Primary Care for Transgender Individuals: A Review of the Literature Reflecting a Canadian Perspective

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Abstract
Literature related to transgender health in adults has focused on definitions, hormone therapy, and transgender-sensitive care provision. Further understanding is needed on the delivery of primary care for transgender adults. The aim of this review was to understand the primary-care needs and access to health care services for transgender adults in Canada. A state-of-the-art literature review was conducted. Thirteen research studies were included. There is limited literature on the delivery of primary care for transgender adults, particularly in Canada. Health care issues and access to care have been explored. However, there remains minimal Canadian content on primary-care delivery for transgender adults. Additional studies are needed to understand transgender primary-care needs in Canada. Further understanding can reduce the invisibility and disparities experienced by transgender individuals. With better understanding of transgender primary health care issues, primary-care practitioners can advocate for the health needs of their patients and improve care delivery.

Keywords
transgender persons, delivery of health care, primary health care, Canada

Introduction
The transgender community has gained increased visibility in society; however, it represents one of the most underserved populations in health care (Alegria, 2011; Bauer et al., 2009; Roberts & Fantz, 2014). Health care barriers experienced by transgender individuals include marginalization, discrimination, lack of practitioner experience and knowledge, a deficiency of services, and structural barriers (Alegria, 2011; Institute of Medicine, 2011; Snelgrove et al., 2012). The term transgender describes an individual whose self-identified gender identity or expression differs from that of their assigned sex at birth (Institute of Medicine, 2011; Reisner et al., 2016). This term is often used as an umbrella term to encompass this diverse group and includes those identifying as transgender, transitioned, or transsexual (Bauer et al., 2009). For this paper, the term transgender will be used to represent all of these diverse groups. It is crucial to note that not everyone self-identifies within a binary gender, such as those identifying as gender nonconforming or nonbinary. The health care experiences of those identifying as gender nonconforming or nonbinary may be different than those identifying as transgender; however, there is minimal research about their experiences in primary care. Therefore, this review will solely focus on those identifying as transgender. The experiences of transgender youth can also be different from the experience of transgender adults. This state-of-the-art literature review (M. Grant & Booth, 2009) will focus on exploring the delivery of primary-care services to transgender adults in Canada.

Estimates of the size of the transgender population vary throughout the literature. International population size data have ranged from 1 in 30,400 to 1 in 200,000 for transgender males and 1 in 11,900 to 1 in 45,000 for transgender females (Coleman et al., 2012). Canadian data on the population size of transgender individuals are lacking. Current census and population health surveys, such as the Canadian Community Health Survey, only collect gender data for two categories, male and female (Davidson, 2015; Statistics Canada, 2016), excluding transgender populations. The most recent estimate is approximately 200,000 transgender adults in Canada (Giblon & Bauer, 2017).

In Ontario, approximately half of the transgender population is living full-time in their felt gender. Compared to transgender males individuals, transgender females individuals are...
less likely to be living in their felt gender without medical treatment (Scheim & Bauer, 2015). This could be related to the increased levels of transphobia and discrimination experienced by transgender female individuals (Marcellin et al., 2013; Scheim & Bauer, 2015). It is estimated that only 23% of transgender Ontarians have socially and medically transitioned (Scheim & Bauer, 2015). Social transition refers to the cosmetic, social, and legal changes of transition such as changes to appearance and using preferred name. Medical transition can involve hormone therapy and/or surgical interventions.

Regardless of their gender, individuals have health-care needs and require primary care. Primary-care provides entry into the health care system with person-focused care over time and care for all (Starfield, 1998). Transgender individuals require access to health care for a range of issues. Health care needs within the transgender population outside of transitional support are similar to the general population in terms of illnesses and chronic disease (Roller et al., 2015). Chronic disease rates, such as those of diabetes, cancer, osteoporosis, and cardiovascular disease, are comparable with the cisgender population (Center for Excellence in Transgender Health, 2016). However, transgender individuals experience more short- and long-term adverse outcomes related to chronic disease compared to the general population, due to factors such as discrimination, personal reluctance to access care, and structural barriers to health care (Roller et al., 2015; Sperber et al., 2005; White et al., 2015; Williamson, 2010).

