



# Transgender men and pregnancy

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## Abstract

Transgender people have experienced significant advances in societal acceptance despite experiencing continued stigma and discrimination. While it can still be difficult to access quality health care, and there is a great deal to be done to create affirming health care organizations, there is growing interest around the United States in advancing transgender health. The focus of this commentary is to provide guidance to clinicians caring for transgender men or other gender nonconforming people who are contemplating, carrying, or have completed a pregnancy. Terms transgender and gender nonconforming specifically refer to those whose gender identity (e.g., being a man) differs from their female sex assigned at birth. Many, if not most transgender men retain their female reproductive organs and retain the capacity to have children. Review of their experience demonstrates the need for preconception counseling that includes discussion of stopping testosterone while trying to conceive and during pregnancy, and anticipating increasing experiences of gender dysphoria during and after pregnancy. The clinical aspects of delivery itself fall within the realm of routine obstetrical care, although further research is needed into how mode and environment of delivery may affect gender dysphoria. Postpartum considerations include discussion of options for chest (breast) feeding, and how and when to reinstitute testosterone. A positive perinatal experience begins from the moment transgender men first present for care and depends on comprehensive affirmation of gender diversity.

## Keywords

Transgender pregnancy, gender identity, counseling, sexual orientation, primary care transgender people, obstetrical care of transgender people, behavioral aspects of transgender pregnancy, testosterone in pregnancy

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## Introduction

Transgender individuals likely represent between 0.3 and 0.5% of the U.S. population.<sup>1,2</sup> Despite pervasive discrimination and invisibility, in recent years, transgender people have experienced significant advances in societal acceptance. This has led many organizations to look at their policies, programs, and educational materials to ensure that work within their sphere is both affirmative and inclusive.<sup>3–5</sup> Change has also been apparent in corporations<sup>6</sup> as well as educational institutions.<sup>7–9</sup> In many countries, even government programs have been on the forefront of change.<sup>10–12</sup> While programs that provide health care for transgender people have grown in recent years, there remains a gaping chasm between what is taught in health professional schools and postgraduate training programs and the transgender individual's needs.<sup>8,13,14</sup> This leaves many health professionals unprepared to provide quality care, with many needing to “catch up” or refer (possibly delaying care) to someone else, when a transgender person presents for care.<sup>15</sup> This is true throughout the basics of supporting and affirming gender affirmation, cross sex hormone therapy or a variety of surgeries, as well as routine primary care.

Indeed, medicine as a whole has not incorporated gender diversity into routine care.<sup>16</sup> For example, when should transgender men have routine chest (breast) cancer screening after chest reconstruction surgery? Or conversely how should one apply breast cancer screening protocols for transgender women; should we consider chronological age or length of exposure to exogenous estrogen? Other examples include, how and when to do prostate examinations for transgender women, and both timing and methodology of sexually transmitted infection (STI) and HIV evaluations for all transgender people? One question that is beginning to progress from media attention to clinical and academic focus is, how best to care for transgender men who desire to be or are pregnant?

Although Thomas Beatie's heart-rendering social, legal, and medical struggles through each of his three pregnancies brought him visibility and notoriety for being the first legally recognized man in the U.S. to give birth,<sup>17,18</sup> the struggles of men and other gender nonconforming individuals going through pregnancy and birth may be much more common than Mr. Beatie's press coverage might suggest. While

no studies currently document the number of transgender men who have had a pregnancy, news reports,<sup>19–23</sup> documentaries,<sup>24</sup> social media list-serves and video-sharing sites, guidebooks,<sup>25,26</sup> fact sheets,<sup>27</sup> and the recent establishment of lists of health service provider with experience supporting transgender individuals in pregnancy and birth,<sup>22</sup> suggest numbers of transgender individuals who are seeking family planning, fertility, and pregnancy services could certainly be quite large. The focus of this commentary is to review the basic issues to be considered by clinicians who are caring for a transgender man or other gender-nonconforming individual whose gender identity is different than their female sex assigned at birth, and who are considering, are carrying, or who have completed a pregnancy. Additionally we hope this supports honest learning and teaching regarding reasonable standards of care to provide gender-affirming quality care.

