

Gender-affirming healthcare experiences and medical transition among transgender women living with HIV: a mixed-methods study

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Abstract. *Background:* Transgender (trans) women are overrepresented among people living with HIV, yet trans women living with HIV (WLWH) experience lower access to HIV care. Access to medical transition may facilitate access to HIV care among trans WLWH. This study sought to describe barriers and facilitators to access to medical transition among trans WLWH. *Methods:* This convergent parallel mixed-methods study drew on cross-sectional quantitative data from 48 trans WLWH analysed using descriptive and bivariate analyses, as well as qualitative semistructured interview data from a subsample of 11 participants analysed using framework analysis. The primary outcome was self-reported transition experience (completed or in the process of medical transition vs planning to but have not begun medical transition). Quantitative and qualitative results were merged and analysed for convergence, divergence and/or expansion of understanding. *Results:* Just over half the participants reported being fully completed medical transition or in the process of medical transition (52.1% (25/48); 95% confidence interval (CI) 37.5–67.6%), with one-fifth reporting planning to but not having begun medical transition (18.8% (9/48); 95% CI 8.3–29.2%). Factors significantly associated with not having begun one's medical transition included housing instability, transphobia, HIV-related stigma and barriers in access to care. Qualitative findings revealed varied transition experiences, influenced by community norms, passing and class privilege, HIV and structural barriers. Mixed-methods results showed positive relationships between trans WLWH and HIV care providers in terms of trans and HIV health care. *Conclusions:* HIV-related stigma and social determinants of health limit access to medical transition for trans WLWH. Stigma must be addressed in a broad range of healthcare settings, in addition to structural barriers, to increase access to gender-affirming HIV care and medical transition for trans WLWH.

Additional keywords: gender affirmation, stigma.

Received 23 January 2019, accepted 21 March 2019, published online 9 July 2019

Introduction

Gender affirmation, a process whereby a person receives recognition and support for their gender identity and expression,¹ is a social determinant of health for transgender (trans) people.² Trans people are a diverse group with a shared experience of incongruence between their gender identity and sex labelled-at-birth.^{1,2} Gender affirmation can be enhanced through social, legal and medical processes, sometimes referred to as transition or transitioning.^{3,4} Social transition may include the use of a new name, gender pronoun and/or changes to one's physical appearance (e.g. clothing, hairstyle); legal transition may include updating some or all of one's legal identity documentation (e.g. passport, drivers licence).³⁻⁵ Medical transition may include hormone therapy, surgical care (e.g. breast augmentation) and/or non-medical procedures (e.g. electrolysis)⁴ that support the alignment of one's physical characteristics with one's gender. Although not all trans people access medical transition, professional organisations recognise that access is medically necessary to support the health and well-being of those who require it,⁶ with manifold positive psychosocial effects including reduced suicidal ideation, depression, substance use and stigma, as well as increased quality of life and resilience.^{5,7-11}

American studies show that social gender affirmation from HIV care providers and access to medical transition facilitate HIV care engagement among trans women,¹²⁻¹⁴ who experience a high prevalence of HIV¹⁵⁻¹⁸ and low access to HIV care.¹⁹⁻²² However, preliminary evidence suggests that trans women living with HIV (WLWH) may experience poorer access to medical transition than trans women not living with HIV.²³ Wilson *et al.*²³ found that although 98% of HIV-negative trans women had accessed some form of gender-affirming medical transition care, only 88% of trans WLWH had accessed such care. Trans WLWH were approximately half as likely to have accessed breast augmentation and one-quarter were as likely to have accessed genital surgery relative to those not living with HIV. Wilson *et al.*²³ hypothesised that trans WLWH may choose not to have surgery due to potential associated surgical risks or that these differences may be due to structural barriers. Indeed, many of the structural access barriers to medical transition described among trans people generally (e.g. uncovered costs,²⁴ lack of service availability,²⁵ stigma¹⁴) may be more pervasive among trans WLWH due to the interaction of trans- and HIV-related stigma and to trans WLWH's dual needs for medical transition and HIV care. Other barriers to medical transition are unique to trans WLWH, such as providers withholding feminising hormones until antiretroviral therapy (ART) adherence improves¹² or provider fear to coprescribe and patient fear to coadminister ART and feminising hormones due to the lack of information about drug interactions.^{12,26,27}

Medical transition care, and in particular feminising hormone use, is a priority for trans WLWH, often above HIV care.¹²⁻¹⁴ As such, integration of medical transition support and HIV care has been described as a best practice by leading trans healthcare organisations in the US (e.g. Fenway Health)² and is an integral component of demonstration projects to increase HIV care engagement among trans women of colour in the US.²⁸ Through qualitative interviews with trans WLWH ($n = 14$) and service providers ($n = 10$) in Ontario, Canada, Munro *et al.*²⁹

described barriers to HIV care engagement, identifying trans-specific barriers at interpersonal (e.g. transphobia) and institutional (e.g. lack of knowledge about trans health) levels. However, there is an absence of information about the transition experiences of trans WLWH, and in particular about their access to medical transition, including barriers and facilitators, as well as their engagement with HIV care providers regarding trans health issues.

