Adolescent

Introduction

Historical Context and Changes Since Previous Standards of Care

Compared to the longer-established care models for transgender adults, specialized healthcare for transgender adolescents is a relatively new field of practice. Until recently, there were few specialized gender clinics for youth, and the handful of clinics served relatively small numbers of children and adolescents. In more recent years there has been a sharp increase in the number of adolescents requesting gender care (Arnoldussen et al., 2019, Kaltiala et al., 2019). New clinics have been founded, but clinical services in many places have not kept pace with the increasing number of youth seeking care. Hence, there are often long waitlists for services and barriers to care exist for many transgender youth around the world (Tollit et al, 2018).

Until recently, there was limited information regarding the prevalence of gender diversity among adolescents. Studies from high school samples indicate much higher rates than earlier thought, with reports of up to 1.2% identifying as transgender (Clark et al., 2014) and up to 2.7% or more (e.g., 7-9%) experiencing some level of self-reported gender diversity (Eisenberg et al., 2017, Wang et al., 2020, Kidds et al., 2021). These studies suggest that gender diversity in youth should no longer be viewed as rare. Additionally, a pattern of uneven ratios by assigned sex has been reported in gender clinics, with adolescents assigned female at birth initiating care 2.5-7.1 times more frequently as compared to adolescents who are assigned males at birth (Arnoldussen et al., 2019, Kaltiala et al., 2015 Kaltiala et al., 2019, Aitken et al., 2015, de Graaf et al., 2018).

A specific WPATH standards of care section dedicated to the needs of children and adolescents was first included in the WPATH Standards of Care in its 5th version from 1998 (Levine et al... 1998). Youth age 16 or older were deemed potentially eligible for gender affirming medical care, but only in select cases. The subsequent 6th (Meyer et al., 2005) and 7th (Coleman et al., 2012) versions divided medical affirming treatment for adolescents into three categories and presented eligibility criteria regarding age/puberty stage: fully reversible puberty delaying blockers as soon as puberty had started; partially reversible hormone therapy (testosterone, oestrogen) for adolescents of age of majority, which was age 16 in certain European countries; and fully irreversible surgeries at age 18 or older, except for chest "masculinizing" mastectomy, which had an age minimum of 16 years of age. Additional eligibility criteria for gender-related medical care were: persistent long (childhood) history of gender "non-conformity"/dysphoria, emerging or intensifying at the onset of puberty; absence or management of psychological, medical, or social problems that interfere with treatment; provision of support for commencing the intervention by the parents/caregivers; and provision of informed consent. A chapter dedicated to transgender and gender diverse adolescents, distinct from the child chapter, has been created for this 8th edition of the Standards of Care given: (1) the exponential growth in adolescent referral rates, (2) increased studies available specific to adolescent gender diversityrelated care, and (3) the unique developmental and gender affirming care issues of this age group.

Methodology

For the current 8th revision of the SOC, our multidisciplinary workgroup started by reviewing the recommendations in the former SOC editions. As there are now separate chapters for childhood and adolescence, to ensure consistency between both chapters, some authors were part of both chapters. For a similar reason, when applicable, the workgroup collaborated with other chapter workgroups on topics shared between the chapters (i.e., Assessment of Children, Assessment of Adults, Hormone Therapy, Surgery and Reproductive Health).

Draft statements began as refinements of earlier versions of the SOC and were also drawn from the more recent Endocrine Society Clinical Practice Guideline (Hembree et al., 2017). Statements were rephrased or adapted and several new statements added, based on more recent research literature. The resulting twelve statements were subjected to the Delphi consensus process. In two rounds, all 12 statements reached consensus endorsement from the larger SOC revision committee.

Adolescence Overview

Adolescence is a developmental period characterized by relatively rapid physical and psychological maturation, bridging between childhood and adulthood (Sanders, 2013). Multiple developmental processes occur simultaneously, including pubertal-signalled changes. Cognitive, emotional, and social systems mature, and physical changes associated with puberty progress. These processes do not all begin and end at the same time for a given individual, nor do they occur at the same age for all persons. Therefore, the lower and upper borders of adolescence are imprecise and cannot be defined exclusively by age. For example, physical pubertal changes may begin in late childhood and executive control neural systems continue to develop well into the mid-20's (Ferguson, Brunsdon, & Bradford, 2021). There is a lack of uniformity in how countries and governments define the age of majority (i.e., legal decision-making status; Dick et al., 2014). While many specify the age of majority as 18 years of age, in some countries it is as young as 15 years (e.g., Indonesia and Myanmar), and others as high as 21 years (e.g., the U.S. State of Mississippi and Singapore).

Cognitive development in adolescence is often characterized by gains in abstract thinking, complex reasoning, and metacognition (i.e., a young person's ability to think about their own feelings in relation to how others perceive them; Sanders, 2013). The ability to reason hypothetical situations enables a young person to conceptualize implications regarding a particular decision. However, adolescence is also often associated with increased risk-taking behaviors. Along with these notable changes, adolescence is often characterized by individuation from parents and the development of increased personal autonomy. There is often a heightened focus on peer relationships, which can be both positive and detrimental (Gardner & Steinberg, 2005). Adolescents often experience a sense of urgency that stems from hypersensivity to reward, and their sense of timing has been shown to be different from that of older individuals (Van Leijenhorst et al., 2010). Social-emotional development typically advances during adolescence, though there is a great variability among young people in terms of level of maturity for inter- and intra-personal communication and insight (Grootens-Wiegers et al., 2017). For transgender and gender diverse adolescents making decisions about gender affirming treatments-decisions that may have lifelong consequences-it is critical to understand how all of these aspects of development may impact the decision-making for a given young person within their specific cultural context.

Gender Identity Development in Adolescence

Understanding of gender identity development in adolescence is evolving. It is important to know what is and is not known about gender identity development during development when providing clinical care to gender diverse and/or exploring young people and their families (Berenbaum, 2018). When considering treatments, families may have questions regarding the development of their adolescent's gender identity and whether their adolescent's declared gender will remain the same over time. For some adolescents, a declared gender identity that differs from the assigned sex at birth comes as no surprise to their parents/caregivers, as their history of gender diverse expression dates back to childhood (Leibowitz & de Vries, 2016). For others, the declaration does not happen until the emergence of pubertal changes, or even well into adolescence (McCallion et al., 2021, Sorbara et al., 2020).

Historically, social learning and cognitive developmental research on gender development was conducted primarily with youth who were not gender diverse in identity or expression, under the assumption that sex correlated with a specific gender; therefore little attention was given to gender identity development. In addition to biological factors influencing gender development, such research demonstrated that there is a role for psychological and social factors as well (Perry & Pauletti, 2011). While there has been less focus on gender identity development in transgender and gender diverse youth, there is ample reason to suppose that apart from biological factors, psychosocial factors are also involved (Steensma et al., 2013). For some youth, gender identity development appears fixed, often expressed from a young age, while for others there may be a developmental process that contributes to gender identity development over time. Neuroimaging studies, genetic studies, and other hormone studies on individuals with differences of sex development (DSD) demonstrate a biological contribution to the development of gender identity for some individuals whose gender identity does not match their assigned sex at birth (Steensma et al., 2013). Families often have questions about this very issue and so it is important to note that it is not possible to distinguish between those where gender identity may seem fixed from birth from those where gender identity development appears to be a developmental process. However, probing the contribution of the environment on gender identity development is difficult and clinically irrelevant. Future research would shed more light on gender identity development if conducted over long periods of time with diverse cohort groups. Conceptualization of gender identity, shifting from dichotomous (e.g. binary) categorization of male and female to a dimensional gender spectrum along a continuum (APA, 2013), would also be necessary.

Adolescence may be a critical period for the development of gender identity development for gender diverse young people (Steensma, Kreukels, de Vries, & Cohen-Kettenis, 2013). Dutch longitudinal clinical follow-up studies on adolescents with childhood gender dysphoria who received puberty suppression and/or gender affirming hormones after *comprehensive* assessment, demonstrated that no youth refrained from pursuing gender affirming surgery years later; these findings suggest that many adolescents who were assessed and determined emotionally mature enough to make irreversible treatment decisions, presented with stability of gender identity over time when the studies were conducted (Cohen-Kettenis & van Goozen, 1997; de Vries et al., 2014; van Goozen, Kuiper, & Cohen-Kettenis, 2005a, Brik et al., 2020).

When extrapolating findings from the longer-term longitudinal Dutch cohort studies to presentday gender diverse adolescents seeking care, it is critical to consider the societal changes that have occurred over time in relation to transgender people. Given the increase in visibility of transgender and gender diverse identities, it is important to understand how increased awareness may impact gender development in different ways (Kornienko et al., 2016). One trend is that more young people are presenting to gender clinics with nonbinary identities (Twist & de Graaf, 2019). Another phenomenon is adolescents seeking care who have not apparently experienced and/or expressed gender diversity during their childhood years. One researcher attempted to study and describe a specific form of later-presenting gender diversity experience (Littman, 2018); however, the study contained significant methodological challenges which must be considered as context for the findings: 1) the study surveyed parents and not youth perspectives, and 2) recruitment included parents from community settings in which treatments for gender dysphoria are often characterized as pathological or undesired. The phenomenon of social influence on gender is salient, however, as some who have changed their thoughts about their own gender identity have described how social influence was relevant in their experience of their gender during adolescence (Vandenbussche, 2021). For a select subgroup of young people, in the context of exploration, social influence on gender may be a relevant issue and an important differential. This phenomenon is neither new nor surprising for health professionals working with adolescents; however, caution must be taken to avoid assuming these phenomena prematurely in an individual adolescent, as well as from datasets that may have been ascertained with potential sampling bias (WPATH, 2018).

Given the emerging nature of knowledge regarding adolescent gender identity development, an individualized approach to clinical care is considered both ethical and necessary. As is the case in all areas of medicine, each study has methodological limitations and conclusions drawn from research cannot *and should not* be universally applied to all adolescents. This is true also when grappling with common parental questions regarding the stability versus instability of a particular young person's gender identity development. Future research will help advance scientific understanding of gender identity development, however there may always be some gaps, and given the ethics of self-determination in care, these gaps should not leave the TGD adolescent without important and necessary care.

