


Bridging Barriers to Cervical Cancer Screening in Transgender Men: A Scoping Review

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Abstract

Estimates of high-risk human papillomavirus (HPV) infection and susceptibility to HPV-related cancer in transgender men (TM) are comparable to prevalence rates found in cisgender women. Regular and thorough screening for cervical cancer is equally as crucial for TM as for cisgender women; however, despite continued risk for cervical cancer in TM and associated recommendations for screening, studies indicate disparities in rates of cervical cancer screening (CCS) in TM compared to cisgender women. The current scoping review explores TM's knowledge and experiences of CCS and barriers to screening uptake in this population. A range of barriers were identified including the need for health-care services to provide care for TM within the context of a nonbinary approach to gender identity and health. Findings synthesized from relevant research studies ($n = 15$; published 2008–2019) are presented, and recommendations are drawn from these findings to inform primary health-care providers' clinical practice and care of TM.

Keywords

Cervical cancer, cervical cancer screening, HPV virus, Pap test, transgender health, transgender men

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Transgender is an umbrella term used to refer to individuals whose gender identity and/or expression is discordant with their sex assigned at birth (Fenway Health, 2010; Potter et al., 2015). The development of a self-identified and labeled gender is a unique experience for each transgender individual. A complete transition for one individual might entail simply living and identifying as their asserted gender without medical interventions, whereas undertaking physical changes through hormone therapy and/or gender-affirming surgery may comprise a complete transition for another (Kiran et al., 2019; Scheim & Bauer, 2015; Unger, 2015). In the case of transgender men (TM)—individuals assigned female at birth and self-identifying as male—most have not undergone genital reassignment surgery and retain an intact cervix (Reisner et al., 2017; Semlyen & Kunasegaran, 2016b). Estimates of high-risk human papillomavirus (HPV) infection (Reisner et al., 2018) and susceptibility to HPV-related cancers in TM (Harb et al., 2019; Peitzmeier et al., 2014a; Semlyen & Kunasegaran, 2016b) are comparable to rates found in cisgender women. Therefore, from a medical

perspective, regular screening for cervical cancer is equally as crucial for TM as for cisgender women.

HPV is the most common sexually transmitted infection, spread between partners of any gender and sexual orientation via intimate skin-to-skin contact (Centers for Disease Control and Prevention [CDC], 2019), regardless of specific sexual practices (Hudson & Donohue, 2019). Infection can occur at various anatomical sites, including the cervix, and has the potential to induce high-grade cellular changes and progression to cancer (Hudson & Donohue, 2019). In 2019 an estimated 1,350 individuals were diagnosed with

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cervical cancer along with 410 associated deaths, making cervical cancer the 19th most common cancer-related cause of death in Canada (Canadian Cancer Society, 2019a). An estimated 13,800 new cases of cervical cancer and 4,290 deaths are predicted for 2020 in the United States (American Cancer Society, 2020). The majority of these deaths are preventable and oftentimes reflect inadequate cervical cancer screening (CCS) and late-stage detection and diagnosis of advanced cervical cancers (Melnikow et al., 2018). The Papanicolaou (Pap) test is the most common and effective method of CCS in Canada (HealthLink BC, 2019) and the United States (Johnson et al., 2016a). North American guidelines for cisgender women recommend Pap testing every 3 years between the ages of 25 and 69 years in Canada (Canadian Task Force on Preventative Health Care, 2013) and between the ages of 21 and 65 years in the United States (Curry, 2018). Although no consensus guidelines for cervical cancer explicitly include TM, the Canadian Cancer Society (2019b) recommends screening for TM aged 21 years or older who are or have ever been sexually active. Similarly, the American College of Obstetricians and Gynecologists (ACOG) advises that TM with intact cervixes follow the same CCS guidelines as cisgender women (ACOG, 2011). Immunization against HPV is currently the best primary prevention of HPV-related cancers (CDC, 2019b; Hudson & Donohue, 2019); however, immunization rates in the transgender male population are unknown (Bernstein et al., 2014; McDowell et al., 2017).