This study aimed to understand trans WLWH's: (1) transition and gender-affirming healthcare experiences; (2) barriers and facilitators to accessing medical transition; and (3) experiences accessing gender-affirming care from HIV care providers.

Methods

Study design, sample and data collection

This study used a convergent parallel mixed-methods design whereby quantitative and qualitative data were collected to address the same research questions, analysed separately and then merged and analysed for convergence, divergence and/or expansion of understanding.³⁰ Quantitative data included baseline survey data from the Canadian HIV Women's Sexual and Reproductive Health Cohort Study (CHIWOS), collected in 2013-15 in the provinces of Ontario, British Columbia and Quebec, Canada.³¹ Trained peer research associates, who identified as women living with HIV, inclusive of trans women, recruited 1422 WLWH aged ≥ 16 years through word-of-mouth and venue-based (e.g. HIV clinics) recruitment.³¹ Peer research associates received training about the project overall, principles of community-based participatory research, recruitment, informed consent, online survey administration and available supports.³² Peer research associates administered a structured questionnaire in English or French using an online platform. Trans WLWH within CHIWOS were identified as those who: (1) selected male or intersex as their sex labelled-at-birth; and (2) selected trans woman as at least one of their gender identities ($n = 48$), prompting a trans-specific survey module for completion.

Quantitative variables

The primary outcome was medical transition experience, measured by asking 'Which of the following applies to your current situation regarding hormones and/or surgery?', with the following response options: 'I have fully medically/surgically transitioned'; 'I am in the process of medically/surgically transitioning'; 'I am planning to transition, but have not begun'; 'I am not planning to medically transition'; 'The concept of 'transitioning' does not apply to me'; 'I am not sure whether I am going to medically transition'; 'Other'; and 'Don't know'.³³ We then created a four-category measure: (1) completed/in the process of medical transition; (2) planning to but have not begun medical transition; (3) not planning to/the concept does not apply; and (4) other/don't know/not sure/prefer not to answer. Transition was self-defined by participants, and may include a range of medical services (e.g. feminising hormone use, gender-affirming surgeries).⁵

The survey included sociodemographic, health and healthcare-related variables. Clinical factors included years living with HIV and overall physical health-related quality of

life (HRQoL), measured using the six-item physical health component (PCS) summary score of the Short Form (SF) Health Survey (SF-12; minimum–maximum score range 15.75–68.43, with higher scores indicating better physical health; Cronbach's $\alpha = 0.71$ for the present analyses, e.g. 'Does your health limit you in moderate activities, such as climbing several flights of stairs?').³⁴ Participants were asked whether they were currently taking gender-affirming hormones. Those who had complete HIV care access data, reported ever accessing HIV care and reported taking hormones were asked whether they had informed their HIV doctor of hormone use; those who indicated 'yes' were asked whether their doctor had discussed possible ART–hormone drug interactions. Perceived knowledge on trans health issues, comfort discussing trans healthcare needs and trustworthiness of confidentiality on trans health issues were measured using three separate questions among those with complete HIV care access data who reported having ever accessed HIV care, with responses to the three questions dichotomised as follows: very/somewhat knowledgeable versus not very/not at all knowledgeable/HIV physician has never talked to me about trans health; very comfortable/comfortable versus uncomfortable/very uncomfortable; and completely/mostly versus not much/not at all respectively. These three questions were adapted from the Trans PULSE survey³³ to be answered in reference to one's HIV physician.

Additional hypothesised barriers were explored in association with transition experience. Housing instability was indicated by living in a self-contained room, transition house, halfway house, safe house, couch surfing, outdoors on street, parks or in a car versus owning or renting an apartment or house. HIV-related stigma was measured using the 10-item HIV Stigma Scale^{35,36} (minimum–maximum score range 11–40, with higher scores indicating higher stigma; Cronbach's $\alpha = 0.84$, e.g. 'I have been hurt by how people reacted to learning I have HIV'). Transphobia was measured using the nine-item Experiences of Transphobia scale, previously used among a sample of trans people in Canada³⁷ (minimum–maximum score range 4–27, with higher scores indicating more transphobia; Cronbach's $\alpha = 0.89$, e.g. 'Have you been hit or beaten up for your trans identity or experience?'). Perceived access to care barriers was measured using the 12-item Barriers to Care scale³⁸ (BACS; minimum–maximum score range 12–48, with higher scores indicating more problematic barriers; Cronbach's $\alpha = 0.94$). The BACS is designed to assess geographical, medical, psychological, stigma and resource concerns in relation to healthcare access for people living with HIV (e.g. 'Please indicate to what extent each of the following circumstances have made it difficult for you to receive the care, services, or opportunities you wish to obtain over the past year: long distances to medical facilities and personnel, lack of psychological support groups for persons living with HIV/AIDs etc.').

