

# Assessment

## Introduction

This chapter provides guidance on the assessment of transgender and gender diverse (TGD) adults who are requesting gender affirmative medical and surgical treatments (GAMST). TGD adults are people who are at or above the age of majority in their country, who have some form of gender diversity, and who are requesting GAMST to better align their body with their gender identity. For clarity, this includes all forms of gender identities including, but not limited to, male, female, gender diverse, non-binary and eunuch. The population of TGD adults is heterogeneous and will vary according to clinical need, biological, psychological, and social situation, as well as access to healthcare. As such, any assessment for GAMST will need to be adapted to the scientific, clinical, and community knowledge base of the presenting gender identity. This chapter recognizes the individual's right to self-determination while also recognizing that in circumstances where the state, or others, are providing healthcare, individuals may experience different local levels of clinical or regulatory oversight.

The role of the assessor is to assess for the presence of gender incongruence and identify any co-existing mental health concerns, to offer information about GAMST and support the TGD person in considering the effects/risks of GAMST, and to assess if the TGD person has the capacity to understand the treatment being offered and if the treatment is likely to be of benefit. The assessor can also assist the TGD person in considering actions that will support their GAMST outcomes.

The GAMST assessment approach described in this chapter recognizes the lived experience and self-knowledge of the TGD person, and the clinical knowledge of the assessing clinician. Consequently, in this approach, the decision to move forward with GAMST is shared between the TGD person and the assessing clinician, with both playing a key part in collaborative decision making. Some systems of care use an "informed consent" model for TGD adults seeking GAMST, although there is significant variability in such models across jurisdictions, systems and clinicians (Deutsch, 2011; Morenz et al., 2020). The majority of informed consent models are used in hormone prescription protocols (Deutsch, 2011; Deutsch, 2016). Informed consent models prioritize the decision making of the TGD person with the clinician acting as an advisor barring serious contraindications. Some informed consent models utilize an abbreviated assessment which focuses primarily on the ability of a TGD person to grant informed consent and to utilize information about GAMST to inform their medical decision-making process. Because informed consent models vary so widely, some can be in alignment with the guidance in this chapter while others may not be.

Since TGD people include a diverse array of gender identities and expressions who have differing needs for gender affirming care, no single assessment process will fit every person or every situation. Some TGD people may need a comparatively brief assessment process for GAMST. TGD adults with complex histories or current circumstances, or those requesting less common or poorly researched treatments, will require more comprehensive assessments with different members of a multidisciplinary team, whether in person or through telehealth. While psychometric assessment tools have been used in some instances, they are not a required part of the assessment for GAMST. Counselling or psychotherapy can be helpful when requested by a TGD person, however counselling or psychotherapy for TGD people specifically focused on their TGD identity is not a prerequisite for GAMST. In addition, a genital exam should never be

included as a part of an assessment for GAMST. If a genital examination is necessary for other reasons, it should only be conducted by a clinician other than the one assessing for GAMST.

GAMST can be delivered in diverse settings. Settings will depend on available systems of health care within each country, and may include nationalised healthcare, private sector settings, community healthcare settings, and charitable institutions. Local and regional circumstances may therefore influence the availability of healthcare. Regardless of setting, health care offered to TGD people should be of the highest possible quality. WPATH advocates for assessment and treatment to be readily available. Access to assessment and treatment for TGD people seeking GAMST is critical given the clear medical necessity of these interventions and the profound benefits they can offer to TGD people (Aldridge et al., 2020; Byne et al., 2012). The guidance in this chapter will need to be adapted according to local, as well as individual, clinical and social circumstances.

The statements below have been recommended or suggested based on significant background literature, available empirical evidence, literature demonstrating the strong positive impact of access to GAMST, a favourable risk-benefit ratio and consensus of professional best practice. The evidence base for the assessment of TGD adults is limited, with no randomised controlled trials or long-term longitudinal research available (Olsen-Kennedy et al., 2016). This is understandable given the complexity and ethical considerations of allocating patients in need of care to different assessment groups and the lack of funding for research and other resources to assess long-term outcomes of assessment approaches.

