medical gender reassignment (GR)) to align the body with the experienced gender.[1] The number of adolescents referred to specialised gender identity services (gender-referred adolescents) to consider GR has increased significantly in the 21st century.[2 3] Psychiatric morbidity is common in gender-referred adolescents.[4] GR may be initiated during the developmental years with expectations of better bodily outcomes than when treatments are initiated in adulthood, and with positive psychosocial outcomes such as reduced depression, self-harm and suicidality[5 6]; however, the evidence base for these psychosocial benefits is weak.[7 8]

Studies have reported increased mortality rates in adults diagnosed with GD, with rates of up to two to three times those of the general population, both in patients who proceeded to GR[9–12] and those whose treatment status was not disclosed.[13 14] This elevated mortality in this population has been associated with ischaemic heart disease, cancer and external causes, such as substance abuse and

suicide, and in some countries, HIV infection.[10 12] However, the all-cause mortality of young people seeking care for gender identity-related issues has not been studied. Moreover, to our knowledge, no previous study has examined the possible differences in mortality by directly comparing those who proceeded to GR to those who did not.

Among gender-referred adolescents, self-harming thoughts, self-injurious behaviours and suicide attempts are common, with a prevalence of up to 50% of the patients.[15–17] However, only a few studies have reported confirmed suicide deaths among transgender-identifying or gender-referred adolescents. Biggs[18] reported four suicides among young people who sought treatment at a British gender identity clinic between 2007 and 2020 (n=15 032, followed up to 30 080 patient-years) during a follow-up period of approximately 3 years. This corresponded to 0.03% of all clinical youth (0.13 suicides/1000 patient-years), and the suicide risk was estimated to be 5.5 times higher compared with a same-age general population sample.[18] In a Belgian gender identity clinic study conducted with 177 young people who sought treatment between 2007 and 2016, five (2.8%) of them died by suicide, which corresponded to a mortality rate of 9.42/1000[18 19] during their adolescent years. Neither of these studies accounted for GR. In a recent US study, two out of 337 participants (0.6%) who started hormone therapy committed suicide within a year of treatment initiation, corresponding to a suicide rate of 5.9/1000 person-years.[20] None of these studies assessed the significance of psychiatric morbidities for suicide mortality nor compared those who proceeded to GR and those who did not. In long-term follow-up studies on the suicide mortality of adults diagnosed with GD, suicide mortality ranging from 0.3% to 3% and rates of 0.7–2.7/1000 person-years have been reported, and these figures are 3.5–19 times higher than those for the general population.[9–13 21] Only one study attempted to consider the role of psychiatric morbidity in suicide risk, and in it, the suicide rate among transgender adults who underwent GR surgery was approximately three times higher than that of matched controls after accounting for psychiatric morbidity.[11] Despite the lack of studies on psychiatric morbidity in the context of GD, it remains that psychiatric morbidity is a well-established predictor of suicide,[22] a major confounding factor, and 20–80% of young people seeking gender identity services present with psychiatric morbidities.[4]

### Objective

In summary, the all-cause mortality of gender-referred adolescents compared with matched controls has not been studied, and the role of GR in all-cause mortality is unknown. Furthermore, suicide mortality among adolescents with clinically significant GD has rarely been studied. Methods enabling direct comparison with a same-age population have not been used, the role of psychiatric morbidity has not been considered and the impact of GR treatments on suicide mortality is unknown. This study aimed to address these gaps in the literature and investigate the mortality of gender-referred adolescents compared with matched controls using comprehensive Finnish registry data. The research questions are as follows:

1. Do the all-cause and suicide mortalities of gender-referred adolescents differ from those of matched control populations?
2. Are any observed differences in mortality between gender-referred adolescents and matched controls explained by psychiatric morbidity?
3. What is the impact of GR on mortality among gender-referred adolescents?