Qualitative interviews

A subset of trans WLWH ($n = 11$) who completed the CHIWOS survey and were verbally proficient in English participated in an open-ended, semistructured individual interview focused on their

experiences accessing different types of health care. The sample was purposively chosen to include those with varied health care engagement and diverse identities or experiences. Of 11 interviews, 10 were conducted by the first author and one was conducted by a peer research associate with a strong relationship with Indigenous trans WLWH, who were those participants identifying with First Nations, Métis or Inuit ancestry within Canada or Indigenous ancestry from a country outside of Canada. Interviews (25–100 min) were conducted using a semistructured interview guide developed to explore multilevel barriers among WLWH of diverse identities or experiences, consistent with social ecological^{39,40} and intersectional theoretical approaches.^{41–45} Interviews were recorded and transcribed verbatim.

Data analyses

Sociodemographic, clinical and HIV care quality characteristics were described using proportions for categorical variables and mean \pm s.d. values for continuous variables, along with associated 95% confidence intervals (CIs) to describe the range of possible proportions and means given the small sample size. CIs for proportions were calculated using the bootstrap variance estimation technique using a set of 500 replicates.⁴⁶ Bivariate analyses were conducted using Fisher's exact or independent t -tests to test for statistically significant associations ($P < 0.05$) of hypothesised barriers to or facilitators of medical transition experience. Mean differences, 95% CIs for the mean difference and associated P -values, or prevalence differences, 95% CIs for the prevalence difference and associated P -values are reported. Transition experience was dichotomised as 'fully completed medical transition/in the process of medical transition' versus 'planning to but have not begun medical transition' to explore barriers and facilitators to access to medical transition only for those who desired such access and who had not, at the time of the survey, accessed it. Analyses were conducted using SPSS Version 24 (IBM Corp., Armonk, NY, USA).

The qualitative interviews were analysed by the primary investigator (AL-D) using framework analysis,⁴⁷ which involved familiarisation with the data, developing a preliminary analytical framework through open coding, revising and testing the analytical framework, applying the analytical framework to all data, charting data into a table summarised by codes and participants and mapping and interpreting the data. Rigour was established through detailed documentation, the charting process and debriefing with trans members of the CHIWOS Trans Community Advisory Board.^{48,49} Analyses were facilitated by the use of NVivo 11.4.0 (QSR International Pty Ltd, Doncaster, Vic., Australia).

Mixed-methods analyses included: (1) specifying dimensions for quantitative and qualitative data comparison (e.g. transition experiences) and information to be compared (e.g. proportion and 95% CI for each transition experience (quantitative) and participant narratives about medical transition (qualitative)); (2) representing comparisons through a written description of quantitative and qualitative findings (statistics-by-themes) or visually representing the data in charts (joint displays); and (3) considering how results converge, diverge or expand understanding.³⁰

Ethics approval for CHIWOS was obtained from the Research Ethics Boards of Women's College Hospital (Ontario), Simon Fraser University, the University of British Columbia and Providence Health (British Columbia), and McGill University Health Centre (Quebec). Ethics approval for the subanalysis was also received from the University of Toronto and from Simon Fraser University, the University of British Columbia and Providence Health.

Results

Participant sociodemographic and clinical characteristics

Quantitative participant characteristics ($n = 48$) are reported in Table 1. The qualitative subsample included trans WLWH from each of the three study provinces (Toronto, $n = 5$; Vancouver, $n = 3$; Montreal, $n = 3$), inclusive of both Anglophone and Francophone participants, age range 20s–60s (median 40s), of White ($n = 4$), Indigenous ($n = 3$) or other ethnicity, inclusive of Latina women, Black, African or Caribbean women, and women of multiracial ethnicity ($n = 4$), and mostly living

Table 1. Sociodemographic and clinical characteristics of transgender women living with HIV ($n = 48$)

Data are given as the mean \pm s.d. or percentage, with 95% confidence intervals (CIs) given in parentheses. The 95% CIs for means and proportions were calculated using the bootstrap variance estimation technique using a set of 500 replicates. CAD, Canadian dollars; HRQoL, health-related quality of life