Transgender individuals also have unique health care needs such as access to hormone therapy and gender-affirmative surgery. The transgender-specific primary-care needs are largely related to medically supervised transition, providing access to and monitoring the administration and dosing of transgender hormones (Sanchez et al., 2009). The transgender population can experience barriers to accessing both routine-generalized primary care and transgender-specific care.

Existing literature highlights numerous barriers experienced by transgender individuals when accessing health care services. Transgender individuals have expressed a reluctance to disclose their gender identity when receiving medical care for fear of discrimination (Markwick, 2016; Mayer et al., 2008; Roberts & Fantz, 2014) and experiencing anxiety over the prospect of disclosing their gender identity due to potential negative consequences (Roberts & Fantz, 2014; Sperber et al., 2005). J. Grant et al. (2010) found that 28% of transgender patients had been verbally harassed and 2% had been physically assaulted while attempting to access care.

Another major barrier identified by individuals is gaining access to a practitioner who is knowledgeable about transgender health care (Cruz, 2014; Gardner & Safer, 2013; Heinz & MacFarlane, 2013; Roberts & Fantz, 2014; Sanchez et al., 2009). Minimal training and formal education is provided to health care practitioners, including nurses, nurse practitioners (NPs), and physicians, about transgender health-specific issues (Alegria, 2011; Roberts & Fantz, 2014). Lack of transgender-specific medical education has been identified by practitioners as a barrier for providing health care to this population (Snelgrove et al., 2012). This has often left transgender individuals feeling like they need to educate their primary-care practitioner on their health care needs (Bauer et al., 2009; Heinz & MacFarlane, 2013), further increasing the burden to accessing care for this population.

The purpose of this review is to synthesize the Canadian literature related to the health care needs and access to primary care in the transgender population, as well as to identify gaps in knowledge to inform future research. The review aims to answer the following question: What is the current state of knowledge regarding primary-care needs and access to health care services for transgender adults in Canada?

Methods

State-of-the-art reviews explore current issues, offering new viewpoints and identifying areas for further research (M. Grant & Booth, 2009). This review explored the adult transgender population and their health care needs, including access to primary care. The search strategy was developed with the assistance of a research librarian and included searching MEDLINE, CINAHL, Cochrane EBM Reviews, Proquest, PsycINFO, LGBT Life, Sociology Database, Social Science Abstracts, and Social Work Abstracts.

Databases were searched using the following search terms: transgender OR trans OR transgendered person OR transsexualism; health OR health care OR health care OR primary health; access OR barriers OR service access OR service use. An additional review of reference lists of included articles supplemented the search. The following inclusion and exclusion criteria were used in selecting the documents to be included in the review. Inclusion criteria included papers that (a) focus on the Canadian population, and/or represent a Canadian perspective; (b) address primary-care issues and/or access to health care; (c) target the transgender adult population in Canada; and (d) were published in English between January 2000 and July 2018. Exclusion criteria include a focus on transgender adolescents or children. Both primary research and conceptual literature was included. Conceptual literature includes gray literature, government documents and reports, clinical practice guidelines, and organization documents.

Results

The completed search strategy yielded 1,216 articles. Title and abstract reviews were completed. After removal of duplicates and articles which did not meet the search criteria, 13 primary research studies were included. Primary research studies included 10 quantitative studies (Bauer et al., 2012, 2014; Bauer, Scheim, et al., 2015; Bauer, Zong, et al., 2015; Gahagan & Subirana-Malaret, 2018; Giblon & Bauer, 2017; Heinz & MacFarlane, 2013; Rotondi et al., 2013; Scheim &
Bauer, 2015; Schein et al., 2017) and three qualitative studies (Bauer et al., 2009; Ross et al., 2016; Vermeir et al., 2018). Research purposes of the primary studies were grouped together to explore common themes, which included exploring transgender health care needs (Bauer et al., 2012; Bauer, Schein, et al., 2015; Ross et al., 2016; Schein & Bauer, 2015; Vermeir et al., 2018), and the access to and barriers to health care (Bauer et al., 2009, 2014; Bauer, Schein, et al., 2015; Bauer, Zong, et al., 2015; Heinz & MacFarlane, 2013; Rotondi et al., 2013; Schein et al., 2017; Vermeir et al., 2018). See Table A1 for characteristics of each research study and Table A2 for the conceptual articles.