Despite the recommendations for screening in TM, studies indicate that compared to cisgender women, TM report the following: higher rates of abnormal CCS results (Adkins et al., 2018), higher likelihood of not receiving CCS in their lifetime (37% TM vs. 10% cisgender women; Rahman et al., 2019), and lower likelihood of receiving regular CCS (56% TM vs. 72% cisgender women, $p = .001$; Kiran et al., 2019). Statistically significant discrepancies have been reported in screening status based on gender identities ($p = .041$). For example, individuals who classify their gender expression as feminine are more likely to be routinely screened for cervical cancer than individuals who classify their gender expression as masculine (Johnson et al., 2016b). TM are 37% less likely to be current with their Pap test than cisgender patients (Peitzmeier et al., 2014b), 10 times more likely to have had an inadequate Pap test, and have a higher probability of multiple inadequate Pap tests (Peitzmeier et al., 2014a). Additionally, TM wait five times longer between inadequate Pap testing and follow-up than cisgender women (Peitzmeier et al., 2014a).

These studies and epidemiological results support the need for targeted interventions to promote regular screening in the TM population. Many TM are not receiving the same gynecological care set out in the guidelines for cisgender women, putting them at undue increased risk of developing cancer (Dutton et al., 2008; Harb et al., 2019).

Although it is recognized that transgender people have unique health-care needs (Unger, 2015), which are underserved due to barriers in accessing and utilizing care (ACOG, 2011; Porsch et al., 2016; Seay et al., 2011; Woodland et al., 2018), specific barriers to gynecological care such as CCS are poorly understood (Agénor et al., 2018; Peitzmeier et al., 2017). The dearth of knowledge in this area is explored in the current scoping review with the aim of informing primary health-care providers' clinical practice in the specific context of CCS in TM. The overarching goal of synthesizing and sharing this information is to improve CCS in TM as a means to reducing cervical cancer mortality rates in this unique population.

Methods

Scoping reviews provide a synthesis of the evidence from diverse and often emergent health-care studies to help inform policies and clinical practice (Colquhoun et al., 2014). These reviews explore broad topics that encompass an array of study designs in order to address knowledge gaps in a nascent body of research and subsequently disseminate findings to guide practitioners, policy makers, and consumers (Arksey & O'Malley, 2005). Rather than evaluating or weighting the findings of individual studies, scoping reviews provide a snapshot of an overlooked or emergent field of research. The current scoping review was conducted following the five-stage methodological framework as outlined by Arksey and O'Malley (2005), which entails (a) identifying the research question; (b) identifying relevant studies; (c) selecting relevant studies; (d) charting the collected data; and (e) synthesizing, summarizing, and reporting the findings.

Identifying the Research Question

The current scoping review addresses the following research question: What are TM's knowledge and experiences of CCS and how do these affect the uptake and utilization of CCS?

Identifying Relevant Studies

CINAHL, PubMed, and Google Scholar electronic databases were searched using the following terms and keywords in a variety of combinations with the Boolean operators "and" as well as "or": *transgender men, transman, transmasculine, transsexual, female-to-male, assigned female at birth (AFAB), LGBTQ, barriers, experiences, perceptions, challenges, cervical cancer screening, Papanicolaou, Pap smear, Pap test, cervical cytology, Human Papillomavirus, and HPV screening*. To help identify additional search terms, subject headings were mapped using CINAHL and PubMed. The use of Boolean operators

to combine keywords such as “*transgender men AND cervical cancer screening*” narrowed the list of relevant articles.

Selection of Relevant Studies

The searches yielded a total of 4,135 results. Article abstracts and titles were screened for relevance to the aforementioned research question. Relevant articles were then formally evaluated using the following inclusion criteria: (a) empirical studies published in peer-reviewed journals between 2008 and 2019 inclusive, (b) a primary focus on CCS in TM with an intact cervix, and (c) articles published in the English language. Studies in which TM were a subset of the sample were also included if TM’s perceptions, experiences, and/or barriers to screening were explicitly reported. The reference lists of the included articles were reviewed, from which one study, a conference abstract, was also retrieved for the current review. After excluding duplicate studies, 15 research articles met the criteria for inclusion in the current scoping review.

Charting the Data, Summarizing, and Reporting the Findings

A synthesis matrix was created to organize information from the 15 research articles and included the following details: author name(s), publication year and country, study purpose, design/methodology employed, study population and sample size, and relevant findings (please see supplemental material online for the synthesis matrix). Thirteen of the studies were conducted in the United States; one study originated in Canada and one in the United Kingdom. Study designs varied: Five employed qualitative designs, five used mixed methods, three studies utilized cross-sectional surveys, and two were based on electronic medical records (EMRs).