Sociodemographic characteristics	
Province	
Ontario	52.1 (27.1–66.7)
British Columbia	18.8 (8.6–29.5)
Quebec	29.2 (16.9–42.4)
Age (years)	41.6 \pm 9.8 (38.9–44.3)
Education	
Less than high school	16.7 (6.2–27.9)
High school or higher	83.3 (72.1–93.8)
Sexual orientation ($n = 46$)	
Sexual minority	43.5 (29.2–56.8)
Heterosexual	56.5 (43.2–70.8)
Annual personal income (CAD) ($n = 47$)	
<20 000	93.6 (85.4–100.0)
\geq 20 000	6.4 (0.0–14.6)
Source of income	
Paid job	12.5 (4.0–22.9)
Other sources of income	87.5 (77.1–96.0)
Relationship status	
Married, common law or in a relationship	22.9 (11.9–34.8)
Single, separated, divorced or widowed	77.1 (65.2–88.1)
Ethnicity	
White	37.5 (23.7–51.1)
Black, African or Caribbean	8.3 (2.0–17.0)
Indigenous	33.3 (20.8–46.8)
Other ethnicity ^A	20.8 (10.2–34.0)
Clinical characteristics	
Years living with HIV ($n = 47$)	11.2 \pm 7.4 (9.2–13.4)
Physical HRQoL ($n = 47$)	47.0 \pm 11.3 (43.1–49.8)

^AOther ethnicity includes Latin American, Arab, West Asian, multiple races or multiracial (exact proportions not specified to protect confidentiality).

with HIV >14 years ($n = 8$), with a few living with HIV for between 6 and 14 years ($n = 3$).

Transition experiences

Among the 48 participants, just over half reported having fully completed medical transition or being in the process of medical transition (52.1% (25/48); 95% CI 37.5–67.6%). Approximately one-fifth reported they were planning to but had not begun medical transition (18.8% (9/48); 95% CI 8.3–29.2%). A minority reported that they were not planning to medically transition or that medical transition did not apply to them (8.3% (4/48); 95% CI 2.1–16.7%). Some participants reported other/don't know/not sure/prefer not to answer (20.8% (10/48); 95% CI 9.4–33.3%). Qualitative results demonstrated varied transition experiences across social and medical domains (Table 2). Few participants had updated legal identity documentation, which contributed to misgendering in health care, whereby staff used a gender pronoun and/or name inconsistent with that stated by the participant.

Among the qualitative study participants ($n = 11$), half had accessed one or more gender-affirming medical procedures, exhibiting self-determination by deciding what would work best for them in terms of their transition based on their perspectives on gender diversity, satisfaction with gender affirmation and cultural identities. These personal decisions were challenging due to pressures from trans communities, medical professionals and society more broadly to conform to a particular image of femininity and transition experience. The ability to access medical and surgical transition was shaped by class privilege and 'passing privilege', the social advantage of being perceived by others to be cisgender.⁵⁰ Access to some or multiple types of gender-affirming medical care were important for health and well-being, and promoted access to non-discriminatory healthcare encounters and safety in public, whereas denial of gender-affirming care caused emotional distress and suicidality among some qualitative study participants.

Most survey participants reported currently taking hormones (68.8% (33/48); 95% CI 56.3–81.3%). Among those who had informed their HIV physician about their hormone use (96.3% (26/27); 95% CI 87.2–100.0%), two-thirds reported that their HIV physician had discussed potential drug interactions between ART and hormones (69.2% (18/26); 95% CI 51.7–88.1%). The qualitative results showed that women who concurrently took ART and hormones had concerns about interactions, and two participants reported adverse events. Qualitative study participants recommended increased clinical and biomedical research specific to the needs of trans women broadly (e.g. surgery follow-up, HIV prevention) and trans WLWH specifically (e.g. drug interaction research).

Barriers and facilitators to gender-affirming care access

There was no significant difference between physical HRQoL for those reporting being fully completed medical transition or in the process of medical transition compared with those reporting planning to but having not begun medical transition (Table 3). In contrast, the qualitative results showed that good HIV clinical health was a prerequisite dictated by surgeons for accessing gender-affirming surgery. HIV-related stigma was

Table 2. Qualitative transition experiences

ART, antiretroviral therapy; HRT, hormone replacement therapy; trans, transgender; WLWH, women living with HIV

