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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ALASKA

EMALEE R. WAGONER, Plaintiff, vs. NANCY DAHLSTROM, Commissioner of the Department of Corrections; LAURA BROOKS; ADAM RUTHERFORD; and ROBERT T. LAWRENCE, Defendants.	Case No.: 3:18-cv-00211-MMS

DEFENDANTS' TRIAL BRIEF

I. INTRODUCTION

This litigation deals with the question of whether a vaginoplasty, which is a gender-affirming surgery, is medically necessary for Plaintiff Emalee Wagoner ("Wagoner"). Plaintiff is a transgender female who is currently incarcerated at the Goose Creek Correctional Center, who contends that this surgery is medically

necessary because of the allegedly severe nature of her gender dysphoria – a condition whereby a person experiences emotional distress due to a mismatch between their gender identity (their personal sense of their own gender) and the sex they were assigned at birth. The Defendants, who are, or were, employees with the State of Alaska, Department of Corrections ("DOC"), contend that while Wagoner does appear to suffer from gender dysphoria, her symptoms do not rise to the level whereby gender-affirming surgery would be medically necessary. Instead, in evaluating Wagoner's specific situation, the DOC considers gender-affirming hormone therapy to sufficiently meet Wagoner's medical needs. The parties are deadlocked on this issue, which requires a jury or this Court to resolve the matter.

II. FACTUAL AND PROCEDURAL BACKGROUND

Wagoner was born a biological male, but now identifies as a woman.[1] She reportedly had a difficult childhood, which included childhood abuse and neglect.[2] She married at a young age and became a stepfather to two stepchildren and a

[1] The name Wagoner was given at birth was Emmanuel Cancel. She changed her name while incarcerated. Defendants will endeavor to use the pronouns by which Wagoner identifies.

[2] When discussing Wagoner's childhood, one of her experts states that "Ms. Wagoner's childhood can best be characterized as one of severe neglect, abhorrent abuse and disadvantage. As a toddler, she was introduced to alcohol. From the ages of 2 until 7 she was sexually abused by an older, male relative. She stated there remains a small liver of wood in her anus, a remnant of a sexual assault with a bat." Her experts did not conduct any interviews or make independent efforts to confirm these facts, but instead relied on Wagoner's self-reporting exclusively.

father to four biological children. For around a decade, from 1998 until 2007, Wagoner sexually abused at least three children, including her stepson, her stepdaughter, and a child who was the daughter of a neighborhood friend. The abuse consisted of revealing her genitals by walking around the house naked; fondling the children; requiring that they perform oral sex on her; and digital and penile penetration. The abuse was pervasive and devastating to the children. The full summary of her criminal conduct is described at Dockets 258-259.

Wagoner attempted to keep the children quiet by threatening to kill them if they told anyone about the abuse. Wagoner would tell the children stories of all of the murders she committed and how she would dispose of the bodies in order to elevate the fear experienced by the children. In addition, the children thought this threat was legitimate due to the level of violence Wagoner displayed in the household, including slamming the children's heads against the wall, whipping them with a belt, and beating their mother. She also provided them with marijuana, cocaine, crack, and meth as a bribe to keep them quiet.[3]

On June 11, 2011, Wagoner was arrested. After some procedural posturing, Wagoner was charged with 50 counts of sexual abuse of a minor and misconduct involving a controlled substance. On January 7, 2015, Wagoner pled guilty to three consolidated counts of first-degree sexual abuse of a minor. She was sentenced to 60 years, with 20 years suspended and 40 years to serve. She attempted to

[3] The factual background related to her criminal conduct is largely set forth in the Pre-Sentence Report. *See* Dkt. 260.

appeal her sentence, claiming that her lawyers provided ineffective assistance of counsel at the sentencing, but the Alaska Court of Appeals affirmed her convictions.[4]

From the date of her arrest in 2011 until around August 2016, Wagoner continued to identify as a man and made no claims as to a diagnosis of gender dysphoria. However, starting in August 2016, she started to communicate with her then-alleged fiancé that she was contemplating attempting to perform a self-surgery by cutting off her penis and genitals. It appears that the motivation for this was either to be released from prison or to be transferred to a women's prison.[5] In August 2016, she attempted self-surgery. Initially, she claimed that it was an accident.[6] Later, she changed her story and claimed that she was attempting a gender-affirming surgery. On one other occasion, Wagoner re-injured her penis which required elevated medical attention at Mat-Su Regional Medical Center.

After her purported efforts at self-surgery, Wagoner began to demand gender-affirming care in the form of everything from breast augmentation to voice

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4 *See Cancel v. State*, 2018 WL 3574712 (Alaska 2018).

5 In a recording with her then-alleged fiancé, Wagoner stated, "if things change – and I do [the self-surgery] and get moved over, will you come see me." In another recording, Wagoner stated as follows: "[The self-surgery is] the only way I can see us being together otherwise its 22 more years will tear us apart. Six years have already destroyed us. It's the only way I see it happening." "So, If I get [the self-surgery] done, you will come live with me?".

6 *See* Exhibit A (SOA 001206); (This is a medical record dated August 21, 2016, which contains the following note: "[p]atient complains of penile laceration he says he hit it in a metal edge of a table top accidentally yesterday.").

alteration therapy.[7] Beginning in 2017, DOC engaged in efforts to accommodate Wagoner's needs, following the diagnosis of her gender dysphoria by a third-party provider. These efforts, increasing in concert with Wagoner's regular appointments with the facilities' mental health staff, initially included medication, the provision of feminine hygiene products to Wagoner and ensuring the availability of certain cosmetics, feminine undergarments, and grooming devices through the commissary. During this time, Wagoner was often less than cooperative and declined to follow the recommended treatment plan.

DOC eventually concluded that her gender dysphoria warranted the provision of gender-affirming hormone therapy, which is a medical treatment that involves the administration of hormones to individuals in order to align their physical characteristics with their gender identity. With such a treatment, a biological male will see body fat distribution, decreased muscle strength, decreased sperm production, creation of breasts and breast growth, and increased scalp hair. Effectively, the hormone therapy allows a biological male to have the appearance of a biological female.

Throughout DOC's treatment of Wagoner, including in the years following the administration of hormone therapy, Wagoner demonstrated improvement such that

[7] *See* Exhibit B (SOA 000624) (This is a note dated February 23, 2018, wherein Wagoner states that she is "requesting [that she] be evaluated and fitted for a prostatic [sic] breast for treatment of my Gender Dysphoria until I can receive breast augmentation); *see also* Exhibit C (SOA 005174) (This is a communication to Wagoner dated July 17, 2024, whereby DOC rejects her request for voice feminization therapy).

DOC has not observed her condition to impair her ability to function in daily life and she has made no additional efforts to attempt self-surgery. Because her symptoms had improved, when it came time for DOC to consider allowing Wagoner a vaginoplasty, the request was denied. There were several reasons to support this denial, but the overall conclusion was that gender-affirming surgery was not medically necessary, but instead an elective procedure.

Throughout her treatment, Wagoner has consistently insisted that she receive a vaginoplasty, which is a surgical procedure that would remove her testicles and create or reconstruct a vagina. The Medical Advisory Committee ("MAC") reviewed the current guidelines and the evidence-based literature regarding the treatment of gender dysphoria. The MAC discussed concerns regarding several aspects of possible treatment for Wagoner, including the degree to which the surgery would be essential as "medically necessary" under DOC policy; the insufficient evidence of a long-term benefit of gender altering surgery for preventing suicide, substance abuse, sexually transmitted diseases, or cardiovascular disease; the potential for harm in mental and physical health if the recommended surgeries are expedited or approved; the lack of objective signs of deterioration in mental health since receiving treatment; and patterns of behavior raising concern for the capacity for compliance with the anticipated long-term surgical care.[8]

[8] *See* Exhibit D (SOA 005143).

Wagoner disagreed with DOC's treatment plan, which is the focal point of her lawsuit. When her complaint was initially filed, she was a pro se litigant, but she is now represented by lawyers from the ACLU and Lambda Legal. The case is set for a five-day trial starting May 12, 2025.

III. OPERATIVE COMPLAINT AND PRE-TRIAL ORDERS

Wagoner filed her Complaint on September 18, 2018,[9] which was followed up with her First Amended Complaint, dated June 5, 2019.[10] Both complaints were subject to the requirement that the Court screen the complaint to ensure that it properly stated a viable claim for relief. In the course of this screening process, the Court determined that Wagoner properly stated a claim against Defendants Nancy Dahlstrom, Laura Brooks, Robert Lawrence, and Adam Rutherford.[11] Later, Wagoner filed a motion seeking permission to file her Second Amended Complaint.[12] The Court initially denied this request.[13] However, later, the Court reconsidered its order and allowed the Second Amendment Complaint, but limited the acceptable amendments to two new claims, but not two new defendants.[14] Therefore, the operative complaint would be the Second Amended Complaint, minus the two new parties (Earl Houser and B. Eisenbacher).

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9 *See* Dkt. 1.

10 *See* Dkt. 13.

11 *See* Dkt. 19.

12 *See* Dkt. 108.

13 *See* Dkt. 113.

14 *See* Dkt. 119.

The Second Amended Complaint sets three types of claims against each of the four named Defendants. First, Plaintiff alleges that the Defendant, Nancy Dahlstrom, failed to implement "any policies with regard to the treatment of transgender inmates suffering from gender dysphoria."[15] Second, Plaintiff claims that Defendants Laura Brooks, Adam Rutherford, and Robert Lawrence "failed to follow the referral [made by] Dr. Greg Lund to have her sent to a full spectrum transgender clinic."[16] Third, Plaintiff alleges that Defendants Laura Brooks, Adam Rutherford, and Robert Lawrence "failed to provide her with effective pain management medical in response to her chronic pain."[17]

In her complaint, Plaintiff asks for four forms of relief. First, she asks for an injunction ordering the four named Defendants to "begin medical and mental health treatment for Wagoner which conforms with the WPATH standards of care," which she contends should include hormone therapy and "sex-reassignment surgery."[18] Second, she asks for an injunction to "schedule her to visit a full spectrum transgender clinic."[19] Third, she requests that Defendants "provide [her] with

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15 *See* Dkt. 122-1 at 20.

16 *Id*. at 20-21.

17 *Id*. at 21.

18 *Id*. at 22.

19 *Id*.

effective pain management medication."[20] Finally, she asks for the award of compensatory and punitive damages.[21]

Both sides filed motions for summary judgment. On June 1, 2023, the Court denied each side's motions. However, there were several key rulings. First, the Court reserved the issue of qualified immunity for trial after the matter has been more "fully litigated."[22] Second, the Court was not in a position to determine whether "the Plaintiff's course of treatment, or lack thereof, to alleviate Plaintiff's gender dysphoria was 'medically unacceptable under the circumstances and that the defendants chose this course in conscious disregard of an excessive risk to the plaintiff's health.'"[23] Finally, the Court determined that there was a factual issue with regard to whether the Defendants' actions rose to the level of deliberate indifference.[24]

There is one motion that could have a significant impact on the scope of the operative complaint. Specifically, Wagoner has filed a motion proposing to strike her claim for damages, with the intended goal of eliminating the need for a jury.[25] In essence, she wants to waive her claim for damages in order to convert this case into a hearing on an injunction. The Defendants have taken the position that this

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20 *Id*.

21 *Id*.

22 *See* Dkt. 134 at 15-16.

23 *Id*. at 18.

24 *Id*. at 18-19.

25 *See* Dkts. 243-244.

case deals with issues that should be resolved by a jury, or in the alternative, the court should seat an advisory jury to assist with some of the issues that are imbued with important public policy issues.[26] A resolution of this motion in the short term will allow the parties to better prepare for trial.

IV. DESCRIPTION OF EACH CLAIM AND ANTICIPATED EVIDENCE

Plaintiff's primary claim is based on the assertion that she was denied medical care that was medically necessary. Experts on both sides will present their opinions regarding this issue. Both sets of experts should largely concede that while there have been a number of studies related to the long-term benefits of gender affirming surgery, the relative scarcity of studies in this evolving field of medicine means any comprehensive analysis remains lacking. For example, one study relied on by one of Plaintiff's experts reached the following conclusion:

> Despite professional recommendations to consider gender-affirming medical interventions for transgender individuals who experience gender incongruence, the effect of such interventions on long-term mental health is largely unknown.[27]

The unknown nature of the effectiveness of these surgeries is partially derived from the fact that there are studies that come to different conclusions. Certainly, some have concluded that gender-affirming surgery is an effective

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26 *See* Dkts. 250-251.

27 *See* Richard Bränström & John E. Pachankis, "Reduction in Mental Health Treatment Utilization Among Transgender Individuals After Gender-Affirming Surgeries: A Total Population Study," 177 *Am J. Psychiatry* 727 (2020) (attached as Exhibit E).

treatment plan for mental health issues, but at the same time, there are also studies that suggest that gender-affirming surgeries do not improve the patient's condition. For example, one study concluded the following:

> Persons with transsexualism, after sex reassignment, have considerably higher risks for mortality, suicidal behavior, and psychiatric morbidity than the general population. Our findings suggest that sex reassignment, although alleviating gender dysphoria, may not suffice as treatment for transsexualism. . .[28]

In another recent study released just a couple of months ago, the authors concluded that there are no short-term benefits from gender-affirming surgeries. Of 107,583 patients, matched cohorts demonstrated that those undergoing surgery were at significantly higher risk for depression, anxiety, suicidal ideation, and substance use disorders than those without surgery.[29] In addition to these studies, the issue is further complicated by the fact that there have not been any studies specifically targeting the population of patients who are incarcerated. Therefore, there remains a general uncertainty regarding the proper procedures to treat gender dysphoria in an incarcerated setting.

Plaintiff's experts will likely testify that due to the nature and extent of Wagoner's symptoms, gender-affirming surgery is medically necessary. However,

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[28] *See* Cecilia Dhejne et al., "Long-Term Follow-up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden," 6 Pub. Lib. Sci. One 1, 1 (2011) (attached as Exhibit F).

[29] *See* Joshua E. Lewis et al., "Examining gender-specific mental health risks after gender-affirming surgery: a national database study," 22 *The Journal of Sexual Medicine* 645 (2025) (attached as Exhibit G).

Defendants' expert, Dr. Joseph Penn, will take the position that the current care being provided to Wagoner, including hormone therapy, has sufficiently dealt with her symptoms, making gender-affirming surgery unnecessary. Even one of Plaintiff's treating urologists believes that surgery would be elective and not medically necessary.[30]

The second claim will be whether the individual Defendants acted with deliberate indifference, to the extent each was even involved or responsible for Plaintiff's grievances. The burden will be on Plaintiff to connect their individual actions to any alleged damages; this is also analyzed with a subjective test, to the extent the Defendants themselves will explain the motivation for their actions.

Plaintiff is also claiming that the Defendants failed to provide her proper treatment for her complex regional pain syndrome. However, the Defendants will point out that they have prescribed Wagoner pain medication, and based on observations, Wagoner does not appear to be in pain. In a memorandum from the MAC, the following conclusions were reached.

> Your medical case has been referred to and evaluated by the MAC. A review of your records reveals that you have been prescribed Meloxicam and Acetaminophen daily. . . You have not come to the medication cart on any regular basis to take the prescribed medications [and therefore] we were unable to evaluate the effectiveness of these medications without appropriate dosing. Observations in person and on camera have not shown you to be in

[30] *See* Exhibit H (SOA 004073 – SOA004076) (In a medical note, Dr. Greg Lund testified that "in my opinion lower surgery is an elective procedure which is not necessary at this time for physical health.").

> any obvious pain that would interfere with your activities of daily living.[31]

Finally, in order to recover damages, Wagoner will have to demonstrate that she suffered from emotional distress that was caused by the Defendants. Evidence will be presented at trial that will show that her self-reported mental health issues, such as depression or anxiety, if any, stem from other factors separate and apart from gender dysphoria. For example, any emotional distress could be triggered by her traumatic childhood, which included child abuse at the hands of her parents; by concerns that other prisoners may threaten her due to her criminal conduct;[32] or by any possible remorse and regret she has for sexually assaulting her children. Finally, any depression could be caused by her failure to maintain meaningful familial or romantic connections.[33] There are a multitude of possible causes for her possible depression and anxiety, which will have to be explored at trial.

In addition, there will be evidence that Wagoner has failed to mitigate her damages. The evidence supporting this defense will come in the form of testimony that Wagoner does not follow the instructions of her medical care providers; she will refuse medicine; and she will not follow their recommended treatment plans.

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[31] *See* Exhibit I (SOA 004243).

[32] When she was first incarcerated, she sent a note to prison officials expressing concern that she could be attacked. The note read, "I'm requesting protective custody. . . [d]ue to life threats from a list of people." *See* Exhibit J (SOA 003342).

[33] In a recorded conversation, Wagoner told her finance, "if you abandon me here, I won't be able to mentally handle it."