Each article was read in its entirety and pertinent study findings were extracted. The extracted data were then analyzed, compared, and organized under two overarching themes: (1) TM’s perceptions, knowledge, and health behaviors toward CCS and (2) barriers to CCS in TM. Theme two comprised two subthemes: (a) psychological discomfort and physical pain and (b) health-care provider, systems, and settings.

Findings

TM’s Perceptions, Knowledge, and Health Behaviors Toward CCS

Eight studies explored the perceptions, knowledge, and/or health behaviors of TM in the context of cervical

cancer prevention and/or risk (Agénor et al., 2016; Dutton et al., 2008; Harb et al., 2019; Johnson et al., 2016a; Peitzmeier et al., 2017; Rahman et al., 2019; Seay et al., 2017; Semlyen & Kunasegaran, 2016b). In studies focused on perceptions of CCS, TM acknowledged CCS as important (Dutton et al., 2008), as necessary (Agénor et al., 2016; Seay et al., 2017), and as an effective means of preventing serious consequences (Peitzmeier et al., 2017). However, perceptions and behaviors were not necessarily congruent. For example, Seay et al. (2017) reported the majority of TM (90.1%, $n = 91$) perceived CCS was necessary, but only half the individuals in this study had received a Pap test within the past 3 years.

Several articles investigated the risk perceptions of TM regarding cervical cancer. In three studies, participants believed their risk of developing cervical cancer was based on their personal or familial reproductive health history, such that they were at higher risk if they had previously had an abnormal Pap test result or if a history of cervical cancer existed among immediate relatives (Agénor et al., 2016; Johnson et al., 2016a; Peitzmeier et al., 2017). Some TM perceived testosterone use for gender affirmation rendered them at greater risk for cervical cancer (Agénor et al., 2016; Peitzmeier et al., 2017; Semlyen & Kunasegaran, 2016b). In one study, TM also believed that due to the lack of information regarding the risks of long-term testosterone use, they should be screened more frequently than cisgender women (Agénor et al., 2016). In-depth qualitative research (Agénor et al., 2016) reported that the majority of TM believed they were at risk of acquiring HPV-related cervical cancer and that this risk did not differ by gender identity. The majority of these participants also perceived a link between sexual behavior and the risk of HPV-related cervical cancer in TM, with the level of risk varying by the type of sexual behavior practiced. Penile–vaginal intercourse was perceived as conferring the greatest risk, whereas some TM believed that vaginal penetration of any kind, oral sex, and having multiple and frequently changing sexual partners also increased risk (Agénor et al., 2016). One article identified the most common risk misconception as the notion that having sex with a male necessitated a Pap test (Johnson et al., 2016a).

Knowledge levels related to HPV and CCS guidelines were investigated in a few studies. Interestingly, a mixed methods study identified contradictions in the knowledge levels of TM. The qualitative results demonstrated that no single participant perceived themselves as “aware and well-informed” regarding HPV and cervical cancer, but quantitative survey results suggested high levels of knowledge and awareness regarding HPV (Harb et al., 2019). For instance, 100% of the participants were aware of facts about infection—that HPV could cause cervical

cancer, that condoms did not prevent infection, that infection can be asymptomatic, and that routine CCS is necessary regardless of HPV vaccination status (Harb et al., 2019). But, survey questions regarding guidelines for CCS, (i.e., age for first screening and frequency for routine testing) were often answered incorrectly (Harb, et al., 2019). In contrast, participants in other research were rated as knowledgeable regarding current screening guidelines (Johnson et al., 2016a). However, when knowledge, attitudes, and health motivations of TM were compared to those of cisgender women, TM also demonstrated poor understanding of HPV (Rahman et al., 2019). Other research indicated that TM recognize the need for education about the importance of CCS within the transgender community (Semlyen & Kunasgaren, 2016a, 2016b), and misperceptions and misinformed behaviors related to CCS are due to a lack of knowledge about the topic (Agénor et al., 2016). Many TM cited that their peers, the internet, and social media were important resources for information regarding cervical cancer (Agénor et al., 2016). A qualitative study employing in-depth interviews identified significant misinformation among TM. Many participants were misinformed that CCS was a prerequisite for gender transition (Peitzmeier et al., 2017). In this study, TM had been informed by providers that CCS was a requirement for testosterone therapy, a hysterectomy, or health insurance coverage for the costs of a hysterectomy (Peitzmeier et al., 2017).