Themes	Quotes
Varied transition experiences	<i>... I did have the opportunity to go and get my top surgery done and I refused and I turned them down 'cause I was doing it all for the wrong reasons. I didn't want to go through the full change I just wanted my top surgery. ... (Participant 5)</i> <i>I think I dreamed about it last night that I was going to do it anyway. Because that's what I've been always dreaming about. Be a complete woman physically and mentally. (Participant 11)</i>
Self-determination versus trans (gender) policing	<i>I don't need it. Because that no define me. Who I am. You know? It's my personality. It's who I am. (Participant 1)</i> <i>But I feel out of place there with the other trans because they all look at me. ... I get the cold shoulders from a lot of them now because they're all looking at me just saying, oh, you're not trans because you're not wearing a wig. (Participant 8)</i> <i>Because some doctors say, why don't you want the surgery? Psychologists do that sometimes, they push to the surgery. (Participant 9)</i>
Shaped by privilege (class, passing)	<i>And I mean I don't think I ever will go through with that unless I like win a million dollars, then hell yes. (Participant 5)</i> <i>I know some had the surgery done, the papers changed, but they look. So the people misgender them. That's what I said to trans always. It's not because you will have, sorry to be rude, a pussy, that will make you call Mrs, by people. They don't see your pussy. (Participant 9)</i>
Importance for mental health and well-being	<i>I had... a stroke. ... one of the neurologists told me, oh, she came to me and she approached me, telling me, you might probably have to stop your hormone therapy. And I went like, you're crazy, if you stop my hormones I'd rather die. They put me on a watch surveillance for 24 hours because of that. (Participant 11)</i> <i>I just burst into tears. She [my doctor] takes me in her office and she's what's going on. I said you know what, I waited too long to have them done, I'm not having them [breast implants] out. (Participant 3)</i>
Concerns about drug interactions between ART and feminising hormones	<i>... In the past year maybe even a bit less than a year have I changed ARVs [antiretroviral therapy] that are a bit more complimenting to HRT. 'Cause before my medications negatively impacted the effects of HRT. ... Because I noticed a change as soon as I changed my meds. ... So for me I feel a lot of the progress I would have had from HRT, that ship has sailed. ... And nobody talked about it. (Participant 7)</i> <i>It is a thin line that you have to walk with balancing those two. ... it kind of scares me because I know there are a lot of people who can't get the HRTs covered and they wouldn't be aware of the danger. ... (Participant 10)</i>
Need for research specific to needs of trans WLWH	<i>... We don't have enough things for HIV trans. So, how we could be prevent, how we could know we are vulnerable. (Participant 9)</i>

higher for the group who reported planning to but having not begun medical transition (mean difference 7.0; 95% CI 2.0–12.0; $P = 0.008$). Qualitative results converged and expanded on this finding by showing how HIV-related stigma posed a barrier to access to gender-affirming medical procedures. Although HIV seropositivity is not an exclusion criterion for gender-affirming surgery, HIV-related stigma was perceived as embedded within institutional policies that permitted the denial of access to gender-affirming surgery, which led to feelings of helplessness. Those able to access medical transition described interpersonal HIV-related stigma when interacting with service providers. Quantitative findings also showed higher transphobia among those planning to but having not begun medical transition (mean difference 9.5; 95% CI 5.7–13.2). A few participants described transphobia as a barrier to access to transition medical care, institutionalised through clinical and administrative tools (e.g. sex-specific body silhouettes; automated appointment reminder systems using sex labelled-at-birth). An alternative explanation for this association as described in the qualitative findings is that those who have not, by choice or by constraint, accessed medical transition may experience more transphobia as a result of gender non-conformity stigma. Gender non-conformity stigma is defined as stigma towards those not conforming to expected gender norms; with regard to trans women, this may refer to stigmatisation of those who have a masculine or masculine-of-centre gender presentation.⁵¹ Participants emphasised that health

care should be structured to optimise choices for where trans WLWH could seek care left (e.g. trans inclusion in all services, trans-specific services).

There were no significant differences between annual personal income or source of income among trans WLWH with different medical transition situations. However, the findings of the qualitative study diverged, whereby social assistance emerged as a highly important form of insurance coverage, facilitating access to hormones and gender-affirming surgeries. A higher proportion of those who were planning to but had not begun medical transition reported housing instability relative to those reporting having fully completed medical transition or being in the process of medical transition (prevalence difference 61.8; 95% CI 24.2–80.3). Qualitative study findings similarly described how experiences of marginalisation (e.g. homelessness, precarious immigration status) compounded financial barriers to access.

The mean score for barriers to access to care was also significantly higher among those reporting planning to but having not begun medical transition (mean difference 14.0; 95% CI 6.7–21.3; $P < 0.001$). Qualitative study participants expanded on these barriers by describing how bureaucratic processes and geographic location still affected access to gender-affirming care among trans WLWH in these urban settings (e.g. within vs outside a downtown or a specific province).