This behavior demonstrates a failure to mitigate damages, for which the DOC should not be liable.

Finally, there remains the issue of qualified immunity. As indicated above, the Court was disinclined to rule on this issue at the summary judgment stage, but there is compelling evidence that strongly suggests that all of the Defendants are entitled to immunity. It is possible this issue may be addressed in the pre-trial setting or at the directed verdict stage, but it is still a defense that remains open for consideration.

V. DISCUSSION OF RELEVANT LEGAL AUTHORITY

Because "society takes from prisoners the means to provide for their own needs," the government has an "obligation to provide medical care for those whom it is punishing by incarceration."[34] If the government fails to provide the necessary medical care that could result in a violation of the Eighth Amendment's prohibition on cruel and unusual punishment. In certain circumstances, a prisoner can assert a claim pursuant to 42 U.S.C. § 1983 alleging a violation of civil rights. In the landmark case of *Estelle v. Gamble*,[35] the United States Supreme Court established that, to prevail in such a claim, a prisoner must show "deliberate indifference" to the prison's serious medical needs to claim an Eighth Amendment

34 *Brown v. Plata*, 563 U.S. 493, 510 (2014).

35 429 U.S. 97 (1976).

violation regarding medical care, meaning mere negligence doesn't constitute cruel and unusual punishment.

To establish a claim of inadequate medical care, a prisoner must first show a "serious medical need" by objectively demonstrating that "failure to treat a prisoner's condition could result in further significant injury or the unnecessary and wanton infliction of pain."[36] If a prisoner establishes a sufficiently serious medical need, that prisoner must then "show the [official's] response to the need was deliberately indifferent," which is a subjective test.[37] An inadvertent or negligent failure to provide adequate medical care is insufficient to establish a claim under the Eighth Amendment.[38] In other words, "[m]edical malpractice does not become a constitutional violation merely because the victim is a prisoner."[39] To "show deliberate indifference, the plaintiff must show that the course of treatment the [official] chose was medically unacceptable under the circumstances and that the [official] chose this course in conscious disregard of an excessive risk to the plaintiff's health."[40] Thus, the critical question becomes whether the government acted with deliberate indifference to a prisoner's medical needs – that is, the

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36 *Jett v. Penner*, 439 F.3d 1091, 1096 (9th Cir. 2006).

37 *Id*.

38 *Estelle*, 429 U.S. at 105-06; *Farmer v. Brennan*, 511 U.S. 825 (1994) ("ordinary lack of due care" is insufficient to establish an Eighth Amendment claim).

39 *Estelle*, 429 U.S. at 106.

40 *Hamby v. Hammond*, 821 F.3d 1085, 1092 (9th Cir. 2016) (quoting *Snow v. McDaniel*, 681 F.3d 978, 988 (9th Cir. 2012), *overruled in part on other grounds by Peralta v. Dillard*, 744 F.3d 1076 (9th Cir. 2014) (en banc)).

defendant knew of the need for reasonable necessary medical care and failed to take reasonable measures to address it.[41]

This case is admittedly similar to *Edmo v. Corizon, Inc.*,[42] where a transgender prisoner with gender dysphoria brought an action against the Idaho Department of Corrections, alleging that the failure to provide her with gender affirming surgery violated her Eighth Amendment rights. Defendants anticipate that Plaintiff may take the position that *Edmo* stands for the proposition that a diagnosis of gender dysphoria in and of itself represents a "serious medical need" such that she is relieved of the burden of establishing that she suffers from a medical need sufficiently serious to implicate the Eighth Amendment.

However, while Wagoner will certainly want the Court to apply the ruling and outcome in *Edmo* to her case, the Ninth Circuit was clear that its decision there was based on the *Edmo* plaintiff's specific circumstances and should not have a broader implication:

> We also emphasize that the analysis here is individual to Edmo and rests on the record in this case. We do not endeavor to project whether individuals in other cases will meet the threshold to establish an Eighth Amendment violation.[43] While *Edmo* may assist in establishing the law to be applied, each case must be viewed separately, as every situation is unique. This means that the Court

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41 *See* Ninth Circuit Pattern Jury Instruction Number 9.27 (Particular Rights—Eighth Amendment—Convicted Prisoner's Claim re Conditions of Confinement/Medical Care).

42 935 F.3d 757 (9th Cir. 2019).

43 *Edmo*, 935 F.3d at 767.

must view the specific circumstances in this case in order to make a proper decision.[44]

It should also be noted that there is a split of authority among the Federal Circuits. While *Edmo* represents the holding in the Ninth Circuit, other circuits have reached an opposite holding. For example, the First Circuit in *Kosilek v. Spencer*[45] held that a gender-affirming surgery was not medically necessary. In that case, the court was confronted the following record: credited expert testimony disagreed as to whether a gender-affirming surgery was medically necessary; the prisoner's active treatment plan had "led to a significant stabilization in her mental state;" and a report and testimony from correctional officials detailed significant security concerns that would arise if the prisoner underwent a gender confirming surgery.[46] "After carefully considering the community standard of medical care, the adequacy of the provided treatment and the valid security concerns articulated by the Department of Corrections," a 3-2 majority of the court concluded that the plaintiff had not demonstrated gender-affirming surgery was medically necessary treatment for her gender dysphoria.[47]

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44 There are some significant factual differences between the two cases. For example, the *Edmo* plaintiff attempted self-castration even after being provided hormone therapy, s*ee Edmo*, 935 F.3d at 774, whereas here, Wagoner has made no further injuries to herself since receiving hormones. This would tend to suggest that Edmo's gender dysphoria was less treatable and more severe than Wagoner's gender dysphoria.

45 774 F.3d 63 (1st Cir. 2014).

46 *Kosilek* at 86-96.

47 *Id.* at 68.

In addition, the Fifth Circuit also found that a gender-affirming surgery was not medically necessary in *Gibson v. Collier*.[48] In that case, the plaintiff Gibson, who had been diagnosed with gender dysphoria, suffered from depression and "acute distress."[49] She tried to castrate herself and attempted suicide three times.[50] The prison provided Gibson hormone therapy and counseling to treat her dysphoria, but she claimed this treatment did not alleviate her distress and that without a gender-affirming surgery, she would again attempt to commit suicide or self-castration.[51] The prison denied her repeated requests for surgery, and Gibson filed suit. The Fifth Circuit rejected Gibson's claim and upheld the constitutionality of a blanket ban on gender-affirming surgery.[52] In a split decision, the majority held that "[a] state does not inflict cruel and unusual punishment by declining to provide [gender-affirming surgery] to a transgender inmate" and that "there is no consensus in the medical community about the necessity and efficacy of [gender-affirming surgery] as a treatment for gender dysphoria" and "this on-going medical debate dooms Gibson's claim."[53]

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48 920 F.3d 212 (5th Cir. 2019).

49 *Id*. at 217.

50 *Id*.

51 *Id*.

52 *Id*. at 226.

53 *Id.* at 221.

VI. SUMMARY OF ANTICIPATED EVIDENTIARY ISSUES

There are four key evidentiary issues. First, Wagoner contends that one of two experts – Dr. Joseph Penn, a triple board-certified correctional and forensic psychiatrist and a Clinical Professor in the Department of Psychiatry and Behavioral Sciences at the University of Texas Medical Branch – should be precluded from testifying. The Defendants' briefing on the admissibility of Dr. Joseph Penn's expert testimony is at Docket 262.

Second, Wagoner suggests that evidence of Wagoner's criminal conduct should be excluded on the basis that this evidence is more prejudicial than probative. The Defendants' position on this is explained at Docket 258; as the Defendants will argue that Plaintiff's experts' opinions are substantively flawed without their consideration of Plaintiff's past conduct and other mental disorders, the Defendants' experts will necessarily be required to discuss this relevant information during trial. The preclusion of this essential evidence would present not only a significant undue burden to the Defendants, but would preclude the fact-finder from undergoing a comprehensive assessment of Wagoner's medical needs as they relate to her gender dysphoria, and relative to her other diagnoses, including antisocial and borderline personality disorders.

Third, Wagoner filed a motion seeking to exclude the statements made by two of Wagoner's treating physicians, Dr. Lund and Dr. Simerville. The Defendants' position on the scope of these physicians' allowable testimony is at Docket 263; they provide the opinions that though Wagoner may have injured her penis, she

does not need any surgery for the purposes of repairing her self-inflicted injuries, and they are also knowledgeable as to the availability of vaginoplasties and genital gender-affirming surgeries in Alaska.

VII. OTHER ISSUES TO BE ADDRESSED BEFORE TRIAL

In addition to the above-stated issues, filed contemporaneously is the list of questions Defendants would like to see the jury asked; we believe that the questions fairly solicit the information the parties need to select a fair and unbiased panel. The Defendants' proposed jury instructions are also being filed herewith, and they will address any arguments relating to the instructions according to the Court's pretrial deadline of April 25, 2025. As discussed above, Defendants anticipate the parties may dispute Plaintiff's burden of proof as it relates to the evidentiary establishment of a "serious medical need" which will likely be required to be resolved prior to trial.

VIII. CONCLUSION

The trial is set to commence on May 12, 2025, and is expected to last one week. The jury (or Court) will be tasked with determining whether gender-affirming surgery is medically necessary, or whether hormone treatment is adequate to deal with Wagoner's symptoms. As described above, while Wagoner will likely over-rely heavily on *Edmo* and focus solely on her diagnosis of gender dysphoria at trial, it will be the fact-finder's job – as was and is DOC's – to evaluate Wagoner's comprehensive symptoms, medical status, and other mental health disorders in

order to properly decide whether Defendants have committed Eighth Amendment violations.

DATED this 18th day of April, 2025.

BIRCH HORTON BITTNER & CHEROT
Attorneys for Defendants NANCY DAHLSTROM, Commissioner of the Department of Corrections; LAURA BROOKS; ADAM RUTHERFORD; and ROBERT T. LAWRENCE

By: */s/ David Karl Gross*
David Karl Gross, ABA #9611065
Mara E. Michaletz, ABA #0803007

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on the 18th day of April, 2025, a true and correct copy of the foregoing was served on the following via the CM/ECF system:

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BIRCH HORTON BITTNER & CHEROT

By: */s/ Alli White*
Alli White

ED Physician Documentation
Mat-Su Regional Medical Center
Emergency Department
2500 S. Woodworth Loop

Palmer
Alaska
99645
Name: Cancel, Emmanuel
Age: 35 yrs
Sex: Male
DOB: 11/19/1980
MRN: 32413
Arrival Date: 08/21/2016
Time: 20:46
Account#: 6448676
Bed: Bed18
Private MD: NONE, NONE
ED Physician: Check, Thomas
HPI:
08/21
21:32 This 35 yrs old White Male presents to ER via POV with complaints of Laceration. tc
08/21
21:32 Patient complains of a penile laceration he says the hit it on a metal edge of a table accidentally yesterday he is a prisoner and today it swelled up when he took a hot shower so he came in for evaluation he says he was asked by prison staff to come in for evaluation otherwise he would not have come an there is no significant pain he says he aches still has a straight urine stream swelling just started a couple hours ago and he has not urinated since then and does not feel the urge to urinate injuries to the glans penis denies any other injury nothing makes it better or worse there was minimal bleeding. tc

Historical:
- Allergies: PENICILLINS; mushrooms;
- Home Meds:
1. None
- PMHx: HYPERTENSION; ULCERS;
- PSHx: KNEE SURGERY - LEFT; VASECTOMY; arm surgery right;
- Advance directive: Unknown.
- Immunization history: Last tetanus immunization: < 5 years ago.

8/27/16

SOA 01206

Exhibit A
Page 1 of 1

STATE OF ALASKA **DEPARTMENT OF CORRECTIONS**

Request for Interview

Name:	Wagoner Emalee	Institution:	GCCC	Date:	2-22-18
OTIS#	428514	Mod/Quad:	Golf 01-T		

To: Medical Provider Smith

Request: I am requesting I be evaluated and fitted for a Prostitie breast for treatment of my Gender Dysplasia until I can recive breast augmentations.

Prisoner Signature: Emalee Rain Wagoner

Action Taken: NO MEDICAL INDICATION. DoC PRACTICES ESSENTIAL HEALTHCARE, NOT ELECTIVE.

Employee Signature: Date: 2-23-18

Final Action Taken:

Employee Signature: Date:

Instructions: Request must be specific and state the action being requested (i.e., interview, hearing, etc.)
Requests are to be responded to within a reasonable time of receipt.

Distribution: Original to Case Record

Department of Corrections, Form 808.11A
Rev.04/08

FEB 23 RECD

SOA 00624

Exhibit B
Page 1 of 1

7/17/2024 7:48:20 AM AKDT

GCCC
22301 West Alsop Road
Wasilla, AK 99623
907) 864-8100

COMMUNICATION TO PATIENT - VOICE FEMINIZATION DENIAL - Completed by: Jill Cronin APRN on

9/19/2023 10:56:37 AM AKDT

Patient: WAGONER, EMALEE R
DOB: 11/19/1980 (Age=43)
Housing: GCCC-AS-07-B
Legal Status: INMATE

#: 428514 (428514)
Sex: TransFemale
Proj. Rel:
Booking Date: 6/21/2011 2:36:00 PM AKDT

Lang:
Race: CAUCASIAN
Type:
Release: 2/18/2038 12:00:00 AM

Text to Append to Form Title:

VOICE FEMINIZATION DENIAL

Ms. Wagoner,

Voice Feminization Therapy is not considered essential healthcare. Standard of Care may change over time, but currently, this is not a service that the DOC will provide. My recommendation would be to seek this therapy upon release from custody.

Thank you,

Provider Cronin

Attachments:

No Attachments

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Corrections

HEALTH REHABILITATION SERVICES
Anchorage Central Office

550 West 7th Avenue Suite 1800
Anchorage, Alaska 99501
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MAC Review and Authorization of Gender Dysphoria Individual Treatment Plan

Inmate: **Wagoner, Emalee #428514**
Date: **October 23, 2023**

Summary:

On 10/23/2022, the Medical Advisory Committee (MAC) reviewed a request from Emalee Wagoner for surgical procedures recommended by Rachel Samuelson, MD including orchiectomy and creation of a neo-vagina for treatment of symptoms of gender dysphoria. The requested procedures were not authorized by the MAC.

The MAC verified that Emalee Wagoner has been diagnosed with gender dysphoria and that she has received cognitive behavioral interventions for co-morbid conditions such as anxiety and depression. She has also been provided cross-sex hormones at dosages determined by Dr. Samuelson beginning in August 2022. Since receiving these interventions, Emalee Wagoner has expressed no suicidal ideation and has displayed no actions of self-harm or self-mutilation. She has been able to participate in programming and maintain employment. Despite her objective stability, her symptoms of gender dysphoria subjectively persist for which Dr. Samuelson recommended surgical procedures.

The MAC reviewed the pertinent aspects of Emalee Wagoner's medical history including two documented episodes of genital self-mutilation in 2016 and 2017. Injuries sustained from these episodes have been evaluated by multiple urologists who recommend no further surgical repair. Dr. Samuelson acknowledges that she does not specialize in gender affirming surgery and that her recommendation is based on her opinion that the possibility that Ms. Wagoner's mental health and general wellbeing could significantly decline without surgery.

The MAC reviewed the current guidelines and the evidence-based literature regarding treatment of gender dysphoria. The MAC discussed concerns regarding several aspects of the recommended surgeries for Ms. Wagoner including: the degree to which surgery is essential under DOC policy; insufficient evidence for long-term benefit of gender altering surgery for preventing suicide, substance abuse, sexually transmitted diseases, or cardiovascular disease; the potential for harms in mental and physical health if the recommended surgeries are expedited or approved; the lack of objective signs of deterioration in mental health over the last five years; and patterns of behavior raising concern for the capacity for compliance with the anticipated long-term post-surgical care.

The MAC acknowledges that Emalee Wagoner continues to express feelings of dysphoria despite cross-sex hormone interventions and cognitive behavioral therapies; however, there is insufficient evidence to affirm that Ms. Wagoner's mental health and well-being will decline without surgery. The MAC does not authorize implementation of this recommendation.

WAGONER, EMALEE R 428514 (428514)

Reduction in Mental Health Treatment Utilization Among Transgender Individuals After Gender-Affirming Surgeries: A Total Population Study

Richard Bränström, Ph.D., John E. Pachankis, Ph.D.

Objective: Despite professional recommendations to consider gender-affirming hormone and surgical interventions for transgender individuals experiencing gender incongruence, the long-term effect of such interventions on mental health is largely unknown. The aim of this study was to ascertain the prevalence of mood and anxiety disorder health care visits and antidepressant and anxiolytic prescriptions in 2015 as a function of gender incongruence diagnosis and gender-affirming hormone and surgical treatment in the entire Swedish population.