Despite uncertain knowledge levels, transgender peer role models who engage in Pap testing have served as motivators for others to engage in CCS (Johnson et al., 2016a; Semlyen & Kunasegaran, 2016b). In other research, chronic fear of cervical cancer diagnosis, which would exacerbate gender dysphoria, compelled several participants to undergo CCS (Peitzmeier et al., 2017).

In three studies, intersecting factors of low socioeconomic status and lack of health insurance coverage were described by TM as taking precedence over CCS for practical reasons (Johnson et al., 2016a; Peitzmeier et al., 2017; Semlyen & Kunasegaran, 2016b). This is consistent with other studies indicating that health insurance coverage determined whether TM sought CCS services (Rahman et al., 2019; Seay et al., 2017). In other research, TM also described undergoing screening with the hope of receiving abnormal results in order to receive insurance coverage for a hysterectomy to thereby facilitate their transition (Peitzmeier et al., 2017).

Barriers to CCS in TM

Psychological discomfort and physical pain. Six studies explored psychological discomfort in the context of CCS in TM (Harb et al., 2019; Johnson et al., 2016a; Kiran et al., 2019; McDowell et al., 2017; Peitzmeier et al.,

2017; Potter et al., 2015). Triggering gender dysphoria was consistently reported (Harb et al., 2019; Johnson et al., 2016a; Potter et al., 2015) and proposed as the reason why TM avoided CCS (Kiran et al., 2019). In mixed sample research, gender dissonance was specific to TM who described the Pap test as overwhelmingly challenging, emotionally and psychologically, deterring them from screening (Johnson et al. 2016a).

Two studies compared TM's preference for self-collected HPV vaginal swabs versus provider-administered sampling (McDowell et al., 2017; Reisner et al., 2018). The majority of participants expressed a preference for HPV self-sampling because it triggered less emotional distress and gender dissonance and fostered an enhanced sense of agency and control. Further demonstrating the correlation between CCS and gender dysphoria, McDowell et al. (2017) developed an online survey option to accommodate TM who were reluctant to participate in face-to-face interviews. These participants feared gender dysphoria would surface by discussing Pap testing in person (McDowell et al., 2017). In two studies, authors explained that gender dysphoria was exacerbated in part because CCS required TM to be cognizant of the genitalia from which they felt disconnected (Johnson et al., 2016a; Peitzmeier et al., 2017).

Two qualitative studies explored notions of masculinity and femininity to better understand how the Pap test triggered gender dysphoria (Peitzmeier et al., 2017; Potter et al., 2015). Participants in these studies stated that because CCS is traditionally perceived as feminine, the exam was incongruous with their masculine identity. TM who were unable to reconcile their masculine identity with the feminized concept of the Pap test felt coerced and experienced threats to their privacy and destabilization of their identity and personal integrity (Peitzmeier et al., 2017). This qualitative study with 32 TM (Peitzmeier et al., 2017) provided an in-depth account of specific aspects of CCS that can be counterproductive to gender transition and cause immense anxiety and depression. For example, the removal of binding and prosthetics, essential for masculine gender presentation in many TM, could destabilize gender identity (Peitzmeier et al., 2017). Many of these TM expressed feeling vulnerable—"on show," "exposed," or "judged" during the exam. Although feelings of vulnerability are likely shared by cisgender women with regard to CCS, TM's perspectives were unique in that it involved focused exposure of natal sex anatomy, highlighting any conflict they felt with their gender identity (Peitzmeier et al., 2017). For several TM, health-care assistants present as witnesses during the Pap test were described as intrusive and caused patients to feel they were on display, in turn provoking anxiety (Peitzmeier et al., 2017). In fact, several TM perceived

these chaperones as voyeurs (Potter et al., 2015). The ability to reframe the Pap test as an affirmation of self-care was a successful strategy for some TM and helped them reduce identity challenges prompted by the test (Peitzmeier et al., 2017). This was often achieved by reframing the test as masculine or gender neutral.