## Phenotypic sex, sexual orientation, and gender identity

Beginning with the basics of gender identity helps define the concepts discussed herein. While lesbian, gay, bisexual, and transgender—collectively abbreviated “LGBT” is often used as an acronym that includes “T” for transgender to capture sexual and gender minority

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experience, it is important to understand that while LGBT people have some common issues and history, each of these groups are quite different. Lesbian, gay, and bisexual (LGB) are terms that refer to sexual orientation, or a person's desires for intimacy with people of the same gender (lesbians and gay men) or both men and women in the case of bisexual people. Gender identity, on the other hand describes whether individuals identify themselves as a man, a woman, or one of many other genders. This is still different from one's phenotypic or physiological sex assigned at birth—referencing chromosomes, natal genitalia, and other anatomic and physiological characteristics that differ between human males and females. Both sexual orientation and gender identity can be fluid, dynamic, and change over time and can only be meaningfully self-defined by each individual. Everyone has a sex, sexual orientation, and a gender identity, but the three are independent. A transgender person is someone whose gender identity is not congruent with the sex they were assigned at birth.<sup>28</sup> Their transgender status implies nothing about who they are emotionally, romantically, or sexually attracted to. Affirming or transitioning one's gender is the process of bringing external gender expression (or how one lives their lives) and potentially one's physical body into alignment with one's internal gender identity. This process is variable for every person, can take months to years, and may involve social, legal, medical, and/or surgical components.

## Fertility and achieving pregnancy

A transgender man or trans man is someone who identifies as a man, but whose sex assigned at birth was female. Born with female reproductive organs, transgender men may elect to have any of a number of sex reassignment surgical procedures, although the largest survey on this subject showed that most have not, even though many wish to do so.<sup>15</sup> This leaves many transgender men with the capacity to bear children. Some whose sex assigned at birth was female may also identify as gender queer, a term that identifies someone living outside the male–female gender binary, but nevertheless which could still allow for the possibility of a pregnancy.

While many transgender men will want to begin cross-sex hormone therapy with testosterone, not all do. For those who elect to use testosterone, its use may affect fertility, fecundity, and impact fetal development.<sup>16,29,30</sup> Unfortunately, there is little data to inform balanced conversations on the topic. Thus, it is always important to discuss family planning—and in particular desires for genetically related children and/or carrying a pregnancy prior to the initiation of cross-sex hormones.<sup>16,30</sup> Though little is known about the desires of transgender individuals for creating families and having genetically related children, likely desire for parenting and having genetically related children is present for many and it is incumbent on providers to help preserve and/or support that desire.<sup>25,31</sup> For some transgender men, oocyte cryopreservation will be a viable, if expensive option, now made more available by changes in vitrification technology and increasing clinical use.<sup>32</sup>

Despite uncertainty about predictable fertility effects, transgender men have successfully conceived and carried a pregnancy after using testosterone. Transgender men also have unintended pregnancies while taking or still amenorrheic from testosterone, which was mistakenly thought to preclude pregnancy.<sup>33</sup> In the case of transgender men or gender variant people who undergo surgery involving either hysterectomy or genital reconstruction with vaginal occlusion to affirm their identity, gestational pregnancy may no longer be possible. The extent to which they can genetically contribute to a child or carry a pregnancy will depend on the specific surgical treatments. However, it is recommended that transgender men who may want to have genetically related children consider either embryo or oocyte cryopreservation (preferably prior to any testosterone treatment), and then, if they are unable to or do not desire to carry a pregnancy—work with their significant other or a surrogate to carry the pregnancy. The remainder of this review will cover the care for transgender men considering or in the midst of a pregnancy.

## Psychological considerations

Principles of obstetrical practice regarding a transgender pregnancy are not complex once one has been appropriately trained in caring for people during pregnancy. While stories of pregnancies in transgender men are notable for challenges they pose to gendered notions of pregnancy, the clinical practice regarding care falls in the realm of routine obstetrical care. Review of the literature shows little research with two recent studies from 2014<sup>33,34</sup> of modest population samples discussed below and another from 1998. Not surprisingly all three studies highlight both psychological issues experienced by transgender men contemplating pregnancy or bearing a child as well as the unique medical implications for both parent and fetus. The former may be more complex and require more specialized training.

Ellis and colleagues used a qualitative approach employing a grounded theory to understand the experiences of male and gender variant gestational parents to guide clinical interactions.<sup>34</sup> As with most clinical studies of transgender people to date, the sample size was small. Their final sample included eight subjects whose natal assigned sex was female and who carried a pregnancy to term while identifying as male or gender variant at the time of conception and through delivery. Based on interview analysis, “the unique finding of this study was that participants experienced significant and persistent loneliness” and felt that “the process of navigating identity required considerable energy and attention,” especially in the context of having “a lack of clear role models of what a positive, well integrated, gender-variant parental role might look like.” They noted both internal and external struggles for parents. Internal challenges were typified by the conflict between one's identity as male and/or gender variant and “social norms that define a pregnant person as woman and a gestational parent as mother.” Regarding the external world, contemplation and experience of pregnancy involved a constant tension about needing to “manage others’ perceptions and either disclosing or not disclosing what they were experiencing.” Their recommendations, focused on providing affirming and inclusive care beginning with preconception counseling and continuing through the postpartum period. This level of support is within the scope of any perinatal provider. However, additional support and guidance from mental health colleagues may be beneficial; should an individual's experiences raise concerns of exacerbated personal psychological distress or safety.