Methods: This study used the Swedish Total Population Register (N=9,747,324), linked to the National Patient Register and the Prescribed Drug Register. Among individuals who received a diagnosis of gender incongruence (i.e., transsexualism or gender identity disorder) between 2005 and 2015 (N=2,679), mental health treatment in 2015 was examined as a function of length of time since gender-affirming hormone and surgical treatment. Outcome measures were mood and anxiety disorder health care visits, antidepressant and anxiolytic prescriptions, and hospitalization after a suicide attempt.

Results: Compared with the general population, individuals with a gender incongruence diagnosis were about six times as likely to have had a mood and anxiety disorder health care visit, more than three times as likely to have received prescriptions for antidepressants and anxiolytics, and more than six times as likely to have been hospitalized after a suicide attempt. Years since initiating hormone treatment was not significantly related to likelihood of mental health treatment (adjusted odds ratio=1.01, 95% CI=0.98, 1.03). However, increased time since last gender-affirming surgery was associated with reduced mental health treatment (adjusted odds ratio=0.92, 95% CI=0.87, 0.98).

Conclusions: In this first total population study of transgender individuals with a gender incongruence diagnosis, the longitudinal association between gender-affirming surgery and reduced likelihood of mental health treatment lends support to the decision to provide gender-affirming surgeries to transgender individuals who seek them.

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Numerous studies indicate that transgender individuals—that is, individuals who experience incongruity between their sex assigned at birth and their current gender identity—are at particular risk of psychological distress and associated impairment (e.g., suicidality) (1–3). This elevated risk is hypothesized to stem at least in part from transgender individuals' elevated exposure to stigma-related stress, also known as minority stress (4, 5), and it can also result from the stress associated with a lack of gender affirmation (i.e., the accurate recognition and validation of one's gender identity) (6). ICD-11 (7) specifies that individuals experiencing persistent discordance between their experienced gender and their assigned sex meet diagnostic criteria for gender incongruence.

To alleviate the stress of persistent discordance between experienced gender and assigned sex, an increasing number of transgender individuals who experience gender incongruence seek gender-affirming medical interventions, including hormone replacement therapy and gender-affirming surgeries (8). The World Professional Association for Transgender Health's *Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People* recommends consideration of these interventions for affirming transgender individuals' gender and alleviating gender-related stress (9).

Despite professional recommendations to consider gender-affirming medical interventions for transgender individuals who experience gender incongruence, the effect of such interventions on long-term mental health is largely unknown. Available evidence stems mainly from small samples utilizing cross-sectional designs and self-reported treatment exposures and mental health outcomes (2, 10, 11). A meta-analysis

See related feature: **Editorial** *by Dr. Mueller (p. 657)*

that aggregated data across nearly two dozen small-sample studies (10), mostly relying on cross-sectional designs, found positive associations between self-reports of receiving both hormone therapy and gender-affirming surgery and mental health. Several more recent uncontrolled studies of the effects of hormone replacement therapy on transgender individuals' mental health have found that transgender individuals' mental health improved for up to 24 months after initiating hormone therapy (11, 12).

Because of previous studies' limitations, including short assessment periods and the fact that existing probability-based surveys do not routinely assess transgender status or other aspects of gender diversity, insufficient evidence exists regarding associations between length of time since receiving gender-affirming interventions and treatment for psychiatric disorders among the transgender population. In fact, no probability-based evidence exists regarding even the prevalence of mood and anxiety disorder treatment among transgender individuals compared with the general population (1).

The limitations of previous research in terms of nonrepresentative sampling, self-reported measurement, and limited follow-up periods can be overcome with national health registry data sets that include clinician-derived assessment of gender incongruence and complete records of psychiatric and gender-affirming treatment and utilization data in an entire population. In the one known study to use a population-based design to investigate psychiatric morbidity among transgender individuals (N=324), individuals who had legally changed their gender and had a diagnosis of gender incongruence associated with an inpatient hospital visit in Sweden between 1973 and 2003 were at higher risk of suicide attempts, suicide-related mortality, and psychiatric hospitalization compared with age- and reassigned-gender-matched controls (13). The study did not report the prevalence of mood and anxiety disorder treatment among those receiving gender-affirming treatment compared with the total population or as a function of length of time since receiving gender-affirming treatment. Furthermore, the proportion of individuals receiving gender-affirming treatments in Sweden has increased nearly exponentially since 2003 (8, 14). Similar recent increases in referrals for gender-affirming treatments have been reported in other countries around the world (15–18).

In this study, we took advantage of the Swedish Total Population Register (19), linked to the Swedish National Patient Register and the Swedish Prescribed Drug Register, to ascertain the prevalence of mood and anxiety disorder health care visits, antidepressant and anxiolytic prescriptions, and hospitalization after a suicide attempt among the entire Swedish population as a function of gender incongruence diagnosis, gender-affirming hormone and surgery utilization, and length of time since receiving gender-affirming treatments. This data set permitted identification of all individuals in Sweden seeking gender-affirming treatments between January 1, 2005, and December 31, 2015. Although not all transgender individuals seek gender-affirming treatments and not all treatment-seeking transgender individuals meet diagnostic criteria for gender incongruence, findings from this unique data opportunity have timely implications for documenting the mental health of transgender individuals seeking gender-affirmative treatment and ways in which the medical profession can support this increasingly visible population.

METHODS

This total population prospective study included all individuals living in Sweden on December 31, 2014, as identified in the Swedish Total Population Register. Using de-identified personal identification numbers (a unique number assigned to all Swedish residents), we linked sociodemographic information with National Patient Register information on health care usage between January 1, 2005, and December 31, 2015, and Prescribed Drug Register information on prescribed and purchased medication between July 1, 2005, and December 31, 2015. The study was approved by the Regional Ethics Committee in Stockholm (no. 2017/1736–31).

Gender Incongruence Diagnosis

Using the Swedish National Patient Register, we classified all individuals in Sweden according to whether they had received a diagnosis of gender incongruence, as defined by the diagnostic system applied in Sweden during the study period (i.e., a diagnosis of either transsexualism [ICD-10 code F64.0] or gender identity disorder [ICD-10 codes F64.8, F64.9]) during an inpatient or specialized outpatient visit between January 1, 2005, and December 31, 2015. The two diagnoses used to define gender incongruence at the time of the study are not fully equivalent but capture largely overlapping populations (20). In Sweden during the study period, a diagnosis of either transsexualism or gender identity disorder was required for accessing gender-affirming treatment (e.g., gender-affirming hormone treatment, hormone-suppressing or -blocking medication treatment, mastectomy with chest contouring, hair removal, vocal cord surgery, speech therapy, genital surgery) and was given after an approximately yearlong evaluation, following a national consensus program (14, 21). Adolescents could receive the same gender-affirming treatments as adults but could not receive genital surgery before age 18 (22).

Outcome Measures

This study's outcome measures were psychiatric outpatient health care visits, antidepressant and anxiolytic prescriptions, and hospitalization after a suicide attempt between January 1, 2015, and December 31, 2015. Restricting the outcome assessment period to one year, 2015, the most recent available, removes potential confounding by secular trends in treatment utilization and transgender acceptance and visibility. Each psychiatric outpatient visit was coded by the treating physician with a primary diagnosis from ICD-10 (23)

and up to 20 supplementary ICD-10 diagnostic codes. Using these codes, we classified all individuals as having received treatment for any or no mood disorders (codes F30–F39) or anxiety disorders (codes F40–F42). Prescribed medication use was obtained from the Swedish Prescribed Drug Register, which contains information regarding all prescribed and purchased medications nationwide for all individuals. Individuals were categorized into any use or no use of antidepressant and anxiolytic medication according to the Anatomical Therapeutic Chemical (ATC) Classification system (codes N06A and N05B). All inpatient health care visits were similarly coded by the treating physician using ICD-10, indicating a primary cause of hospitalization and up to 30 supplementary causes. Using these codes, we classified all individuals as having been hospitalized after a suicide attempt (versus not) using the ICD-10 codes for intentional self-harm (codes X60–X84).

TABLE 1. Demographic characteristics of the Swedish population, by gender incongruence diagnosis, December 31, 2014

Measure	Individuals Diagnosed With Gender Incongruence (N=2,679)		General Population[a] (N=9,744,645)	
	Mean	SD	Mean	SD
Age (years)	31.5	14.0	40.7	23.8
Mean yearly household income (Swedish kronor, 000s)	298.4	301.0	464.8	800.6
	N	%	N	%
Legal gender				
Male	1,284	47.9	4,870,930	50.0
Female	1,395	52.1	4,873,715	50.0
University education	809	30.2	2,643,505	27.1
Urbanicity				
Larger city	1,102	41.1	3,364,003	34.5
Smaller city	867	32.4	3,238,223	33.2
Rural community	710	26.5	3,142,419	32.2
Country of birth				
Sweden	2,214	82.6	8,141,590	83.5
Other European country	164	6.1	801,227	8.2
Outside of Europe	301	11.2	800,800	8.2
No information about country of birth	0	0.0	1,028	0.01

[a] The N for general population excludes those with a diagnosis of gender incongruence.

Covariates

Sociodemographic information was drawn from the Swedish Total Population Register in December 2014 and included current legal gender, age, country of birth, level of education, urbanicity, and household income.

Gender-Affirming Treatment Utilization

For individuals with a gender incongruence diagnosis at any visit, we assessed the type and year of gender-affirming treatment, both hormone treatment and surgery. Information about hormone treatment, including androgen-suppressing and -blocking medication, was obtained from the Swedish Prescribed Drug Register between July 1, 2005, and December 31, 2015. All medications prescribed to individuals who had received a gender incongruence diagnosis were coded as gender-affirming if they were feminizing hormone medication (i.e., estrogens [ATC codes G03C, L02AA], progestogen [G03D]), masculinizing hormone medication (i.e., androgens [G03B]), or androgen-suppression or -blocking medication (i.e., testosterone-5-alpha reductase inhibitors [G04CB], antiandrogens [G03H], gonadotropin-releasing hormone analogues [G03GA, L02AE, H01CA], antigonadotropin-releasing hormones [H01CC], and spironolactone [C03DA01]). For each individual with a gender incongruence diagnosis who received prescriptions for any of these medications, we calculated the number of years since initiation.

Gender-affirming surgery was coded using information about all inpatient surgical procedures received by individuals with a gender incongruence diagnosis in the National Patient Register between January 1, 2005, and December 31, 2015. All surgical procedures associated with a gender incongruence diagnosis performed during this period were coded by type of surgery using the Nordic Medico-Statistical Committee Classification of Surgical Procedures (16): breast or dermatological chest surgery (codes H and QB), surgery of the reproductive organs (codes K and L), dermatological surgery (code Q), and laryngeal surgery (code DQ).

Statistical Analysis

We first examined sociodemographic differences between individuals with a gender incongruence diagnosis and the rest of the population in Sweden. We then compared the prevalence of any mood and anxiety disorder treatments (i.e., psychiatric outpatient health care visits and prescribed psychiatric medication) between individuals receiving gender-affirming treatments and the rest of the population in Sweden during 2015, using logistic regression. Among individuals with a gender incongruence diagnosis, we then investigated the odds of mood and anxiety disorder treatment and hospitalization following a suicide attempt (occurring in 2015) as a function of years since initiation of hormone or hormone-suppressing treatment and since last gender-affirming surgery. We examined years since *last* gender-affirming surgery because gender-affirming surgery is often a lengthy process involving several distinct procedures before gender affirmation is attained.

All analyses were conducted using SPSS, version 24 (IBM, Armonk, N.Y.), and adjusted for current legal gender, age, country of birth, level of education, urbanicity, and household income.

TABLE 2. Association between gender incongruence diagnosis and mood- and anxiety-related health care visits, antidepressant and anxiolytic prescriptions, and hospitalization after suicide attempt in the total Swedish population, 2015[a]

	Individuals Diagnosed With Gender Incongruence (N=2,679)		General Population[b] (N=9,744,645)		Unadjusted		Adjusted	
Measure	N	%	N	%	Odds Ratio	95% CI	Odds Ratio	95% CI
Psychiatric outpatient visits, 2015								
Any mood disorder	250	9.3	95,137	1.0	10.44	9.16, 11.89	6.07	5.32, 6.93
Any anxiety disorder	197	7.4	63,200	0.6	12.16	10.52, 14.06	5.92	5.10, 6.86
Prescribed medication treatment, 2015								
Any antidepressant use	771	28.8	377,043	9.4	3.90	3.58, 4.24	3.95	3.62, 4.31
Any anxiolytic treatment	449	16.8	566,678	5.8	3.26	2.95, 3.61	3.43	3.09, 3.81
Inpatient visits, 2015								
Hospitalization after suicide attempt	22	0.8	7,104	0.1	11.35	7.46, 17.28	6.79	4.45, 10.35

[a] All analyses were conducted using logistic regression and adjusted for age, gender, education, income, urbanity, and country of birth.
[b] The N for general population excludes those with a diagnosis of gender incongruence.

RESULTS

Of the total Swedish population on December 31, 2014 (N=9,747,324), 2,679 had received a diagnosis of gender incongruence between January 1, 2005, and December 31, 2015 (Table 1). Those diagnosed with gender incongruence were significantly younger on average than the rest of the population ($t=19.94$, $p<0.001$), and they were more likely to have a current legal female gender than male gender ($\chi^2=4.54$, $p=0.03$). Individuals with a gender incongruence diagnosis were more likely to have a university education ($\chi^2=12.77$, $p<0.001$), to have a lower household income ($t=30.61$, $p<0.001$), to live in a larger city ($\chi^2=61.95$, $p<0.001$), and to have been born outside of Europe ($\chi^2=32.33$, $p<0.001$).

Mood and Anxiety Disorder Treatment Among Individuals Diagnosed With Gender Incongruence

Table 2 compares the prevalence of health care visits and medication treatment for mood and anxiety disorders between individuals diagnosed with gender incongruence and those not. In analyses adjusted for sociodemographic factors, those diagnosed with gender incongruence were about six times as likely to have had a health care visit due to a mood or anxiety disorder in 2015, more than three times as likely to have received prescriptions for antidepressant and anxiolytic medication in 2015, and more than six times as likely to have been hospitalized after a suicide attempt.

Gender-Affirming Treatments Among Individuals Diagnosed With Gender Incongruence

Just over 70% of individuals diagnosed with gender incongruence during the follow-up period (2005–2015) had received prescriptions for hormone treatment, including androgen-suppressing and -blocking medication, during this period. Half of those treated with hormones had initiated their hormone treatment within the past 5 years (Table 3).

Nearly 40% of those with a diagnosis of gender incongruence had received gender-affirming surgical treatments during the follow-up period. Table 3 presents the types of surgical treatments and the distribution of individuals by number of years since last gender-affirming surgery. The most common types of surgical procedures were mastectomy with chest contouring, surgery of the reproductive organs, dermatological surgeries, and laryngeal surgery.

Less than a third (29%) of those diagnosed with gender incongruence had received neither hormone treatment nor gender-affirming surgery. Among those who had received gender-affirming surgery, 97% had also been treated with hormones.

Changes in Likelihood of Mood and Anxiety Disorder Treatment After Gender-Affirming Hormone and Surgical Treatment

We examined the effect of years since hormone treatment initiation and years since last gender-affirming surgery on likelihood of having received mood or anxiety disorder treatment in 2015 among individuals with a diagnosis of gender incongruence. Among those with a gender incongruence diagnosis receiving hormone treatment, years since initiation of hormone treatment was not significantly related to likelihood of mental health treatment (i.e., psychiatric outpatient health care visits and prescribed psychiatric medication; adjusted odds ratio=1.01, 95% CI=0.98, 1.03). However, among those receiving gender-affirming surgical treatment, the risk of mental health treatment was significantly reduced with increased time since last surgical treatment (adjusted odds ratio=0.92, 95% CI=0.87, 0.97). Specifically, the likelihood of being treated for a mood or anxiety disorder was reduced by 8% for each year since last gender-affirming surgery. The number of individuals with a gender incongruence diagnosis who had been hospitalized after a suicide attempt in 2015 was low (N=22) but was also

reduced as a function of time since last surgical treatment. The association between time since gender-affirming hormone and surgical treatments and hospitalization after a suicide attempt did not reach significance (hormone treatment: adjusted odds ratio=1.12, 95% CI=0.97, 1.30; surgical treatment: adjusted odds ratio=0.87, 95% CI=0.61, 1.24). Figure 1 presents the prevalence of mental health treatment (either health care visits for depression and anxiety, antidepressant and anxiolytic prescriptions, or both) and hospitalization after a suicide attempt in 2015 by years since last gender-affirming surgical treatment.

To assess the potentially interrelated and therefore confounding effect of gender-affirming hormone and surgical treatments on each other, a sensitivity analyses was conducted, entering both years since initiation of hormone treatment and years since last surgical treatment simultaneously into the same model predicting odds of mood and anxiety disorder treatment (i.e., psychiatric outpatient health care visits and prescribed psychiatric medication). The results of this analysis were similar to those presented above, with a nonsignificant effect of time since initiation of hormone treatment (adjusted odds ratio=1.03, 95% CI=0.97, 1.08) and a significant effect of years since last gender-affirming surgical treatment (adjusted odds ratio=0.91, 95% CI=0.86, 0.97).

