

AWMF Guidelines on gender incongruence/dysphoria, section 2.1 (Frequency in adults and minors, pp. 8–11) compared with WPATH’s Standards of Care, Version 8 (pp. 23–26)

- **Green highlight:** similar/same text (in translation) as SOC8, with citation
- **Yellow highlight:** similar/same text (in translation) as SOC8, without citation
- **Blue highlight:** all references
- **Red highlight:** error in Guidelines; corresponding red in WPATH is correct

This literature review from the Guidelines follows in its entirety the same order as SOC8. The summaries of every referenced study appear to be taken from SOC8, rather than from an independent review of the studies themselves.

- Every single cited reference in the Guidelines is identical to the corresponding text in SOC8 and is discussed in the same order as SOC8.
- At least one reference cited in the Guidelines' text (e.g., Adams et al., 2017) is missing from their bibliography, further suggesting the in-text references were taken from SOC8.
- Alongside reproducing SOC8's review work, its final paragraph cites the same statistics WPATH developed as part of their overall analysis, without attribution.

AWMF Guidelines, pp. 8–11 (complete text, in translation)	WPATH SOC8, pp. 23–26 (selected text, in original order)
<p>Recent reviews synthesize the available evidence (Arcelus et al., 2015; Collin et al., 2016; Goodman et al., 2019; Meier & Labuski, 2013; Zhang et al., 2020). When it comes to epidemiological data pertaining to the TGD population, it is best to avoid the terms incidence and prevalence if the data do not exclusively refer to medical diagnoses or treatments, but to self-reports of respondents. This is also to preclude the pathologization of gender-nonconforming individuals (Adams et al., 2017; Bouman et al., 2017).</p>	<p>Since then, the literature on this topic has expanded considerably as evidenced by a number of recent reviews that have sought to synthesize the available evidence (Arcelus et al., 2015; Collin et al., 2016; Goodman et al., 2019; Meier & Labuski, 2013; Zhang et al., 2020). In reviewing epidemiologic data pertaining to the TGD population, it may be best to avoid the terms “incidence” and “prevalence.” Avoiding these and similar terms may preclude inappropriate pathologizing of TGD people (Adams et al., 2017; Bouman et al., 2017).</p>

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<p>Instead, the Standards of Care (Coleman et al., 2022) recommend using the terms number and proportion to signify the absolute and relative size of the so-called TGD population. When evaluating individual study results, it is important to pay consideration to the methodology of the survey, in particular to the respective access to respondents and the chosen case definitions. For example, frequency data diverge considerably depending on whether the data refer to individuals who have sought medical treatment in the health care system for a diagnosis corresponding to a gender incongruence or gender dysphoria (Collin et al., 2016; Meier & Labuski, 2013) or on individuals who have indicated a non-conforming gender identity in a population-based survey. Such population-based surveys are based on a broader definition of self-reported gender identities and therefore yield significantly higher case numbers.</p>	<p>For all the above reasons, we recommend using the terms “number” and “proportion” to signify the absolute and the relative size of the TGD population. Perhaps the most important consideration in reviewing this literature is the variable definition applied to the TGD population (Collin et al., 2016; Meier & Labuski, 2013). In clinic-based studies, the data on TGD people are typically limited to individuals who received transgender-related diagnoses or counseling or those who requested or underwent gender-affirming therapy, whereas survey-based research typically relies on a broader, more inclusive definition based on self-reported gender identities.</p>
<p>In the majority of the studies published more than a decade ago, the number of patients treated at a specific clinical center was determined and extrapolated to an approximated population size of the clinic's catchment area, which may have led to a significant underestimation of the frequency. For these reasons, only studies published since 2009 and whose methodology clearly defines TGD status and an well-defined reference population were considered in the Standards of Care study overview (Coleman et al., 2022). These are subdivided into studies reporting the proportion of gender nonconforming people in the context of healthcare service use; studies based on population-based surveys with predominantly adult participants; and studies based on surveys of adolescents in schools.</p>	<p>With these considerations in mind, it is advisable to focus specifically on recent (published within the last decade) peer-reviewed studies that utilized sound methodology in identifying TGD people within a well-defined sampling frame. For all of the above reasons, the present chapter is focused on studies that met the following inclusion criteria 1) appeared in press in 2009 or later; 2) used a clear definition of TGD status; 3) calculated proportions of TGD people based on a well-defined population denominator; and 4) were peer-reviewed. These types of studies can provide more accurate contemporary estimates.</p> <p>The available studies can be assigned into three groups 1) those that reported proportions of TGD people among individuals enrolled in large health care systems; 2) those that presented results from population surveys of predominantly adult participants; and 3) those that were based on surveys of youth conducted in schools.</p>