## METHODS

### Finnish registers

Each Finnish citizen is assigned an 11-digit personal identification number at birth or on acquiring citizenship status. This number serves as a unique identifier for individuals in various government registers, such as healthcare units. This identifier allows for the linkage of individual-level data across different registers. The Finnish Population Information System is a nationwide central registry that contains up-to-date personal information of all Finnish citizens. The National Institute for Health and Welfare has registered data on all Finnish citizen healthcare visits, including the location of the event, primary and secondary diagnoses, procedure codes and specialty codes, in its Care Register for Health Care (CRHC) since 1994. The Social Insurance Institution of Finland (Kela) registers the purchase of prescription medications. The cause of death register records information on citizens' causes and times of death. Moreover, these register datasets can be used for scientific research according to the Regulation (European Union) 2016/679 of the European Parliament and Council,[23] based on appropriate permission from the Social and Health Data Permit Authority Findata and Statistics Finland. Using register data enables the compilation of comprehensive and reliable data without loss to follow-up.

### Study population

In Finland, the gender identity assessment that may result in GR is nationally centralised to two university hospitals (Tampere and Helsinki University Hospitals). This study comprised a register-based follow-up of individuals who entered nationally centralised gender identity clinics in Finland from 1996 to 2019 before turning 23 years. The follow-up for each participant (later also a gender-referred individual) began when they entered the gender identity teams, that is, during their first appointment at the gender identity services and according to the subsequent provision of the following diagnoses: F64.0, F64.2, F64.8 or F64.9 (the index date). The follow-up period was extended until death or until June 2022, when the dataset was compiled. We did not restrict the upper age limit of the study sample to 18 years, as is common in many previous adolescent studies, because the identity development of young people continues beyond reaching legal adulthood.[24]

### Control group

Four male and four female controls matched for age and municipality of birth were extracted from the Population Information System for each gender-referred individual. The gender-referred individual's index date was assigned to all controls.

### Outcome measures

Information on the date and cause of death was obtained from the cause of death register, which relies on data from the Digital and Population Data Services Agency. This agency maintains records of all deaths in Finland along with their causes, as reported on death certificates.

### Variables

The number of contacts with specialist-level psychiatric care was extracted from the CRHC. The number of contacts, excluding the specialised gender identity assessment, was used in the analyses and classified as follows: none, 1–5, 6–25, 26–100 and 101+.

GR includes masculinising/feminising hormonal treatments, mastectomies and/or genital surgery. Transgender persons

diagnosed with F64.0 in the nationally centralised services (since 2023, F64.8) can obtain the right to special reimbursement from the national social insurance for their hormonal GR. This can occur when treatment is continued for a year, and means that special reimbursement for cross-sex hormone therapy can be used as an indicator of hormonal GR. This information was obtained from the Social Insurance Institution of Finland (Kela). Information on surgical GR was obtained from the CRHC.

Birth year and currently registered sex data were extracted from the Population Information System. The register does not allow researchers to track changes in the registered sex.

### Statistical analyses

The data were pseudonymised by Statistics Finland and analysed using IBM SPSS Statistics V.27.0. Basic demographic information was assessed using cross-tabulation and $\chi^2$ tests (Fisher's exact test where appropriate). Cox regression models were used to analyse mortality rates. HRs with 95% CIs were calculated for all-cause and suicide mortalities. The dependent variables (all-cause mortality and suicide mortality) were used. Group membership (gender referred, controls) was entered as the independent variable, first controlling for registered sex and birth year, and subsequently adding the number of specialist-level psychiatric treatment contacts. Multivariate models were finally rerun, further categorising the gender-referred group into those who had (GR+) and had not proceeded to (GR−) GR. In order to avoid type 1 error due to multiple testing and the large data size, the cut-off for statistical significance was set at a $p<0.01$.

### Patient and public involvement

Patients or members of the public did not have direct participation in the design, execution or reporting of this research.

## FINDINGS

There were 2083 individuals under the age of 23 years who sought gender identity assessments, and 16 643 matched controls. The mean age of gender-referred individuals at the time of seeking gender identity assessments was 18.5 (SD 2.2), with a median age of 19 (8–22) years. The mean follow-up time was 6.53 years, with a median of 5.74 (2.41–25.69) years. Gender-referred individuals contributed 13 602 person-years of follow-up, whereas the controls contributed 108 756 person-years.

The demographic characteristics of the study population are summarised in table 1. Among gender-referred individuals, 41.3% were registered males ($p<0.001$). There were 55 deaths in the study population, including 20 suicides. In bivariate analyses, all-cause mortality did not statistically significantly differ between gender-referred individuals and controls; however, the proportion of suicides was higher in the gender-referred group (0.3% vs 0.1%; $p=0.004$). Psychiatric treatment was more common and the number of contacts was higher among gender-referred individuals than among the matched controls. Of the gender-referred individuals, 38.2% had proceeded to GR interventions (table 1).