TABLE 3. Type of, and years since, gender-affirming hormone and surgery treatment in December 31, 2015, among individuals with a gender incongruence diagnosis in Sweden, January 1, 2005, to December 31, 2015

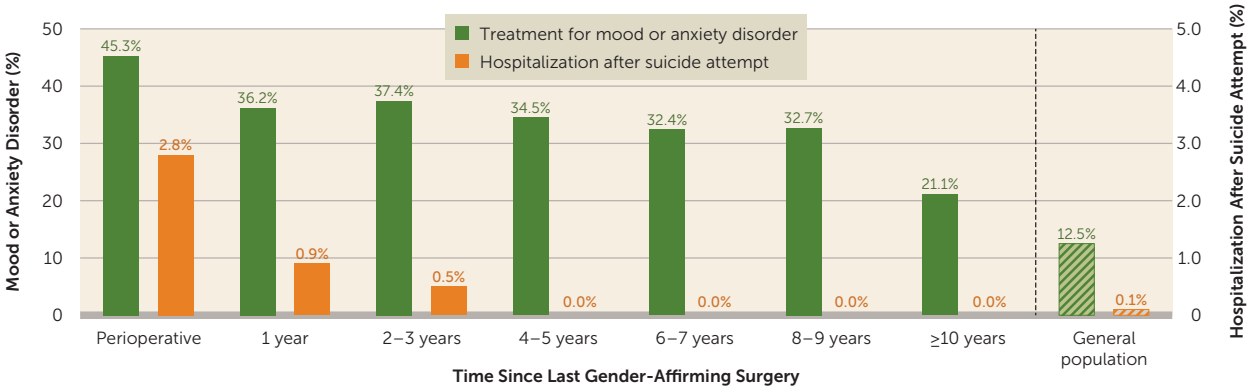
Measure	N	%
Time since first gender-affirming hormone treatment	Individuals with gender incongruence diagnosis (N=2,679)	
No hormone treatment	794	29.6
<1 year	359	13.4
1 year	226	8.4
2–3 years	367	13.7
4–5 years	330	12.3
6–7 years	176	6.6
8–9 years	193	7.2
≥10 years	234	8.7
Type of hormone treatment (more than one type is possible)	All individuals receiving gender-affirming hormone treatment (N=1,885)	
Estrogen or progesterone	1,066	56.6
Androgen	916	48.6
Androgen-suppressing or -blocking medication	808	42.9
Time since last gender-affirming surgical treatment	All individuals with gender incongruence diagnosis (N=2,679)	
No surgical treatment	1,661	62.0
<1 year	353	13.2
1 year	221	8.2
2–3 years	198	7.4
4–5 years	110	4.1
6–7 years	68	2.5
8–9 years	49	1.8
≥10 years	19	0.7
Type of surgical procedures (more than one type is possible)	All individuals receiving gender-affirming surgical treatment (N=1,018)	
Breast or dermatological chest surgery	788	77.4
Surgery of the reproductive organs	540	53.0
Dermatological surgery	315	30.9
Laryngeal surgery	70	6.9

DISCUSSION

Taking advantage of total population registers containing diagnoses of gender incongruence, gender-related hormone and surgical treatment codes, and mental health treatment utilization, we examined the potential impact of gender-affirming hormone and surgical treatment on later mental health treatment utilization. The results also present the first known population prevalence of mood and anxiety disorder treatment and suicide attempts among transgender individuals compared with the general population. Overall, our results show that transgender individuals, here defined as those with a diagnosis of gender incongruence, are about six times as likely as the general population to have had a health care visit for any mood or anxiety disorder, between three and four times as likely to have received prescriptions for antidepressant or anxiolytic medication, and more than six times as likely to have been hospitalized after a suicide attempt. Time since initiating gender-affirming hormone treatment was not associated with these mental health treatment outcomes, whereas time since receiving gender-affirming surgery was significantly associated with a decrease in mental health treatment.

These findings begin to answer the call for population-based documentation of transgender health (1) and extend earlier evidence of associations between gender-affirming treatment and improved mental health mostly derived from studies utilizing cross-sectional designs or short follow-up periods, self-reported exposures and outcomes, and small nonprobability samples (2, 10, 11). In addition to showing that transgender individuals are more likely to utilize mental health treatments than the general population, the results suggest that gender-affirming treatments may reduce this risk. Specifically, the odds of receiving mental health treatment in 2015 were reduced by 8% for every year since

FIGURE 1. Prevalence of treatment for mood or anxiety disorders (health care visit or antidepressant or anxiolytic prescription) and hospitalization after suicide attempt in 2015 among individuals with a gender incongruence diagnosis, by number of years since last gender-affirming surgery



receiving gender-affirming surgery over the 10-year follow-up period. Despite this linear decrease, even 10 years after receiving such treatments, the prevalence of mental health treatment utilization continued to exceed that of the general Swedish population (24), suggesting the need to address factors in addition to gender-affirming treatment availability that may strengthen transgender individuals' mental health. Such factors may include reductions in structural (e.g., economic inequality), interpersonal (e.g., victimization), and psychosocial (e.g., identity concealment) stressors to which transgender individuals are disproportionately exposed (4, 24). Ensuring access to transgender-affirming mental health care may also further reduce transgender individuals' persistent psychiatric risk (25). Although the prevalence of hospitalization after suicide attempt among those with a gender incongruence diagnosis was too small for statistical testing, the numbers who were treated after a suicide attempt decreased as a function of years since last gender-affirming surgery. Among those who received their last gender-affirming surgery more than 3 years ago, no suicide attempts were registered.

Despite the notable methodological strengths of utilizing data from a total population, the results should be interpreted in light of several limitations. First, the criterion used here to define the transgender population does not capture the full spectrum of those who identify as transgender. We specifically lacked information regarding gender assigned at birth, legal gender change, and gender identity at the time of data collection, preventing subgroup analyses of the transgender population (26). Recent estimates across five countries suggest that between 0.4% and 1.3% of the population may identify as transgender, including gender-nonconforming individuals who do not seek gender-affirming hormone or surgical treatment (18, 27–29). Although the transgender population in the present study is limited to individuals with a diagnosis of gender incongruence, this population is of particular concern to the medical community because of its high likelihood of seeking gender-affirming hormone and surgical treatments. Given the free availability of gender-affirming treatments in Sweden, our approach to ascertaining this particular population is likely highly sensitive. Our approach also did not include a comparison group of individuals who had sought but not yet received gender-affirming treatment. While this population might be able to serve as an important comparison group in future studies, without the ability to distinguish between those who had not received treatment because they are waiting for it and those not seeking it in the first place, the current data structure cannot provide this comparison. Longitudinal designs assessing within-person changes in treatment seeking, treatment receipt, and ultimate mental health outcomes would be essential for tracking mental health before and immediately after treatment. Because our approach could only ascertain suicide attempts among living individuals, longitudinal designs that allow for tracking completed suicide among decedents remains an important future direction.

Second, mental health treatment utilization is an imperfect proxy for mental health itself. Transgender people receiving treatment for gender incongruence are by definition exposed to treatment settings, which may disproportionately expose them to mental health treatment opportunities. Although the Swedish context of universal health care coverage removes financial barriers to treatment seeking, other unmeasured factors, such as general tendency toward treatment seeking or perceived discrimination in treatment settings, may influence the associations examined here. Third, because we derived information about outpatient psychiatric health care visits from national health care databases, we had limited information about the type of mental health treatment patients received, and we could not differentiate among individuals receiving psychotropic medication, psychotherapy, or both. Fourth, this study was conducted in a single high-income national context with legal protections for transgender individuals and universal health coverage, including for gender-affirming treatments. While this context makes the present study possible,

it also may constrain the generalizability of findings to low- and middle-income countries and to countries that lack transgender protections or universal health care coverage.

Overall, this study provides timely support for policies that ensure coverage of gender-affirming treatments. Although gender-affirming treatments are recommended as a medical necessity for appropriately selected individuals experiencing gender incongruence and are a covered health benefit in most developed countries, uncertainty exists, such as in the United States, regarding federal protections of transgender employees from transgender-related exclusions in employee benefits (30). In the context of such uncertainty, some U.S. states deny use of state funds to cover costs for gender-affirming treatments, and the Veterans Health Administration specifically prohibits gender-affirming surgery within Veterans Affairs (VA) facilities or use of VA funding for gender-affirming treatments (31, 32). To the extent that gender-affirmative medical interventions are interpreted as sterilization, many hospitals can refuse to provide such care, citing religious directives (33). Debates regarding the provision of gender-affirming health care are global, and in much of the world, such care is unavailable or largely unaffordable (29). Therefore, in many contexts around the world, lack of coverage for gender-affirming treatments drives the use of non–medically supervised hormones and surgeries, thereby exacerbating physical health risks (34) and the other epidemics disproportionately borne by the global transgender population, including suicide and HIV infection. The longitudinal association found in the present study between gender-affirming surgery and reduced mental health treatment utilization, combined with the physical and mental health risks of surgery denial, supports policies that provide gender-affirming surgeries to transgender individuals who seek such treatments.

ADDENDUM

After this article was published online on October 4, 2019, some letters containing questions on the statistical methodology employed led the *Journal* to seek statistical consultations. The results of these consultations were presented to us and we concurred with many of the points raised. The letters (35-41) and our response to them (42) appear in the Letters to the Editor section of the August 2020 issue of the *Journal*.

AUTHOR AND ARTICLE INFORMATION

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Correction to Bränström and Pachankis

After the article "Reduction in Mental Health Treatment Utilization Among Transgender Individuals After Gender-Affirming Surgeries: A Total Population Study" by Richard Bränström, Ph.D., and John E. Pachankis, Ph.D. (doi: 10.1176/appi.ajp.2019.19010080), was published online on October 4, 2019, some letters containing questions on the statistical methodology employed in the study led the *Journal* to seek statistical consultations. The results of these consultations were presented to the study authors, who concurred with many of the points raised. Upon request, the authors reanalyzed the data to compare outcomes between individuals diagnosed with gender incongruence who had received gender-affirming surgical treatments and those diagnosed with gender incongruence who had not. While this comparison was performed retrospectively and was not part of the original research question given that several other factors may differ between the groups, the results demonstrated no advantage of surgery in relation to subsequent mood or anxiety disorder-related health care visits or prescriptions or hospitalizations following suicide attempts in that comparison. Given that the study used neither a prospective cohort design nor a randomized controlled trial design, the conclusion that "the longitudinal association between gender-affirming surgery and lower use of mental health treatment lends support to the decision to provide gender-affirming surgeries to transgender individuals who seek them" is too strong. Finally, although the percentage of individuals with a gender incongruence diagnosis who had received gender-affirming surgical treatments during the follow-up period is correctly reported in Table 3 (37.9%), the text incorrectly refers to this percentage as 48%. The article was reposted on August 1, 2020, correcting this percentage and including an addendum referencing the postpublication discussion captured in the Letters to the Editor section of the August 2020 issue of the Journal (1).

1. Kalin NH: Reassessing mental health treatment utilization reduction in transgender individuals after gender-affirming surgeries: a comment by the editor on the process (letter). Am J Psychiatry 2020; 177:765

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Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden

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Abstract

Context: The treatment for transsexualism is sex reassignment, including hormonal treatment and surgery aimed at making the person's body as congruent with the opposite sex as possible. There is a dearth of long term, follow-up studies after sex reassignment.

Objective: To estimate mortality, morbidity, and criminal rate after surgical sex reassignment of transsexual persons.

Design: A population-based matched cohort study.

Setting: Sweden, 1973-2003.

Participants: All 324 sex-reassigned persons (191 male-to-females, 133 female-to-males) in Sweden, 1973–2003. Random population controls (10:1) were matched by birth year and birth sex or reassigned (final) sex, respectively.

Main Outcome Measures: Hazard ratios (HR) with 95% confidence intervals (CI) for mortality and psychiatric morbidity were obtained with Cox regression models, which were adjusted for immigrant status and psychiatric morbidity prior to sex reassignment (adjusted HR [aHR]).

Results: The overall mortality for sex-reassigned persons was higher during follow-up (aHR 2.8; 95% CI 1.8–4.3) than for controls of the same birth sex, particularly death from suicide (aHR 19.1; 95% CI 5.8–62.9). Sex-reassigned persons also had an increased risk for suicide attempts (aHR 4.9; 95% CI 2.9–8.5) and psychiatric inpatient care (aHR 2.8; 95% CI 2.0–3.9). Comparisons with controls matched on reassigned sex yielded similar results. Female-to-males, but not male-to-females, had a higher risk for criminal convictions than their respective birth sex controls.

Conclusions: Persons with transsexualism, after sex reassignment, have considerably higher risks for mortality, suicidal behaviour, and psychiatric morbidity than the general population. Our findings suggest that sex reassignment, although alleviating gender dysphoria, may not suffice as treatment for transsexualism, and should inspire improved psychiatric and somatic care after sex reassignment for this patient group.

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Introduction

Transsexualism (ICD-10),[1] or gender identity disorder (DSM-IV),[2] is a condition in which a person's gender identity - the sense of being a man or a woman - contradicts his or her bodily sex characteristics. The individual experiences gender dysphoria and desires to live and be accepted as a member of the opposite sex.

The treatment for transsexualism includes removal of body hair, vocal training, and cross-sex hormonal treatment aimed at making the person's body as congruent with the opposite sex as possible to alleviate the gender dysphoria. Sex reassignment also involves the surgical removal of body parts to make external sexual characteristics resemble those of the opposite sex, so called sex reassignment/confirmation surgery (SRS). This is a unique

intervention not only in psychiatry but in all of medicine. The present form of sex reassignment has been practised for more than half a century and is the internationally recognized treatment to ease gender dysphoria in transsexual persons.[3,4]

Despite the long history of this treatment, however, outcome data regarding mortality and psychiatric morbidity are scant. With respect to suicide and deaths from other causes after sex reassignment, an early Swedish study followed 24 transsexual persons for an average of six years and reported one suicide.[5] A subsequent Swedish study recorded three suicides after sex reassignment surgery of 175 patients.[6] A recent Swedish follow-up study reported no suicides in 60 transsexual patients, but one death due to complications after the sex reassignment surgery.[7] A Danish study reported death by suicide in 3 out of 29 operated male-to-female transsexual persons followed for an average of six years.[8] By contrast, a Belgian study of 107 transsexual persons followed for 4–6 years found no suicides or deaths from other causes.[9] A large Dutch single-centre study (N = 1,109), focusing on adverse events following hormonal treatment, compared the outcome after cross-sex hormone treatment with national Dutch standardized mortality and morbidity rates and found no increased mortality, with the exception of death from suicide and AIDS in male-to-females 25–39 years of age.[10] The same research group concluded in a recent report that treatment with cross-sex hormones seems acceptably safe, but with the reservation that solid clinical data are missing.[11] A limitation with respect to the Dutch cohort is that the proportion of patients treated with cross-sex hormones who also had surgical sex-reassignment is not accounted for.[10]

Data is inconsistent with respect to psychiatric morbidity post sex reassignment. Although many studies have reported psychiatric and psychological improvement after hormonal and/or surgical treatment,[7,12,13,14,15,16] other have reported on regrets,[17] psychiatric morbidity, and suicide attempts after SRS.[9,18] A recent systematic review and meta-analysis concluded that approximately 80% reported subjective improvement in terms of gender dysphoria, quality of life, and psychological symptoms, but also that there are studies reporting high psychiatric morbidity and suicide rates after sex reassignment.[19] The authors concluded though that the evidence base for sex reassignment "is of very low quality due to the serious methodological limitations of included studies."

The methodological shortcomings have many reasons. First, the nature of sex reassignment precludes double blind randomized controlled studies of the result. Second, transsexualism is rare [20] and many follow-ups are hampered by small numbers of subjects.[5,8,21,22,23,24,25,26,27,28] Third, many sex reassigned persons decline to participate in follow-up studies, or relocate after surgery, resulting in high drop-out rates and consequent selection bias.[6,9,12,21,24,28,29,30] Forth, several follow-up studies are hampered by limited follow-up periods.[7,9,21,22,26,30] Taken together, these limitations preclude solid and generalisable conclusions. A long-term population-based controlled study is one way to address these methodological shortcomings.

Here, we assessed mortality, psychiatric morbidity, and psychosocial integration expressed in criminal behaviour after sex reassignment in transsexual persons, in a total population cohort study with long-term follow-up information obtained from Swedish registers. The cohort was compared with randomly selected population controls matched for age and gender. We adjusted for premorbid differences regarding psychiatric morbidity and immigrant status. This study design sheds new light on transsexual persons' health after sex reassignment. It does not, however, address whether sex reassignment is an effective treatment or not.