Research evidence of gender affirming medical treatment for transgender adolescents

A key challenge in adolescent transgender care is the quality of evidence for effectiveness of gender affirming medical treatments. Given the lifelong implications of medical treatment and the young age at which treatments may be started, adolescents, their parents, and care providers should be informed about the nature of the evidence base. It seems reasonable that decisions to move forward with medical treatments should be made carefully. Despite the slowly growing body of evidence on effectiveness of early medical intervention, the number of studies is still low, with few outcome studies following youth into adulthood. Therefore, a systematic review regarding outcomes of treatment in adolescents is not possible and a short narrative review is instead provided.

At the time of this chapter's writing, there were several longer-term longitudinal cohort follow-up studies reporting positive results of early (i.e., adolescent) medical treatment; for a significant period of time, many of these studies had been conducted through one Dutch clinic. The findings demonstrate improved psychological functioning and body image satisfaction associated with the resolution of gender dysphoria. Most of these studies followed a pre-post methodological design and compared baseline psychological functioning to outcomes following the provision of medical gender-affirming treatments. Different studies evaluated individual aspects or combinations of treatment interventions: 1) gender-affirming hormones and surgeries (Cohen-Kettenis & van Goozen, 1997; Smith et al., 2001; Smith et al., 2005), 2) puberty suppression (de Vries et al., 2011) and 3) puberty suppression, affirming hormones and surgeries (de Vries et al., 2014). The 2014 long term follow-up study is the only study that followed youth from early adolescence (pre-treatment mean age of 13.6) through young

adulthood (post treatment mean age of 20.7); this was the first study to show that genderaffirming treatment enabled transgender adolescents to make age-appropriate developmental transitions while living as their affirmed gender, and with satisfactory objective and subjective outcomes in adulthood (de Vries et al., 2014). These were convincing results. However, the question of generalizability remains, as the study employed a small (n=55), select, and sociallysupported sample; further, all participants had experienced gender nonconformity during childhood. Of note also, the participants were part of a clinic employing a multidisciplinary approach, including provision of comprehensive, ongoing assessment and support of gender dysphoria and emotional well-being.

Several more recently published longitudinal studies followed and evaluated participants at different stages of their gender affirming treatments. In these studies, some participants may not have started gender-affirming medical treatments; others had been treated with puberty suppression, while others started gender affirming hormones or even had their gender affirming surgeries (Costa et al., 2015, Becker-Hebly et al., 2020, Kuper et al., 2020, Achille et al., 2020, Carmichael et al., 2021). Given the heterogeneity of treatments, this type of design makes interpreting outcomes more challenging. Even so, the data consistently demonstrate improved or stable psychological functioning, body image, and/or treatment satisfaction after up to two years following baseline.

Cross-sectional studies provide another design to evaluate affirming treatments. One such study compared psychological functioning in transgender adolescents at baseline and while on puberty suppression to that of cisgender high school peers at two different time points. At baseline the transgender youth demonstrated lower psychological functioning compared to cisgender peers, whereas when on puberty suppression they demonstrated better functioning than their peers (van der Miesen et al., 2020). Grannis et al., (2021) demonstrated that transgender males who started testosterone had lower internalizing mental health symptoms (depression and anxiety) compared to those who had not started testosterone treatment.

Two additional studies followed a different outcome design. In a retrospective chart study Kaltiala and colleagues (2020) reported that transgender adolescents with few or no mental health challenges prior to commencing gender affirming hormones, generally did well during the treatment. However, adolescents with more mental health challenges at baseline continued to experience the manifestations of those mental health challenges over the course of gender affirming medical treatment. Nieder and colleagues (2021) studied *satisfaction with care* as an outcome measure, which demonstrated that transgender adolescents were more satisfied as they progressed further with the treatments they initially desired.

Providers may consider the possibility of an adolescent regretting gender affirming decisions made during adolescence and/or that the young person will detransition in the future. There are two Dutch studies that report low rates of adolescents (1.9% and 3.5%) choosing to stop puberty suppression (Wiepjes et al., 2018, Brik et al., 2019). Again, these studies were conducted in clinics that follow a protocol that includes comprehensive assessment before the gender affirming medical treatment is started. At present, no clinical cohort studies have reported on profiles of adolescents who regret or detransition after *ir*reversible affirming treatment. Case study reports indicate there are adolescents who detransition but do not regret initiating treatment as they experience the start of treatment as a part of their gender exploration and consolidation (Turban, 2018). However, this may not be the predominant perspective of people who detransition (Vandenbussche, 2021). Some adolescents may regret the steps they have taken (Dyer, 2020). Therefore, it is important to present the full range of possible outcomes when assisting transgender adolescents. Providers may discuss this topic in a

collaborative and trusting manner (i.e., as a "potential future experience and consideration") with the adolescent and their parents/caregivers *before* gender affirming medical treatments are started. Also, providers should be prepared to support adolescents who detransition. In an internet convenience sample survey of 237 self-identified detransitioners, 25% had medically transitioned before age 18. Many of them expressed difficulties finding help during their detransition process and reported that their detransition was an isolating experience, during which they did not receive sufficient and/or appropriate support (Vandenbussche, 2021).

To conclude, although the existing samples reported on relatively small groups of youth (e.g., n = 22-101 per study) and the time to follow-up has been varied across studies (6-months – 7 years), this emerging evidence base indicates general improvement in the lives of transgender adolescents who, following careful assessment, receive requested gender affirming medical treatment. Further, rates of reported regret during the study monitoring periods are low. Taken as a whole, the data show that early medical intervention—as part of broader combined assessment and treatment approaches focused on gender dysphoria and general well-being—can be effective and helpful for many transgender adolescents seeking these interventions.

Ethical and human rights perspectives

A medical ethics and human rights perspective was also considered while formulating the adolescent SOC statements. For example, allowing irreversible puberty to progress in adolescents who experience gender incongruence is *not* a neutral act given that it may have immediate and lifelong harmful effects for the transgender young person (Giordano, 2009; Giordano & Holm, 2020; Kreukels & Cohen-Kettenis, 2011). From a human rights perspective, considering gender diversity as a normal and expected variation within the broader human diversity, it is an adolescent's right to participate in their own decision-making process about their health and lives, including access to gender health services (Amnesty International, https://www.amnesty.org.uk/press-releases/amnesty-international-uk-and-liberty-joint-statement-puberty-blockers).

Short Summary of Statements and Unique Issues in Adolescence

These guidelines are designed to account for what is known and what is not known about gender identity development in adolescence, the evidence for gender affirming care in adolescence, and the unique aspects that distinguish adolescence from other developmental stages.

Identity Exploration: A defining feature of adolescence is the solidifying of aspects of identity, including gender identity. Statement 2 addresses identity exploration in the context of gender identity development. Statement 12B accounts for the length of time that a young person experiences and/or expresses a gender diverse identity in order to make a meaningful decision regarding gender affirming care.

Consent and Decision-Making: In adolescence, consent and decision-making require assessment of the individual's emotional, cognitive, and psychosocial development. Statement 12C directly addresses emotional and cognitive maturity and describes the necessary components to assessing decision-making capacity.

Caregivers/Parent involvement: Adolescents are typically dependent on their caregivers/parents in numerous ways, including treatment decisions and consent. Statement 11 addresses the importance of involving caregivers/parents and the role they play in assessment and treatment. No set of guidelines can account for every set of individual circumstances on a global scale.

This chapter should be used in coordination with other relevant chapters throughout the Standards of Care. These guidelines are meant to provide a gold standard based on the available evidence at this moment in time. While the available evidence for the assessment and treatment of gender diverse and transgender adolescents is relatively new (compared to adults), when factoring in the collective clinical experience of those working with this population as well as the perspectives and priorities of transgender adolescents, themselves, we believe that these statements represent the most up-to-date ethical guidelines available to assist families in collaborative decision-making.

SSIONAL ASSOCIATION FOR TRANSGENDER HEALTH

Summary of Recommendations

Statement 1: We recommend that health professionals working with gender diverse adolescents:

- A. Must be licensed by their statutory body, and hold a Postgraduate degree or its
- equivalent in a relevant clinical field to this role granted by a nationally accredited statutory institution.
- B. should receive theoretical and evidenced-based training and develop expertise in general child, adolescent, and family mental health across the developmental spectrum.
- C. should receive training and have expertise in gender identity development, gender diversity in children and adolescents, the ability to assess capacity to assent/consent, and general knowledge of gender diversity across the life span.
- D. should receive training and develop expertise in autism spectrum disorders and other neurodiversity conditions or collaborate with a developmental disability expert when working with autistic/neuro-diverse, gender diverse adolescents.
- E. should continue professional development on gender diverse children, adolescents and families

Statement 2: We recommend that health professionals working with gender diverse adolescents facilitate the exploration and expression of gender openly and respectfully such that no one particular identity is favored.

Statement 3: We recommend that health professionals working with gender diverse adolescents undertake a comprehensive biopsychosocial assessment for adolescents presenting with gender identity related concerns seeking medical/surgical transition-related care in a collaborative and supportive manner.

Statement 4: We recommend that health professionals work with families, schools, and other relevant settings in order to promote acceptance of gender diverse expressions of behavior and identities of the adolescents.

Statement 5: We recommend against efforts aimed at trying to change an adolescent's gender identity and lived gender expression to become more congruent with sex assigned at birth, also referred to as reparative and conversion therapy.

Statement 6: We suggest that health professionals should inform the gender diverse and transgender adolescents about the health implications and safety aspects of chest binding or genital tucking interventions.

Statement 7: We recommend that providers should consider prescribing menstrual suppression agents for adolescents experiencing gender incongruence who may not be ready or desire to pursue other medical affirming treatments, as well as those who wish to have testosterone.

Statement 8: We recommend that health professionals should maintain an ongoing relationship with the gender diverse and transgender adolescent and any relevant caregivers in order to support the adolescent in their decision-making throughout the duration of puberty suppression treatment, hormonal treatment, and gender related surgery until transition to adult care.

Statement 9: We recommend that health professionals should involve relevant disciplines, including mental health and medical professionals, in order to reach a decision as to whether puberty suppression, hormone initiation and/or gender related surgery for gender diverse and transgender adolescents is appropriate, and remains indicated throughout the course of treatment until transition to adult care.