Table 3. Joint display of quantitative and qualitative study results regarding barriers and facilitators to access to medical transition
 Unless indicated otherwise, data are given as the mean ± s.d. or as n (%). CAD, Canadian dollars; CI, confidence interval; HRQoL, health-related quality of life

Factor	Quantitative findings			P-value ^B	Theme(s)	Qualitative findings		Merged outcomes
	Fully completed medical transition/ in the process of medical transition (n = 25)	Planning to but have not begun medical transition (n = 9)	Proportion difference (PD) or mean difference (MD) (95% CI) ^A			Quotations		
Physical HRQoL (n = 33)	47.7 ± 13.0	51.7 ± 4.9	MD 4.0 (2.4, 10.3)	0.212	Physical and mental health • Good HIV physical health a prerequisite for accessing gender-affirming surgery	Some people I know who are HIV and they had the surgery and they don't have trouble. They want their situation of CD4 to be good, because the surgery could make people die. (Participant 11) Actually they didn't provide services to HIV people for a decade or more...it was 7 years of floundering in the system. Wondering when, when is this going to happen... (Participant 7) ...They [the endocrinologist] called me to remind me the appointment, right? And the machine that called me by my name 'Mr'. (Participant 11) So, if one is not possible, then society can be quite cruel... And I've been through it all but do you know what? I just kind of dress down now and everything and that's what's been keeping me safe. (Participant 6)	Diverge and expand	
HIV-related stigma (n = 32)	21.4 ± 6.3	28.4 ± 6.0	MD 7.0 (2.0, 12.0)	0.008	Stigma and discrimination • HIV-related stigma a barrier to access to gender-affirming surgeries	Stigma and discrimination • HIV-related stigma a barrier to access to gender-affirming surgeries	Converge and expand	
Transphobia (n = 28)	16.4 ± 6.4	25.9 ± 3.0	MD 9.5 (5.7, 13.2)	<0.001	Stigma and discrimination • Transphobia experienced in settings; lack of access to medical transition increases trans and gender-non-conformity stigma	Stigma and discrimination • Transphobia experienced in settings; lack of access to medical transition increases trans and gender-non-conformity stigma	Converge and expand	
Annual personal income (<CAD20 000 per year; n = 33)	21 (87.5)	9 (100.0)	PD 12.5 (-18.5, 0.3)	0.545	Lack of finances or insurance coverage	Lack of finances or insurance coverage	Diverge and expand	
Source of income (paid employment; n = 34)	6 (24.0)	0 (0.0)	PD -24.0 (43.4, 8.4)	0.162	• Women find ways to pay • Social assistance a mechanism to gain access to insurance coverage	Always. (Participant 1) If I need something, I have like \$30 000 of credit card I could use. So, if I had problems with my breasts, I will have the credit card to help me. (Participant 9) 'Living in [another city] I knew it [gender-affirming surgery] was like a two year wait list' (Participant 10)	Diverge and expand	
Housing instability (n = 34)	4 (16.0)	7 (77.8)	PD 61.8 (24.3, 80.3)	0.002	Geography or availability of gender-affirming care providers	Geography or availability of gender-affirming care providers	Converge and expand	
Barriers to access to care (n = 32)	19.9 ± 8.6	33.9 ± 10.5	MD 14.0 (6.7, 21.3)	<0.001	• Downtown increased access Bureaucratic processes • Barrier to access to legal and medical transition in particular	And their evaluation of me was you'll never live in society as a woman, you'll never function as woman, so don't even try it. (Participant 3)	Converge and expand	

^A Proportion differences and mean differences were calculated by subtracting values for those who reported fully completing medical transition or being in the process of medical transition from values for those planning to but have not begun medical transition.

^B Fischer's exact tests were used to examine the significance of associations between proportions; t-tests were used to examine the significance of associations between means.

Table 4. Joint display of quantitative and qualitative study results regarding experiences accessing gender-affirming care from HIV physicians
CI, confidence interval; trans, transgender; WLWH, women living with HIV

Quantitative Factors	<i>n</i> ^A	Percentage (95% CI ^B)	Theme(s)	Qualitative Quotations	Merged outcomes
Perceived knowledge about trans health issues (<i>n</i> = 36)			HIV care providers and trans WLWH have positive relationships	... <i>she treats me with respect, like. And she's helped me with my cats she's done a lot for me emotionally, physically, that kind of connection.</i> (Participant 2)	Converge and expand
Very/somewhat knowledgeable	25	69.4 (52.9, 83.3)			
Not very/not at all knowledgeable	11	30.6 (16.7, 47.1)	• Warmth • Acceptance/non-judgment • Holistic approach • Trust • Collaboration	... <i>There are trans doctors where I go though so there's nothing to scratch your head at.</i> (Participant 8)	
Comfort discussing trans healthcare needs with HIV physician (<i>n</i> = 35)			• Increases access to care (directly and indirectly)	<i>He talks to you and gives you options, like I took two drug holidays at one point...</i> (Participant 3)	
Very comfortable/comfortable	30	85.7 (72.2, 94.6)			
Uncomfortable/very uncomfortable	5	14.3 (5.4, 27.8)		<i>And I said you guys cannot do anything unless [physician name] approves anything... It all has to be approved by my doctor or I will not let you see me I will walk out and I will die.</i> (Participant 5)	
Trust confidentiality with regards to trans care (<i>n</i> = 36)				<i>And before he refers me he mention this is a trans woman she has to be treated in that way... I know he does it. All the time.</i> (Participant 1)	
Completely/mostly	32	94.1 (86.1, 100.0)			
Not much/not at all	2	5.9 (0.0, 13.9)			
Transphobia in HIV care (<i>n</i> = 40)					
Yes ^C	8	20.0 (8.8, 32.5)			
No	32	80.0 (67.5, 91.2)			