The all-cause mortality rate among gender-referred individuals was 0.81 per 1000 person-years, while controls had a rate of 0.40 per 1000 person-years. The suicide mortality rate among gender-referred individuals was 0.51 per 1000 person-years, while controls had a rate of 0.12 per 1000 person-years.

In multivariate analyses accounting for differences in follow-up times, the all-cause mortality of gender-referred individuals did not differ from that of controls when registered sex and year of birth were accounted for or when psychiatric treatment contacts were added to the model (table 2). Mortality was predicted by the male sex and an increasing amount of psychiatric treatment contacts.

When only registered sex and year of birth were controlled for, the HR for suicide mortality greatly increased in the gender-referred group. However, when the number of specialist-level psychiatric treatment contacts was added to the model, the difference between cases and controls levelled out. Death by suicide was significantly predicted by a high number of psychiatric treatment contacts, and borderline significantly predicted by male sex and earlier birth year (table 3).

To explore the role of GR, models accounting for sex, year of birth and psychiatric treatment were repeated by dividing the GR group into those who had and those who had not proceeded to GR. Adjusted HRs for all-cause mortality were 1.4 (95% CI 0.6 to 3.3; $p=0.5$) in the GR− group and 0.7 (95% CI 0.2 to 2.0; $p=0.5$) in the GR+ group, as compared with the controls. Adjusted HRs for suicide mortality were 3.2 (95% CI 1.0 to 10.2; $p=0.05$) and 0.8 (95% CI 0.2 to 4.0; $p=0.8$), respectively.

## DISCUSSION

In this nationally representative, register-based, long-term, follow-up study, the all-cause mortality of gender-referred adolescents did not statistically significantly differ from that of matched population controls. Suicide mortality first appeared to

**Table 1** Sample characteristics (%, n)

| | All n=18 726 | Cases n=2083 | Controls n=16 643 | P value Cases versus controls (where appropriate) |
|---|---|---|---|---|
| Registered males | 49.0 (9185) | 41.3 (860) | 50.0 (8325) | **<0.001** |
| Death during follow-up | 0.3 (55) | 0.5 (11) | 0.3 (44) | 0.05 |
| Suicide | 0.1 (20) | 0.3 (7) | 0.1 (13) | **0.004** |
| Number of contacts to specialist-level psychiatric care | | | | **<0.001** |
| None | 69.0 (12 928) | 28.6 (595) | 74.1 (12 333) | |
| 1–5 | 8.2 (1537) | 9.6 (200) | 8.0 (1337) | |
| 6–25 | 8.1 (1518) | 15.2 (317) | 7.2 (1201) | |
| 26–100 | 8.0 (1490) | 20.5 (426) | 6.4 (1064) | |
| 101+ | 6.7 (1253) | 26.2 (545) | 4.3 (708) | |
| Hormonal or surgical gender reassignment interventions* | 4.3 (814)* | 38.2 (796) | 0.1 (18)* | |

p-values statistically significant at level <0.01 are highlighted in bold.
*Controls may have obtained corresponding hormonal treatments (androgen, oestrogen, antiandrogen) or mastectomy because of any other relevant condition not counted as gender reassignment.

**Table 2** Predictors of all-cause mortality among persons who contacted specialised gender identity units at age less than 23 years

| | Model 1. Group membership, registered sex, birth year | | Model 2. Group membership, registered sex, birth year and contact with specialist-level psychiatric care | |
|---|---|---|---|---|
| | HR (95% CI) | P value | HR (95% CI) | P value |
| Group | | | | |
| Controls | Ref | | Ref | |
| Gender-referred | 2.0 (1.1 to 4.0) | 0.03 | 1.0 (0.5 to 2.0) | 1.0 |
| Registered sex male | 2.3 (1.3 to 4.1) | **0.004** | 2.7 (1.5 to 4.9) | **0.001** |
| Later birth year | 1.0 (0.9 to 1.1) | 0.9 | 1.0 (0.9 to 1.1) | 0.9 |
| Contacts to specialist-level psychiatric care | – | – | | |
| None | | | Ref | |
| 1–5 | | | 2.7 (1.1 to 6.7) | 0.04 |
| 6–25 | | | 5.7 (2.7 to 11.8) | **<0.001** |
| 26–100 | | | 4.0 (1.7 to 9.4) | **0.001** |
| 101+ | | | 6.8 (3.0 to 15.4) | **<0.001** |

p-values statistically significant at level <0.01 are highlighted in bold

be much higher among gender-referred participants; however, the association was fully explained by psychiatric treatment history. All-cause and suicide mortalities did not differ between those gender referred who had and had not proceeded to GR when psychiatric treatment history was accounted for.