Statement 10: We recommend that health professionals working with trans and gender diverse adolescents requesting gender affirming medical or surgical treatments inform of the reproductive effects that includes the potential loss of fertility and options to preserve fertility in the context of the youth's stage of pubertal development prior to the initiation of treatment

Statement 11: We recommend that when gender affirming medical or surgical treatments are indicated for adolescents' health professionals working with trans and gender diverse adolescents involve parent(s)/guardian(s) in the assessment and treatment process, unless their involvement is determined to be harmful or unnecessary to the adolescent.

The following recommendations are made regarding the requirements for gender affirming medical and surgical treatment:

Statement 12: We recommend that health professionals assessing trans and gender diverse adolescents should only recommend gender affirming medical or surgical treatments requested by the patient when:

- A. The adolescent meets the diagnostic criteria of gender incongruence as per the ICD-11 where a diagnosis is necessary to access health care. In countries which have not implemented the latest ICD other taxonomies may be used but efforts should be undertaken to utilize the latest ICD as soon as is practicably possible.
- B. There is well-documented (according to local context) evidence of persistent gender incongruence or gender nonconformity / diversity of several years.
- C. The adolescent demonstrates the emotional and cognitive maturity required to provide informed consent/assent for the treatment.

- D. The adolescent's mental health concerns (if any) that may interfere diagnostic clarity, capacity to consent and/or gender affirmative medical treatment have been addressed.
- E. The adolescent has been informed of the reproductive effects that includes the potential loss of fertility and options to preserve fertility have been discussed in the context of the adolescent's stage of pubertal development.
- F. The adolescent has reached Tanner 2 stage of puberty for pubertal suppression.
- G. The adolescent is the following age for each treatment:
 - 14 years and above for hormone treatment (estrogens or androgens), unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame.
 - 15 years and above for chest masculinization; unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame.
 - 16 years and above for breast augmentation, facial surgery (including rhinoplasty, tracheal shave, and genioplasty) as part of gender affirming
 - treatment; unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame.
 - 17 and above for metoidioplasty, orchidectomy, vaginoplasty, and hysterectomy and fronto-orbital remodeling as part of gender affirming treatment unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame.
 - 18 years or above for phalloplasty, unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame.
- H. The adolescent had at least 12 months of gender affirming hormone therapy, or longer if required to achieve the desired surgical result for gender-affirming procedures including, Breast augmentation, Orchiectomy, Vaginoplasty, Hysterectomy, Phalloplasty metoidioplasty and facial surgery as part of gender affirming treatment unless hormone therapy is either not desired or is medically contraindicated.

Statement 1:

We recommend that health professionals working with gender diverse adolescents:

- A. Must be licensed by their statutory body, and hold a Postgraduate degree or its equivalent in a relevant clinical field to this role granted by a nationally accredited statutory institution.
- B. should receive theoretical and evidenced-based training and develop expertise in general child, adolescent, and family mental health across the developmental spectrum.
- C. should receive training and have expertise in gender identity development, gender diversity in children and adolescents, the ability to assess capacity to assent/consent, and general knowledge of gender diversity across the life span.
- D. should receive training and develop expertise in autism spectrum disorders and other neurodiversity conditions or collaborate with a developmental disability expert when working with autistic/neuro-diverse, gender diverse adolescents.

E. should continue professional development on gender diverse children, adolescents and families

When assessing and supporting gender diverse and transgender adolescents and their families, care providers/health professionals need both general as well as gender-specific knowledge and training. Providers who are trained to work with adolescents and families play a significant important role in navigating aspects of adolescent development and family dynamics when caring for youth and families (Adelson et al., 2012; American Psychological Association, 2015; Hembree et al., 2017). Other chapters in these standards of care describe these criteria for professionals for gender care in more detail (see Child, Assessment, or Surgery Chapters). Professionals working with adolescents should understand what is and is not known regarding adolescent gender identity development, and how this differs from that of adults and prepubertal children. Among health professionals, it is the *mental health professional* who has the most appropriate training and time to conduct an assessment and elucidate treatment priorities and goals when working with transgender youth, including those seeking gender affirming medical care. Understanding and managing the dynamics of family members who may share differing perspectives on the history and needs of the young person is an important competency that mental health professionals are often most prepared for.

When access to professionals trained in child and adolescent development is not possible, health professionals should make a commitment to obtain training on family dynamics and adolescent development, including gender identity development. Similarly, considering that autistic/neurodiverse transgender youth represent a substantial minority subpopulation of youth served in gender clinics globally, health professionals should seek additional training on autism and the unique elements of care that autistic gender diverse youth may require (Strang et al., 2016). If these qualifications are not possible, then consultation and collaboration with a provider who specializes in autism and neurodiversity is advised.

Statement 2:

We recommend that health professionals working with gender diverse adolescents facilitate the exploration and expression of gender openly and respectfully such that no one particular identity is favored.

Adolescence is a developmental period that involves physical and psychological changes characterized by individuation and the transition to independence from caregivers (Berenbaum et al., 2015; Steinberg, 2009). It is a period during which young people may explore different aspects of identity, including gender identity.

Adolescents differ regarding the degree to which they explore and commit to aspects of their identity (Meeus et al., 2012). For some adolescents, the pace to achieving consolidation of identity is fast, while for others it is slower. For some adolescents, physical, emotional, and psychological development occur on the same general timeline, while for others, there are certain gaps between these aspects of development. Similarly, there is variation in the timeline for gender identity development (Katz-Wise et al, 2017). For some young people, gender identity development is a clear process that starts in early childhood, while for others pubertal changes contribute to one's experience of themselves as a particular gender (Steensma et al., 2013), and for many others a process may begin well after pubertal changes finish. Given these variations, there is no *one particular pace, process, or outcome* that can be predicted for an individual adolescent seeking gender affirming care.

Therefore, health professionals working with adolescents should prioritize supportive environments that simultaneously respect an adolescent's affirmed gender identity and also allows the adolescent to openly explore evolving gender needs, should they change over time.

Statement 3:

We recommend that health professionals working with gender diverse adolescents undertake a comprehensive biopsychosocial assessment for adolescents presenting with gender identity related concerns seeking medical/surgical transition-related care in a collaborative and supportive manner.

Given the many ways identity may unfold during adolescence, we recommend using a comprehensive assessment, conducted by a qualified health professional (whose qualifications are specified in Statement 1), to guide treatment and optimize outcomes. As mentioned in Statement 1, *mental health professionals* have the most appropriate training to obtain the information discussed here. The assessment process should be approached collaboratively with the adolescent and their caregiver(s), which is described in more detail in statement 11. An assessment should occur prior to any medical interventions being considered (e.g., puberty blocking medication, gender affirming hormones, surgeries, see Hormone and Surgery chapters).

There are many different gender identity trajectories that youth may experience. For example, some youth will realize they are transgender or more broadly gender diverse and pursue medical interventions to align their bodies with their identity. For others, their gender exploration will help them better understand themselves, but will not result in affirming a gender different from what was assigned at birth or involve the use of medical interventions (Arnoldussen et al., 2019). With the ongoing sociocultural developments regarding the definitions of gender, youth may increasingly present with a range of identities and ways of describing their experiences and gender related needs (Twist & de Graaf, 2019), which may change as they mature and develop. Utilizing a comprehensive assessment for each adolescent helps to better understand their unique needs and individualize their care.

Careful assessment was part of the most robust longitudinal study that exists thus far on gender diverse adolescents pursuing gender affirming medical interventions (De Vries et al., 2014). In this study, which followed transgender youth into adulthood, positive psychological and quality of life outcomes were found for those who met the criteria to physically transition. However, it is critical to note that all of these youth experienced childhood gender dysphoria *and* were required to undergo a comprehensive assessment over time prior to each medical intervention to help determine whether they would likely benefit from the intervention (de Vries & Cohen-Kettenis, 2012; de Vries., 2014). In other words, it was a very specific sample and cannot be generalized to all gender diverse adolescents seeking medical interventions. Furthermore, the assessment itself has not been part of any study, so we cannot conclude its unique effect on long-term outcomes.

Delivery of healthcare and access to specialists varies globally. Thus, adaptations to the assessment process and flexibility may be necessary, as long as all of the information needed to guide treatment, as outlined below, is obtained. In some cases, a more extended assessment process may be useful, such as for youth with more complex presentations (e.g., complicating mental health histories, co-occurring autism spectrum characteristics (Strang et al., 2018), in particular for those with an absence of experienced childhood gender incongruence considering

different needs have been described in the literature (Ristori & Steensma, 2016; Sorbara et al., 2021). Given the unique cultural, financial, and geographical factors that exist for specific populations, providers should design assessment models that are flexible and which allow for appropriately timed care to as many young people as possible. At the same time, it is important to remember that treating youth outside of the assessment framework (e.g., with limited or no assessment) currently has no empirical support and therefore carries the risk that the decision to start gender affirming medical interventions *may* not be in the long-term best interest of the young person.

The assessment should include a thorough clinical interview with the adolescent alone, the caregiver(s) alone, and the adolescent and caregiver(s) together. Additionally, psychometrically validated psychosocial and gender measures can also be used to provide additional information.

It is important to develop a positive and trusting working alliance with the adolescent and caregiver(s) that is collaborative and aims to support the young person in making a fully informed decision about their body and their health. A process that takes caregiver(s) the viewpoints into account and recognizes the value of their input provides important information for understanding the adolescent and the context in which they live and function. Additionally, involving the young person's caregiver(s) in the assessment process often helps them come to better understand their adolescent's struggles and gender-related needs, thereby allowing them to be more affirming and supportive. Research shows that gender diverse youth do best when supported by their caregiver(s) (see statement 11/12; Ryan, Huebner, Diaz, & Sanchez, 2009).