#### **Summary of Recommendations:**

Statement 1: We recommend that health professionals assessing transgender and gender diverse adults for physical treatments:

- A. Should be licensed by their statutory body, and hold, at a minimum, a Master's degree or equivalent training in a relevant clinical field to this role granted by a nationally accredited statutory institution.
- B. For countries requiring a diagnosis for access to care, the health professional should be competent in using the latest edition of the World Health Organization's International Classification of Diseases (ICD) for diagnosis. In countries which have not implemented the latest ICD, other taxonomies may be used; efforts should be undertaken to utilize the latest ICD as soon as is practicably possible.
- C. Should be able to identify co-existing mental health or other psycho-social concerns and be able to distinguish these from gender dysphoria, incongruence or diversity.
- D. Should be able to assess capacity to consent for treatment.
- E. Should have experience or be qualified to assess clinical aspects of gender dysphoria, incongruence or diversity.
- F. Should have continuing education in the assessment and management of gender dysphoria, incongruence or diversity.

Statement 2: We suggest that healthcare professionals assessing transgender and gender diverse adults seeking gender affirming treatment should liaise with professionals from different disciplines within the field of trans health for consultation and referral if required.

***The following recommendations are made regarding the requirements for gender affirming medical and surgical treatment (all should be fulfilled):***

Statement 3: We recommend that healthcare professionals assessing transgender and gender diverse adults for gender affirming medical and surgical treatment should:

- A. Only recommend gender affirming medical treatment requested by the patient when there is well-documented (according to local contexts) persistent gender incongruence.
- B. Ensure fulfilment of diagnostic criteria prior to physical treatments in regions where a diagnosis is necessary to access health care.
- C. Identify and exclude other possible causes of apparent gender incongruence prior to the initiation of gender affirming treatments.
- D. Ensure that any mental health conditions which could negatively impact the outcome of gender affirming medical treatments have been assessed, with risks and benefits discussed, before a decision is made regarding treatment.
- E. Ensure that any physical health conditions which could negatively impact the outcome of gender affirming medical treatments have been assessed, with risks and benefits discussed, before a decision is made regarding treatment.
- F. Assess the capacity to consent for the specific physical treatments prior to the initiation of this treatment.
- G. Assess the capacity of gender diverse and transgender adult to understand the effect of gender affirming treatment on reproduction and explore reproductive options with the individual prior to the initiation of gender affirming treatment.

Statement 4: We suggest that, as part of the assessment for gender affirming hormonal or surgical treatment, professionals who have competencies in the assessment of transgender and gender diverse people wishing gender related medical treatment should consider, together with the individual, the role of social transition.

Statement 5: We suggest that transgender and gender diverse adults who fulfil the criteria for gender affirming medical and surgical treatment require a single opinion from a professional who has competencies in the assessment of trans and gender diverse people wishing gender related medical treatment for the initiation of this treatment.

Statement 6: We suggest that healthcare professionals assessing transgender and gender diverse people seeking gonadectomy should consider a minimum of 6 months of hormone therapy as appropriate to the patient's gender goals before the patient undergoes irreversible surgical intervention, (unless hormones are not clinically indicated for the individual).

Statement 7: We recommend that healthcare professionals assessing adults who wish to retransition and seek gender related hormonal and/or surgical interventions to do so, should utilize a comprehensive interdisciplinary assessment, which may include further viewpoints from experienced healthcare professionals in transgender health and that considers, together with the individual, the role of social transition as part of the assessment process.

Statement 1:

**We recommend that health professionals assessing transgender and gender diverse adults for physical treatments:**

Statement 1A:

**Should be licensed by their statutory body, and hold, at a minimum, a Master's degree or equivalent training in a relevant clinical field to this role granted by a nationally accredited statutory institution.**

TGD people, as with all other people seeking healthcare, should have the highest quality of care accessible which is commensurate with the quality of care provided in health services for all people (The Yogyakarta Principles; 2017). As this will vary around the globe, the nature of the professional completing an assessment for GAMST will vary according to the nature of healthcare in the local setting, as well as regulatory requirements set by licensing and registration boards. It is important that healthcare includes an assessment conducted by a competent, statutorily regulated, healthcare professional who can identify gender incongruence and conditions that can be mistaken for gender incongruence, and who can support the TGD person throughout the assessment process (RCGP, 2019). Assessors must be able to refer to health care professionals licensed to provide GAMST.

Accessing a competent, statutorily regulated, healthcare professional with expertise in GAMST assessment can sometimes be difficult. Continuity of care, gaps in accessible care or significantly delayed care (e.g., a long wait list) may require that a healthcare professional without expertise provide care and support the assessment of a TGD person for GAMST. Avoiding unnecessary delays in care is critically important. However, TGD people should be supported to access care with an experienced healthcare professional as soon as possible (RCGP, 2019).