Methods

National registers

The study population was identified by the linkage of several Swedish national registers, which contained a total of 13.8 million unique individuals. The Hospital Discharge Register (HDR, held by the National Board of Health and Welfare) contains discharge diagnoses, up to seven contributory diagnoses, external causes of morbidity or mortality, surgical procedure codes, and discharge date. Discharge diagnoses are coded according to the 8th (1969-1986), 9th (1987–1996), and 10th editions (1997-) of the International Classification of Diseases (ICD). The register covers virtually all psychiatric inpatient episodes in Sweden since 1973. Discharges that occurred up to 31 December 2003 were included. Surgical procedure codes could not be used for this study due to the lack of a specific code for sex reassignment surgery. The Total Population Register (TPR, held by Statistics Sweden) is comprised of data about the entire Swedish population. Through linkage with the Total Population Register it was possible to identify birth date and birth gender for all study subjects. The register is updated every year and gender information was available up to 2004/2005. The Medical Birth Register (MBR) was established in 1973 and contains birth data, including gender of the child at birth. National censuses based on mandatory self-report questionnaires completed by all adult citizens in 1960, 1970, 1980, and 1990 provided information on individuals, households, and dwellings, including gender, living area, and highest educational level. Complete migration data, including country of birth for immigrants for 1969–2003, were obtained from the TPR. In addition to educational information from the censuses, we also obtained highest educational level data for 1990 and 2000 from the Register of Education. The Cause of Death Register (CDR, Statistics Sweden) records all deaths in Sweden since 1952 and provided information on date of death and causes of death. Death events occurring up to 31 December 2003 are included in the study. The Crime Register (held by the National Council of Crime Prevention) provided information regarding crime type and date on all criminal convictions in Sweden during the period 1973–2004. Attempted and aggravated forms of all offences were also included. All crimes in Sweden are registered regardless of insanity at the time of perpetration; for example, for individuals who suffered from psychosis at the time of the offence. Moreover, conviction data include individuals who received custodial or non-custodial sentences and cases where the prosecutor decided to caution or fine without court proceedings. Finally, Sweden does not differ considerably from other members of the European Union regarding rates of violent crime and their resolution.[31]

Study population, identification of sex-reassigned persons (exposure assessment)

The study was designed as a population-based matched cohort study. We used the individual national registration number, assigned to all Swedish residents, including immigrants on arrival, as the primary key through all linkages. The registration number consists of 10 digits; the first six provide information of the birth date, whereas the ninth digit indicates the gender. In Sweden, a person presenting with gender dysphoria is referred to one of six specialised gender teams that evaluate and treat patients principally according to international consensus guidelines: Standards of Care.[3] With a medical certificate, the person applies to the National Board of Health and Welfare to receive permission for sex reassignment surgery and a change of legal sex status. A new national registration number signifying the new gender is assigned after sex reassignment surgery. The National

Board of Health and Welfare maintains a link between old and new national registration numbers, making it possible to follow individuals undergoing sex reassignment across registers and over time. Hence, sex reassignment surgery in Sweden requires (i) a transsexualism diagnosis and (ii) permission from the National Board of Health and Welfare.

A person was defined as exposed to sex reassignment surgery if two criteria were met: (i) at least one inpatient diagnosis of gender identity disorder diagnosis without concomitant psychiatric diagnoses in the Hospital Discharge Register, and (ii) at least one discrepancy between gender variables in the Medical Birth Register (from 1973 and onwards) or the National Censuses from 1960, 1970, 1980, or 1990 and the latest gender designation in the Total Population Register. The first criterion was employed to capture the hospitalization for sex reassignment surgery that serves to secure the diagnosis and provide a time point for sex reassignment surgery; the plastic surgeons namely record the reason for sex reassignment surgery, i.e., transsexualism, but not any co-occurring psychiatric morbidity. The second criterion was used to ensure that the person went through all steps in sex-reassignment and also changed sex legally.

The date of sex reassignment (start of follow-up) was defined as the first occurrence of a gender identity disorder diagnosis, without any other concomitant psychiatric disorder, in the Hospital Discharge Register after the patient changed sex status (any discordance in sex designation across the Censuses, Medical Birth, and Total Population registers). If this information was missing, we used instead the closest date in the Hospital Discharge Register on which the patient was diagnosed with gender identity disorder without concomitant psychiatric disorder prior to change in sex status. The reason for prioritizing the use of a gender identity disorder diagnosis *after* changed sex status over *before* was to avoid overestimating person-years at risk of sex-reassigned person.

Using these criteria, a total of 804 patients with gender identity disorder were identified, whereof 324 displayed a shift in the gender variable during the period 1973–2003. The 480 persons that did not shift gender variable comprise persons who either did not apply, or were not approved, for sex reassignment surgery. Moreover, the ICD 9 code 302 is a non specific code for sexual disorders. Hence, this group might also comprise persons that were hospitalized for sexual disorders other than transsexualism. Therefore, they were omitted from further analyses. Of the remaining 324 persons, 288 were identified with the gender identity diagnosis *after* and 36 *before* change of sex status. Out of the 288 persons identified *after* changed sex status, 185 could also be identified *before* change in sex status. The median time lag between the hospitalization *before* and *after* sex change for these 185 persons was 0.96 years (mean 2.2 years, SD 3.3).

Gender identity disorder was coded according to ICD-8: 302.3 (transsexualism) and 302.9 (sexual deviation NOS); ICD-9: 302 (overall code for sexual deviations and disorders, more specific codes were not available in ICD-9); and ICD-10: F64.0 (transsexualism), F64.1 (dual-role transvestism), F64.8 (other gender identity disorder), and F64.9 (gender identity disorder NOS). Other psychiatric disorders were coded as ICD-8: 290-301 and 303-315; ICD-9: 290-301 and 303-319; and ICD-10: F00-F63 as well as F65-F99.

Identification of population-based controls (unexposed group)

For each exposed person (N = 324), we randomly selected 10 unexposed controls. A person was defined as unexposed if there were no discrepancies in sex designation across the Censuses, Medical Birth, and Total Population registers *and* no gender identity disorder diagnosis according to the Hospital Discharge Register. Control persons were matched by sex and birth year and had to be alive and residing in Sweden at the estimated sex reassignment date of the case person. To study possible gender-specific effects on outcomes of interest, we used two different control groups: one with the same sex as the case individual at birth (birth sex matching) and the other with the sex that the case individual had been reassigned to (final sex matching).

Outcome measures

We studied mortality, psychiatric morbidity, accidents, and crime following sex reassignment. More specifically, we investigated: (1) all-cause mortality, (2) death by definite/uncertain suicide, (3) death by cardiovascular disease, and (4) death by tumour. Morbidity included (5) any psychiatric disorder (gender identity disorders excluded), (6) alcohol/drug misuse and dependence, (7) definite/uncertain suicide attempt, and (8) accidents. Finally, we addressed court convictions for (9) any criminal offence and (10) any violent offence. Each individual could contribute with several outcomes, but only one event per outcome. Causes of death (Cause of Death Registry from 1952 and onwards) were defined according to ICD as suicide (ICD-8 and ICD-9 codes E950-E959 and E980-E989, ICD-10 codes X60-X84 and Y10-Y34); cardiovascular disease (ICD-8 codes 390-458, ICD-9 codes 390-459, ICD-10 codes I00-I99); neoplasms (ICD-8 and ICD-9 codes 140-239, ICD-10 codes C00-D48), any psychiatric disorder (gender identity disorders excluded); (ICD-8 codes 290-301 and 303-315, ICD-9 codes 290-301 and 303-319, ICD-10 codes F00-F63 and F65-F99); alcohol/drug abuse and dependence (ICD-8 codes 303-304, ICD-9 codes 303-305 (tobacco use disorder excluded), ICD-10 codes F10-F16 and F18-F19 (x5 excluded); and accidents (ICD-8 and ICD-9 codes E800-E929, ICD-10 codes V01-X59).

Any criminal conviction during follow-up was counted; specifically, violent crime was defined as homicide and attempted homicide, aggravated assault and assault, robbery, threatening behaviour, harassment, arson, or any sexual offense.[32]

Covariates

Severe psychiatric morbidity was defined as inpatient care according to ICD-8 codes 291, 295-301, 303-304, and 307; ICD-9 codes 291-292, 295-298, 300-301, 303-305 (tobacco use disorder excluded), 307.1, 307.5, 308-309, and 311; ICD-10 codes F10-F16, F18-F25, F28-F45, F48, F50, and F60-F62. Immigrant status, defined as individuals born abroad, was obtained from the Total Population Register. All outcome/covariate variables were dichotomized (i.e., affected or unaffected) and without missing values.

Statistical analyses

Each individual contributed person-time from study entry (for exposed: date of sex reassignment; for unexposed: date of sex reassignment of matched case) until date of outcome event, death, emigration, or end of study period (31 December 2003), whichever came first. The association between exposure (sex reassignment) and outcome (mortality, morbidity, crime) was measured by hazard ratios (HR) with 95% CIs, taking follow-up time into account. HRs were estimated from Cox proportional hazard regression models, stratified on matched sets (1:10) to account for the matching by sex, age, and calendar time (birth year). We present crude HRs (though adjusted for sex and age through matching) and confounder-adjusted HRs [aHRs] for all outcomes. The two potential confounders, immigrant status (yes/no) and history of severe psychiatric morbidity (yes/no) prior to sex

reassignment, were chosen based on previous research[18,33] and different prevalence across cases and controls (Table 1).

Gender-separated analyses were performed and a Kaplan-Meier survival plot graphically illustrates the survival of the sex reassigned cohort and matched controls (all-cause mortality) over time. The significance level was set at 0.05 (all tests were two-sided). All outcome/covariate variables were without missing values, since they are generated from register data, which are either present (affected) or missing (unaffected). The data were analysed using SAS version 9.1 (SAS Institute Inc., Cary, NC, USA).

Ethics

The data linking of national registers required for this study was approved by the IRB at Karolinska Institutet, Stockholm. All data were analyzed anonymously; therefore, informed consent for each individual was neither necessary nor possible.

Results

We identified 324 transsexual persons (exposed cohort) who underwent sex reassignment surgery and were assigned a new legal sex between 1973 and 2003. These constituted the sex-reassigned (exposed) group. Fifty-nine percent (N = 191) of sex-reassigned persons were male-to-females and 41% (N = 133) female-to-males, yielding a sex ratio of 1.4:1 (Table 1).

The average follow-up time for all-cause mortality was 11.4 (median 9.1) years. The average follow-up time for the risk of being hospitalized for any psychiatric disorder was 10.4 (median 8.1).

Characteristics prior to sex reassignment

Table 1 displays demographic characteristics of sex-reassigned and control persons prior to study entry (sex reassignment). There were no substantial differences between female-to-males and male-to-females regarding measured baseline characteristics. Immigrant status was twice as common among transsexual individuals compared to controls, living in an urban area somewhat more common, and higher education about equally prevalent. Transsexual individuals had been hospitalized for psychiatric morbidity other than gender identity disorder prior to sex reassignment about four times more often than controls. To adjust for these baseline discrepancies, hazard ratios adjusted for immigrant status and psychiatric morbidity prior to baseline are presented for all outcomes [aHRs].

Mortality

Table 2 describes the risks for selected outcomes during follow-up among sex-reassigned persons, compared to same-age controls of the same birth sex. Sex-reassigned transsexual persons of both genders had approximately a three times higher risk of all-cause mortality than controls, also after adjustment for covariates. Table 2

Table 1. Baseline characteristics among sex-reassigned subjects in Sweden (N = 324) and population controls matched for birth year and sex.

Characteristic at baseline	Sex-reassigned subjects (N = 324)	Birth-sex matched controls (N = 3,240)	Final-sex matched controls (N = 3,240)
Gender			
Female at birth, male after sex change	133 (41%)	1,330 (41%)	1,330 (41%)
Male at birth, female after sex change	191 (59%)	1,910 (59%)	1,910 (59%)
Average age at study entry [years] (SD, min-max)			
Female at birth, male after sex change	33.3 (8.7, 20–62)	33.3 (8.7, 20–62)	33.3 (8.7, 20–62)
Male at birth, female after sex change	36.3 (10.1, 21–69)	36.3 (10.1, 21–69)	36.3 (10.1, 21–69)
Both genders	35.1 (9.7, 20–69)	35.1 (9.7, 20–69)	35.1 (9.7, 20–69)
Immigrant status			
Female at birth, male after sex change	28 (21%)	118 (9%)	100 (8%)
Male at birth, female after sex change	42 (22%)	176 (9%)	164 (9%)
Both genders	70 (22%)	294 (9%)	264 (8%)
Less than 10 years of schooling prior to entry vs. 10 years or more			
Females at birth, males after sex change	49 (44%); 62 (56%)	414 (37%); 714 (63%)	407 (36%); 713 (64%)
Males at birth, females after sex change	61 (41%); 89 (59%)	665 (40%); 1,011 (60%)	595 (35%); 1,091 (65%)
All individuals with data	110 (42%); 151 (58%)	1,079 (38%); 1,725 (62%)	1,002 (36%); 1,804 (64%)
Psychiatric morbidity* prior to study entry			
Female at birth, male after sex change	22 (17%)	47 (4%)	42 (3%)
Male at birth, female after sex change	36 (19%)	76 (4%)	72 (4%)
Both genders	58 (18%)	123 (4%)	114 (4%)
Rural [vs. urban] living area prior to entry			
Female at birth, male after sex change	13 (10%)	180 (14%)	195 (15%)
Male at birth, female after sex change	20 (10%)	319 (17%)	272 (14%)
Both genders	33 (10%)	499 (15%)	467 (14%)

Note:
*Hospitalizations for gender identity disorder were not included.
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Table 2. Risk of various outcomes among sex-reassigned subjects in Sweden (N = 324) compared to population controls matched for birth year and birth sex.

	Number of events cases/ controls 1973–2003	Outcome incidence rate per 1000 person-years 1973–2003 (95% CI)		Crude hazard ratio (95% CI) 1973–2003	Adjusted* hazard ratio (95% CI) 1973–2003	Adjusted* hazard ratio (95% CI) 1973–1988	Adjusted* hazard ratio (95% CI) 1989–2003
		Cases	Controls				
Any death	27/99	7.3 (5.0–10.6)	2.5 (2.0–3.0)	2.9 (1.9–4.5)	2.8 (1.8–4.3)	3.1 (1.9–5.0)	1.9 (0.7–5.0)
Death by suicide	10/5	2.7 (1.5–5.0)	0.1 (0.1–0.3)	19.1 (6.5–55.9)	19.1 (5.8–62.9)	N/A	N/A
Death by cardiovascular disease	9/42	2.4 (1.3–4.7)	1.1 (0.8–1.4)	2.6 (1.2–5.4)	2.5 (1.2–5.3)	N/A	N/A
Death by neoplasm	8/38	2.2 (1.1–4.3)	1.0 (0.7–1.3)	2.1 (1.0–4.6)	2.1 (1.0–4.6)	N/A	N/A
Any psychiatric hospitalisation‡	64/173	19.0 (14.8–24.2)	4.2 (3.6–4.9)	4.2 (3.1–5.6)	2.8 (2.0–3.9)	3.0 (1.9–4.6)	2.5 (1.4–4.2)
Substance misuse	22/78	5.9 (3.9–8.9)	1.8 (1.5–2.3)	3.0 (1.9–4.9)	1.7 (1.0–3.1)	N/A	N/A
Suicide attempt	29/44	7.9 (5.5–11.4)	1.0 (0.8–1.4)	7.6 (4.7–12.4)	4.9 (2.9–8.5)	7.9 (4.1–15.3)	2.0 (0.7–5.3)
Any accident	32/233	9.0 (6.3–12.7)	5.7 (5.0–6.5)	1.6 (1.1–2.3)	1.4 (1.0–2.1)	1.6 (1.0–2.5)	1.1 (0.5–2.2)
Any crime	60/350	18.5 (14.3–23.8)	9.0 (8.1–10.0)	1.9 (1.4–2.5)	1.3 (1.0–1.8)	1.6 (1.1–2.4)	0.9 (0.6–1.5)
Violent crime	14/61	3.6 (2.1–6.1)	1.4 (1.1–1.8)	2.7 (1.5–4.9)	1.5 (0.8–3.0)	N/A	N/A

Notes:
*Adjusted for psychiatric morbidity prior to baseline and immigrant status.
‡Hospitalisations for gender identity disorder were excluded.
N/A Not applicable due to sparse data.
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separately lists the outcomes depending on when sex reassignment was performed: during the period 1973-1988 or 1989–2003. Even though the overall mortality was increased across both time periods, it did not reach statistical significance for the period 1989–2003. The Kaplan-Meier curve (Figure 1) suggests that survival of transsexual persons started to diverge from that of matched controls after about 10 years of follow-up. The cause-specific mortality from suicide was much higher in sex-reassigned persons, compared to matched controls. Mortality due to cardiovascular disease was moderately increased among the sex-reassigned, whereas the numerically increased risk for malignancies was borderline statistically significant. The malignancies were lung cancer (N = 3), tongue cancer (N = 1), pharyngeal cancer (N = 1), pancreas cancer (N = 1), liver cancer (N = 1), and unknown origin (N = 1).