The comprehensive assessment for gender diverse youth seeking gender affirming medical interventions includes the following domains that correspond with the relevant statements:

- **Gender Identity Development**: Statements 12A and 12B elaborate on the factors associated with gender identity development within the specific cultural context, when assessing transgender and gender diverse adolescents.
- Social Development and Support; Intersectionality: Statements 4 and 11 elaborate on the importance of assessing gender minority stress, family dynamics, and other aspects contributing to social development and intersectionality.
- Diagnostic Assessment of Possible Co-Occurring Mental Health and/or
 Developmental Concerns: Statement 12D elaborates on the importance of understanding
 the relationship that exists, if at all, between any co-occurring mental health or
 developmental concerns and the young person's gender identity/gender diverse expression.
- Capacity for Decision Making: Statement 12C elaborates on the assessment of emotional maturity of a young person and the relevance when an adolescent is considering gender affirming medical/surgical treatments.

Statement 4:

We recommend that health professionals work with families, schools, and other relevant settings in order to promote acceptance of gender diverse expression of behavior and identities of the adolescent.

Multiple studies and related expert consensus support implementation of approaches that promote acceptance and affirmation of gender diverse youth across all settings, including families, schools, healthcare, and all other organizations and communities with which they interact (e.g, Pariseau et al., 2019; Russell et al., 2018; Simons et al., 2013; Toomey et al., 2010; Travers et al., 2012). Acceptance and affirmation are accomplished through a range of approaches, actions, and policies that we recommend be enacted across the various relationships and settings in which a young person exists and functions. Examples of acceptance and affirmation of gender diversity and exploration that can be implemented by family, staff, and organizations, as organized by Pariseau and colleagues (2019) and others include:

- 1. Actions that are supportive of youth drawn to engaging in gender-expansive (e.g., nonconforming) activities and interests,
- 2. Communications that are supportive when youth express their experiences about their gender and gender exploration,
- 3. Use of the youth's asserted name/pronouns,
- 4. Support for youth wearing clothing/uniforms, hairstyles, and items (e.g., jewelry, makeup) they feel affirm their gender,
- 5. Positive and supportive communication with youth about their gender and gender concerns,
- Education for people in the young person's life (e.g., family members, healthcare providers, social support networks), as needed, about gender diversity issues, including how to advocate for gender diverse youth in community, school, healthcare and other settings,
- 7. Support for gender diverse youth to connect with communities of support (e.g., LGBTQ groups, events, friends),
- 8. Provision of opportunities to discuss, consider, and explore medical treatment options when indicated,
- 9. Anti-bullying policies that are enforced.
- 10. Inclusion of nonbinary experiences in daily life, reading materials, and curricula (e.g., books, health and sex education classes, essay topics assigned moving beyond the binary, LGBTQ and ally groups),
- 11. Gender inclusive facilities which the youth can readily access without segregation from non-gender diverse peers (e.g., bathrooms, locker rooms).

We recommend healthcare professionals work with parents, schools, and other organizations/groups to promote acceptance and affirmation because acceptance and affirmation are associated with fewer negative mental health and behavioral symptoms and more positive mental health and behavioral functioning (Day et al., 2015; de Vries et al., 2016; Greytak et al., 2013; Pariseau et al., 2019; Peng et al., 2019; Russell et al., 2018; Simons et al., 2013; Taliaferro et al, 2019; Toomey et al., 2010; Travers et al., 2012). Russell and colleagues (2018) found improvement increases with more acceptance and affirmation across more settings (e.g., home, school, work, and friends). Rejection by family, peers, and school staff (e.g., intentionally calling name and pronoun youth does not identify with, not acknowledging affirmed gender identity bullying, harassment, verbal and physical abuse, poor relationships, rejection for being trans/gender diverse, eviction) was strongly linked to negative outcomes such as anxiety, depression, suicidal ideation, suicide attempts, and substance use (Grossman et al., 2005; Klein and Golub; 2016; Pariseau et al., 2019; Peng et al., 2019; Reisner et al., 2015; Roberts et al., 2013). It is important that behaviors that are considered rejecting towards a young person's affirmed gender or gender exploration from family members, peers, and other

adults (e.g., school staff), because negative symptoms increase with increased levels of rejection and continue into adulthood are not used (e.g., Roberts et al., 2013).

Neutral or indifferent responses to a youth's gender diversity and exploration (e.g., letting a child tell others their chosen name but not using the name, not telling family or friends when the youth wants them to disclose, not advocating for the child about rejecting behavior from school staff or peers, not engaging or participating in other supports such as psychotherapists and support groups) have also been found to have negative consequences, such as increased depression symptoms (Pariseau et al., 2019). For these reasons, it is important not to ignore a youth's gender questioning or delaying tending to the gender exploration. There is particular value in professionals recognizing that youth need individualized approaches, support, and pacing of exploration over time and across domains and relationships. Youth may need help coping with the tension of tolerating others' processing/adjusting to an adolescent's identity exploration and changes (e.g., Kuper et al., 2019). It is important that professionals collaborate with parents and others as they process their concerns and feelings and educate themselves about gender diversity as such processes may not be rejection or neutrality, but may be efforts to develop attitudes and gather information that foster acceptance (e.g., Katz-Wise et al., 2017).

Statement 5:

We recommend against efforts aimed at trying to change an adolescent's gender identity and lived gender expression to become more congruent with sex assigned at birth, also referred to as reparative and conversion therapy.

Some healthcare providers, secular or religious organizations, and/or rejecting families may make efforts to thwart gender identity exploration and expression, such as choosing not to use the youth's identified name and pronouns or restricting self-expression in clothing and hairstyles (Craig et al., 2017; Green et al., 2020). These disaffirming behaviors typically aim to reinforce views that a young person's gender identity/expression must match the gender associated with the sex assigned at birth. Activities and approaches (sometimes referred to as "treatments") aimed at trying to change a person's gender identity and expression to become more congruent with the sex assigned at birth have been attempted, but these approaches have not resulted in changes in gender identity (Craig et al., 2017; Green et al., 2020). We recommend against such efforts because they have been found ineffective and are associated with increases in mental illness and poorer psychological functioning (Craig et al., 2017; Green et al., 2020; Turban et al., 2020; SOC8 Adolescent Statement 4).

Much of the research on "conversion therapy" and "reparative therapy" has actually studied efforts to change gender expression (masculinity or femininity), conflating sexual orientation with Gender identity (APA, 2009; Burnes et al., 2016; Craig et al., 2017). Some of these efforts have targeted both gender identity and expression (AACAP, 2018). Conversion/reparative therapy efforts have been linked to increased anxiety, depression, suicidal ideation, suicide attempts, and healthcare avoidance (Craig et al., 2017; Green et al., 2020; Turban et al., 2020). Some of these studies have been criticized for the methodologies used and conclusions reached (e.g., D'Angelo et al., 2020), however this should not detract from the importance of emphasizing that a priori efforts to change a person's identity is ethically not sound. As both secular and religion-based gender identity/expression change efforts have been associated with negative psychological functioning that endures into adulthood (Turban et al., 2020), in addition to the larger ethical reasons that should drive the respect of gender diverse identities, we recommend against any type of conversion or change efforts.

It is important to note that therapeutic exploration of gender diversity, and potential factors driving a young person's experience and report of gender incongruence, is not considered a reparative therapy effort in the context of supporting an adolescent with self-discovery, so long as there is no a priori goal to change or promote one particular gender identity or expression (AACAP, 2018; see SOC8 Adolescent Statement 2). To ensure these explorations are therapeutic, we recommend employing affirmative responses to gender exploration, such as those identified in SOC8 Adolescent Statement 4.

Statement 6:

We suggest that health professionals should inform the gender diverse and transgender adolescents about the health implications and safety aspects of chest binding or genital tucking interventions.

Gender diverse and transgender youth may experience distress related to chest and genital anatomy. Practices such as chest binding, chest padding, genital tucking and genital packing are reversible, non-medical interventions that may help alleviate this distress (Olson-Kennedy, 2018; Deutsch 2016; Transcare BC; Callen-Lorde). It is important to assess distress related to physical development or anatomy, educate youth about potential non-medical interventions to address this distress, and address use and safety of these interventions.

Chest binding involves the compression of the breast tissue to create a flatter appearance of the chest. Studies suggest that up to 87% of transmasculine patients report a history of binding (Peitzmeier, 2017; Jones, 2015). Binding methods may include the use of commercial binders, sports bras, layering of shirts, layering of sports bras, or using elastics or other bandages (Peitzmeier, 2017). Currently most youth report learning about binding practices from online communities comprised of peers (Julian, 2019). Providers can play an important role in ensuring that youth receive accurate and reliable information about the potential benefits and risks of chest binding. Additionally, providers can counsel patients on safe binding practices and monitor for potential negative health effects. While there are potential negative physical impacts of binding, youth who bind report many benefits including increased comfort, improved safety, and lower rates of misgendering (Julian, 2019). Common negative health impacts of chest binding in youth include back/chest pain, shortness of breath, and overheating (Julian, 2019). More serious negative health impacts such as skin infections, respiratory infections, and rib fractures are uncommon, but have been associated with chest binding in adults (Peitzmeier, 2017). If binding, youth should be advised to use only those methods that are considered safe for binding-such as binders specifically designed for the gender diverse population-to reduce the risk of serious negative health effects. Methods that are considered unsafe for binding include the use of duct tape, ace wraps, and plastic wrap as these can cause restriction in blood flow, skin damage, and restricted breathing. If youth report negative health impacts of chest binding these should ideally be addressed by a gender affirming medical provider with experience working with transgender and gender diverse youth. Many youth who bind may desire chest masculinization surgery in the future (Olson-Kennedy, 2018).

Genital tucking is the practice of positioning the penis and testes to reduce the outward appearance of a genital bulge. Methods of tucking include tucking the penis and testes between the legs or, tucking the testes inside the inguinal canal and pulling the penis back between the legs. Typically, genitals are held in place by underwear or a gaff, a garment that may be made or purchased. Limited studies are available on the specific risks and benefits of tucking in adults, and none in youth. Previous studies that have demonstrated that tight undergarments are associated with decreased sperm concentration and motility; elevated scrotal temperatures

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can be associated with poor sperm characteristics and theoretically genital tucking could affect spermatogenesis and fertility (Marsh 2019) though no definitive studies exist. Further research is needed on specific benefits and risks of tucking in youth.

Statement 7:

We recommend that providers should consider prescribing menstrual suppression agents for adolescents experiencing gender incongruence who may not desire or be ready to pursue other medical affirming treatments, including testosterone.