## Physical considerations

For transgender men with functioning natal reproductive organs, the major unifying medical issue regarding conceiving and delivering healthy children are related to whether they used testosterone and if so, the duration of use and timing in relation to pregnancy. Light et al. sought to address this by studying the experience of pregnancy and birth in a cross-sectional online survey of 41 transgender men—individuals who had a male or masculine identity, but who had been assigned the female sex at birth.<sup>33</sup> Of those studied, 25 (61%) reported testosterone use prior to pregnancy. Among testosterone users, 6 (24%) had an unplanned pregnancy and 14 (72%) conceived within six months. Of the prior testosterone users, 20 (80%) resumed menses within six months after stopping testosterone and five participants conceived while still amenorrheic from testosterone (though whether they were concurrently using testosterone at conception was unclear). The majority of respondents among both prior testosterone users and nonusers used their own oocytes and most used a partner's sperm.

## Pregnancy completion and outcomes

Unfortunately, limited prior data make an understanding of the factors affecting mode of delivery challenging. In Ellis' study, individuals had salient reasons for desiring either vaginal birth or cesarean delivery.<sup>34</sup>

In Light's work, more of the transgender men, 9 (36%) who had used testosterone delivered by cesarean than those who had not used testosterone 3 (19%). In addition, among the group who had used testosterone, 3 (33%) of the individuals who had a cesarean delivery requested this mode of delivery compared with 0 among those who had not used testosterone. Although these findings were not statistically significant, more attention into influencers on mode of delivery is warranted.<sup>33</sup> Specific considerations may be anticipated in the delivery suite with acceptance of a virulized man undergoing labor and delivery process, or patient concerns with or disassociation from natal female genitalia.<sup>34</sup>

While the literature suggests that high (endogenous) androgen levels in pregnant women are associated with reduced birth weight<sup>35,36</sup> in this study "pregnancy, delivery, and birth outcomes" did not differ according to prior testosterone use, though testosterone levels and birth weight were not measured during pregnancy. Complications that were self-reported included hypertension (12%), preterm labor (10%), placental abruption (10%), and anemia (7%). Notably, anemia was not reported by any who had prior testosterone use. Study findings were limited by a small sample, retrospective self-reported outcomes, and insufficient power to observe differences between prior testosterone users and nonusers. The role of testosterone in influencing the genesis of obstetrical complications, remains unclear. Thus, at this time the management of any obstetrical pathophysiological entity that presents itself should be managed according to current obstetrical best practices and not determined in relation to gender identity or use of prior testosterone. Nonetheless these findings herald important considerations for future research and clinical practice.

## Pregnancy and postpartum management

Salient themes regarding the impact of pregnancy on family structure, isolation, gender dysphoria during pregnancy, and differences in interactions with health care providers emerged from open-ended survey questions. Attention to the potential for postpartum depression is warranted, as baseline depression and suicide rates among transgender individuals are higher than adult average and lack of societal and familial support, discrimination, assault, insufficient health provider training and awareness, and individual loneliness throughout pregnancy and parenting have been reported.<sup>15,33,34,37,38</sup> Many of the respondents reported choice of health care provider was strongly influenced by providers' acceptance and support of the to-be parent's identity. Potentially commensurate with this finding, many respondents sought midwifery care (46%), much higher than U.S. national average (8.2%),<sup>39</sup> and many expressed desires to stay out of hospital settings. However, despite overarching themes, responses were rich and varied, and as a group conveyed the need to both learn more of these experiences and train health providers to support transgender people throughout the entire preconception to parenting period. A salient takeaway was that while having a family is something that many transgender individuals want, pregnancy can lead men to acknowledge that they still have female reproductive organs which for many can be difficult, however rewarding the pregnancy may ultimately be. Though pregnancy can be a difficult time regardless of gender identity, for these transgender men often the pregnancy led to increased experiences of gender dysphoria, which merit special attention and support.