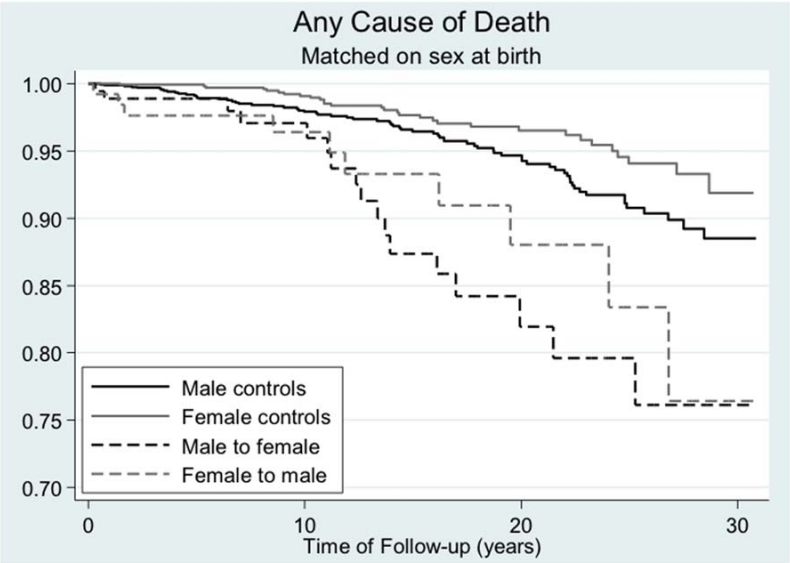

Figure 1. Death from any cause as a function of time after sex reassignment among 324 transsexual persons in Sweden (male-to-female: N = 191, female-to-male: N = 133), and population controls matched on birth year.
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Psychiatric morbidity, substance misuse, and accidents

Sex-reassigned persons had a higher risk of inpatient care for a psychiatric disorder other than gender identity disorder than controls matched on birth year and birth sex (Table 2). This held after adjustment for prior psychiatric morbidity, and was true regardless of whether sex reassignment occurred before or after 1989. In line with the increased mortality from suicide, sex-reassigned individuals were also at a higher risk for suicide attempts, though this was not statistically significant for the time period 1989–2003. The risks of being hospitalised for substance misuse or accidents were not significantly increased after adjusting for covariates (Table 2).

Crime rate

Transsexual individuals were at increased risk of being convicted for any crime or violent crime after sex reassignment (Table 2); this was, however, only significant in the group who underwent sex reassignment before 1989.

Gender differences

Comparisons of female-to-males and male-to-females, although hampered by low statistical power and associated wide confidence intervals, suggested mostly similar risks for adverse outcomes (Tables S1 and S2). However, violence against self (suicidal behaviour) and others ([violent] crime) constituted important exceptions. First, male-to-females had significantly increased risks for suicide attempts compared to both female (aHR 9.3; 95% CI 4.4–19.9) and male (aHR 10.4; 95% CI 4.9–22.1) controls. By contrast, female-to-males had significantly increased risk of suicide attempts only compared to male controls (aHR 6.8; 95% CI 2.1–21.6) but not compared to female controls (aHR 1.9; 95% CI 0.7–4.8). This suggests that male-to-females are at higher risk for suicide attempts after sex reassignment, whereas female-to-males maintain a female pattern of suicide attempts after sex reassignment (Tables S1 and S2).

Second, regarding any crime, male-to-females had a significantly increased risk for crime compared to female controls (aHR 6.6; 95% CI 4.1–10.8) but not compared to males (aHR 0.8; 95% CI 0.5–1.2). This indicates that they retained a male pattern regarding criminality. The same was true regarding violent crime. By contrast, female-to-males had higher crime rates than female controls (aHR 4.1; 95% CI 2.5–6.9) but did not differ from male controls. This indicates a shift to a male pattern regarding criminality and that sex reassignment is coupled to increased crime rate in female-to-males. The same was true regarding violent crime.

Discussion

Principal findings and comparison with previous research

We report on the first nationwide population-based, long-term follow-up of sex-reassigned transsexual persons. We compared our cohort with randomly selected population controls matched for age and gender. The most striking result was the high mortality rate in both male-to-females and female-to males, compared to the general population. This contrasts with previous reports (with one exception[8]) that did not find an increased mortality rate after sex reassignment, or only noted an increased risk in certain subgroups.[7,9,10,11] Previous clinical studies might have been biased since people who regard their sex reassignment as a failure are more likely to be lost to follow-up. Likewise, it is cumbersome to track deceased persons in clinical follow-up studies. Hence, population-based register studies like the present are needed to improve representativity.[19,34]

The poorer outcome in the present study might also be explained by longer follow-up period (median >10 years) compared to previous studies. In support of this notion, the survival curve (Figure 1) suggests increased mortality from ten years after sex reassignment and onwards. In accordance, the overall mortality rate was only significantly increased for the group operated before 1989. However, the latter might also be explained by improved health care for transsexual persons during 1990s, along with altered societal attitudes towards persons with different gender expressions.[35]

Mortality due to cardiovascular disease was significantly increased among sex reassigned individuals, albeit these results should be interpreted with caution due to the low number of events. This contrasts, however, a Dutch follow-up study that reported no increased risk for cardiovascular events.[10,11] A recent meta-analysis concluded, however, that data on cardiovascular outcome after cross-sex steroid use are sparse, inconclusive, and of very low quality.[34]

With respect to neoplasms, prolonged hormonal treatment might increase the risk for malignancies,[36] but no previous study has tested this possibility. Our data suggested that the cause-specific risk of death from neoplasms was increased about twice (borderline statistical significance). These malignancies (see Results), however, are unlikely to be related to cross-hormonal treatment.

There might be other explanations to increased cardiovascular death and malignancies. Smoking was in one study reported in almost 50% by the male-to females and almost 20% by female-to-males.[9] It is also possible that transsexual persons avoid the health care system due to a presumed risk of being discriminated.

Mortality from suicide was strikingly high among sex-reassigned persons, also after adjustment for prior psychiatric morbidity. In line with this, sex-reassigned persons were at increased risk for suicide attempts. Previous reports [6,8,10,11] suggest that transsexualism is a strong risk factor for suicide, also after sex reassignment, and our long-term findings support the need for continued psychiatric follow-up for persons at risk to prevent this.

Inpatient care for psychiatric disorders was significantly more common among sex-reassigned persons than among matched controls, both before and after sex reassignment. It is generally accepted that transsexuals have more psychiatric ill-health than the general population prior to the sex reassignment.[18,21,22,33] It should therefore come as no surprise that studies have found high rates of depression,[9] and low quality of life[16,25] also after sex reassignment. Notably, however, in this study the increased risk for psychiatric hospitalisation persisted even after adjusting for psychiatric hospitalisation prior to sex reassignment. This suggests that even though sex reassignment alleviates gender dysphoria, there is a need to identify and treat co-occurring psychiatric morbidity in transsexual persons not only before but also after sex reassignment.

Criminal activity, particularly violent crime, is much more common among men than women in the general population. A previous study of all applications for sex reassignment in Sweden up to 1992 found that 9.7% of male-to-female and 6.1% of female-to-male applicants had been prosecuted for a crime.[33] Crime after sex reassignment, however, has not previously been studied. In this study, male-to-female individuals had a higher risk for criminal convictions compared to female controls but not compared to male controls. This suggests that the sex reassignment procedure neither increased nor decreased the risk for criminal offending in male-to-females. By contrast, female-to-males were at a higher risk for criminal convictions compared to female controls and did not differ from male controls, which suggests increased crime proneness in female-to-males after sex reassignment.

Strengths and limitations of the study

Strengths of this study include nationwide representativity over more than 30 years, extensive follow-up time, and minimal loss to follow-up. Many previous studies suffer from low outcome ascertainment,[6,9,21,29] whereas this study has captured almost the entire population of sex-reassigned transsexual individuals in Sweden from 1973–2003. Moreover, previous outcome studies have mixed pre-operative and post-operative transsexual persons,[22,37] while we included only post-operative transsexual persons that also legally changed sex. Finally, whereas previous studies either lack a control group or use standardised mortality rates or standardised incidence rates as comparisons,[9,10,11] we selected random population controls matched by birth year, and either birth or final sex.

Given the nature of sex reassignment, a double blind randomized controlled study of the result after sex reassignment is not feasible. We therefore have to rely on other study designs. For the purpose of evaluating whether sex reassignment is an effective treatment for gender dysphoria, it is reasonable to compare reported gender dysphoria pre and post treatment. Such studies have been conducted either prospectively[7,12] or retrospectively,[5,6,9,22,25,26,29,38] and suggest that sex reassignment of transsexual persons improves quality of life and gender dysphoria. The limitation is of course that the treatment has not been assigned randomly and has not been carried out blindly.

For the purpose of evaluating the safety of sex reassignment in terms of morbidity and mortality, however, it is reasonable to compare sex reassigned persons with matched population controls. The caveat with this design is that transsexual persons before sex reassignment might differ from healthy controls (although this bias can be statistically corrected for by adjusting for baseline differences). It is therefore important to note that the current study is only informative with respect to transsexuals persons health after sex reassignment; no inferences can be drawn as to the effectiveness of sex reassignment as a treatment for transsexualism. In other words, the results should not be interpreted such as sex reassignment *per se* increases morbidity and mortality. Things might have been even worse without sex reassignment. As an analogy, similar studies have found increased somatic morbidity, suicide rate, and overall mortality for patients treated for bipolar disorder and schizophrenia.[39,40] This is important information, but it does not follow that mood stabilizing treatment or antipsychotic treatment is the culprit.

Other facets to consider are first that this study reflects the outcome of psychiatric and somatic treatment for transsexualism provided in Sweden during the 1970s and 1980s. Since then, treatment has evolved with improved sex reassignment surgery, refined hormonal treatment,[11,41] and more attention to psychosocial care that might have improved the outcome. Second, transsexualism is a rare condition and Sweden is a small country (9.2 million inhabitants in 2008). Hence, despite being based on a comparatively large national cohort and long-term follow-up, the statistical power was limited. Third, regarding psychiatric morbidity after sex reassignment, we assessed inpatient psychiatric care. Since most psychiatric care is provided in outpatient settings (for which no reliable data were available), underestimation of the *absolute* prevalences was inevitable. However, there is no reason to believe that this would change the *relative risks* for psychiatric morbidity unless sex-reassigned transsexual individuals were more likely than matched controls to be admitted to hospital for any given psychiatric condition.

Finally, to estimate start of follow-up, we prioritized using the date of a gender identity disorder diagnosis *after* changed sex status over *before* changed sex status, in order to avoid overestimating person-years at risk after sex-reassignment. This means that adverse outcomes might have been underestimated. However, given that the median time lag between the hospitalization before and after change of sex status was less than a year (see Methods), this maneuver is unlikely to have influenced the results significantly. Moreover, all deaths will be recorded regardless of this exercise and mortality hence correctly estimated.

Conclusion

This study found substantially higher rates of overall mortality, death from cardiovascular disease and suicide, suicide attempts, and psychiatric hospitalisations in sex-reassigned transsexual individuals compared to a healthy control population. This highlights that post surgical transsexuals are a risk group that need long-term psychiatric and somatic follow-up. Even though surgery and hormonal therapy alleviates gender dysphoria, it is apparently not sufficient to remedy the high rates of morbidity and mortality found among transsexual persons. Improved care for the transsexual group after the sex reassignment should therefore be considered.

Supporting Information

Table S1 Risk of various outcomes in sex-reassigned persons in Sweden compared to population controls matched for birth year and *birth sex*.
(DOCX)

Table S2 Risk of various outcomes in sex-reassigned persons in Sweden compared to controls matched for birth year and *final sex*.
(DOCX)

Author Contributions

Conceived and designed the experiments: CD PL AJ NL ML. Performed the experiments: MB AJ. Analyzed the data: CD PL MB AJ NL ML. Contributed reagents/materials/analysis tools: PL NL AJ. Wrote the paper: CD PL MB AJ NL ML.

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Original Research

Examining gender-specific mental health risks after gender-affirming surgery: a national database study

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Abstract

Background: Transgender individuals face heightened psychological distress, including depression, anxiety, and suicidal ideation, partly due to stigma and lack of gender affirmation.
Aim: To evaluate mental health outcomes in transgender individuals with gender dysphoria who have undergone gender-affirming surgery, stratified by gender and time since surgery.
Methods: This retrospective study utilized the TriNetX database, analyzing U.S. patients aged ≥18 with gender dysphoria (International Classification of Diseases, Tenth Revision [ICD-10] F64) between June 2014 and June 2024. Six cohorts were created based on gender and surgery status: Cohorts A-D included patients with or without surgery, and Cohorts E-F allowed for gender comparison among those with surgery. Propensity score matching controlled for age, race, and ethnicity. Mental health outcomes included depression, anxiety, suicidal ideation, substance use disorder, and body dysmorphic disorder, assessed over two years post-surgery using clinician-verified ICD-10 codes. Body dysmorphic disorder (BDD) was analyzed separately and not conflated with gender dysphoria cohorts to ensure the distinction between these conditions**.** Statistical analysis employed risk ratios, with $P < 0.05$ deemed significant.
Outcomes: Primary outcomes were differences in mental health disorders, specifically depression, anxiety, suicidal ideation, body-dysmorphic disorder, and substance use disorder, among transgender individuals' post-surgery.
Results: From 107 583 patients, matched cohorts demonstrated that those undergoing surgery were at significantly higher risk for depression, anxiety, suicidal ideation, and substance use disorders than those without surgery. Males with surgery showed a higher prevalence of depression (25.4% vs. 11.5%, RR 2.203, $P < 0.0001$) and anxiety (12.8% vs. 2.6%, RR 4.882, $P < 0.0001$). Females exhibited similar trends, with elevated depression (22.9% vs. 14.6%, RR 1.563, $P < 0.0001$) and anxiety (10.5% vs. 7.1%, RR 1.478, $P < 0.0001$). Feminizing individuals demonstrated particularly high risk for depression (RR 1.783, $P = 0.0298$) and substance use disorders (RR 1.284, $P < 0.0001$).
Clinical implications: Findings suggest the necessity for gender-sensitive mental health support following gender-affirming surgery to address post-surgical psychological risks.
Strengths and Limitations: By leveraging ICD-10 codes, we provide a more accurate representation of patient demographics and clinical outcomes, minimizing recall and reporting biases that often limit survey-based research. Limitations include the inability to account for unmeasured confounders such as social support.
Conclusion: Gender-affirming surgery, while beneficial in affirming gender identity, is associated with increased risk of mental health issues, underscoring the need for ongoing, gender-sensitive mental health support for transgender individuals' post-surgery.

Keywords: transgender; gender identity; gender dysphoria; gender-affirming surgery; mental health; TriNetX.

Introduction

Transgender individuals—those who experience a mismatch between their gender identity and the sex assigned at birth—face a heightened risk of psychological distress and related challenges, including suicidal tendencies [1–4]. This increased risk is thought to arise partly from transgender individuals' heightened exposure to stigma-related stress, often referred to as minority stress [5, 6]. Additionally, it may be linked to the stress of not receiving gender affirmation, which involves the accurate acknowledgment and validation of their gender identity [3, 7]. For some transgender individuals, this distress reaches a clinical threshold known as gender dysphoria, defined as significant discomfort or distress stemming from an incongruence between one's experienced or expressed gender and their assigned sex at birth [8, 9]. To relieve the stress associated with the ongoing mismatch between one's gender identity and assigned sex, a growing number of transgender individuals pursue gender-affirming medical treatments, such as hormone therapy and gender-affirming surgeries.

Despite increasing support for gender-affirming medical interventions to alleviate distress in transgender individuals experiencing gender incongruence, the long-term mental health outcomes associated with these interventions remain largely unclear. Much of the available research is based on small sample sizes, cross-sectional designs, and self-reported data on treatment exposure and mental health outcomes,

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which can introduce biases and limit the reliability of findings [4, 10–13]. A meta-analysis of small-scale studies, primarily cross-sectional, suggested a positive association between self-reported hormone therapy and gender-affirming surgery with improved mental health outcomes [10]. However, these studies are often limited by short follow-up periods and lack of control for confounding variables, making it challenging to establish causative links over time.

Existing studies also fall short due to non-representative sampling and limited longitudinal data, leaving critical questions unanswered about the association between the duration since gender-affirming treatment and mental health outcomes among transgender individuals. Moreover, the absence of probability-based data on the prevalence of mood and anxiety disorders within this population, as compared to the general population, reflects a gap in understanding the true impact of these interventions [14].