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<p>A total of six US studies evaluated data from the Veterans Health Affairs System, a health insurance system that provides care to over 9 million people. Based on claims data and diagnostic codes, the proportion of transgender individuals in the total number of people insured by this system ranged from 0.02% to 0.08% (Blosnich et al., 2013; Dragon et al., 2017; Ewald et al., 2019; Jasuja et al., 2020; Kauth et al., 2014; Quinn et al., 2017). An important limitation of these studies was that people aged 65 or older tended to be overrepresented in the reference population.</p>	<p>Among studies that estimated the size of the TGD population enrolled in large health care systems, all were conducted in the US, and all relied on information obtained from electronic health records. Four of those health system-based studies relied exclusively on diagnostic codes to ascertain the TGD population; two studies (Blosnich et al., 2013; Kauth et al., 2014) used data from the Veterans Health Affairs system, which provides care to over 9 million people, and two studies (Dragon et al., 2017; Ewald et al., 2019) used claims data from Medicare, the federal health insurance program that primarily covers people 65 years of age or older.</p> <p>[...]</p> <p>Taken together, these data indicate among health system-based studies that relied on diagnostic codes or other evidence documented in the medical records (Blosnich et al., 2013; Dragon et al., 2017; Ewald et al., 2019; Kauth et al., 2014; Quinn et al., 2017), the proportions of TGD people reported in recent years (2011–2016) ranged from 0.02% to 0.08%.</p>
<p>In contrast, population-representative studies based on self-reported transgender status produced much higher estimates: Two American studies used the Behavioral Risk Factor Surveillance Study (BRFSS), an annual telephone survey conducted in all 50 US states (Conron et al., 2012; Crissman et al., 2017). Both studies consistently report, based on different annual surveys, that approximately 0.5% of participants aged 18 and older responded “yes” to the question “Do you consider yourself transgender?”</p>	<p>In contrast to results from the health system-based studies, findings from surveys that relied on self-reported TGD status produced much higher estimates. Two US studies took advantage of the Behavioral Risk Factor Surveillance Study (BRFSS), which is an annual telephone survey conducted in all 50 states and US territories (Conron et al., 2012; Crissman et al., 2017). The first study used data from the 2007–2009 BRFSS cycles in the state of Massachusetts, and the second study used the 2014 BRFSS data from 19 states and the territory of Guam. Both studies reported that approximately 0.5% of adult participants (at least 18 years of age) responded “Yes” to the question “Do you consider yourself to be transgender?”</p>

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<p>In an internet-based survey administered to a representative sample of the Dutch population aged 15 to 70 years, 1.1% of persons assigned male at birth and 0.8% of persons assigned female at birth indicated that they identified more with the opposite sex (Kuyper & Wijzen, 2014).</p>	<p>An internet-based survey administered to a sample of the Dutch population 15–70 years of age (Kuyper & Wijzen, 2014) asked participants to score the following two questions using a 5-point Likert scale: “Could you indicate to which degree you psychologically experience yourself as a man?” and “Could you indicate to which degree you psychologically experience yourself as a woman?” The respondents were considered “gender ambivalent” if they gave the same score to both statements and “gender incongruent” when they reported a lower score for their sex assigned at birth than for their gender identity. The proportions of participants reporting incongruent and ambivalent gender identity were 1.1% and 4.6%, respectively, for persons who were assigned male at birth (AMAB), and 0.8% and 3.2%, respectively, for persons assigned female at birth (AFAB).</p>
<p>In a similarly designed study in Belgium, using a sample drawn from the country's population register, the proportion of individuals who self-identified as gender nonconforming was 0.7% for those assigned male at birth and 0.6% for those assigned female at birth (Van Caenegem et al., 2015).</p>	<p>A similarly designed study estimated the proportion of TGD residents in the Flanders region of Belgium using a sample drawn from the country's National Register (Van Caenegem, Wierckx et al., 2015). Participants were asked to score the following statements: “I feel like a woman” and “I feel like a man” on a 5-point Likert scale. Using the same definitions applied in the Dutch study (Kuyper & Wijzen, 2014), the proportion of gender incongruent individuals was 0.7% for AMAB people and 0.6% for AFAB people. The corresponding estimates for gender ambivalence among AMAB and AFAB people were 2.2% and 1.9%, respectively.</p>