When discussing options with gender diverse youth around menstrual-suppressing medications. providers should engage in shared decision making, use gender-inclusive language (e.g. asking patients which terms they utilize to refer to their menses, reproductive organs, and genitalia) and perform physical exams that are approached in a sensitive, gender-affirmative manner (Bonnington et al., 2020; Krempasky et al., 2020). There is no formal research on how menstrual suppression may impact gender dysphoria. However, the use of menstrual suppression can be an initial intervention to allow for further exploration of gender-related goals of care and/or prioritization of other mental health care, especially for those who experience a worsening of gender dysphoria from unwanted uterine bleeding (see Statement 12D, (Mehringer & Dowshen, 2019)). To exclude any underlying menstrual disorders, a detailed menstrual history and evaluation is important to obtain prior to implementing menstrual-suppressing therapy (Carswell & Roberts, 2017). As part of the discussion of menstrual-suppressing medications, consideration for desire for contraception and how effective menstrual-suppressing medications are as methods of contraception also needs to be considered (Bonnington et al., 2020). A variety of menstrual suppression options, such as combined oestrogen-progestin medications, oral progestins, depot progestin and IUDs should be offered to allow for individualized treatment plans within the context of availability, cost and insurance coverage, contraindications and side effect profile (Kanj et al., 2019).

Options for combined oral contraception include different combinations of ethinyl estradiol, with ranging doses, and different generations of progestins (Pradhan & Gomez-Lobo, 2019). Lowerdose ethinyl estradiol components of combined oral contraceptive pills are associated with increased breakthrough uterine bleeding. Continuous combined oral contraceptives may be used to allow for continuous menstrual suppression, as can delivered as transdermal or vaginal ring options. Progestin-only hormonal medication options may be desired, especially in transmasculine or non-binary youth who do not desire oestrogen-containing medical therapies, are actively growing, and/or in patients at risk for thromboembolic events or other contraindications to receiving oestrogen (Carswell & Roberts, 2017), Progestin-only hormonal medications include oral progestins, depo-medroxyprogesterone injection, etonogestrel implant and levonorgestrel intrauterine device (Schwartz et al., 2019). Progestin-only hormonal options vary in terms of efficacy in achieving menstrual suppression and have lower rates of achieving amenorrhea than combined oral contraception options (Pradhan & Gomez-Lobo, 2019), and a more detailed description of the clinical studies is addressed further in the Hormone Chapter. s should not make assumptions regarding the method of administration Health professional as some transmasculine youth may desire vaginal rings or IUD implants (Akgul et al., 2019). Hormonal medications require monitoring for potential mood lability and/or depressive effects; however, the benefits and risks of untreated menstrual suppression in the setting of gender dysphoria should be evaluated on an individual basis.

The use of GnRH analogue may also result in menstrual suppression however it is recommended that gender diverse youth meet the eligibility criteria (as outlined in Statement 12)

before consideration of this medication solely for this purpose (Carswell & Roberts, 2017; Pradhan & Gomez-Lobo, 2019). Finally, menstrual-suppression medications may be indicated as an adjunctive therapy for breakthrough uterine bleeding that may occur while on exogenous testosterone or as a bridging medication with awaiting menstrual suppression with testosterone therapy. With the use of exogenous testosterone as a gender-affirming hormone, menstrual suppression is typically achieved in the first six months of therapy (Ahmad & Leinung, 2017). However, it is vital that adolescents be counseled that ovulation and therefore, pregnancy, is still possible, even in the setting of amenorrhea as this is a common misconception (Gomez et al., 2020; Kanj et al., 2019).

Statement 8:

We recommend that health professionals should maintain an ongoing relationship with the gender diverse and transgender adolescent and any relevant caregivers in order to support the adolescent in their decision-making throughout the duration of puberty suppression treatment, hormonal treatment, and gender related surgery until transition to adult care.

Health professionals with expertise in child and adolescent development, as described in statement 1, play an important role in the continuity of care for young people over the course of their gender-related treatment needs (see statement 1). Supporting adolescents and their families necessitates approaching care using a developmental lens, through which understanding a young person's evolving emotional maturity and care needs can take place over time. As gender affirming treatment pathways differ based on the needs and experiences of individual transgender and gender diverse adolescents, decision making for these treatments (puberty suppression, oestrogens/androgens, gender affirming surgeries) can occur at different points in time within a span of several years. Longitudinal research demonstrating the benefits of pubertal suppression and gender affirming hormone treatment took place in a setting where an ongoing clinical relationship between the adolescents/families and the multidisciplinary team was maintained (De Vries et al., 2014).

Clinical settings that offer longer appointment times provide space for adolescents and caregivers to share important psychosocial aspects of emotional wellbeing (e.g. family dynamics, school, romantic and sexual experiences) that contextualize individualized gender affirming treatment needs and decisions as described elsewhere in the chapter. An ongoing clinical relationship can take place across settings, whether that be within a multidisciplinary team or with providers in different locations who collaborate with one another. Given wide variability in access to specialized gender care centers, particularly for other marginalized groups who experience disparities with access, it is important for the health professional to appreciate any barriers to care while maintaining flexibility when defining how an ongoing clinical relationship can take place in that specific context.

An ongoing clinical relationship that increases resiliency in the youth and provides support to parents/caregivers who may have their own treatment needs, may ultimately lead to increased parental acceptance- when needed- which is associated with better mental health outcomes in youth (Ryan, Huebner, Diaz, & Sanchez, 2009).

Statement 9:

We recommend that health professionals should involve relevant disciplines, including mental health and medical professionals, in order to reach a decision as to whether

puberty suppression, hormone initiation and/or gender related surgery for gender diverse and transgender adolescents is appropriate, and remains indicated throughout the course of treatment until transition to adult care.

Transgender and gender diverse adolescents with gender dysphoria/gender incongruence, who seek gender affirming medical and surgical treatments need healthcare professionals of differing disciplines. Providing care to TGD adolescents includes addressing both: 1) diagnostic considerations (see Statement 3, 12A, 12B), conducted by a specialized gender health professional (as defined in statement 1) whenever possible and necessary and 2) treatment considerations when prescribing, managing, and monitoring medications for gender affirming medical and/or surgical care, requiring the training of the relevant medical/surgical professional. The list of key disciplines includes but is not limited to: adolescent medicine/primary care, endocrinology, psychology, psychiatry, speech/language pathology, social work, support staff, and the surgical team.

Transgender youth healthcare guidelines for have routinely emphasized the importance of a multidisciplinary care team that involves both medical and mental health professionals (American Psychological Association, 2015; Hembree et al., 2017; Telfer et al., 2018). The evolving evidence demonstrates clinical benefit from use gender of affirming treatments with transgender youth who come from gender clinics that are multidisciplinary (DeVries et al., 2014; Kuper et al., 2020; Tollit et al., 2019). Additionally, adolescents seeking gender affirming care in multidisciplinary clinics are presenting with significant complexity, necessitating close collaboration between mental health, medical, and/or surgical professionals (McCallion et al., 2021; Sorbara et al., 2020; Tishelman et al., 2015).

Not all patients and/or families are in the position or in a location to access multidisciplinary care, and so therefore the *lack of available disciplines* should not preclude a young person from accessing needed care in a timely manner. When disciplines *are available*, particularly in centers with existing multidisciplinary teams and/or disciplines, efforts to include the relevant providers when developing a gender care team, is recommended. This does not mean that all disciplines are necessary for the provision of care to a particular youth and family.

Statement 10:

We recommend that health professionals working with trans and gender diverse adolescents requesting gender affirming medical or surgical treatments inform of the reproductive effects that includes the potential loss of fertility and options to preserve fertility in the context of the youth's stage of pubertal development prior to the initiation of treatment.

While assessing adolescents seeking gender affirming medical or surgical treatments, health professionals should discuss the specific ways in which the desired treatment may affect reproductive capacity. Fertility issues and the specific preservation options are more thoroughly discussed in the Reproductive Health for Adolescents and Adults chapter and the Hormone Therapy for Adolescents and Adults chapter of the SOC-8. Please see those chapters for greater detail.

It is important that health professionals understand what fertility preservation options exist in order to relay the information to adolescents. Parents are advised to be involved in this and should also understand the pros and cons of the different options. health professionals should acknowledge that adolescents and parents may have different views around reproductive

capacity and may therefore come to different decisions (Quain et al., 2020). health professionals can be helpful in guiding this process.

Health professionals should specifically pay attention to the developmental and psychological aspects of fertility preservation and decision-making competency for the individual adolescent. Adolescents may think they have made up their minds concerning their reproductive capacity, but the chances that adolescents' opinions regarding having biologically related children in the future might change over time and needs to be discussed with a health professional who has sufficient experience and knowledge of adolescent development and working with parents.

Addressing the long-term consequences for fertility of gender affirming medical treatment and ensuring that transgender adolescents have realistic expectations concerning fertility preservation options or adoption, is not a one-time discussion but should be part of an ongoing conversation. This conversation should occur not only before any medical intervention is started (puberty suppression, hormones or surgeries), but also during further treatment and transition.

Currently, there are only preliminary results of retrospective studies of transgender adults regarding decisions that they made about the consequences of medical affirming treatment on reproductive capacity when they were young. Meanwhile, it is important not to assume the future adult goals of an adolescent. Research in childhood cancer survivors reports distress about potential infertility, regret and missed opportunities for fertility preservation (Armuand et al, 2014, Ellis et al., 2016, Lehmann et al., 2017). Individuals with cancer who did not prioritize having biological children before treatment have reported "changing their minds" in survivorship (Armuand et al, 2014).

Given the complexities of the different fertility preservation options and the challenges that health professional s may experience around discussing fertility with the adolescent and the family (Tishelman et al., 2019), a fertility consultation is an important consideration for every transgender adolescent who pursues medical affirming treatments unless the local situation is such that this is not covered by insurance or public health care plan, is not available locally, or the individual circumstances make this unpreferable.

Statement 11:

We recommend that when gender affirming medical or surgical treatments are indicated for adolescents, health professional's working with trans and gender diverse adolescents involve parent(s)/guardian(s) in the assessment and treatment process, unless their involvement is determined to be harmful or unnecessary to the adolescent.