Our study seeks to address these gaps by utilizing the TriNetX database and International Classification of Diseases, Tenth Revision (ICD-10) codes, which allow for a more comprehensive, clinician-verified assessment of gender dysphoria and related mental health outcomes across a large, nationally representative cohort. Unlike previous studies that rely on self-reported data and smaller, institution-based samples, our methodology leverages robust, real-world data to enable a more accurate and generalizable understanding of mental health outcomes following gender-affirming surgery. The objectives of this study are threefold: (1) to assess mental health outcomes in transgender individuals with gender dysphoria who have undergone gender-affirming surgery compared to those who have not, (2) to explore gender-specific mental health differences among those who have received gender-affirming surgery, and (3) to evaluate whether mental health outcomes vary based on the length of time since undergoing surgery. By addressing these objectives, this study aims to provide valuable insights into the mental health impacts of gender-affirming surgery, contributing to more informed and supportive care for transgender individuals.

Methods

Data source

This study utilized the TriNetX database, a global health research network managed by a private organization, providing access to de-identified patient data from over 64 U.S.-based healthcare organizations, including a mix of public and private institutions. The database encompasses data from more than 113.4 million patients, aggregated from electronic medical records (EMRs), claims, and other healthcare data sources, ensuring standardized and comprehensive documentation. Organizations contribute their data to support research initiatives, improve healthcare outcomes, and leverage analytics for quality improvement. This study was deemed exempt from Institutional Review Board (IRB) oversight as it exclusively involved de-identified patient data.

Study design and population

The retrospective study selected patients from June 12, 2014, to June 12, 2024 of U.S. patients. To be included, all patients had to be 18 years or older with a diagnosis of gender dysphoria, as identified by the ICD-10 code F64. This criterion was chosen based on literature highlighting elevated mental health concerns for transgender and nonbinary patients with gender dysphoria [15, 16]. Gender-affirming surgery cohorts consisted of patients with a documented diagnosis of gender dysphoria who had undergone specific gender-affirming surgical procedures. For transmen, this primarily included mastectomy (chest masculinization surgery, CPT codes 19 303 and 19 304), while for transwomen, this encompassed a range of feminizing procedures such as tracheal shave (CPT code 31899), breast augmentation (CPT code 19325), and vaginoplasty (CPT codes 57 335 and 55 970). These surgeries were identified using clinician-verified CPT codes within the TriNetX database, allowing for precise classification.

Classification of cohorts

We classified patients using the gender documented in the EMRs within the TriNetX database, recognizing that this documentation may reflect either natal sex or gender identity, depending on how it was recorded. To minimize potential misclassification, we identified transgender individuals using the ICD-10 code F64 (gender dysphoria) and categorized them into six cohorts.

- **Cohort A**: Patients documented as male (which may indicate natal sex or affirmed gender identity), aged ≥18 years, with a prior diagnosis of gender dysphoria, who had undergone gender-affirming surgery.
- **Cohort B**: Male patients with the same diagnosis but without surgery.
- **Cohort C**: Patients documented as female, aged ≥18 years, with a prior diagnosis of gender dysphoria, who had undergone gender-affirming surgery.
- **Cohort D**: Female patients with the same diagnosis but without surgery.
- **Cohort E**: Transgender male patients who underwent masculinizing gender-affirming regardless of a previous documented diagnosis of gender dysphoria
- **Cohort F**: Transgender female patients who underwent feminizing gender-affirming surgery regardless of a previous documented diagnosis of gender dysphoria.

Cohorts E and F include transgender patients who underwent gender-affirming surgery but lacked a documented diagnosis of gender dysphoria, unlike Cohorts A and C, which specifically require this diagnosis for inclusion. This distinction allows for the evaluation of mental health outcomes in a broader transgender population, encompassing individuals who sought surgery without meeting the formal diagnostic criteria for gender dysphoria. By comparing these cohorts, the study provides unique insights into how mental health outcomes may differ based on diagnostic status. While longitudinal data at the individual level were unavailable, mental health outcomes were assessed in a cross-sectional manner using diagnoses recorded before and after surgery within the database. Risk for mental health outcomes was assessed for all cohorts over two years following surgery, based on findings from the 2015 US Transgender Survey that highlighted significant adverse mental health outcomes occurring within this timeframe [17]. Mental health outcomes were determined using validated tools administrated by the doctors and healthcare organizations, with the results recorded using corresponding ICD-10 codes.

Mental health outcome assessment

Mental health outcomes in this study were assessed using clinician-verified International Classification of Diseases, Tenth Revision (ICD-10) diagnostic codes, as recorded in the EMRs within the TriNetX database. These diagnoses were established by healthcare professionals during clinical encounters and documented in the EMRs of participating healthcare organizations. This approach eliminates the reliance on self-report measures, ensuring that diagnoses such as depression, anxiety, suicidal ideation, substance use disorder, and body dysmorphic disorder are based on clinical evaluations rather than patient-reported symptoms or survey items. By utilizing ICD-10 codes, we sought to enhance the validity and reliability of the data, addressing the limitations of bias and subjectivity inherent in self-reported mental health measures.

Study outcomes

The outcomes for our study were chosen based on studies that highlighted mental health outcomes that exist within the transgender patient population [18–20]. Patients included in the analysis had no documented mental health disorder diagnoses prior to the index date. The absence of longitudinal patient trajectories in the database limited within-patient tracking, and outcomes were evaluated cross-sectionally based on ICD-10 diagnoses documented at two time points: pre- and post-surgery. The database does not include explicit information on sex assigned at birth, relying instead on documented demographic data as "male" or "female."

Propensity score matching

To control for potentially confounding factors, propensity score matching was utilized. In our study, we propensity matched for age, race, and ethnicity, criteria identified in the literature as risk factors for mental health in this population [21, 22].

Statistical analysis

Data analysis was conducted using the TriNetX software platform, which facilitates statistical computations and cohort comparisons. Risk ratios (RRs) with 95% confidence intervals (CIs) were calculated to assess the relative risk of mental health outcomes between cohorts. Statistical significance was determined with a threshold of $P < 0.05$. Additional tables summarizing demographic and outcome data were generated using Microsoft Excel to provide a comprehensive overview of the results.

Results

Our team identified 107 583 patients aged ≥18 with a previous diagnosis of gender dysphoria using the TriNetX Database United States Collaborative Network. Initially, Cohort A included 2774 male patients with gender dysphoria and gender-affirming surgery; Cohort B included 48 090 male patients with gender dysphoria but no gender-affirming surgery; Cohort C included 3358 female patients with gender dysphoria and gender-affirming surgery; Cohort D included 67 579 female patients with gender dysphoria but no gender-affirming surgery; Cohort E included 3790 transgender male patients who underwent gender-affirming surgery but did not have a documented diagnosis of gender dysphoria; Cohort F included 4643 transgender female patients who underwent gender-affirming surgery but did not have a documented diagnosis of gender dysphoria. The demographics for each cohort before and after propensity score matching is attached to the supplementary tables.

After propensity score matching of cohorts A and B, each cohort had 2774 patients of similar race, ethnicity, and age at index (**Supplementary document:** Table S1). Compared to male patients with a diagnosis of gender dysphoria only, those with gender affirmation surgery were at significantly higher risk for depression, anxiety, suicidal ideation, and substance use disorders. However, neither cohort was at increased risk for body dysmorphic disorder (Table 1). Male patients with gender-affirming surgery had a 25.4% rate of depression, compared to 11.5% for those without surgery (RR 2.203, 95% CI 1.477-3.287, $P < 0.0001$). Male patients with surgery had 4.882 times the risk of anxiety (12.783% vs. 2.618%, RR 4.882, 95% CI 4.505-5.29, $P < 0.0001$) compared to those who did not receive surgery (12.783% vs. 2.618%, RR 4.882, 95% CI 4.505-5.29, $P < 0.0001$). Both groups had the same risk for body dysmorphic disorder (0.4% vs. 0.4%, RR 1.001, 95% CI 0.417-2.402, $P = 0.9974$).

After propensity score matching of Cohorts C and D, each cohort had 3358 female patients of similar age at index, race, and ethnicity (**Supplementary document:** Table S2). Female patients with gender dysphoria and a history of gender-affirming surgery had significantly higher risks for depression, anxiety, suicidal ideation, and substance use disorders compared to those with a diagnosis of gender dysphoria only. However, neither group was at an increased risk for body dysmorphic disorder (Table 2). Females with gender-affirming surgery had a 22.9% rate of depression, compared to 14.6% for those without surgery (RR 1.563, 95% CI 1.422-1.717, $P < 0.0001$). Compared to those without surgery, females who had undergone gender-affirming surgery had a 1.478 times higher risk of anxiety (10.496% vs. 7.098%, RR 1.478, 95% CI 1.214-1.797, $P < 0.0001$), a 2.357 times higher risk of suicidal ideation (19.811% vs. 8.402%, RR 2.357, 95% CI 1.579-3.515), and a 2.712 times higher risk of substance use disorder (19.322% vs. 7.123%, RR 2.712, 95% CI 1.439-3.217). Both groups had the same risk for body dysmorphic disorder (0.3%) (Table 2).

To assess gender disparities in mental health outcomes in transgender patients who underwent gender-affirming surgery but lacked a documented diagnosis of gender dysphoria, we compared Cohorts E and F. After propensity score matching, both cohorts included 3607 patients who were similar at index, in age, race, and ethnicity (**Supplementary document:** Table S3). Transgender men who had undergone gender-affirming surgery were at higher risk of most mental health issues compared to transgender women. Specifically, transgender men had a 1.58 times higher risk of anxiety (14.1% vs. 8. 9%, RR 1.580, 95% CI 0.845-2.134, $P = 0.0002$), a 1.186 times higher risk of suicidal ideation (5.5% vs. 4.6%, RR 1.186, 95% CI 0.97-1.449, $P = 0.0358$), and a 1.284 times higher risk of substance use disorder (14.4% vs. 11.2%, RR 1.284, 95% CI 1.137-1.45, $P < 0.0001$). Among the five outcomes, the relative risk was highest for depression among transgender men compared to transgender women (RR 1.783, 95% CI 1.327-2.389, $P = 0.0298$). Both cohorts were at the same risk for body dysmorphic disorder (Table 3).

Table 1. Outcomes for male patients with a previous diagnosis of gender dysphoria following gender-affirming surgery (cohort A) vs. male patients with gender dysphoria only (cohort B) after propensity score matching.

Outcomes	Cohort A	Cohort B	RR (95% CI)	p-value
Depression	25.4%	11.5%	2.203 (1.477, 3.287)	<0.0001
Anxiety	12.8%	2.6%	4.882 (4.505, 5.29)	<0.0001
Suicidal ideation	3.4%	2.5%	1.356 (0.984, 1.868)	0.0002
Substance use disorder	19.0%	8.2%	2.299 (2.158, 2.45)	<0.0001
Body dysmorphic disorder	0.4%	0.4%	1.00 (0.417, 2.402)	0.9974

RR: relative risk; CI: confidence interval.

Table 2. Female patient outcomes following gender-affirming surgery with a previous diagnosis of gender dysphoria (cohort C) vs. female patient outcomes with a previous diagnosis of gender dysphoria only (cohort D) after propensity score matching.

Outcomes	Cohort C	Cohort D	RR (95% CI)	p-value
Depression	22.9%	14.6%	1.563 (1.422, 1.717)	<0.0001
Anxiety	10.5%	7.1%	1.478 (1.214, 1.797)	<0.0001
Suicidal ideation	19.8%	8.4%	2.357 (1.579, 3.515)	0.0401
Substance use disorder	19.3%	7.1%	2.712 (1.439, 3.217)	0.0193
Body dysmorphic disorder	0.3%	0.3%	1.00 (0.416, 2.406)	0.9995

RR: relative risk; CI: confidence interval.

Table 3. Outcomes of transgender males without documented gender dysphoria following gender-affirming surgery (cohort E) vs. transgender females without documented gender dysphoria following gender-affirming surgery (cohort F) after propensity score matching.

Outcomes	Cohort E	Cohort F	RR (95% CI)	p-value
Depression	44.2%	24.7%	1.789 (1.327, 2.389)	0.0298
Anxiety	14.1%	8.9%	1.580 (0.845, 2.134)	0.0002
Suicidal ideation	5.5%	4.6%	1.186 (0.97, 1.449)	0.0358
Substance use disorder	14.4%	11.2%	1.284 (1.137, 1.45)	<0.0001
Body dysmorphic disorder	0.3%	0.3%	1.00 (0.416, 2.405)	1.000

RR: relative risk; CI: confidence interval.

Discussion

The findings of this study underscore a pressing need for enhanced mental health guidelines tailored to the needs of transgender individuals following gender-affirming surgery. Our analysis reveals a significantly elevated risk of mental health disorders—including depression, anxiety, suicidal ideation, and substance use disorder—post-surgery among individuals with a prior diagnosis of gender dysphoria. Importantly, however, our results indicate no increased risk of body dysmorphic disorder following surgery, suggesting that these individuals generally experience satisfaction with their body image and surgical outcomes. Notably, the heightened risk of mental health issues post-surgery was particularly pronounced among individuals undergoing feminizing transition compared to masculinizing transition, emphasizing the necessity for gender-sensitive approaches even after gender-affirming procedures.

By excluding patients with documented pre-existing mental health diagnoses, this study sought to ensure that identified mental health outcomes likely represented new or emergent conditions rather than pre-existing disorders. This methodological approach was critical to focusing on the relationship between gender-affirming surgery and mental health. However, we acknowledge that this approach, relying solely on ICD-10 codes, may not fully account for undiagnosed or subclinical conditions prior to surgery. These emergent mental health issues may result from a multifactorial interplay of social, psychological, and physiological factors, including social support systems, environmental stressors, hormonal changes, surgical outcomes, and the broader psychosocial adjustments involved in transitioning.

Comparison with previous studies

When evaluating these findings within the context of previous research, it is crucial to recognize the limitations inherent in studies that rely primarily on survey data, such as those analyzed by Marano et al. and Almazan and Keuroghlian [13, 23]. These studies, using data from the U.S. Transgender Survey, underscore the psychosocial benefits of gender-affirming surgeries, including reductions in depression, anxiety, and suicidal ideation, while emphasizing the importance of aligning physical appearance with gender identity to improve mental health. However, survey-based studies are limited by self-reported data, which may introduce response bias and lack clinical validation, potentially limiting the generalizability of their findings [24]. Our study diverges by using a national database of de-identified clinical data, enabling a more comprehensive and representative examination of real-world mental health outcomes across diverse demographics. This approach allows us to capture more nuanced insights into mental health risks, particularly the heightened susceptibility to depression, anxiety, suicidal ideation, and substance use disorder in transwomen individuals' post-surgery. This divergence from survey-based findings highlights the need for gender-sensitive mental health strategies that extend beyond the surgical intervention itself.

Implications for mental health care

Despite the observed increase in mental health issues, gender-affirming surgery remains essential in aligning transgender individuals' physical appearance with their gender identity, offering significant psychological benefits [8, 19]. Research,

such as that conducted by Park et al., has documented long-term satisfaction and mental health improvements in patients who have undergone gender-affirming surgeries over decades [25]. These enduring benefits underscore the necessity for mental health practitioners to recognize and address these specific challenges, ensuring that post-surgical mental health care is both accessible and gender-responsive.

It is also crucial to acknowledge that transgender individuals seek mental health support for a wide range of issues, not solely those related to gender identity. The lifelong impact of minority stress continues to affect transgender individuals' experiences of depression and anxiety even after transitioning [3, 26, 27]. Barriers to mental health care, including discrimination within healthcare settings, exacerbate these mental health challenges, fostering systemic distrust and reducing access to necessary services [28–30]. Our findings highlight that anxiety is particularly prevalent among transgender men post-surgery, while substance use disorder is more common among transgender women, reflecting gender-specific mental health risks. For transgender women, societal pressures to conform to traditional female roles and the pervasive devaluation of femininity may contribute to heightened stress, emotional distress, and, ultimately, increased reliance on substance use as a coping mechanism [31, 32]. Conversely, transgender men may encounter societal expectations to suppress emotions, aligning with traditional masculine norms, which can heighten anxiety as they navigate their new gender identity.

Hierarchical criteria and mental health diagnoses

An important consideration in interpreting our findings is the hierarchical nature of psychiatric diagnoses, as specified in the DSM. This framework often precludes standalone diagnoses of anxiety or depression if these symptoms are deemed to be better explained by another superior diagnosis, such as gender dysphoria [33]. Consequently, symptoms of anxiety or depression that co-occur with gender dysphoria may be subsumed under the latter diagnosis, particularly in pre-surgical contexts. Following gender-affirming surgery, the alleviation of distress related to gender incongruence may enable the reclassification of these symptoms as independent diagnoses. This diagnostic shift could contribute to the observed increase in mental health diagnoses post-surgery, not as a reflection of adverse surgical outcomes but rather as a reconceptualization of symptoms within the care pathway. Including this perspective enhances our understanding of the study's findings and emphasizes the need for nuanced mental health assessments tailored to the unique trajectories of transgender individuals. Future research should explore how changes in diagnostic frameworks and psychiatric practices influence mental health outcomes in this population.