**Table 3** Predictors of suicide mortality among persons who contacted specialised gender identity units at age less than 23 years

| | Model 1. Group membership, registered sex, birth year | | Model 2. Group membership, registered sex, birth year and contact with specialist-level psychiatric care | |
|---|---|---|---|---|
| | HR (95% CI) | P value | HR (95% CI) | P value |
| Group | | | | |
| Controls | Ref | | Ref | |
| Gender-referred | 4.3 (1.7 to 10.7) | **0.002** | 1.8 (0.6 to 4.8) | 0.3 |
| Registered sex male | 3.0 (1.1 to 8.2) | 0.04 | 3.8 (1.4 to 10.5) | 0.01 |
| Later birth year | 0.9 (0.8 to 1.0) | 0.02 | 0.9 (0.8 to 1.0) | 0.01 |
| Contacts to specialist-level psychiatric care | – | – | | – |
| None | | | Ref | |
| 1–5 | | | 1.3 (0.2 to 10.7) | 0.8 |
| 6–25 | | | 3.9 (1.0 to 16.0) | 0.06 |
| 26–100 | | | 5.6 (1.5 to 21.0) | 0.01 |
| 101+ | | | 11.1 (3.2 to 38.3) | **<0.001** |

p-values statistically significant at level <0.01 are highlighted in bold

### All-cause and suicide mortalities of gender-referred adolescents as compared with a matched control population

The all-cause mortality rate among gender-referred individuals aged less than 23 years (0.81 per 1000 person-years) was much lower than that reported in earlier studies among adults diagnosed with GD.[9–14 21] This discrepancy is most likely due to the young age of our participants, who therefore had not yet developed age-related illnesses such as cancer or cardiovascular diseases. Moreover, substance abuse problems, which have been associated with transgender individuals' mortality in other countries,[10] are rare among transgender youth in Finland,[25] as is HIV/AIDS.[26] Risks related to GR[27 28] and lifestyle choices may not have been actualised in our sample. We are not aware of comparable studies of all-cause mortality in adolescent patients with clinical GD.

In the gender-referred group, 0.3% died by suicide. This is significantly lower than the reported figures for suicidal ideation and self-harm among adolescents with GD.[15–17] The suicide mortality rate was 0.51 per 1000 person-years in our sample. Our rate was slightly higher than the British data of 0.13 per 1000 person-years[18]; however, our follow-up period was longer. Studies examining adults diagnosed with GD have reported suicide mortality rates ranging from being roughly comparable to those in our findings to being approximately fivefold higher.[9–13 21] The three-step theory of suicide posits that suicide (attempt) may follow if a combination of pain and hopelessness overwhelms connectedness, and if the individual has capability for suicide.[29] Meanwhile, adolescents presenting with GD may not necessarily feel disconnected, but actually find new connectedness and social support after 'coming out',[2] but they may also be less capable of suicide than adults. Nevertheless, suicide mortality among young people seeking GR is rare.

### Mortality and psychiatric morbidity

In this study, all-cause mortality was predicted through psychiatric treatment, with a higher risk associated with increased treatment needs and the male sex. Psychiatric disorders are associated with increased burdens of somatic illnesses[30] and suicide.[22] Our findings concord with these past pieces of evidence and show that the first observed difference between the gender-referred group and matched controls in suicide mortality levelled out when psychiatric treatment was considered. In fact, the novel contribution of this study is showing that suicide mortality associates with increased psychiatric needs; this is an important finding if we consider the failure of previous studies on mortality among patients with GD to account for psychiatric morbidities. In light of our findings, experiencing GD significant enough to seek GR appears to not be associated with increased suicide mortality, but suicides appear to be explained by psychiatric morbidities.