^AAmong those who completed the trans module of the survey (*n* = 48), had complete access to HIV care data (*n* = 44) and reported having ever accessing HIV care (*n* = 40), unless specified otherwise. 'Don't know' and missing responses were classified as missing.

^BThe 95% CIs for proportions were calculated using the bootstrap variance estimation technique using a set of 500 replicates.

^CThese acts included (non-mutually exclusive): being told by one's HIV provider that they do not know enough about trans-related care to provide trans care in addition to HIV care (*n* = 5); being told that one was not really the gender they identified with (*n* = 1); being discouraged from exploring one's gender (*n* = 1); the HIV care provider thinking the gender listed on one's ID or forms was a mistake (*n* = 4) and/or other (*n* = 2).

Interpersonal relationship between trans WLWH and HIV care providers

Both quantitative and qualitative results showed predominantly positive relationships between trans WLWH and HIV physicians (Table 4). Quantitatively, most participants reported: (1) perceiving their HIV physicians to be very/somewhat knowledgeable about trans health issues (69.4% (25/36); 95% CI 52.9–83.3%); (2) being very comfortable/comfortable discussing trans healthcare needs with their HIV physician (85.7% (30/35); 95% CI 72.2–94.6%); (3) being completely/mostly trusting of their HIV physician with regard to doctor–patient confidentiality in reference to trans-related care (94.1% (32/36); 95% CI 86.1–100.0%); and (4) never experiencing transphobia in HIV care settings (80.0% (32/40); 95% CI 67.5–91.2%).

Qualitative study results showed that HIV physicians express non-judgment of trans WLWH and a genuine interest in their lives (e.g. asking about relationships). These relationships were characterised by trust and collaboration. Participants valued their physicians' support in making autonomous decisions, such as choosing not to take ART. Positive patient–provider relationships gave women a space to access care, sometimes in the absence of other safe spaces. Physicians were also able to mitigate opportunities for discrimination by making informed referrals to trans-inclusive

providers or address discriminatory behaviours perpetuated by other care providers by advocating for their patients.

Two participants were misgendered by HIV physicians in public, which they perceived as purposeful and avoidable. These two participants also described being stereotyped (e.g. portrayed as a sex worker or someone who used substances) and asked invasive questions by their HIV physicians. These negative experiences resulted in care avoidance.

Discussion

The present mixed-methods study explored access to gender affirmation and medical transition among trans WLWH, highlighting how HIV shapes participants' overall experiences of transition and their access to transition medical care. Approximately half the participants reported being fully completed medical transition or in the process of medical transition, whereas almost one-fifth were planning to but had not begun medical transition. Social determinants of health, such as housing instability, and higher HIV-related stigma, transphobia and access to care barriers were associated with having not begun medical transition. These findings suggest primarily structural barriers to transition medical care access. Further qualitative work is necessary to understand how these barriers impede access. On a positive note, most trans WLWH found their HIV care providers to be supportive of their trans health care and issues.

These findings revealed how HIV physical health can shape, and HIV-related stigma can disrupt, the transition process for trans WLWH. First, qualitative study findings showed that trans WLWH had to maintain good HIV clinical health to be able to access gender-affirming surgeries. Second, trans WLWH who reported planning to but having not begun medical transition experienced more HIV-related stigma relative to those reporting being fully completed medical transition or in the process of medical transition, suggesting that HIV-related stigma may be a barrier to accessing transition medical care. The qualitative results also demonstrated that HIV-related stigma was perceived within transition medical care at structural and interpersonal levels; although denial of access to surgery based on HIV physical health may be a legitimate medical decision, this was perceived as HIV-related stigma by trans WLWH.

Trans women's recommendations for the preferred structure of care challenge the predominant discourse that trans WLWH want to access integrated HIV and gender-affirming medical care from a single care provider.² Participants in the present study described different choices they would make (e.g. some preferred integrated care, others preferred separating types of care), influenced by HIV-related stigma, in that trans WLWH may not want other trans women to know their HIV status⁵² or trans experience. Ultimately, the findings suggest that integrating gender-affirming trans and HIV health care may increase HIV care engagement for some, but not all, trans WLWH.