When there is indication that an adolescent might benefit from a gender affirming medical or surgical treatment, involving the parent(s) and/or primary caregiver(s) in the assessment process is recommended in almost all situations (Edwards-Leeper & Spack, 2012; Rafferty et al., 2018). Exceptions to this might include situations in which an adolescent is in foster care and/or child protective services custody and parent involvement would be impossible, inappropriate, and/or harmful. Parent and family support of T/GD youth is a primary predictor of youth wellbeing and a protective factor for T/GD youth mental health (Gower et al., 2018; Grossman et al., 2019; Lefevor et al., 2019; McConnell et al., 2015; Pariseau et al., 2019; Ryan et al., 2009; Ryan et al., 2010; Simons et al., 2013; Wilson et al., 2016). Therefore, including parent(s)/caregiver(s) in the assessment process to encourage and facilitate increased parental understanding and support of the adolescent may be one of the most helpful practices available.

Parent(s)/caregiver(s) may provide key information for the clinical team, including report on the young person's gender and overall developmental, medical, and mental health history as well as information about the young person's level of current support and general functioning and wellbeing. Concordance or divergence of report between the adolescent and their parent(s)/caregiver(s) may be important information for the assessment team, including for the designing and shaping of individualized youth and family supports (De Los Reyes et al., 2019; Katz-Wise et al., 2017). Knowledge of the family context, including resilience factors and challenges can help providers know where special supports would be needed during the medical treatment process. Engagement of parent(s)/caregiver(s) is also important for educating families around various treatment approaches, ongoing follow-up and care needs, and potential treatment complications. Through psychoeducation regarding clinical gender care options and participation in the assessment process, which may unfold over time, parent(s)/caregiver(s) may better understand their adolescent child's gender-related experience and needs (Andrzejewski et al., 2020; Katz-Wise et al., 2017).

Parent/caregiver concerns or questions regarding the stability of gender-related needs over time and implications of various gender affirming interventions are common, and should not be dismissed. It is appropriate for parent(s)/caregiver(s) to ask these questions, and there are cases in which the parent(s)/caregiver(s)' questions or concerns are particularly helpful in informing treatment decisions and plans. For example, parent/caregiver report may provide critical context in situations in which a young person experiences very recent and/or sudden self-awareness of gender diversity and a corresponding gender treatment request, or when there is concern for possible excessive peer and/or social media influence on a young person's current self-gender concept. Contextualization of parent/caregiver report is also critical, as the report of a young person's gender history as provided by parent(s)/caregiver(s) may or may not align with the young person's self-report. Gender histories may be unknown to parent(s)/caregiver(s) because gender may be an inward experience for youth, not known by others unless it is discussed.

Some parents may present with unsupportive or antagonistic beliefs about T/GD identities and/or clinical gender care (Clark et al., 2020). Such parent perspectives may in some cases seem rigid, but providers should not assume this is the case. There are many examples of parent(s)/caregiver(s) who, over time with support and psychoeducation, have become increasingly accepting of their T/GD's child's gender diversity and care needs. Helping youth and parent(s)/caregiver(s) to work together on important gender care decisions is a primary goal. However, in some cases, parent(s)/caregiver(s) may be too rejecting of their adolescent child and their child's gender needs to be part of the clinical evaluation process. In these situations, youth may require the engagement of larger systems of advocacy and support to move forward with necessary supports and care (Dubin et al., 2020).

Statement 12:

We recommend that health professionals assessing trans and gender diverse adolescents should only recommend gender affirming medical or surgical treatments requested by the patient when:

Statement 12A:

The adolescent meets the diagnostic criteria of gender incongruence as per the ICD-11 where a diagnosis is necessary to access health care. In countries which have not implemented the latest ICD other taxonomies may be used but efforts should be undertaken to utilize the latest ICD as soon as is practicably possible.

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When working with transgender and gender diverse adolescents, health professionals should realize that a classification may give access to care, but pathologizing transgender identities may be experienced as stigmatizing (van Beek et al., 2016). Assessments related to gender health and gender diversity have been criticized, and controversies exist around classification systems (Drescher, 2016). Healthcare professionals should realize they do not diagnose a gender identity per se, as one's gender identity is the subjective experience of being male or female or another gender. Health professionals should assess the overall and gender-related history and transgender care related needs of youth. Through this assessment process, health care providers may provide a classification when needed to get access to transgender-related care. However, a classification involving gender diversity connotes no pathology, in and of itself.

Gender Incongruence and Gender Dysphoria are the two diagnostic terms used in respectively the World Health Organization's International Classification of Diseases (ICD) and the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM). Of these two widely used classification systems, the DSM is for psychiatric classifications only and the ICD contains all diseases and conditions related to physical as well as mental health. The most recent versions of these two systems, the DSM-5 and the ICD-11 respectively, reflect a long history of reconceptualizing and depsychopathologizing gender related diagnoses (American Psychiatric Association, 2013, World Health Organization, 2019). Compared to the earlier version, the DSM-5 replaced Gender Identity Disorder with Gender Dysphoria acknowledging the distress experienced by some people stemming from the incongruence between experienced gender identity and sex assigned at birth. Compared to the ICD 10th edition, the Gender Incongruence classification was moved from the Mental Health Chapter to a Chapter "Conditions related to Sexual Health" in the ICD-11. One important reconceptualization in comparison to the DSM-5 Gender Dysphoria classification is that distress is not a required indicator of the ICD-11 Gender Incongruence classification (WHO, 2019). After all, when growing up in a supporting and accepting environment, the distress and impairment criterion, an inherent part of every mental health condition, may not be applicable (Drescher, 2012). As such, the ICD-11 Gender Incongruence classification may better capture the fullness of gender diversity experiences and related clinical gender needs.

Criteria of the ICD-11 classification "Gender Incongruence of Adolescence or Adulthood" require a marked and persistent incongruence between an individual's experienced gender and the assigned sex which often leads to a desire to 'transition,' in order to live and be accepted as a person of the experienced gender. For some, this includes hormonal treatment, surgery, or other health care services to make the individual's body align as much as desired, and to the extent possible, with the person's experienced gender. Relevant for adolescents is the indicator that a classification cannot be assigned 'prior to the onset of puberty'. Finally, it is noted "that gender variant behaviour and preferences alone are not a basis for assigning the classification" (WHO, ICD-11, 2019).

Criteria for the DSM-5 classification "Gender Dysphoria in Adolescence and Adulthood" denote 'a marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months' duration' (criterion A, fulfilled when 2 of 6 subcriteria are manifest), associated with 'clinically significant distress or impairment in social, occupational, or other important areas of functioning' (Criterion B, APA 2013). As noted before, not all transgender and gender diverse people experience gender dysphoria and this should not preclude them from accessing medical affirming care. For adolescents, the DSM-5 makes two specific remarks, which make it possible to give the classification when secondary sex characteristics have yet to fully develop. First, there should be a marked incongruence between one's experienced/expressed gender and

one's primary and/or secondary sex characteristics (or in younger adolescents, the anticipated secondary sex characteristics). Second, the strong desire to be rid of one's primary and/or secondary sex characteristics because of a marked incongruence with one's experienced/expressed gender (or in younger adolescents, a desire to prevent the anticipated secondary sex characteristics).

Of note, a gender related classification is one of the requirements for medical gender affirming care, but such a classification solely does not *indicate* a person *needs* medical affirming care. The range of youth experiences of gender incongruence necessitates professionals provide a range of treatments or interventions based on the individual's needs. Counseling, gender exploration and mental health assessment, and when needed, treatment with mental health providers trained in gender development may all be indicated with or without medical affirming care.

Statement 12B:

There is well-documented (according to local context) evidence of persistent gender incongruence or gender nonconformity / diversity of several years.

Identity exploration and consolidation are experienced by many adolescents (Klimstra et al., 2010; Topolewska-Siedzik & Cieciuch, 2018). Identity exploration during the teen years may include exploration of gender and gender identity (Steensma et al., 2013). Little is known about how processes of adolescent identity consolidation (e.g., the process of commitment to specific identities) may impact a young person's experience(s) of gender. Given potential shifts in gender-related experiences and needs during adolescence, as discussed below, it is important to establish that the young person has experienced several years of persistent gender incongruence or gender diversity prior to initiating gender-affirming hormones or providing gender-affirming surgeries. Establishing evidence of persistent gender incongruence or gender diversity typically requires careful assessment with the young person over time (see Statement 3). Whenever possible and appropriate, the assessment and discernment process should also include the parent(s)/caregiver(s) (see Statement 1). The documentation to demonstrate well documented gender diversity can be provided via history obtained directly from the adolescents and parents/cargivers when this is not documented in the medical records.

The research literature on continuity versus discontinuity of gender affirming medical care needs/requests is complex and somewhat difficult to interpret. A series of studies conducted over the last several decades, including some with methodological challenges (as noted by Temple Newhook et al., 2018; Winters et al., 2018), suggest that gender diversity is not consistent for all children as they progress into adolescence: A subset of youth who experienced gender diversity prior to puberty show reduced (or fully discontinued) gender diversity over time (de Vries et al., 2010; Ristori & Steensma, 2016; Singh et al., 2021, Wagner et al., 2021). However, there has been less research focus on rates of continuity and discontinuity of gender diversity and gender-related needs in pubertal and/or adolescent populations. The data available regarding broad unselected gender-referred pubertal/adolescent cohorts (from the Amsterdam transgender clinic) suggest that, following extended assessments over time, a subset of gender diverse adolescents presenting for gender care elect not to pursue gender-affirming medical care (Arnoldussen et al., 2019; de Vries et al., 2011). Importantly, findings from studies of gender diverse pubertal/adolescent cohorts who have undergone comprehensive gender evaluation over time, shown persistent gender diversity and gender-related need, and received resulting referrals for medical gender care, suggest very low levels of regret regarding gender-related medical care decisions (de Vries et al., 2014; Wiepjes

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et al., 2018). Critically, these findings of low regret can only currently be applied to youth who have demonstrated sustained gender diversity and gender-related needs over time, as established through comprehensive and iterative assessment (see Statement 3). Although by clinical observation an increasing number of youth are coming to self-identify as gender diverse in later adolescence, nothing is known about how their gender trajectories compare to those of youth who have come to know their gender diversity earlier (Kaltiala-Heino et al., 2018). This is a much-needed area of research.