Physical pain with CCS was reported by many TM, especially speculum insertion and cervical scraping, which was often made worse by an uncomfortable and cold exam room and awkward body positioning (McDowell et al., 2017; Peitzmeier et al., 2017; Potter et al., 2014). In research that compared methods of screening, a significant majority of TM (>90%) preferred the HPV swab method versus the Pap test because it was less invasive and less physically uncomfortable (McDowell et al., 2017). TM have attributed the pain of speculum insertion to vaginal changes that occur with the use of exogenous hormone therapy for gender transition (Peitzmeier et al., 2017). In a study that concluded TM have a 10-fold increased chance of receiving unsatisfactory Pap test results compared with cisgender women, the authors hypothesized that in addition to patient or provider discomfort with the exam, the difference was also due to vaginal atrophy and inelasticity induced by long-term use of testosterone therapy (Peitzmeier et al., 2014a). In addition to pain during the procedure, the after-effects were equally perturbing for some TM: Speculum insertion ruptured the hymen of one participant causing profuse bleeding, which continued for 2 days (Peitzmeier et al., 2017). Although minor bleeding is normal after a Pap test, it can be disturbing for TM because it can trigger gender dysphoria related to menstruation (Potter et al., 2015). Despite previous painful experiences with the Pap test, qualitative research demonstrated that undergoing the test with providers who were more gender affirming and willing to make modifications resulted in a CCS experience without pain (Peitzmeier et al., 2017).

Health-care providers, systems, and settings. Suboptimal patient-provider relationships were cited as a primary barrier to CCS (Harb et al., 2019; Peitzmeier et al., 2017; Rahman et al., 2019). In tandem with this finding, establishing a trusted relationship with a health-care practitioner was identified as a solution. TM wanted their gender identity to be accepted by health-care providers (Semlyen & Kunasegaran, 2016a, 2016b); the need for acceptance was so significant that many TM suggested it was the key factor influencing their decision to reveal their transgender identity and it even helped them to overcome gender dysphoria (Dutton et al., 2008; Peitzmeier et al., 2017). TM ascribed great responsibility to providers for creating a safe and welcoming environment in which they felt comfortable addressing their needs (Harb et al., 2019; McDowell et al., 2017; Peitzmeier et al., 2017).

Underutilization of CCS in TM compared to cisgender women has been linked to TM feeling less comfortable with their providers (Rahman et al., 2019).

Participants expressed a greater willingness to be screened for cervical cancer if recommended by a trusted provider (Harb et al. 2019); TM perceived trustworthy providers as those willing to answer questions and who presented the decision to receive CCS as the patient's choice (Peitzmeier et al., 2017). Some TM were willing to have their provider perform vaginal HPV sampling or Pap testing only if they had a strong therapeutic alliance (McDowell et al., 2017). Comfort with a provider was enhanced when there was a willingness to incorporate TM's needs and adapt the exam accordingly; when providers did not offer explanations or were unwilling to make modifications to the exam, TM reported feeling dehumanized and degraded, alluding to a power struggle between provider and patient (Peitzmeier et al., 2017).

TM's perceptions of their provider's level of knowledge, comfort, and experience working with the transgender population was also a determinant for participating in CCS (Agénor et al., 2016; Harb et al., 2019; Peitzmeier et al., 2014a, 2017). Participants who recalled having had a positive experience with CCS reported being examined by a provider who specialized in transgender care; however, finding a transgender-competent provider who understood the unique health-care needs of TM was difficult (Harb et al., 2019). TM expressed concerns regarding their provider's level of education and experience working in transgender health (Semlyen & Kunasegaran, 2016b) to the extent that some described feeling obligated to explain their specific needs to their providers during visits (Harb et al., 2019; Peitzmeier et al., 2017).

In a survey of the use of sexual health services, including CCS, TM frequently reported postponing or avoiding care due to prior negative experiences with providers and concerns regarding lack of provider sensitivity and knowledge of transgender health-care needs (Porsch et al., 2016; Semlyen & Kunasegaran, 2016a, 2016b). TM expressed a desire for "cultural competence" among providers, including the use of appropriate pronouns when being addressed and knowing with certainty that these providers were comfortable working with bodies that diverged from binary male-female representations customarily presented in medical training (Peitzmeier et al., 2017). Fear of discrimination was a barrier to seeking health care (Harb et al., 2019; Johnson et al., 2016a; Semlyen & Kunasegaran, 2016b), and to some degree, TM anticipated being mistreated or invalidated as men (Harb et al., 2019; Semlyen & Kunasegaran, 2016b). In fact, participants who experienced discrimination based on their gender expression were over three times more likely to avoid routine CCS (Johnson et al., 2016b).