Primary-Care Needs of Transgender Individuals

Transgender individuals require health screening, preventive care, risk assessments, and periodic exams. However, gender-affirming health care related to medical transition, such as hormone therapy and surgeries has been identified as a priority in the transgender population (Rainbow Health Ontario, 2015). Not all transgender individuals need or want to undergo medical transition; however, those that do require access to primary-care services for gender-affirming care (Schein et al., 2017). Access to gender-affirming medical care can improve the psychological functioning of the individual (Ross et al., 2016). In the province of Ontario it is estimated that 42% of transgender individuals are currently taking hormone therapy (Schein & Bauer, 2015), with 67% receiving this treatment from their primary-care practitioner (Rotondi et al., 2013). Furthermore, an estimated 26% received hormones from nonmedical sources, including friends, buying on the street or from online pharmacies (Rotondi et al., 2013). Surgical transition through transition-related surgeries is also a key aspect of the transition process for some transgender individuals. Surgeries, including orchietomy and vaginoplasty for transgender females, and mastectomy, hysterectomy, metoidioplasty, or phalloplasty for transgender males, are often desired by transgender individuals (Rotondi et al., 2013). Schein and Bauer (2015) found that in their sample of 433 transgender individuals living in Ontario, 24% of transgender females and 30% of transgender males have had some form of transition-related surgery.

Health care issues concerning transgender individuals in Canada solely focused on mental health and human immunodeficiency virus (HIV). Studies have shown that HIV prevalence is higher in transgender individuals in Canada compared to cisgender individuals. The TransPULSE study in Ontario (N = 433), the only large, probability-based data set on transgender health and health care in Canada, found an HIV prevalence of 0.6% in transgender males and 3.0% in transgender females, higher than the national average (Bauer et al., 2012).

The TransPULSE study demonstrated an increased risk of suicidality within the transgender population in Ontario compared to the general Canadian average. The study found that 35% of transgender participants seriously considered suicide, and 11% attempted suicide in the previous year. Canadian statistics showed 3.7% of the Canadian transgender population seriously considering suicide and 0.6% attempting suicide in the same year (Bauer, Schein, et al., 2015). In a Nova Scotia study including 13 transgender adults participants expressed issues with body image, self-esteem, coping, depression, and anxiety (Gahagan & Subirana-Malaret, 2018). Social isolation was identified as an issue by transgender individuals from Vancouver Island, British Columbia, with 41% of the participants (n = 54) feeling isolated most or all of the time. In addition, feelings of social isolation increased to 67% in individuals who had yet to start medical transition, highlighting an increased vulnerability in this transgender population before accessing health care services (Heinz & MacFarlane, 2013).

Access to Primary Care

Access to health care has been identified as a top personal need for transgender individuals (Heinz & MacFarlane, 2013; Schein et al., 2017). It is estimated that 83% of transgender individuals in Ontario have a family physician compared to 90% of the general Canadian population (Bauer, Zong, et al., 2015). Schein et al. (2017) found that transgender females being Indigenous and/or of color had a higher likelihood of not having a primary-care provider. In Canada, transgender health care is provided in primary-care settings; however, there are a limited number of primary-care practitioners providing this care, and patients are often left on waiting lists or travel great distances to receive health care (Heinz & MacFarlane, 2013; Rotondi et al., 2013). Heinz and MacFarlane (2013) found that 72% of transgender participants had to travel away from their area of residence to access transgender-specific health care.

The Ontario TransPULSE study found that transgender individuals avoid primary and emergency care due to the perceived risk of discrimination and stigma in these health care settings (Bauer et al., 2014). In the study by Gahagan and Subirana-Malaret (2018), more than half the transgender participants reported having at least one negative health care experience. Unmet health care needs and poor quality of health care was reported by one-third of participants in the TransPULSE study (Giblon & Bauer, 2017). Furthermore, 21% of transgender individuals in the study avoided the emergency department when they needed care due to their gender expression (Bauer et al., 2014). When individuals were able to get transgender-specific health care appointments, they often experienced long wait times to obtain initial and subsequent appointments (Ross et al., 2016; Rotondi et al., 2013; Vermeir et al., 2018).