Established practice requires the ability to identify and diagnose Gender Incongruence (Hembree et al., 2017; Reed, et al., 2016; T'Sjoen et al., 2020) and the ability to identify differentials or conditions that may be mistaken as gender dysphoria (Byne et al., 2020; Dhejne et al., 2016; Hembree et al., 2017). Established practice also strongly emphasizes the need for ongoing continuing education in the provision of care and assessment of TGD people (American Psychological Association, 2015; T'Sjoen et al., 2020) (see Education chapter for additional details).

Statement 1B:

**For countries requiring a diagnosis for access to care, the health professional should be competent in using the latest edition of the World Health Organization's International Classification of Diseases (ICD) for diagnosis. In countries which have not implemented the latest ICD, other taxonomies may be used; efforts should be undertaken to utilize the latest ICD as soon as is practicably possible.**

A diagnosis of gender incongruence may be necessary to access GAMST (as described below) in some countries. Healthcare professionals assessing TGD people in those countries should be competent in using the most current classification system necessary for TGD people to access GAMST.

Statement 1C:

**Should be able to identify co-existing mental health or other psycho-social concerns and be able to distinguish these from gender dysphoria, incongruence or diversity.**

Gender diversity is a natural variation in people and is not inherently pathological (American Psychological Association, 2015). However, assessment is best provided by a healthcare professional that has some expertise in mental health to identify conditions that can be mistaken for gender incongruence; such conditions are rare and, when present, are often psychological in nature (Byne et al., 2012; Byne et al., 2020; Hembree et al., 2017).

The need to include a healthcare professional with some expertise in mental health does not dictate the inclusion of a psychologist, psychiatrist or social worker in every assessment. Instead, a general practitioner, nurse or other qualified clinician could fulfil this requirement as long as they have sufficient expertise to diagnose gender incongruence, recognize mental health concerns, distinguish between these concerns and gender dysphoria, incongruence or diversity, assist a TGD person in care planning and preparing for GAMST, and refer to a mental health professional (MHP) if needed. MHPs have an important role to play in the care of TGD people, as discussed in greater depth in the mental health chapter. For example, the prejudice and discrimination experienced by some TGD people (Robles et al., 2016) can lead to depression, anxiety, or the worsening of other mental health conditions such as mood disorders. In such cases, an MHP can diagnose or clarify and treat mental health conditions. Health professionals with expertise in mental health and MHPs are well-placed to support TGD people who require or request mental health input or support during their transition. Please see the Mental Health chapter for additional information.

Statement 1D:

**Should be able to assess capacity to consent for treatment.**

An assessment for GAMST must include an examination of the TGD person's ability to consent to the proposed treatment. Consent requires the cognitive capacity to understand the risks and benefits of a treatment and the potential negative and positive outcomes, and the cognitive ability to use that understanding to make an informed decision (American Medical Association, nd; Applebaum, 2007).

Some TGD individuals will have the capacity to grant consent immediately during the assessment; some individuals may need a lengthier process to support the development of consent through ongoing discussion and the practice of skills required for medical decision making. The presence of psychiatric illness or mental health symptoms should not be a barrier for GAMST, particularly as GAMST has been found to reduce mental health symptomology (Aldridge et al., 2020). Health care systems can consider GAMST for individuals who may not be able to directly consent if an appropriate legal guardian or regulatory approved independent decision maker with the power to determine health care treatment grants consent and confirms that the proposed treatment is in alignment with the TGD individual's needs and wishes.

Statement 1E:

**Should have experience or be qualified to assess clinical aspects of gender dysphoria, incongruence or diversity.**

Statement 1F:

**Should have continuing education in the assessment and management of gender dysphoria, incongruence or diversity.**

As in any other area of practice, it is vital that healthcare professionals who are providing assessment for the initiation of GAMST are knowledgeable and experienced in TGD healthcare. If this is not possible in the local context, the healthcare professional providing the assessment should work closely with a healthcare professional that is knowledgeable and experienced. As part of their clinical practice, healthcare professionals should commit to ongoing training in TGD healthcare; become a member of relevant professional bodies; attend relevant professional meetings, workshops, or seminars; and consult with a healthcare professional with relevant experience and engage with the TGD community. This is particularly important in TGD healthcare as it is a relatively new field and the knowledge and terminology are constantly changing (American Psychological Association, 2015; Thorne et al., 2019), hence keeping up to date in the areas of TGD health is vital for anyone involved in an assessment for GAMST.