In addition to provider acceptance and trust, acceptance of transgender identity within the health-care system in general was critical for the uptake of screening (Semlyen & Kunasegaran, 2016b). Six studies explored the lack of trans-inclusivity in health care and organizational barriers to CCS (Dutton et al., 2008; Harb et al., 2019; Johnson et al., 2016a; Kiran et al., 2019; Peitzmeier et al., 2017; Semlyen & Kunasegaran, 2016b). Harb et al. (2019) identified specific characteristics of the health-care setting that inhibited the uptake of CCS, such as sex-segregated offices or clinics providing CCS with a “stereotypical” feminine aesthetic that clearly catered to females (e.g., pink walls and decor), making TM feel out of place and alienated. Participants also described insensitive office staff who addressed them publicly by their legal feminine name in a waiting room full of cisgender women as a barrier to engaging with the health system (Potter et al., 2015). To avoid such experiences, TM preferred to seek care at clinics that promoted trans-inclusivity with trans-friendly providers, or they obtained referrals from their transgender peers for clinics welcoming all genders (Harb et al., 2019).

Traditional gender representations in screening promotions and exclusion from screening reminders or public health advertisements were cited as deterrents to CCS (Harb et al., 2019; Semlyen & Kunasegaran, 2016b). TM indicated that screening advertisements tend to target heterosexual cisgender females, conveying the notion that CCS does not apply to those outside these identities (Johnson et al., 2016a). It is possible that exclusion from screening initiatives may in part be explained by the fact that in an effort to affirm their identity, many TM change their gender marker within health records and in doing so are then inadvertently excluded from sex-based health-care initiatives (Kiran et al., 2019). Furthermore, TM have stated that in general, health-care settings do not account for transgender individuals in their records (Dutton et al., 2008; Harb et al., 2019). Intake forms rarely reserved space for transgender specification (Dutton et al., 2008), an omission particularly important in the context of sexual health care (Harb et al., 2019). Trans-friendly spaces, inclusive intake forms, and posters or educational pamphlets targeting TM were noted as important indicators for making TM feel welcome in the health-care system (Peitzmeier et al., 2017; Potter et al., 2015).

In the United States, challenges with health insurance companies were also cited as barriers to CCS. Participants described being denied CCS coverage if their medical record had been marked as male because insurance companies categorized CCS as an exam for cisgender females (Peitzmeier et al., 2017). Some TM avoided screening if they knew gaining insurance coverage would require substantial self-advocacy, causing them worry and stress,

reinforcing the assumption that CCS was reserved for females (Peitzmeier et al., 2017). Others explained that they refrained from changing their gender marker to male solely for the approval of health insurance coverage (Peitzmeier et al., 2017). Obstacles and issues with health insurance were seen by TM as a form of institutional discrimination, an impediment to their gender transition, and resulted in mistrust and resentment toward CCS and the health-care system (Peitzmeier et al., 2017).

Discussion

The findings of this scoping review illustrate how barriers to TM's CCS services are influenced by factors at the patient, provider, and organizational levels. This review also identified the pivotal role that health-care providers play in TM's decision-making to undergo CCS or not (Harb et al., 2019; Peitzmeier et al., 2017). Given the unique lived experiences and challenges of gender minority groups, including those on the transmasculine continuum, providers should make every effort to gain their patients' trust and ensure their dignity and safety. Treating transgender individuals with the fundamental principles of respect and understanding opens the door for therapeutic communication and improved access to care (Dutton et al., 2008). Although a core principle of providing health care to TM may still apply—“if you have it, screen it” (Light & Obedin-Maliver, 2019, p. 13)—preventative services need to be more accessible and efforts should be made by all stakeholders to expand the view of health care beyond a gender binary system.

The findings also indicated how knowledge and perceptions among TM regarding risk and prevention of cervical cancer are varied and, at times, based on assumptions. Similarly, the knowledge and perceptions about providing care for transgender individuals is also varied among health-care professionals. These findings confirm the conclusions of Gatos (2018) who also argued that TM face significant barriers to care, including health-care discrimination and providers' lack of knowledge about and guidelines for this population. Three Canadian provinces have introduced disparate guidelines, policies, or recommendations promoting inclusivity of LGBTQ communities in CCS programs (Canadian Partnership Against Cancer, 2018). In the United States, the Preventive Services Task Force statement on cervical screening makes no mention of transgender individuals (Curry, 2018). There is a need to develop evidence-based clinical guidelines better to assess and manage the risk of cervical cancer among this gender minority group (Gatos, 2018). In response to the need for guidelines, and based on a synthesis of the current findings, some clinical recommendations follow to assist health-care providers serving transgender male clients.