Canada’s universal health care system provides coverage to all Canadian citizens. Health care delivery and health insurance is mandated provincially (Government of Canada, 2017). Each province and territory control access and coverage for
transgender health care services, medications and surgeries. There continues to be significant differences in health care access and services depending on where individuals live in Canada. Access to primary-care services and coverage for hormone therapy is currently covered under all provincial health insurance plans. Yukon is the only territory in Canada that provides this coverage on the health insurance plan. While appointments to see primary-care providers is covered in the Northwest Territories and Nunavut, the assessment for hormone therapy and some medications are not covered (Canadian Professional Association for Transgender Health, 2018). As an example, the Ontario Health Insurance Program (OHIP) covers 100% of medical visits and diagnostic testing for residents of Ontario, substantially reducing some costs associated with accessing health care. Prescription medication, such as hormone therapy, is covered for individuals with private insurance or those receiving government benefits (Rotondi et al., 2013). Effective January 1, 2018, OHIP+ was introduced to provide drug coverage, including transgender hormones, to Ontario residents aged 24 years and younger (Ministry of Health and Long Term Care, 2018).

Coverage for transition-related surgery, including orchitectomy, vaginoplasty, mastectomy, hysterectomy, metoidioplasty and phalloplasty, is determined by each jurisdiction. Currently all provinces and the Yukon Territory provide coverage for most transition-related surgeries. For residents in the Northwest Territories coverage for surgeries is assessed on a case-by-case bases, and no coverage is available in Nunavut (Canadian Professional Association for Transgender Health, 2018). Requirements for surgery coverage is mandated by each jurisdiction and involves special application and approval from the Ministry of Health. Currently in Ontario, applications and referrals for mastectomy and breast augmentation can be done by a physician or NP trained in the provision of transgender health care with multiple surgical centers located in Ontario. For genital surgery, patients require letters of support from two health care practitioner trained in transgender health care, one from a physician or NP, the second from another physician or NP, registered nurse, social worker with a Master’s degree or psychologist (Ministry of Health and Long Term Care, 2016). However, the approval process is long with many criteria which must be met prior to approval, including a minimum of 12-months continuous hormone therapy and often a referral to another practitioner to obtain the second assessment. Once approved, there is an additional wait list for surgery as many facilities do not offer these surgical procedures (Rotondi et al., 2013). Until 2019, there was only one facility in Canada performing genital transition-related surgery and therefore patients were referred to Quebec, the USA or overseas (Ministry of Health and Long Term Care, 2016), contributing to the wait time for surgical intervention. Currently there is a surgical? center in Ontario with plans to open another in British Columbia.

As previously mentioned, hormone therapy is a priority for the transgender population (Rainbow Health Ontario, 2015; Sanchez et al., 2009). Rotondi et al. (2013) found that in their sample of 433 transgender individuals living in Ontario, a quarter of the sample had obtained and used hormones from a nonmedical source, such as a friend or purchased on the street or on the internet. Risks of improper dosing, organ dysfunction, or infection have been reported when transgender individuals engage in “do-it-yourself” surgeries (Rotondi et al., 2013).

**Barriers to Transgender Health care**

A major barrier identified by individuals is gaining access to a practitioner who is knowledgeable about transgender health care (Vermeir et al., 2018). A Canadian study by Heinz and MacFarlane (2013) found that 63% of respondents had to provide education to their doctor about transgender health care, and 11% said their doctor was not at all knowledgeable. Providers who are knowledgeable about transgender health issues have been identified as a key component to having a positive health care encounter (Ross et al., 2016). Transgender individuals have acknowledged the need to teach their health care practitioners about transgender-specific health issues due to the practitioners lack of knowledge (Bauer et al., 2009, 2014; Heinz & MacFarlane, 2013). It has also been reported that transgender individuals have been denied health care, or have had practitioners refuse to examine specific body parts (Bauer, Scheim, et al., 2015).

Organizational barriers were also identified as a major barrier for transgender individuals to access health care services. Organizational barriers include lack of transgender-friendly spaces and gender-neutral washrooms, binary gender documentation in electronic medical records (EMR), and inappropriate reference ranges for laboratory systems (Bauer et al., 2009; Roberts & Fantz, 2014; Vermeir et al., 2018). Bauer et al. (2009) identify the lack of policies to accommodate transgender individuals as evidence of “institutional erasure” in the Ontario health care system. Use of EMRs in health care is vital; however, they can be a critical barrier for transgender individuals accessing health care. Transgender individuals may have preferred names, gender, or pronouns which are different than those listed on their government documents. The binary nature of EMRs, health intake forms, and sex designation on health-related documents can affect patients’ experiences with the health care system (Bauer et al., 2009). Sex designation on health documents is a critical barrier as it can affect billing and eligibility for sex-specific procedures, such as a prostate-related blood work for a transgender female. In an attempt to remove this barrier in 2016, the Ontario government allowed residents the option to make their government issued identification cards, including health cards gender-neutral (Ministry of Government and Community Services, 2016). This was followed in 2018 by Alberta (Government of Alberta, 2019) and British Columbia (Government of British Columbia, 2018).
In addition, since 2017, all Canadians are able to have gender-neutral passports (Government of Canada, 2019).