### Impact of GR on mortality among gender-referred adolescents

Neither GR-treated gender-referred participants nor those who had not proceeded to GR differed from controls regarding all-cause mortality when confounding by different follow-up times, sex, birth year and psychiatric treatment was accounted for. There is limited and partially conflicting evidence regarding the long-term somatic safety of GR. For example, there is no conclusive evidence regarding the risk of malignancy associated with hormone therapy. Oestrogen is known to increase the risk of thromboembolism; however, thromboembolic events in transgender women are rare. Changes in body mass index (BMI), lipid levels and blood pressure are also possible.[27 28] Considering

the young age of our sample population, we cannot conclude the somatic safety of GR because any potential impact on mortality would likely require follow-up periods of up to several decades. Since the increase in young people seeking GR has mainly occurred during the last decade, the mean and follow-up times remained modest in this sample.

Most importantly, when psychiatric treatment needs, sex, birth year and differences in follow-up times were accounted for, the suicide mortality of both those who proceeded and did not proceed to GR did not statistically significantly differ from that of controls. This does not support the claims[5 6] that GR is necessary in order to prevent suicide. GR has also not been shown to reduce even suicidal ideation[7 8], and suicidal ideation is not equal to actual suicide risk.[29] To the best of our knowledge, the impact of GR on suicide mortality among gender-referred adolescents has not been reported in earlier studies. In an earlier study by Dhejne *et al*,[11] even when psychiatric morbidity was controlled for, participants diagnosed as transsexual in adulthood who had undergone both hormonal and surgical GR displayed increased suicide mortality compared with matched population controls. Nonetheless, these authors focused on patients treated before 2002. More recent cohorts, particularly adolescents, may differ from those in earlier decades, and stress related to gender identity itself may be lower presently because of decreasing prejudice.

When psychiatric treatment history is considered, GD significant enough to result in contact with specialised gender identity services during adolescence does not appear to be predictive of all-cause or suicide mortality. Psychiatric morbidities are also common in this population. Therefore, the risk of suicide related to transgender identity and/or GD per se may have been overestimated.

## Strengths and limitations

The strengths of this study include a large nationally representative sample, an inclusion period of three decades, the use of matched population controls and a long follow-up period. The register datasets used display no loss during follow-up because reporting to these registers is mandatory for health authorities and citizens cannot opt out. Persons who may have permanently emigrated would not emerge in registers anymore, and there is no reason to expect that emigration from Finland would relate to GD. This study also considered contact with specialist-level psychiatric care as a reliable indicator of severe mental disorders, with longer or more intensive treatments reflecting greater severity.

The limitations of this study include the non-consideration of confounding factors such as social support, BMI or lifestyle factors. Psychiatric morbidity was analysed on the level of intensity of specialist-level psychiatric contact without disentangling causes of using the services. However, regardless of actual diagnoses set, specialist-level psychiatric treatment contact indicates severe psychiatric morbidity, as specialist-level services are reserved to severe disorders, and national guidelines exist to ensure this similar threshold throughout the country. Some of the psychiatric morbidity warranting specialist-level psychiatric treatment may have emerged only after the contact to gender identity services and may therefore theoretically not truly represent confounding but a pathway linking GD to mortality. However, register data cannot truly reveal the timing of onset of a disorder, and totally disentangling between psychological phenomena may also be challenging; therefore, we have simply called psychiatric morbidity a confounder.

A further limitation is that although the follow-up time in this study was longer than that in many other studies on outcomes in clinical GD adolescent samples, the mean follow-up time of six years could be considered relatively short. Despite the large amounts of data, deaths were rare in our sample, limiting the possibility of more fine-tuned analyses. Moreover, because the register authorities do not allow researchers to track changes in the registered sex, we were not able to run analyses stratified by birth sex, which is a limitation, particularly given the known sex differences in suicide mortality. However, owing to data security and privacy issues, cell frequencies below a certain limit must not be reported. This would have prevented further stratification anyway. Finally, our sample represented clinically gender-referred participants; thus, the findings cannot be generalised to all transgender-identifying youths.

## Clinical implications

It is of utmost importance to identify and appropriately treat mental disorders in adolescents experiencing GD to prevent suicide. Health policies need to ensure that accurate information is provided to professionals along these lines.