Statement 2:

**We suggest that healthcare professionals assessing transgender and gender diverse adults seeking gender affirming treatment should liaise with professionals from different disciplines within the field of trans health for consultation and referral if required.**

Assessment for GAMST should be conducted by a multidisciplinary team if possible (Costa et al., 2018; Hembree et al., 2017; Karasic & Fraser, 2018; T'Sjoen, et al, 2020), with team members who have timely and adequate contact with one another. This team could include a healthcare professional who is expert in each aspect of care which the TGD person is accessing, and may include a mental health professional, an endocrinologist, a primary care provider, a surgeon, a voice and communication specialist, TGD peer navigator and others. It is critical that TGD people are supported by follow-up appointments with any involved healthcare provider during assessment for GAMST, and during and after physical treatments.

**The following suggestions are made regarding the requirements for gender affirming medical and surgical treatment (all of them should be fulfilled)**

Statement 3:

**We recommend that healthcare professionals assessing transgender and gender diverse adults for gender affirming medical and surgical treatment should:**

Statement 3A:

**Only recommend gender affirming medical treatment requested by the patient when there is well-documented (according to local contexts) persistent gender incongruence.**

There should be marked and persistent, well documented evidence of gender incongruence to access GAMST. A consideration of the length and consistency of gender incongruence in the absence of formal documentation may also be considered. Persistent gender incongruence can exist in the absence of disclosure to others by the TGD person (Brumbaugh-Johnson & Hull, 2019; Saeed et al., 2018; Sequeira et al., 2020). An abrupt or superficial change in gender identity or lack of persistence is insufficient to initiate physical treatments and further assessment is encouraged. In such circumstances, ongoing assessment can be very useful in assuring consistency and persistence before GAMST is initiated.

It is not necessary for TGD people to experience severe levels of distress regarding their gender identity to access physical treatments. In fact, access to physical treatment can act as a prophylactic measure against distress (Becker et al., 2018; Giovanardi et al., 2021; Nieder et al. 2021; Nobili et al., 2018; Robles et al., 2016). A TGD adult can have persistent gender incongruence without distress and can still benefit from GAMST.

Established clinical practice examines the persistence of gender incongruence when considering the initiation of GAMST (Chen & Loshak, 2020). Jones et al. (2017), in a review of 200 clinical notes, does consider the importance of the “stability of gender identity” when care planning. Providing GAMST to TGD people with persistent gender incongruence has shown low rates of patient regret and high rates of patient satisfaction (Becker et al., 2018; El-Hadi et al., 2018; Staples et al., 2020; Wiepjes et al., 2018). However, while the ICD 11 (WHO, 2019) requires a marked and persistent gender incongruence for a diagnosis of Gender Incongruence to be made, there is little specific evidence concerning the length of persistence required for treatment in adults. Healthcare professionals involved in an assessment of a TGD person for GAMST are encouraged to give due consideration to the life stage, history and current circumstances of the adult being assessed.

Statement 3B:

**Ensure fulfilment of diagnostic criteria prior to GAMST, in regions where a diagnosis is necessary to access health care.**

A diagnosis of gender incongruence may be necessary in some contexts to access transition-related care. In those contexts where a diagnosis is necessary to access GAMST, the assessment for GAMST will involve determining and assigning a diagnosis. In these instances, health professionals should have competence in using the International Classification of Diseases and Related Health Problems (ICD) (WHO, 2019). In regions where diagnosis is necessary to access health care, a diagnosis of HA60 Gender Incongruence of adolescence or adulthood should be determined prior to physical interventions. Physical interventions secondary to a diagnosis of HA6Z Gender incongruence, unspecified may be considered in the context of a more comprehensive assessment by the multidisciplinary team.

There is evidence that the use of rigid, standardized assessments for “transition readiness” may reduce access to care and are not always in the best interest of the TGD person (MacKinnon et al., 2020). Therefore, in situations where the assignment of a diagnosis is mandatory to access care, the process should be approached with trust and transparency between healthcare provider and the TGD individual requesting GAMST, with the needs of the TGD individual in mind. Indeed, high quality relationships between TGD people and their healthcare providers is associated with lower emotional distress and better outcomes (Kattari et al., 2016). Because many TGD people fear that healthcare providers will conflate transgender identity with mental illness (Ellis et al., 2015), a diagnostic assessment should be undertaken with sensitivity to facilitate the best relationship between provider and the TGD individual.

Statement 3C:

**Should identify and exclude other possible causes of apparent gender incongruence prior to the initiation of gender affirming treatments.**

In rare cases, TGD individuals might have a condition that may be mistaken for gender incongruence or may have another reason for seeking treatment aside from the alleviation of gender incongruence. In these cases and where there is ambiguity regarding the diagnosis of

gender incongruence, a more detailed and comprehensive assessment is important. For example, further assessment might be required to determine if feelings of gender incongruence persist outside of an acute psychotic episode. If gender incongruence persists after an acute psychotic episode resolves, GAMST may be considered. If gender incongruence does not persist and only occurs during such an episode, treatment should not be considered. It is important that such circumstances be identified and excluded prior to the initiation of GAMST (Byne et al., 2012; Byne et al., 2020; Hembree et al., 2017).