Future directions

Further research should investigate the complex factors contributing to mental health disparities post-surgery, including social support, family acceptance, societal stigma, and pre-existing mental health conditions. Prospective, longitudinal studies are needed to track changes in mental health from pre-surgery through long-term follow-up, providing greater clarity on the causal impact of gender-affirming surgery. Additionally, examining how systemic factors, such as healthcare policy, insurance coverage, and provider training, influence access to care would offer critical insights into improving equity and effectiveness in mental health care for transgender individuals.

While the limitations of this study cannot be fully overcome with the current data available from the TriNetX database, it is important to carefully interpret the conclusions within the context of these constraints. The retrospective design and reliance on de-identified, aggregated data restrict our ability to establish causation or continuously follow individuals across healthcare systems. Furthermore, potential misclassification of mental health outcomes due to undocumented pre-existing conditions or incomplete follow-up outside the TriNetX network remains a limitation. Despite these challenges, our analytic design offers valuable insights into associations between gender-affirming surgery and mental health outcomes at a population level, leveraging clinician-verified ICD-10 codes to enhance diagnostic reliability compared to self-reported data. However, this approach cannot capture nuanced individual trajectories or address disparities in access to care that may influence the likelihood of receiving a diagnosis. Future research should employ longitudinal designs with continuous follow-up to better address these limitations, allowing for more robust evaluations of the relationship between gender-affirming care and mental health outcomes.

Study limitations

While this study offers critical insights into the mental health challenges experienced by transgender individuals following gender-affirming surgery, several limitations must be acknowledged. The TriNetX database, comprising de-identified patient records, restricts patient-level linkage for multiple diagnoses or tracking individual health trajectories, which limits our ability to perform true longitudinal or within-person analyses. Instead, our analysis relied on cross-sectional comparisons of mental health outcomes before and after surgery. While TriNetX aggregates patient data from multiple healthcare organizations within its network, this does not extend to patients who leave the network entirely, potentially leading to incomplete follow-up data. Additionally, data stored in unstructured formats, such as clinical notes, are not included, which may contribute to selection bias. A significant limitation is the potential selection bias inherent in the study population. Individuals pursuing gender-affirming surgery may represent a subgroup experiencing higher levels of psychological distress compared to those who do not seek surgery. This increased baseline distress could inherently elevate the risk of adverse mental health outcomes, independent of the surgical intervention itself. Future research should consider methods to account for these pre-existing differences to better understand the true impact of surgery on mental health outcomes.

One significant limitation is the binary classification of gender within the TriNetX database, which only records patients as "male" or "female" in its demographic data. This excludes non-binary individuals and others who do not align with binary gender categories, limiting the inclusivity and representativeness of the study. Furthermore, the database does not include explicit information on sex assigned at birth, legal gender changes, or affirmed gender identities, which prevents more nuanced subgroup analyses. This limitation underscores the importance of developing future data systems that allow for broader gender identity categories to support more inclusive research.

While our use of clinician-verified ICD-10 codes ensures objective and standardized diagnoses, these codes are reliant

on the clinical expertise and practices of healthcare professionals, which may vary across organizations. This variability introduces potential inconsistencies in diagnosis accuracy. Moreover, differences in healthcare access likely influence the likelihood of receiving formal mental health diagnoses. Patients undergoing surgery often have greater access to healthcare services, including mental health care, compared to those who do not. This may lead to higher rates of mental health diagnoses in surgical cohorts, independent of actual differences in mental health status, introducing potential surveillance bias.

Another limitation is the potential misclassification of individuals in the "no-surgery" cohort. The TriNetX database captures surgical history only from participating organizations, which means that patients who underwent gender-affirming surgeries outside of these institutions may have been incorrectly categorized. This limitation may affect the accuracy of our comparisons between surgical and non-surgical cohorts. Future studies with access to centralized and comprehensive data sources are needed to improve the classification of surgical histories.

The criteria for identifying transgender individuals in this study were based on documented diagnoses of gender dysphoria (ICD-10 code F64). This approach excludes transgender or gender-diverse individuals who do not seek medical treatment for gender incongruence, limiting the generalizability of our findings. Additionally, the absence of a comparison group for individuals who sought but had not yet received gender-affirming treatments restricts the study's ability to assess the impact of treatment timing on mental health outcomes. Longitudinal studies that track outcomes before and after treatment are needed to address this gap.

Lastly, mental health treatment utilization serves as an imperfect proxy for mental health itself. Transgender individuals receiving treatment for gender dysphoria are frequently in healthcare settings, where they may encounter more mental health treatment opportunities, potentially skewing utilization rates. Finally, while our findings support the need for accessible gender-affirming treatments, the generalizability of these results may be further limited by systemic factors, including healthcare policies, insurance coverage, and regional differences in provider training. These barriers, which vary significantly across different healthcare systems, can affect transgender individuals' access to adequate mental health care and underscore the necessity for policies that ensure consistent, affirming care.

Conclusion

Our study reveals that both male and female patients with gender dysphoria who undergo gender-affirming surgery are at significantly higher risk for adverse mental health outcomes, including depression, anxiety, suicidal ideation, and substance use disorder, compared to those who do not undergo gender-affirming surgery. This trend persists even after controlling for confounding factors through propensity score matching. Notably, transgender men showed a greater relative risk for these mental health issues compared to transgender women following gender-affirming surgery. Despite the benefits of surgery in alleviating gender dysphoria, our findings underscore the necessity for ongoing mental health support for transgender individuals during their post-surgery trajectories. These results also highlight the critical need for gender-specific care tailored to the unique experiences of male and female populations, respectively, addressing both pre- and post-surgical mental health care to improve overall well-being and prevent any mental illness or diseases.

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Author contributions

Joshua Lewis (Conceptualization [lead], Data curation [lead], Methodology [lead], Writing—original draft [equal], Writing—review & editing [equal]), Amani Patterson (Writing—original draft [equal], Writing—review & editing [equal]), Maame Effirim (Writing—original draft [equal], Writing—review & editing [equal]), Manav Patel (Writing—original draft [equal], Writing—review & editing [equal]), Shawn Lim (Writing—original draft [equal], Writing—review & editing [equal]), Victoria Cuello (Writing—original draft [equal], Writing—review & editing [equal]), Marc Phan (Writing—original draft [equal], Writing—review & editing [equal]), Wei-Chen Lee (Data curation [supporting], Methodology [lead], Supervision [lead], Writing—original draft [equal], Writing—review & editing [equal]).

Supplementary material

Supplementary material is available at *The Journal of Sexual Medicine* online.

Conflicts of interest

The authors that there are no conflicts of interest regarding the publication of this paper.

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Ethical statement

The study was deemed IRB exempt from University of Texas Medical Branch Institutional Review Board.

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Original Research

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Has had urinary incontinence since then. Also reports that he has frequent dysuria and scrotal pain.

History Of Present Illness

This patient presents with numerous urological complaints. She has gender identity dysphoria and has attempted surgical male to female transition with complications. She has tried penile inversion on her own and unfortunately now has long length ventral hypospadias with incontinence. She does drink a lot of fluid as she has been prone to infection. At this point she states that she is in constant discussions with the attorney General regarding referral and management. A specific referral from a physician here is needed, and there has been no help from the Department of Corrections physicians in referral to a center specializing in transgender issues.

Past Medical History

Disease Name	Date Onset	Notes
Anxiety	--	--
Balanitis	--	--
Gastroesophageal Reflux	--	--
Gender dysphoria in adolescents or adults	--	--
Gender identity disorder	--	--
Gross hematuria	--	--
Heart murmur	--	--
Injury, self-inflicted	--	"Patient has a tear in his penis from a few months ago when he tried to give "himself a sex change" and today he got directed and shoved his finger into his penis and has had some hematuria since." As stated in MSRMC visit dated 6/20/17.
Microscopic Hematuria, Other	--	--
Pain, penile	--	--
Pharyngitis, Acute	--	--
Retention of urine, acute	--	--
Stomach Ulcer	--	--
Unspecified injury of external genitals, initial encounter	--	Object inserted into urethra.

Past Surgical History

Procedure Name	Date	Notes
Arm Surgery	--	Left arm.
Circumcision	10/6/2005	Greg O. Lund, MD
Circumcision revision	12/15/2005	Greg O. Lund, MD
Colonoscopy	--	x2
Knee surgery	--	Left.
Vasectomy	10/21/2003	Greg O. Lund, MD

[Digital Signature Validated]

7/26/22 PMW

Medication List

Name	Date Started	Instructions
acetaminophen oral 325 mg oral capsule		--
bupropion HCl 75 mg tablet		--
Fiber-lax oral 625mg		--
finasteride 5 mg tablet		take 1 tablet (5 mg) by oral route once daily
Flomax 0.4 mg capsule		--
fluticasone propionate nasal 50 mcg/actuation nasal spray,suspension		--
Lipitor 20 mg tablet		--
loratadine 10 mg tablet		take 1 tablet (10 mg) by oral route once daily
meloxicam 7.5 mg tablet		--

Allergy List

Allergen Name	Date	Reaction	Notes
Mushrooms	--	--	--
PENICILLINS	--	--	--

Family Medical History

Disease Name	Relative/Age	Notes
*No family history listed		--

Social History

Finding	Status	Start/Stop	Quantity	Notes
Children	--	--/--	--	4
Coffee	--	--/--	--	4 pd
Denies illicit substance abuse	Former	--/--	--	--
Milk	--	--/--	--	2 pd
Number of alcoholism	[illegible]	[illegible]		[illegible] years sober, 2022.
Single	--	--/--	--	--
Tobacco	Former	--/--	2 pks pd	--
Water	--	--/--	--	10 pd

Review of Systems

Constitutional
- **Denies** : fever, chills, unexplained change in weight

Cardiovascular
- **Denies** : chest pain, irregular heart beats, leg swelling

Respiratory
- **Denies** : shortness of breath, cough, TB exposure

Gastrointestinal
- **Admits** : abdominal pain

- **Denies** : nausea, vomiting, diarrhea, constipation

Genitourinary

- **Admits** : urgent need to urinate, Voiding 6-10 times a day, Voiding 1 time at night, painful urination, involuntary loss of urine, related to urgency, related to cough, sneeze uses 3-5 pads a day, unable to urinate, urine slow to start, weak urinary stream, dribbling after urinating, decreased sex drive, erectile dysfunction, difficulty obtaining erection, difficulty maintaining erection, scrotal pain/mass
- **Denies** : visible blood in urine, pain during intercourse, genital sores

Integument

- **Denies** : currently have a rash

Neurologic

- **Admits** : tingling or numbness, muscular weakness

Musculoskeletal

- **Admits** : back pain, muscle pain
- **Denies** : bone pain
- **Denies** : heat/cold intolerance

Psychiatric

- **Admits** : anxiety, difficulty sleeping

Heme-Lymph

- **Admits** : easy bleeding, bruise easily

Allergic-Immunologic

- **Admits** : allergy causing difficulty breathing, allergy resulting in rash

Vitals

Date	Time	BP	Position	Site	Cuff L\R Size	HR	RR	TEMP (F)	WT (kg)	HT	BMI kg/m^2	BSA m^2	O2 Sat	FR L/min FiO2 HC
06/27/2022	03:42 PM	150/80	Sitting			87 - R	16	96.5	113.6	6'	33.97	2.4	97 %	

Physical Examination

Constitutional

- **Appearance** : well developed, well nourished, in no acute distress

Chest

- **Respiratory Effort** : Breathing is unlabored without accessory muscle use

Gastrointestinal

- **Abdominal Exam** : abdomen benign, soft without guarding, no CVA or abdominal tenderness, no masses present
- **Liver and Spleen** : no hepatomegaly present, liver nontender to palpation, spleen not palpable
- **Hernias** : No evidence of a right inguinal hernia, No evidence of a left inguinal hernia

Genitourinary

- **External Genitalia** : Unremarkable male phallus grossly, with full length ventral urethrotomy and hypospadias, moist, unremarkable scrotum with bilateral benign to palpation testes, some tenderness toward the right inguinal canal

Lymphatic

- **Groin** : no inguinal lymphadenopathy present

Skin

- **General Inspection** : no obvious rashes present, no significant lesions observed

Neurologic and Psychiatric

- **Orientation** : oriented to person, place and time

Results

In-Office Procedures

Lab procedure

Automated dipstick urinalysis with microscopy (81001)

- BILIRUBIN ICTOTEST: Negative
- Hemoglobin, Free, Qual, Urine: Trace-Intact
- Color Ur: Yellow
- Glucose Ur Ql Strip: Negative
- Ketones Ur Ql Strip: Negative
- Specific Gravity: 1.020
- pH Ur Strip: 6.5
- Prot Ur Ql Strip: Negative
- Urobilinogen Ur Ql Strip.auto: 0.2 E.U/dl
- Nitrite Ur Ql Strip: Positive
- Leukocyte esterase Ur Ql Strip: Trace

Imaging procedure

Bladder Scan (51798)

- Post void residual urine volume: 35 mL

Assessment

- (1) Injury, self-inflicted 300.9/Z72.89
  "Patient has a tear in his penis from a few months ago when he tried to give "himself a sex change" and today he got directed and shoved his finger into his penis and has had some hematuria since." As stated in MSRMC visit dated 6/20/17.
- (2) Urinary incontinence 788.30/R32
- (3) Gender dysphoria in adolescents or adults 302.85/F64.0

We had a lengthy discussion. Em frequently refers to seeing me on numerous occasions, but I do not have records of those visits. Regardless, the patient would definitely benefit from referral to specialist in trans gender care. She asked whether I would be willing to perform prostate surgery or orchiectomy or testosterone blocker therapyand I think this would not do the patient just this as full transgender care is indicated. Em understands this.

I did some research and provided them with several referral sources in California. The web site for University of Washington and UCSF both state that they expect to but are not currently doing vaginoplasty. The other centers include Cedars-Sinai, Southern California Hospital at Hollywood and Crane Center for Transgender Surgery. I am sure there are many others as well.

I explained that I would prefer she see a full spectrum clinic rather than local management such as Lupron or orchiectomy. Em seems to understand and is grateful for the help.

Addendum (July 26, 2022): I received a call today from Dr. Lawrence at the Department of Corrections wanting clarification. He further explains constitutional issues regarding elective and necessary medical care in light of an incarcerated individual. I explained that in my opinion lower surgery is an elective procedure which is not necessary at this time for physical health. I did emphasize that I was not in a position nor do I have expertise to make a psychological recommendation regarding long-term health. However, certainly from a physical standpoint this surgery would seem to be elective.

Plan

Instructions

- Recommend referral to Specialty Center for ongoing and definitive care
- Please cc DOC

Correspondence

- CC this document -

Electronically Signed by: Greg O. Lund, MD -Author on July 26, 2022 11:40:20 AM

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Corrections
HEALTH AND REHABILITATION SERVICES
Anchorage Central Office

550 West 7th Avenue Suite 1800
Anchorage, Alaska 99501
Main: 907.269.7300
Fax: 907.269.7310

MEMORANDUM

To: Wagoner, Emalee. #428514 Date: Monday, 7 Nov 2022

From: Medical Advisory Committee Re: Appeal # GC 22-692

Your grievance request is: "I want to be prescribed a new medication's [sic] that will properly alleviate my chronic pain. In the alternative I would like to have my testicles surgically removed."

Your medical case has been referred to and evaluated by the Medical Advisory Committee. A review of your records reveals that you have been prescribed Meloxicam and Acetaminophen daily. You state that they don't work and will damage your liver. You have not come to the medication cart on any regular basis to take the prescribed medications, however, we unable to evaluate the effectiveness of these medications without appropriate dosing. Observations in person and on camera have not shown you to be in any obvious pain that would interfere with your activities of daily living. The urologist's exam of genitalia recorded "...unremarkable scrotum with bilateral benign to palpation testes..."

Grievance request denied. You are receiving essential health care per DOC policy.

STATE OF ALASKA DEPAR[illegible]NT OF CORRECTIONS

Request for Interview

Name	Emmanuel Cancel	Palmer Correctional Center	Date 7/2/11
OTIS #	428514	Min Med	House # 17 top

To: Shift

Request: Due to publicity of Charge's against me im requesting protective custody Due to life threat's from a list of people robert bates + linsley u can call my fiance She has the list

Prisoner Signature

Action Taken:

Employee Signature Date

Final Action Taken:

Employee Signature Date

Instructions: **Requests must be specific and state the action being requested (i.e., interview, hearing, etc.). Requests are to be responded to within a reasonable time of receipt.**

Distribution: Original to case record

Department of Corrections, Form 808.11 rev. 04/08

SOA 03342

Exhibit J
Page 1 of 1