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<p>In a study of approximately 50,000 adult residents of the Stockholm region, selected to be representative of the population, the number of gender-nonconforming individuals was determined asking differentiated questions about their perceived gender identity, including their desire for body-modifying medical treatments (Åhs et al., 2018). A “strong desire” for hormone therapy or sex reassignment surgery was reported by 0.2% of respondents of both natal genders. In contrast, questions about gender-incongruent identity experience and the social desire for transition (“I feel like someone of the opposite sex” and “I want to live and be treated as someone of the opposite sex”) were answered in the affirmative by 0.8% to 1.2% of respondents. This is to be seen as an indication that estimated proportional frequencies of persons with transgender or non-binary self-description cannot be equated with estimated frequencies of persons desiring body-modifying medical interventions.</p>	<p>A more recent population-based study evaluated the proportion of TGD people among approximately 50,000 adult residents of Stockholm County, Sweden (Åhs et al., 2018). The numerator was determined by asking participants the following question: “I would like hormones or surgery to be more like someone of a different sex.” Two additional items were designed to identify individuals experiencing gender incongruence: “I feel like someone of a different sex” and “I would like to live as or be treated as someone of a different sex.” The need for either hormone therapy or gender-affirming surgery was reported by 0.5% of participants. Individuals who expressed feeling like someone of a different sex and those who wanted to live as or be treated as a person of another sex constituted 2.3% and 2.8% of the total sample, respectively.</p>
<p>A representative survey of 6,000 adults in Brazil (Spizzirri et al., 2021) determined that 1.9% of the sample identified as gender non-conforming, with 0.7% identifying as transgender and 1.2% identifying as non-binary.</p>	<p>Population-based data outside of North America and Western Europe are less common. One recent study offers valuable data from a large representative survey of 6,000 adults in Brazil (Spizzirri et al., 2021). Gender identity of participants was assessed based on the following three questions 1) “Which of the following options best describes how you currently feel?” (Options: I feel I am a man, I feel I am a woman, and I feel I am neither a man nor a woman); 2) “What is the sex on your birth certificate?” (Options: male, female, and undetermined); and 3) “Which of these situations do you most closely relate to?” (Options: I was born male, but I have felt female since childhood; I was born female, but I have felt male since childhood; I was born male, and I feel comfortable with my body; I was born female, and I feel comfortable with my body). Based on the responses to these three questions, the authors determined 1.9% of the survey respondents were TGD (0.7% defined as transgender, and 1.2% defined as nonbinary).</p>

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<p>There are several population-based school surveys on the proportion of gender nonconforming persons under 19 years of age. In a national cross-sectional survey of high schools in New Zealand (n = 8,000), 1.2% of respondents identified as transgender or gender-diverse, and a further 2.5% reported that they were not sure (Clark et al., 2014). In a survey of 14- to 18-year-old students in the US state of Minnesota (N = 81,000), 2.7% of respondents reported being transgender or gender-diverse (Eisenberg et al., 2017). In the 2017 Youth Risk Behavior Survey (YRBS), which is conducted nationwide in the United States biennially among high school students in grades 9-12 (13-19 years of age), 1.8% of the nearly 120,000 participants across 19 urban areas responded affirmatively to the statement “Yes, I am transgender” and 1.6% agreed with the statement “I am not sure if I am transgender” (Johns et al., 2019).</p>	<p>The literature on the population proportions of TGD youth (persons under 19 years of age) includes several survey studies conducted in schools. A 2012 national cross-sectional survey in New Zealand collected information on TGD identity among high school students (Clark et al., 2014). Among over 8,000 survey participants, 1.2% self-identified as TGD and 2.5% reported they were not sure. Another study of schoolchildren was based on a 2016 survey of 9th and 11th grade students (ages 14–18 years) in the US state of Minnesota (Eisenberg et al., 2017). Of the nearly 81,000 survey respondents, 2.7% reported being TGD. A more recent study (Johns et al., 2019) presented results of the Youth Risk Behavior Survey (YRBS), which is conducted biennially among local, state, and nationally representative samples of US high school students in grades 9–12 (approximate age range 13–19 years). The 2017 YRBS cycle was carried out in 10 states and 9 large urban areas and included the following sequence: “Some people describe themselves as transgender when their sex at birth does not match the way they think or feel about their gender. Are you transgender?” Among nearly 120,000 participants across the 19 sites, 1.8% responded “Yes, I am transgender,” and 1.6% responded “I am not sure if I am transgender.”</p>
<p>Only one study examined the proportion of children who self-identified as transgender in a younger age group. In the 2011 survey of N = 2,700 students in grades 6-8 (ages 11-13) at San Francisco public middle schools (Shields et al., 2013), 1.2% of the respondents identified themselves as transgender when asked, “What is your gender?”, with the possible responses being “female, male or transgender”.</p>	<p>Only one study examined the proportion of self-identified TGD children in a younger age group. Shields et al. analyzed the data from a 2011 survey of 2,700 students in grades 6–8 (age range 11–13 years) across 22 San Francisco public middle schools (Shields et al., 2013). Thirty-three children self-identified as TGD based on the question “What is your gender?” where the possible responses were “female, male, or transgender.” The resulting proportion of transgender survey respondents was 1.3%.</p>

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<p>The data presented here indicate that studies in which transgender identity was ascertained based on self-report yielded a prevalence of between 0.3% and 0.5% among adults and from 1.2% to 2.7% among adolescents. When the definition was expanded to include a broader spectrum of gender non-conforming manifestations, such as gender uncertainty or gender ambivalence, the corresponding proportions were higher: 0.5% to 4.5% among adults and 2.5% to 8.4% among adolescents. This indicates a broad and fluid spectrum of non-conforming or “queer” self-descriptions in adolescence, which should not be equated with the medical diagnosis of GI, but rather requires internal differentiation.</p>	<p>When the surveys specifically inquired about “transgender” identity, the estimates ranged from 0.3% to 0.5% among adults and from 1.2% to 2.7% in children and adolescents. When the definition was expanded to include broader manifestations of gender diversity, such as gender incongruence or gender ambivalence, the corresponding proportions were higher: 0.5% to 4.5% among adults and 2.5% to 8.4% among children and adolescents.</p>