The level of reversibility of a gender affirming medical intervention should be considered along with the sustained duration of young person's gender incongruence. For example, the duration of persistent gender incongruence before initiating pubertal blockers may be much shorter than for initiating gender affirming hormones, given that pubertal suppression is intended to provide a young person with the time to explore their gender-related needs before deciding whether to progress to treatments that involve more irreversible elements. For youth who have experienced shorter duration gender incongruence, social transition-related supports may provide some relief as well as additional information for the clinical team regarding a young person's broad gender care needs (see Statements 4, 6, and 7).

Statement 12C:

The adolescent demonstrates the emotional and cognitive maturity required to provide informed consent/assent for the treatment.

The process of informed consent includes communication between a patient and provider regarding the patient's understanding of a potential intervention as well as, ultimately, the patient's decision whether to receive the intervention. In most settings, for minors, the legal guardian is integral to the informed consent process: If a treatment is to be given, the legal guardian (often the parent[s]/caregiver[s]) provides the informed consent to do so. Assent, in most settings, is a somewhat parallel process in which the minor and the provider communicate about the intervention and the provider assesses understanding and intention.

A necessary step in the informed consent/assent process for consideration of gender affirming medical care is careful discussion with qualified healthcare professionals who are trained to assess the emotional and cognitive maturity of adolescents. The reversible and irreversible effects of the treatment, as well as fertility preservation options (when applicable), and any additional potential risks and benefits of the intervention are important components of the discussion. These discussions are required for informed consent/assent. Assessment of cognitive and emotional maturity is important because it helps the care team understand the adolescent's capacity *to be informed*.

The skills necessary to assent/consent to any medical intervention or treatment include the ability to: (1) comprehend the nature of the treatment, (2) reason about treatment options, including risks and benefits, (3) appreciate the nature of the decision, including the long-term consequences; and (4) communicate choice (Appelbaum, 2007; Grootens-Wiegers et al., 2017). In the case of gender affirming medical treatments, a young person should be well-informed about what the treatment may and may not accomplish, typical timelines for changes (e.g., with gender affirming hormones), and any implications of stopping the treatment. Gender-diverse youth should fully understand the reversible, partially reversible, and irreversible aspects of a treatment, as well as the limits of what is known about certain treatments (e.g., the impact of pubertal suppression on brain development; (Chen et al., 2020). Gender-diverse youth should also understand that although many gender-diverse youth begin gender affirming medical care

and experience that care as a good fit for them long-term, there is a subset of individuals who over time discover that this care is not a fit for them (Wiepjes et al., 2018). Youth should know that such shifts are sometimes connected to a change in gender needs over time, and in some cases, a shift in gender identity itself. Given this information, gender-diverse youth must be able to reason thoughtfully about treatment options, considering the implications of the choices at hand. And as a foundation for providing assent, the gender-diverse young person needs to be able to communicate their choice.

The skills needed to accomplish the tasks required for assent/consent may not emerge at specific ages per se (Grootens-Wiegers et al., 2017), and there may be variability in these capacities related to developmental differences and mental health presentations (Shumer & Tishelman, 2015) as well as the opportunities a young person has had to practice these skills (Alderson, 2007). Further, assessment of emotional and cognitive maturity must be conducted separately for each gender-related treatment decision (Vrouenraets et al., 2021).

The following questions may be useful to consider in assessing a young person's emotional and cognitive readiness to assent or consent to a specific gender affirming treatment:

- Can the young person think carefully into the future and consider the implications of a partially and/or fully irreversible intervention?
- Does the young person have sufficient self-reflective capacity to consider the possibility that gender-related needs and priorities can develop over time, and that gender-related priorities at a certain point in time might change?
- Has the young person, to some extent, thought through the implications of what they might do if their priorities around gender do change in the future?
- Is the young person able to understand and manage the day-to-day short-term and/or long-term aspects of a specific medical treatment (e.g., medication adherence, administration, and necessary medical follow-ups).

Assessment of emotional and cognitive maturity may be accomplished over time as the care team continues conversations about the treatment options and affords the young person the opportunity to practice thinking into the future and flexibly considering options and implications. For youth with neurodevelopmental and/or some types of mental health differences, skills for future thinking, planning, big picture thinking, and self-reflection may be less-well developed (Olde Dubbelink & Geurts, 2017). In these cases, a more careful approach to consent and assent may be required, and this may include additional time and structured opportunities for the young person to practice the skills necessary for medical decision-making (Strang et al., 2018).

Statement 12D:

The adolescent mental health concerns (if any) that may interfere diagnostic clarity, capacity to consent and/or gender affirmative medical treatment have been addressed.

Evidence indicates transgender and gender diverse adolescents are at increased risk for mental health challenges (for an overview, see e.g. Leibowitz & de Vries, 2016), often related to family/caregiver rejection, non-affirming community environments, and neurodiversity-related factors (e.g. Weinhardt et al, 2017, Ryan et al., 2010, de Vries et al., 2016, Pariseau et al, 2019). A young person's mental health challenges may impact their conceptualization of their gender development history and gender identity related needs, the adolescent's capacity to

consent, and the ability of the young person to engage in/receive medical treatment. Additionally, transgender and gender diverse youth may experience mental health concerns irrespective of the presence of gender dysphoria gender incongruence, similar to cisgender youth. Depression and self-harm may be of specific concern; many studies reveal depression scores and emotional and behavioral problems that are comparable to mental health clinic referred populations (Leibowitz & de Vries, 2016) and higher rates of not only suicidal ideation, but also suicide attempts and self-harm (de Graaf et al., 2020). Also, eating disorders occur more frequently than expected in non-referred populations (Spack et al., 2012, Khatchadourian et al., 2013, Ristori et al., 2019). Importantly, transgender and gender diverse adolescents show high rates of autism spectrum disorders/characteristics (see this chapter statement 1.4, van der Miesen et al., 2016, Øien et al., 2018). Other mental health challenges may also be present, (e.g. ADHD, intellectual disability and psychotic disorders; de Vries et al., 2011, Parkes et al., 2006, Meijer et al., 2018). Stabilizing the mental health of transgender youth prior to initiation of gender affirming treatment has also been associated with reduced psychiatric acuity during treatment with hormones when compared to those youth who had more challenges at baseline (Kaltiala et al., 2020).

Of note, many transgender adolescents are well-functioning and experience few if any mental health concerns. For example, socially transitioned pubertal adolescents who receive medical gender affirming treatment at specialized gender clinics may experience mental health outcomes equivalent to cisgender peers (e.g. de Vries et al., 2014, van der Miesen, 2020). A key task of the provider is to assess the direction of the relationships that exist between any mental health challenges and the young person's self-understanding of gender care needs, and then prioritize accordingly.

Mental health difficulties may in various ways challenge the assessment and treatment of gender related needs of TGD adolescents:

- First, when a TGD adolescent is experiencing acute suicidality, self-harm, eating disorders or other mental health crises that threaten physical health, safety must be prioritized. According to the local context and guidelines, appropriate care should seek to mitigate threat or crisis such that there is sufficient time and stabilization for thoughtful gender-related assessment and decision making. For example, an actively suicidal adolescent may not be emotionally able to make an informed decision regarding. If indicated, safety-related interventions should not preclude starting gender affirming care.
- 2. Second, mental health can also complicate the assessment of gender development and gender identity related needs. For example, it is critical to differentiate gender incongruence from specific mental health presentations, such as obsessions (and compulsions), special interests in autism, rigid thinking, broader identity problems, parent child interaction difficulties, severe developmental anxieties (e.g. fear of growing up and pubertal changes unrelated to gender identity), trauma, or psychotic thoughts. Mental health challenges that interfere with clarity of identity development and gender-related decision making should be prioritized and addressed.
- 3. Third, decision-making regarding gender affirming medical treatments that have life-long consequences requires thoughtful, future-oriented thinking by the adolescent, with support from the parents/caregivers, as indicated (see statement 11). To be able to make such an informed decision, an adolescent should be able to understand, express a choice, appreciate and give careful thought regarding the wish for medical affirming treatment (see statement 12 C). Neurodevelopmental differences such as autistic

features or autism spectrum disorder (see statement 1.4, e.g., communication differences; a preference for concrete or rigid thinking; differences in self-awareness, future thinking, and planning) may challenge the assessment and decision-making process; neurodiverse youth may require extra support, structure, psychoeducation, and time built into the assessment process (Strang et al, 2016). Other mental health presentations that involve reduced communication and self-advocacy, difficulty engaging in assessment, memory and concentration difficulties, hopelessness and and/or difficulty engaging in future-oriented thinking may complicate assessment and decision making. In such cases, extended time is often necessary before any decisions regarding medical affirming treatment can be made.

4. Finally, during the course of medical treatment, while addressing mental health concerns is important, it does not mean that all mental health challenges can or should be resolved completely. However, it is important that any mental health concerns are addressed enough to not hinder therapeutic adherence (e.g. medication adherence, attending follow-up medical appointments, and self-care particularly during a postoperative course).

Statement 12E:

The adolescent has been informed of the reproductive effects that includes the potential loss of fertility, and options to preserve fertility have been discussed in the context of the adolescent's stage of pubertal development.

For the clinical approach, the scientific background, the rationale and concerned *values* we refer to the Reproductive Health for Adolescents and Adults chapter and the Hormone Therapy for Adolescents and Adults chapter of the SOC-8. Also please see the background text above for statement 10 in this chapter (Adolescent chapter) or the Reproductive Health for Adolescents and Adults chapter. For a detailed description of available preservation options and general consideration regarding fertility consequences of medical affirming treatment, see Fertility chapter.

Statement 12F:

The adolescent has reached Tanner stage 2 of puberty for pubertal suppression.