**Discussion**

Transgender health literature has historically focused on definitions, the essentials of hormone therapy, medical transitions, and transgender-sensitive care provision. There is an identified lack of research on the primary care of transgender individuals in Canada to inform primary-care delivery. Three main themes dominated the primary research: primary-care needs of transgender individuals, access to primary care, and barriers to transgender health care.

As demonstrated in this review, Canadian literature focusing on the primary care needs for transgender individuals outside hormone therapy and access to surgeries is lacking. While there is Canadian data about higher rates of HIV and risk of suicide, no primary studies were found exploring other mental health issues, preventive care or chronic care issues. Mention of any of these issues in Canadian literature focuses of data from international sources to describe the rates within transgender individuals. Studies from the United States have identified a higher prevalence of depression, anxiety, substance abuse, and self-harm in transgender individuals compared to cisgender individuals (Institute of Medicine, 2011; Roller et al., 2015). Stigma experienced by the transgender population is thought to be a main factor for these issues (Lee, 2000). A large, Australian cross-sectional study (N = 946) found that 57% of transgender individuals had been diagnosed with depression and 39% with anxiety (Hyde et al., 2014). Further Canadian studies are needed to examine the health care issues affecting transgender individuals such as access to preventive care and chronic diseases. Understanding rates of cancer screening or chronic disease in Canadian transgender individuals is needed to help inform future health care delivery in the country.

A key barrier to health care services identified by transgender individuals in this review was the lack of practitioners knowledgeable in transgender health care issues. A Canadian study by Beagan et al. (2013) found physician and nurses felt uncertain about transgender care and wanted more specialized knowledge. Both Canadian and international literature highlights that minimal transgender-specific content is taught in medicine and nursing. Traditionally, the formal education of nurses and physicians in transgender health care is often provided under the larger context of lesbian, gay, bisexual and transgender (LGBT) health (Obedin-Maliver et al., 2011). However, this has the potential to further reduce the transgender-specific content when including the topic of gender identity with sexual orientation, which are very different topics.

White et al. (2015) conducted a survey to assess the LGBT-related content in medical school curricula in Canada and the United States. The authors found that medical schools teach a median of 5 hours of LGBT content in their required curricula. Most students felt prepared to provide generalized sexual health care to the LGBT population, but unprepared to address transgender health care issues (White et al., 2015). Only one-third of medical schools in Canada and the United States provided education on transgender hormones and/or surgical transition (Obedin-Maliver et al., 2011). A cross-sectional study of 365 Canadian medical students found that 24% thought transgender health was proficiently taught and only 6% felt they had sufficient knowledge to care for transgender individuals (Chan et al., 2016). Moll et al. (2014) found only 26% of emergency medicine residency programs in the United States included a specific LGBT lecture, accounting for an average of 45 minutes on LGBT health.

While medical curricula devoted limited time to LGBT health care education, nursing curricula is also lacking. A study of baccalaureate nursing education in the United States found that the median time devoted to LGBT content was 2.12 hours (Lim et al., 2015). Rondahl (2009) found that only 10% of nursing students in Sweden had a basic level of knowledge regarding the LGBT population. This lack of educational preparedness suggests a substantial lack of awareness of transgender health issues and identifies a need in medical and nursing education. Current curricula do not provide the breadth and depth of knowledge needed to properly provide care to transgender individuals. We found no studies that identified the amount of time this topic is covered in NP curricula.

Lack of educational training on transgender health care has also been identified in social work. A study by Craig et al. (2017) found that social work educational programs in Canada and the United States lacked LGBT content across the curriculum and topics that were addressed lacked depth. McInroy et al. (2014) found a lack of curriculum content specific to gender minority populations in Canadian social work programs. Confusion was also noted between sexual and gender minority, suggesting a lack of understanding of the terminology and difference between the two (McInroy et al., 2014).