During the postpartum period, new considerations arise along with age-old ones. Some transgender men will have to decide if and when to start or reinstitute testosterone. For those who seek to chest (breast) feed, and many may, an elevated testosterone level has been shown to suppress lactation.<sup>40</sup> While testosterone does not appear to significantly pass into breast milk or have a short-term impact on infants,<sup>41</sup> it is still recommended that men who do chest feed stay off testosterone.<sup>29</sup> Some transgender men defer chest reconstruction (also known as "top") surgery in light of a planned desire to chest feed. Those who have had "top surgery" may still be able to lactate or can engage in

chest feeding with assistance of a support device.<sup>42</sup> Again, the choice to chest or breast feed is a personal one and may cause one to experience dysphoria as they take on (and challenge) this traditionally feminine role. Balancing well-known health benefits of breast milk and breastfeeding with the medical, surgical, logistical, and social challenges that this might incur for a man, indicates that—how one feeds their child—should be an informed personal choice supported by health care providers—as for any parent.<sup>42–44</sup>

## Discussion and learning points

What becomes clear from qualitative study and more generalized experience caring for transgender people is that a positive psychological outcome will depend on the experience someone has from the moment they first present for care and depends on the total experience from beginning to end being inclusive and affirmative.<sup>28</sup> Many of the news reports on pregnancies of transgender men having children sensationalize what for trans men, as for all parents having children, should be a personal and intimate experience. Principles of care will depend on efforts to ensure that the experience of care is designed around the needs of patients, which may vary. This will mean asking all patients at the outset about their gender identity and assigned sex at birth in addition to questions about preferred name and pronouns.<sup>28</sup> Good examples and training on this topic are readily available.<sup>45,46</sup> Understanding all individuals' gender identity will support comprehensive health services. All staff from the front line receptionists to clinicians will need training to understand why gender affirming policies and behaviors are important. In particular, systems may need to be modified and specified to ask these questions accurately while treating the information confidentially and with discretion. Health care providers and staff are often unaccustomed to caring for any transgender people, let alone ones who may be pregnant. This results in many transgender people reporting discrimination and a lack of training in the health care setting and results in barriers to much needed health care.<sup>15</sup> We need to support training and inquiry that enhances medical and social understanding of the situation as well as advancing an individual's care but is not simply for the purpose of idle curiosity, gossip, or entertainment. The information should be received and protected as would any privileged patient information. Every health care system needs to systematically examine how they can comprehensively meet the needs of the gender diversity we have among our patients and community.

The authors work on opposite sides of the United States in two institutions working hard to meet the needs of transgender people. Dr. Makadon works primarily on organizational change and education at the National LGBT Health Education Center at The Fenway Institute in Boston, MA, which is part of Fenway Health, a community health center that also has a robust transgender health clinical program integrated into its core primary care model. Dr. Obedin-Maliver works at a large academic center: The University of California San Francisco (UCSF). At both institutions, we are working to encourage organizational change and enhanced resources with the goals of respect and service. At the Fenway Institute, we have a structured technical assistance program offered nationally, that begins with an organizational readiness assessment where we ask both staff and management about their knowledge, comfort, and attitudes as well as experience regarding care of transgender people, in fact of all sexual and gender minorities. Based on our findings, we follow-up with educational programs, training both front line and administrative staff as well as clinicians. Our experience is that however unintended, a rigid encounter with a registrar who does not understand the principles to explain one's name (and gender) vary from previous medical records or legal documents and questions patients publically about this, can lead to dismay and bring an abrupt and unfortunate end to one's visit. At UCSF, we have established a primary care transgender clinic but are also working to bring visibility of transgender needs into training at all levels of the health professional training process and for various specialties such as

psychiatry, obstetrics and gynecology, midwifery, and urology. Efforts are underway to make system-wide change to recognize gender identity and sexual orientation in patients' electronic medical record to facilitate meaningful communication. We also host multispecialty grand rounds and training, national conferences, and work to advance research to inform evidence-based care of transgender individuals. Utilizing resources from The Fenway Institute and others, we at UCSF have also worked to train staff and trainees understand concepts of gender identity and the steps one may take when one affirms their gender identity must be understood by all on the health care team. Furthermore, we have found that training to facilitate this understanding, while eliminating the pull to indulge in curiosity, is a process that must be intentional and well thought out, but is not complex. In our two institutions we have found, institutionalized kindness and respect do need the support of organizational leaders and, optimally, a respected colleague who can champion this work. Overcoming these experiential issues will allow one to receive care with dignity and allow one to begin the process of raising a family.

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JOM and HJM contributed equally in the preparation of this manuscript.

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