The onset of puberty is a pivotal point for many gender diverse youth. For some, it creates an intensification of their gender incongruence, and for others, pubertal onset may lead to gender fluidity (e.g. a transition from binary to non-binary gender identity) or even attenuation of a previously affirmed gender identity (Drummond et al., 2008; Steensma et al., 2011, 2013; Wallien & Cohen-Kettenis, 2008). The use of puberty-blocking medications, such as GnRH analogue, is not recommended until children have achieved a minimum of Tanner stage 2 of puberty because the experience of physical puberty may be critical for further gender identity development for some transgender and gender diverse adolescents (Steensma et al., 2011). Therefore, puberty blockers should not be implemented in prepubertal gender diverse youth (Waal & Cohen-Kettenis, 2006). For some youth, GnRH agonists may be appropriate in late or post-puberty (e.g. Tanner stage 4 or 5) and this should be highly individualized. See the Hormone chapter for a more comprehensive description about the use of GnRH agonists.

Variations in the timing of pubertal onset is due to multiple factors (e.g. sex assigned at birth, genetic, nutritional, etc). Tanner staging refers to five stages of pubertal development ranging

from prepubertal (Tanner stage 1) to postpubertal, adult sexual maturity (Tanner stage 5) (Marshall & Tanner, 1969, 1970). For birth-assigned females, pubertal onset (e.g. gonadarche) is defined by the occurrence of breast budding (Tanner stage 2), and in birth-assigned males, by achieving a testicular volume of greater than or equal to 4 mL (Roberts & Kaiser, 2020). The onset of puberty should be differentiated from physical changes such as pubic hair and apocrine body odor due to sex steroids produced by the adrenal gland (e.g. adrenarche) by an experienced medical provider as adrenarche does not warrant the use of puberty-blocking medications (Roberts & Kaiser, 2020). Educating parents and families about the difference between adrenarche and gonadarche helps families understand the timing for shared decision making with their multidisciplinary team related to gender-affirming medical therapies.

The importance of addressing other risks and benefits of pubertal suppression, both hypothetical and actual, cannot be overstated. Evidence demonstrates that there are surgical implications for transgirls who proceed with pubertal suppression (van de Grift et al., 2020), which means that discussions related to the future unknowns related to sexual health are important to have with families.

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Statement 12G:

The adolescent is the following age for each treatment:

14 years and above for hormone treatment (estrogens or androgens), unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame. 15 years and above for chest masculinization; unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame.

16 years and above for breast augmentation, facial surgery (including rhinoplasty, tracheal shave, and genioplasty) as part of gender affirming treatment; unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame.

17 and above for metoidioplasty, orchidectomy, vaginoplasty, and hysterectomy and fronto-orbital remodeling as part of gender affirming treatment unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame.

18 years or above for phalloplasty, unless there are significant, compelling reasons to take an individualized approach, considering the factors unique to the adolescent treatment frame.

The ages outlined above provide general guidance on the age at which gender affirming interventions may be considered. Age criteria should be considered in addition to other criteria outlined for gender affirming interventions in youth as outlined in statements 12 A-F. Individual needs, decision making capacity for the specific treatment being considered, and developmental stage (rather than age) are *most* relevant when determining timing of treatment decisions for individuals. Age has a strong correlation, though not perfect, with cognitive and psychosocial development and may be a useful objective marker in determining potential timing of interventions (Ferguson, Brunsdon, & Bradford, 2021). Higher (i.e., more advanced) ages are provided for treatments with greater irreversibility and/or complexity. This approach allows for continued cognitive/emotional maturation that may be required for the adolescent to fully consider and consent to increasingly complex treatments (See 12C).

Recommendations above are based on available evidence; expert consensus; and ethical considerations including, respect for the emerging autonomy of adolescents and minimizing harm in the setting of a limited evidence base. Historically, there has been hesitancy in the transgender healthcare setting to offer gender affirming treatments with potential irreversible effects to minors. The age criteria set forth in these guidelines are intended to facilitate youth's access to gender affirming treatments, and are younger than ages stipulated in previous guidelines (Coleman et al., 2012; Hembree et al., 2017). Importantly, for each gender affirming intervention being considered youth must communicate consent/assent and be able to demonstrate an understanding and appreciation of potential benefits and risks specific to the intervention (See statement 12C).

A growing body of evidence indicates the provision of gender affirming treatment for gender diverse youth who meet criteria, leads to positive outcomes (Achille et al., 2020; A. L. de Vries et al., 2014; Kuper et al. 2020). There is however, limited data on the optimal timing of gender affirming interventions, and long-term physical, psychological, and neurodevelopmental outcomes in youth (Chen et al., 2020; Chew et al., 2018; Olson-Kennedy et al., 2016). The only existing longitudinal studies in gender diverse youth with adult outcomes at this time are based on a specific model (i.e. the Dutch approach) that involved a comprehensive initial assessment with follow-up. In this approach pubertal suppression was considered at age 12, GAHT at age 16 and surgical interventions after age 18 with exceptions in some cases. It is not clear if deviations from this approach would lead to the same or different outcomes. Longitudinal studies are currently underway to better define outcomes as well as the safety and efficacy of gender affirming treatments in youth. (Olson-Kennedy et al., 2019). While the long-term effects of gender affirming treatments initiated in adolescence are not fully known, the potential negative health consequences of delaying treatment should also be considered (de Vries et al., 2021). As the evidence base regarding outcomes of gender affirming interventions in youth continues to grow, recommendations on timing and readiness for gender affirming interventions may be updated.

Previous guidelines regarding gender affirming treatment of adolescents recommended that initiation of partially reversible gender affirming hormone treatment (GAHT) could begin at about 16 years of age (Coleman et al., 2012; Hembree et al., 2009). More recent guidelines suggest that there may be compelling reasons to initiate GAHT prior to the age of 16, though there are limited studies on youth who have initiated hormones prior to 14yo (Hembree et al., 2017). A compelling reason for earlier initiation of GAHT, for example, might be to avoid prolonged pubertal suppression, given potential bone health concerns and the psychosocial implications of delaying puberty as described in more detail in the Hormone Chapter (Klink et al., 2015; Schagen et al., 2020: Vlot et al., 2017: Zhu & Chan, 2017). Puberty is a time of significant brain and cognitive development. The potential neurodevelopmental impact of extended pubertal suppression in gender diverse youth has been specifically identified as an area in need of continued study (Chen et al., 2020). While GnRH analogs have been shown to be safe when used for the treatment of precocious puberty, there are concerns that delaying exposure to sex hormones (endogenous or exogenous) at a time of peak bone mineralization may lead to decreased bone mineral density. The potential decrease in bone mineral density as well as the clinical significance of any decrease needs continued study (Klink et al., 2015; Lee et al., 2020; Schagen et al., 2020). It should also be noted that ages for initiation of GAHT recommended above are delayed when compared to when cisgender peers initiate puberty with endogenous hormones in most regions (Palmert & Dunkel, 2012). The potential negative psychosocial implications of not initiating puberty with peers may place additional stress on gender diverse youth, though this has not been explicitly studied. When considering timing of initiation of gender affirming hormones providers should consider the potential physical and psychological

benefits and risks of starting treatment with the potential risks and benefits of delaying treatment.

Age recommendations for irreversible surgical procedures were determined by review of existing literature and expert consensus of mental health providers, medical providers, and surgeons highly experienced in providing care to gender diverse adolescents. Studies done with transmasculine youth have demonstrated that chest dysphoria is associated with higher rates of anxiety, depression, and distress; and can lead to functional limitations such as avoiding exercising or bathing (Mehringer et al., 2021; Olson-Kennedy et al., 2018; Sood et al., 2021). Testosterone unfortunately does little to alleviate this distress and chest masculinization is an option for some individuals to address this distress long-term. Studies with youth who sought chest masculinization surgery to alleviate chest dysphoria demonstrated good surgical outcomes, satisfaction with results, and minimal regret during the study monitoring period (Marinkovic & Newfield, 2017; Olson-Kennedy et al., 2018). Chest masculinization surgery can be considered in minors when clinically and developmentally appropriate as determined by a multidisciplinary team experienced in adolescent and gender development (See statements 1-12). Duration or presence of testosterone therapy should not preclude surgery if otherwise indicated. The needs of some gender diverse youth may be met by chest masculinization surgery alone. Breast augmentation may be desired by transfeminine youth though there is less data on this procedure in youth, possibly due to fewer individuals requesting this procedure.(E. R. Boskey et al., 2019; James, 2016) GAHT, specifically oestrogen, can help with development of breast tissue and it is recommended that youth have a minimum of 12 months of hormone therapy, or longer if required for surgical effect prior to breast augmentation unless hormone therapy is not clinically indicated or is medically contraindicated.

Data are limited on the optimal timing of other gender affirming surgical treatments in adolescents. Part of this is due to the fact that access to these treatments is limited and is variable in different geographical locations.(Mahfouda et al., 2019) Data indicate that rates of gender affirming surgeries have increased since 2000, and that there has been an increase in the number of gender diverse youth seeking vaginoplasty (Mahfouda et al., 2019; Milrod & Karasic, 2017) A 2017 study of 20 WPATH affiliated surgeons in the United States reported that slightly more than half had performed vaginoplasty in minors (Milrod & Karasic, 2017). Limited data are available on outcomes for youth undergoing vaginoplasty. Small studies have reported improved psychosocial functioning and decreased gender dysphoria in adolescents who have undergone vaginoplasty (Becker et al., 2018; Cohen-Kettenis & van Goozen, 1997; Smith et al.,2001). While the sample sizes are small these studies suggest that there may be a benefit in some adolescents to having these procedures performed before the age of 18. Factors that may support pursuing these procedures for youth under 18 years of age include the increased availability of support from family members, greater ease of managing post-operative care prior to transitioning to tasks of early adulthood (e.g. entering university or the workforce), and safety concerns in public spaces (i.e to reduce transphobic violence) (Boskey et al., 2018; Boskey et al., 2019; Mahfouda et al., 2019). Given the complexity and irreversibility of these procedures an assessment of the adolescent's ability to adhere to post-surgical care recommendations and to comprehend the long-term impacts of these procedures on reproductive and sexual function is crucial (Boskey et al., 2019). Given the complexity of phalloplasty and current rates of complication it is not recommended that this surgery be considered in youth under 18 at this time.

Additional key factors that should be taken into consideration when discussing timing of interventions with youth and families are addressed in detail in Statements 12 A-F.

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