**Contributors** S-MR: writing—original draft (lead), formal analysis (equal), conceptualisation (equal). KT: writing—reviewing and editing (supporting), methodology (supporting), conceptualisation (supporting). TH: methodology (lead), writing—reviewing and editing (supporting), data curation (supporting). RK: writing—reviewing and editing (lead), data curation (lead), funding acquisition (lead), supervision (lead), conceptualisation (equal), formal analysis (equal), guarantor.

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**Patient consent for publication** Not applicable.

**Ethics approval** The study was approved by the ethical committees of Tampere University Hospital (ETL R20040R), Findata (THL/5188/14.02.00/2020) and Statistics Finland (TK/1016/07.03.00/2020).

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# Puberty blockers could cause long-term fertility and health issues for boys, study finds: ‘May be permanent’

By Melissa Rudy

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Fox News

Puberty blockers have been shown to cause long-term fertility problems in boys, according to a preprint study from Mayo Clinic.

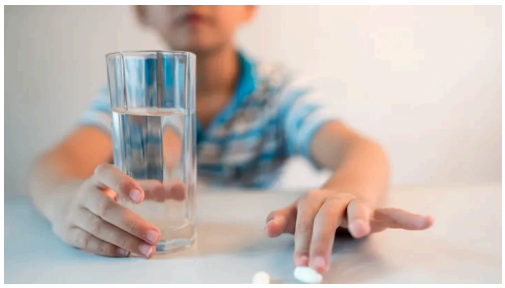
The study, which has not yet been peer-reviewed, analyzed more than 130,000 sperm cells from male children with gender dysphoria.

All participants were 17 or younger.

**TRANS CHILDREN WHO TOOK PUBERTY-BLOCKING DRUGS HAD MENTAL HEALTH ISSUES, UK STUDY FOUND**

The researchers analyzed the testicular cells of boys who had been taking puberty blockers for anywhere from three months to 52 months, and compared them to cells of a control group who had not been on the blockers.

Among those on puberty blockers, the researchers identified mild to severe "sex gland atrophy," determining that the medications accelerated the aging and function of testicular cells.



Puberty blockers have been shown to cause long-term fertility problems in boys, according to a Mayo Clinic preprint study. (iStock)

The findings suggest that puberty blockers’ impacts may be permanent — disputing claims that such effects can be reversed.

The researchers also detected cases of microlithiasis, which is marked by the presence of small clusters of calcium in the testicles.

**‘GENDER-AFFIRMING’ TREATMENTS DON’T BENEFIT YOUTH, SAYS PEDIATRICIANS GROUP: ‘IRREVERSIBLE CONSEQUENCES’**

Additional research from Mayo Clinic has linked testicular microlithiasis to an increased risk of testicular cancer.

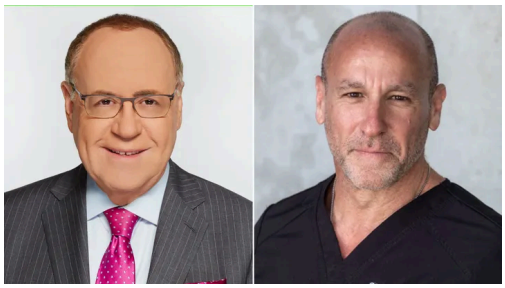
"We provide unprecedented histological evidence revealing detrimental pediatric testicular sex gland responses to [puberty blockers]," the authors wrote in the study findings.

**Doctors highlight the risks**

Dr. Marc Siegel, clinical professor of medicine at NYU Langone Medical Center and a Fox News medical contributor, was not involved in the Mayo Clinic research but commented on the use of puberty blockers.

"Thousands of U.S. children — more than ever before — are experiencing gender dysphoria and many go on to identify as

transgender," Siegel told Fox News Digital.



Dr. Marc Siegel, left, of New York, and Dr. Brett Osborn, right, of Florida, both offered thoughts on the potential risks of puberty-blocking medications. (Dr. Marc Siegel/Dr. Brett Osborn)

"They certainly still face a stigma for this, which needs to be addressed — but at the same time, the growing rush to gender-affirming treatment is disturbing, particularly without parental approval."

In 2021, approximately 42,167 children received gender dysphoria diagnoses, almost triple the 15,172 reported in 2017, according to Reuters.

"Much of this is politically driven, and may lead to premature treatments that are not offered in the U.K., Finland, Sweden or many other countries," Siegel said.