There is also an insufficient number of practitioners with additional training to meet the needs of this population (Mayer et al., 2008). Practitioners often refer transgender individuals to other practitioners and specialists, such as endocrinologists, whom they assume may better address transgender health concerns. This approach can be interpreted by transgender individuals as an unwillingness to provide them care (Bauer et al., 2009). In an attempt to address gaps in practitioner knowledge in Canada organizations such as the Canadian Professional Association for Transgender Health, TransCare BC, and Rainbow Health Ontario have been providing conferences and workshops specifically around the provision of primary care for transgender individuals. Canadian-specific primary-care guidelines, from Ontario and British Columbia, are readily available online for practitioners to support the delivery of care to this vulnerable population (Dahl et al., 2015; Rainbow Health Ontario,
In a recent study from Ontario, primary-care providers delivering transgender care identified the Ontario guidelines from Rainbow Health Ontario as their key resources in practice (Ziegler et al., 2019). Another example of online continuing education is the Trans Health Connection, which was funded by the Ontario Ministry of Health and Long-term care. This program provides transgender-related cultural competence and clinical care training for health care providers (Giblon & Bauer, 2017).

**Limitations of This Review**

Most of the Canadian literature relating to transgender health care is from the Ontario TransPULSE study and may not be generalizable to the broader Canadian context due to provincial differences in health care services, such as health care coverage and access to transgender surgeries. Exploration of transgender health care from other provincial perspectives is recommended.

**Conclusion**

This review points to the need for more research to address knowledge gaps in transgender health care. There is a need to build primary-care practitioners’ knowledge and clinical competence in providing person-centered primary care for this population. Including transgender health issues in medical, nursing, and allied health curricula will help address practitioner knowledge gaps related to supporting patients through their transition process. In addition, more educational opportunities for practitioners, such as workshops, online learning modules and conferences, will aid in developing and increasing knowledge for providing care to this population.

This review also identifies that further research is needed to understand how primary care is effectively implemented and delivered to this marginalized population in Canada. Further primary studies are needed from both patient and organizational perspectives to provide an understanding of transgender primary-care needs and issues related to access. It is important to better understand transgender health care needs which may help to reduce the invisibility and disparities experienced by transgender individuals when accessing primary-care services. Transgender individuals continue to experience health care barriers, including access to competent, knowledgeable practitioners, medications, and surgeries. With an increased understanding and awareness of transgender health issues, and primary-care access barriers, primary-care practitioners can advocate for the health needs of their patients, eliminate current health care barriers, and reduce the invisibility and disparities experienced by transgender individuals when accessing primary care.

**Appendix**

Table A1. Characteristics of the Primary Studies.