Patient–Provider Dynamics

CCS should be approached as a process, starting with the building of a trusting patient–provider relationship (Bernstein et al., 2014). Trust can be achieved through shared decision-making and inclusion of patient preferences in the screening process (Potter et al., 2015). This may involve the provider asking the patient their preferred terminology regarding their anatomy (e.g., “genital opening” vs. “vagina”) and making deliberate efforts to articulate aspects of the exam in a gender-neutral manner (e.g., “cancer screening” vs. “Pap smear”; Canadian Cancer Society, 2019c; Potter et al., 2015). Patients should also be made to feel in control of their health, including the decision to undergo testing or to terminate the exam at any time (Bernstein et al., 2014; Canadian Cancer Society, 2019c; Robinson, 2010). Clinicians who take a respectful approach have better success of building rapport and trust with their patients, which fosters a greater willingness in the patient to undergo screening (Peitzmeier et al., 2017). The Canadian Cancer Society (2019c) recommends providers employ a persistent, patient-centered, and respectful approach when encouraging CCS in TM. It is crucial providers understand that not all TM will agree to a Pap test initially, and many may require several visits before becoming comfortable with the provider and the idea of being screened (Canadian Cancer Society, 2019c). Providers can also encourage screening through increased engagement with TM who visit clinics regularly for testosterone injections and hormone blood work follow-ups (Peitzmeier et al., 2014a).

Performing the CCS Exam for TM

Providers must give accurate medical information to their transgender male patients; for instance, TM should never be misinformed that CCS is a prerequisite for testosterone therapy (Bernstein et al., 2014). There is no evidence that testosterone increases the risk of cervical cancer (Agénor et al., 2016; Feldman & Goldberg, 2006). It may be in the patient’s interest to perform baseline screening prior to initiating hormone therapy before atrophic changes ensue causing CCS to become painful (Bernstein et al., 2014; Peitzmeier et al., 2014a).

Providers should assess the patient’s level of comfort with the exam and inquire about previous positive or negative experiences with CCS (Canadian Cancer Society, 2019c; CERCP, 2017; Potter et al., 2015). Balancing this approach, caution should be taken to avoid asking inappropriate or intrusive questions bearing no relevance to the exam (Robinson, 2010). Providers should be mindful that it is not the responsibility of the patient to educate the provider on the idiosyncrasies of being transgender (Bernstein et al., 2014; Canadian Cancer Society, 2019c).

Taking an accurate sexual history, however, is important and relevant (Canadian Cancer Society, 2019c; Potter et al., 2015; Woodland, 2018). This may allow the provider to ascertain the patient’s level of HPV risk in order to engage with the patient in conversations about safe sex practices and the importance of regular screening (Agénor et al., 2016) and HPV vaccination (Bernstein et al., 2014). It is additionally useful to explain the procedure, what the patient can expect, and answer any concerns or questions (Canadian Cancer Society, 2019c; Potter et al., 2015). For instance, minor bleeding and discomfort can be expected, and inadequate Pap test results are common among TM taking testosterone due to atrophic changes, necessitating retesting within 2 to 4 months (Potter et al., 2015). Providers may offer to explain the mechanics of the examination (Potter et al., 2015), including showing patients the instruments that will be used, such as the speculum (Bernstein et al., 2014; Canadian Cancer Society, 2019c; Potter, 2018). Providers could also suggest that patients take the speculum home to practice self-insertion in preparation for the exam (Canadian Cancer Society, 2019c).