**EXPOSING THE TRANS AGENDA AIMED AT OUR KIDS: FAITH LEADER REVEALS HOW PARENTS CAN KEEP CHILDREN SAFE**

Among the puberty-blocking drugs is lupron (leuprolide), which is a type of hormone therapy used for advanced prostate cancer.

It is also used to stop early puberty in children, according to WebMD.

"It helps to delay sexual development (such as growth of the breasts/testicles) and the start of menstrual periods," WebMD reported.

"It also helps slow down early bone growth to increase the likelihood of reaching normal adult height."

In the majority of cases, one physician recommends that any hormonal interventions should be delayed until an older age. (iStock)

The U.S. Food and Drug Administration (FDA) reported 10,000 adverse effects in children in 2017 — including mood swings, cognitive problems, suicidal thoughts, longer-term fertility problems, seizures, migraines, brittle bones, brain swelling and vision loss, according to Siegel.

Experts also warn of the potential mental impacts of these drugs.

"Transgender individuals are three times more likely than the general population to suffer from anxiety, depression and neurodevelopmental issues," Siegel warned.

"Much of this is politically driven, and may lead to premature treatments."

Although some studies have shown that interventions such as puberty blockers may decrease anxiety in the short term, Siegel pointed out that "there are no longer-term head-to-head trials versus extensive therapy and watchful waiting."

Puberty blockers typically lead children down a path to long-term use of transgender-affirming hormones, such as estrogen and

testosterone, he noted.

Puberty blockers typically lead children down a path to long-term use of transgender-affirming hormones, such as estrogen and testosterone, according to doctors. (iStock)

"These hormones carry their own risks — for example, estrogen may increase the incidence of breast cancer," Siegel said.

"Bottom line, I don't believe puberty blockers should be given routinely to children and teens for gender dysphoria," Siegel said. "There are too many long-term risks, including the idea that the children or teens may change their minds."

**SURFER BETHANY HAMILTON SPEAKS OUT AGAINST NEW RULE ALLOWING TRANSGENDER WOMEN TO COMPETE WITH FEMALES**

In the majority of cases, Siegel recommends that any hormonal interventions or gender reassignment surgeries be delayed until an older age.

He added, "Intensive supportive and cognitive therapy makes sense as an initial approach."

"Transgender individuals are three times more likely than the general population to suffer from anxiety, depression and neurodevelopmental issues," Dr. Marc Siegel of New York warned. (iStock )

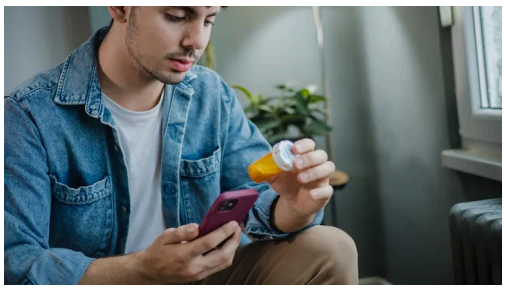
Dr. Brett Osborn, a Florida neurologist and longevity expert who was also not involved in the new research, noted that previous studies have shown that puberty-blocking drugs can alter the normal progression of testicular cells, potentially leading to atrophy or abnormal development.

"Specifically, the drugs impact the normal function of ‘spermatogonial’ stem cells (SSCs), which are crucial for sperm production and overall reproductive health," he told Fox News Digital.

"The changes induced by these medications may be permanent, contrary to popular opinion among transgender activists."

"Disruption in their development could result in reduced fertility or other reproductive issues later in life," he continued. "Based on the researchers’ histologic findings, the changes induced by these medications may be permanent, contrary to popular opinion among transgender activists."

Added Osborn, "These medications are not as benign as billed."



Hormones such as testosterone, progesterone and estrogen are critical for brain development, memory and cognition, one doctor

noted. (iStock)

The risks go beyond infertility, the doctor warned.

"There are also downrange effects of altered hormone levels on brain development, let alone other organ systems," he said.

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Hormones such as testosterone, progesterone and estrogen are critical for brain development, memory and cognition, Osborn pointed out.

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The doctor called for "safer and more effective" treatments for those with gender dysphoria.

"Gaining insight into the full impact of these medications – the usage of which has become more prevalent — is crucial for future generations."

Fox News Digital reached out to the Mayo Clinic researchers for comment.

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