| Study | Purpose of study | Sample | Design and methods | General findings |
|-------|------------------|--------|--------------------|-----------------|
| Bauer et al. (2009) | To understand how erasure impacts health care for transgender people | 85 Transgender patients in Ontario | Descriptive—Focus Groups | Key concerns about health include barriers to access trans-inclusive care, lack of relevant information, social service barriers, mental health and challenges finding help |
| Bauer et al. (2012) | To describe self-reported HIV prevalence and HIV-related sexual risk among transgender individuals | 433 transgender individuals from Ontario | Descriptive using cross-sectional design Instrument—Trans PULSE survey | Self-reported HIV prevalence was 10 times the estimate baseline prevalence for Ontario |
| Bauer et al. (2014) | To describe transgender patient’s need for and ability to obtain emergency department (ED) care and to describe ED avoidance by transgender patients | 433 transgender individuals from Ontario | Descriptive using cross-sectional design Instrument—Trans PULSE survey | -21% of transgender individuals reported avoiding ED care |
| Bauer, Zong, et al. (2015) | To examine factors associated with patient discomfort in discussing trans health with a family physician | 433 transgender individuals from Ontario | Descriptive using cross-sectional design Instrument—Trans PULSE survey | -52% experienced trans-specific negative ED experiences |
| Study                        | Purpose of study                                                                 | Sample                                           | Design and methods                                      | General findings                                                                 |
|------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------|
| Bauer, Scheim, et al. (2015) | To identify intervenable factors associated with suicide risk reduction for transgender individuals | 433 transgender individuals from Ontario         | Descriptive using cross-sectional design Instrument—TransPULSE survey | -31% had seriously considered and 11% had attempted suicide in the past year  
                             |                                                                                   |                                                   |                                                                                       | -Reduced social isolation and increased access to medical transition reduced risk      |
| Gahagan and Subirana-Malare (2018) | To explore the main health concerns and perceived barriers to primary health care for the LGBTQ community | 16 transgender individuals from Nova Scotia (overall sample n=283— included those identifying as lesbian, gay, bisexual and queer) | Quantitative study Instrument—online, close-ended, anonymous survey | - More than 50% of transgender participants experienced at least 1 negative experience accessing health care  
                             |                                                                                   |                                                   |                                                                                       | -Transgender individuals were concerned with accessing care, body image and self esteem |
| Giblon and Bauer (2017)       | To examine health care inequalities between transgender and cisgender individuals living in Ontario | TransPULSE (n = 433) and Canadian Community Health Survey (n = 39,980) | Probability study Instrument—TransPULSE Survey and Canadian Community Health Survey | -33% of trans individuals reported unmet health care needs  
                             |                                                                                   |                                                   |                                                                                       | -Availability of services were rated as poor or fair                                |
| Heinz and MacFarlane (2013)  | To identify the health and social needs of trans people on Vancouver Island       | 54 transgender individuals from British Columbia | Descriptive using cross-sectional design Instrument—Vancouver Island Survey (adapted from TransPULSE survey) | -Top needs of trans people include health care, social support, and public acceptance  
                             |                                                                                   |                                                   |                                                                                       | -Health care included quick access to surgeries and local access to trans-specific medical expertise |
| Ross et al. (2016)           | To explore the positive health care experiences of transgender individuals and those who were involved in creating a positive health care experience | 10 participants made up of transgender individuals and health care providers | Qualitative case study methodology—semi structured interviews | -External supports and formal networking were key factors for positive health care experiences  
                             |                                                                                   |                                                   |                                                                                       | -Self navigation by transgender individuals was important to obtaining positive health care experiences |
| Rotondi et al. (2013)        | To examine the extent of nonprescribed hormone use and self-performed surgeries among transgender people in Ontario | 402 transgender individuals from Ontario         | Descriptive using cross-sectional design Instrument—TransPULSE survey | -Estimated 43% of trans people in Ontario are using hormones, a quarter of which had received them from a nonprescribed source  
                             |                                                                                   |                                                   |                                                                                       | -Five individuals had performed or attempted to perform surgical procedures on themselves  
                             |                                                                                   |                                                   |                                                                                       | -30% of transgender individuals had not taken any steps toward gender transition  
                             |                                                                                   |                                                   |                                                                                       | -42% were using hormone therapy  
                             |                                                                                   |                                                   |                                                                                       | -15% of transgender females had vaginoplasty and 0.4% of transgender males had phalloplasty  

(continued)
Table A2. Focus of Conceptual Literature.

| Author (date)               | Purpose/focus of the paper                                                                 | Sample                  | Design and methods                          | General findings                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------|----------------------------------------------------------------------------------|
| Collier (2015)              | Editorial                                                                                 |                         |                                             |                                                                                  |
| Dahl et al. (2015)          | Clinical practice guideline                                                               |                         |                                             |                                                                                  |
| Rainbow Health Ontario (2015) | Clinical practice guideline                                                               |                         |                                             |                                                                                  |
| Roberts & Fantz (2014)      | Discussion paper                                                                          |                         |                                             |                                                                                  |
| TransCare BC (2019)         | Clinical practice guideline                                                               |                         |                                             |                                                                                  |

Table A1. (continued)

| Study                        | Purpose of study                                                                 | Sample                  | Design and methods                          | General findings                                                                 |
|------------------------------|--------------------------------------------------------------------------------|-------------------------|---------------------------------------------|----------------------------------------------------------------------------------|
| Scheim et al. (2017)         | To understand the prevalence of and factors associated with no having a family doctor among trans people | 433 transgender individuals from Ontario | Descriptive using cross-sectional design Instrument-TransPULSE survey | -17.2% of transgender Ontarians did not have a regular family physician         |
| Vermeir et al. (2018)        | To investigate the physical environmental, social and interpersonal barriers when accessing primary and emergency care | 8 transgender adults in Nova Scotia | Qualitative explorative study—semistructured interviews | -Participants encounter subtle discrimination most frequently                     |

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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