Most participants in this study were living in poverty and reliant on social assistance. Qualitative results diverged and expanded on null quantitative findings with regard to income level and source of income, with many trans WLWH describing the importance of social assistance to accessing transition. Even with the existence of provincial health insurance coverage, many costs associated with medical transition are not covered (e.g. electrolysis, travel).^{25,53–57} Trans WLWH often rely on social assistance for hormone coverage, thus positioning them in a double bind: requiring insurance coverage for hormone therapy, while being unable to afford the travel and expenses required for gender-affirming medical procedures. Systematic exclusion of trans WLWH from accessing gender-affirming health care may be ameliorated by extending insurance coverage to a comprehensive range of services and required assessments, travel and after-care costs.²⁵

Importantly, the quantitative findings showed transphobia was significantly higher among those reporting planning to but having not begun medical transition. Qualitative findings converge and expand on this finding by describing the ways in which transphobia impedes access to medical transition. At the same time, without access to medical transition, trans WLWH continue to experience transphobia in their everyday lives. These findings corroborate other studies that show the importance of access to medical transition on trans women's safety and well-being.^{5,7–11}

Concerns about drug interactions did not deter trans WLWH from taking ART. However, participants had concerns and described negative side effects from coadministration in relation to both perceived transition outcome (e.g. less effective feminisation of features) and physical health (e.g. feeling ill). Although published commentaries drawing on oral contraceptive and ART pharmacokinetic studies suggest that drug interactions are unlikely,^{27,58,59} the findings of the present study

underscore the imminent need for research specifically among trans WLWH. In the interim, HIV providers should still discuss the concurrent use of ART and hormones with trans WLWH. Approximately one-third of trans WLWH perceived their HIV care providers to lack knowledge about trans health, and some participants did experience transphobia from HIV care providers, suggesting a need for additional training to support HIV care providers to provide gender-affirming HIV care.

This study has some limitations. Although many significant differences were found, the small sample means the study is underpowered to detect smaller differences. The non-random sampling of trans WLWH also limits generalisability, because word-of-mouth strategies reach women who are socially networked and recruitment through HIV clinics reaches those who are already engaged in care. However, community advisory boards, such as the trans community advisory board, were developed to recruit underserved populations (e.g. socially isolated and non-engaged in HIV care trans WLWH). Although self-reported data are susceptible to social desirability bias, this risk may be mitigated by the engagement of peer research associates. The small cross-sectional dataset in this study precluded causal analysis, and the bivariate analyses that were possible did not include confounder control. The analyses were limited by the variables collected in the study; a stronger measure of transition experience would have included subcategories (e.g. started hormone therapy, had breast augmentation) to quantitatively capture the broad range of trans WLWH's experiences. Despite the small size, this is the largest quantitative sample of trans WLWH in Canada. It provides important information regarding barriers to accessing care within a context of universal health care, and includes trans-specific factors. The qualitative component included those living in urban centres, and findings are limited to English-proficient trans WLWH who live in some of the best-resourced areas with regard to gender-affirming and HIV care. Future studies should explore concerns of rural and non-English-speaking trans WLWH.

In conclusion, in addition to increasing the gender affirmative care competency of HIV care settings, attention must be placed on increasing HIV competency and challenging HIV-related stigma in other settings where trans WLWH may need to access medical transition. Stigma intervention research may draw on systematic reviews describing HIV-related stigma reduction interventions for healthcare settings,⁶⁰ in addition to literature detailing physician-side barriers to providing care to trans patients.⁶¹ Providing comprehensive support that addresses the social determinants of health, including income and housing, may increase access to medical transition for trans WLWH. Ultimately, this may promote equitable access to gender-affirming care for all trans women, regardless of HIV status.

Conflicts of interest

The authors have no conflicts of interest to disclose.

Acknowledgements

The Canadian HIV Women's Sexual and Reproductive Health Cohort Study was funded by Canadian Institutes of Health Research (CIHR) Operating Grant (Grant no. MOP-111041), the CIHR Canadian HIV Trials Network (CTN 262), the Ontario HIV Treatment Network and the Academic Health Science Centres Alternative Funding Plans (Innovation Fund. Ashley

Lacombe-Duncan received funding for this substudy from a Social Science and Humanities Research Council doctoral fellowship. Mostafa Shokoohi is supported by an Ontario Trillium Scholarship. The authors acknowledge the participants of the Canadian HIV Women's Sexual and Reproductive Health Cohort Study: thank you for trusting us with your stories. The authors also acknowledge the administrative and recruitment support of Mina Kazemi, Angela Underhill, Rebecca Gormley, Karène Proulx-Boucher and the entire Peer Research Associate Team.

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