Because CCS may provoke physical and emotional discomfort, the practitioner should provide options for modifying the exam based on the patient’s consent (McDowell et al., 2017). Alterations to mitigate physical discomfort may include strategies such as self-insertion of the speculum, using a smaller (pediatric) speculum, applying a small amount of lubricant and/or lidocaine to the vaginal introitus for speculum insertion, and prescribing vaginal estrogen to be used for several days prior to the exam to relieve tissue atrophy from possible testosterone use (Potter et al., 2015). Warm lubricant can be especially helpful for TM receiving hormone therapy as testosterone can significantly decrease vaginal secretions making the tissues drier (Canadian Cancer Society, 2019c; Potter, 2018). To lessen the patient’s emotional and psychological discomfort, the provider may offer the use of an anxiolytic medication, instruct the patient to undress from the waist down only, and allow the patient to reclathe before discussing exam findings (Potter et al., 2015). Since peer support is known to facilitate uptake of screening, having a trusted friend accompany and support the patient during the exam may also be helpful for some TM (Canadian Cancer Society, 2019c; Johnson et al., 2016a; Potter et al., 2015) and should be suggested by the provider (Potter, 2018).

For those patients who cannot proceed with the exam or refuse it altogether, options should be explored (e.g., vaginal HPV sampling and/or HPV vaccination) as acceptable alternatives (Bernstein et al., 2014; Potter et al., 2015). Although accuracy of vaginal HPV sampling is still advancing (McDowell et al., 2017), this method is a useful strategy to establish a patient’s HPV

status, which in the case of reluctant TM is somewhat helpful (Agénor et al., 2016; Reisner et al., 2018). Positive swab results could then be used to encourage TM to undergo the more conclusive cervical cytology (Agénor et al., 2016). The HPV swab is appealing not only in terms of improving physical and emotional comfort, but also because it offers TM more control over the screening process and ultimately promotes more equitable engagement with health care (Seay et al., 2017).

Clinic Environment

Improving TM's access and use of CCS is influenced by clinic environments and health system messaging (Light & Obedin-Maliver, 2019; Potter et al., 2015). Improving trans-inclusivity of the clinical environment can be achieved through the use of signage and imagery reflecting affirmation of all genders (e.g., posters, brochures, and educational materials; CERCP, 2017; Light & Obedin-Maliver, 2019; Potter et al., 2015). Clinics may choose to advertise trans-inclusivity by posting their expertise in transgender care and nondiscriminatory policies on their websites (CERCP, 2017), including the promotion of Pap testing as an exam that is not exclusive to individuals identifying as female (Harb et al., 2019; Potter et al., 2015). Health-care providers and medical staff may need to partake in training to improve their capacity to provide gender-inclusive and sensitive care (CERCP, 2017; Kiran et al., 2019; Woodland et al., 2018). Staff and providers should be cognizant of making assumptions or having expectations regarding the gender presentation of the patient (Potter et al., 2015). Clinic office staff involved in patient registration should respectfully inquire about the patient's asserted name and pronouns and consistently use those titles to address the patient throughout the health-care encounter (Light & Obedin-Maliver, 2019; Nisly et al., 2018). Clinic intake forms need to provide space for the patient to specify gender identity (CERCP, 2017; Potter et al., 2015) rather than forcing a binary choice between male and female. To minimize potential discomfort within a waiting room of cisgender women, clinic and office staff might offer to schedule TM as the first or last appointments of the day (Potter et al., 2015).

Health-Care System

A gender-affirming health-care system and safe and accepting physical environment is equally as important as the level of sensitivity and competence of clinicians and staff. To increase TM's access to CCS, EMRs may require revision to allow for specification of gender identity (Potter et al., 2015) and to ensure that TM are included in cancer screening initiatives. Health

administrators and insurance companies must update their systems for the inclusion of TM; it is important that a male gender marker does not result in automatic denial of coverage for CCS because it is assumed to be a woman's concern (Peitzmeier et al., 2017). Health administrators and providers can help their patients navigate such obstacles by advocating for insurance coverage (Potter et al., 2015). Finally, TM have noted in research that their peers, the internet, and social media are important sources of information regarding cervical cancer and screening (Agénor et al., 2016); therefore, messaging interventions to improve knowledge among TM should employ these mediums to disseminate accurate information to this underserved population.

Conclusion

In summary, cervical cancer does not discriminate: TM require regular and thorough CCS. To ensure their awareness of this need for screening, TM require reminders through national screening initiatives, targeted messaging from health-care campaigns and advertisements, and most importantly, support, motivation, and counseling from their providers. To encourage TM to make the decision to undergo screening, TM require health-care environments that are accessible and inclusive as well as providers who are sensitive, competent, and willing to advocate for their unique emotional, psychological, and physical needs. By working together, patients, providers, and health organizations can bridge the gaps to CCS and cancer prevention in TM.

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Supplemental Material

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