It is important to understand, however, that TGD people may present with gender incongruence as well as with a mental health condition. Indeed, some mental health conditions are more prevalent in TGD people who have not accessed GAMST; such as anxiety (Bouman et al., 2017), depression (Heylens et al., 2014a; Witcomb et al., 2018), and self-harm (Arcelus et al., 2016; Claes et al., 2015). Recent longitudinal studies suggest that TGD peoples' mental health symptoms tend to improve following GAMST (Aldridge et al., 2020; Heylens et al., 2014b; White Hughto & Reisner, 2016). There is no evidence to suggest that it is beneficial to withhold GAMST from TGD people who have gender incongruence as well as a mental health condition. See the mental health chapter for more information.

Statement 3D:

**Ensure that any mental health conditions which could negatively impact the outcome of gender affirming medical treatments have been assessed, with risks and benefits discussed, before a decision is made regarding treatment.**

TGD people may have mental health problems just as cisgender people do. There are no mental health diagnoses which, in and of themselves, are a contraindication to GAMST for TGD people.

In general, social and medical transition are both associated with reductions in mental health problems (Aldridge et al., 2020; Bouman et al., 2017; Durwood, McLaughlin, & Olson, 2017; Glynn et al., 2016; Hughto & Reisner, 2016; Wilson et al., 2015; Witcomb et al., 2018). Unfortunately, the loss of social support, and the physical and financial stress that can be associated with initiation of GAMST may exacerbate pre-existing mental health problems and warrants additional support from the treating clinician (Budge, Adelson, & Howard, 2013; Yang et al., 2016). An assessment of mental health symptoms can improve transition outcomes, particularly when the assessment is used to facilitate access to psychological and social support during transition (Byne et al., 2012). Treatment for mental health problems can and should occur in conjunction with GAMST when medical transition is desired. It is vital that gender affirmative care is not impeded unless, in some extremely rare cases, there is robust evidence that doing so is necessary to prevent significant decompensation with risk of harm to self or others. In those cases, it is also important to consider the risks of delaying GAMST on a TGD person's mental and physical health (Byne et al., 2018).

A delay of transition may be considered if the TGD person is unable to engage with the process of transition, for example, or if the TGD person would be unable to manage aftercare following surgery, even with support. Where a delay in GAMST has, as a last resort, been found to be necessary, the healthcare provider should offer resources and support to improve mental health and facilitate re-engagement with the GAMST process as soon as practicably possible. Indeed, there should generally be an assumption to treat, as access to desired medical transition for TGD people facilitates social transition and safety in public (Rood et al., 2017). In turn, the degree to which transgender people's appearance conforms to their gender identity is the best

predictor of quality of life and mental health outcomes following medical transition (Austin & Goodman, 2017). Delaying access to GAMST due to the presence of mental health problems may exacerbate symptoms (Owen-Smith et al., 2018) and damage rapport; consequently, this should be done only when all other avenues have been exhausted.

Statement 3E:

**Ensure that any physical health conditions which could negatively impact the outcome of gender affirming medical treatments have been assessed, with risks and benefits discussed, before a decision is made regarding treatment.**

In rare cases, GAMST, such as hormones and surgical interventions, may have iatrogenic consequences or may exacerbate pre-existing physical health conditions (Hembree et al., 2017). In these instances, care should be taken to manage pre-existing physical health conditions while initiating (if appropriate) or continuing gender affirming treatments whenever possible, with any interruptions in treatment to be as brief as possible and with treatment to be re-initiated as soon as is practicably possible.

Limited data and inconsistent findings suggest cardiovascular and metabolic risks associated with hormone therapy in TGD adults (Defreyne et al., 2019; Iwamoto et al., 2019; Iwamoto et al., 2021; Spanos et al., 2020). Based on the possible harm related to long-term treatment and probable benefits expected from the preventive measures applied before and during hormone treatment, a careful assessment of physical health conditions prior to initiation of treatment is encouraged. Some specific conditions, such as a history of hormone-sensitive cancer, may require further assessment and management (Center of Excellence for Transgender Health, 2016; Hembree et al., 2017).

Similar concerns may be present for TGD adults who wish to access surgical interventions. Each gender-affirming surgical intervention has specific risks and possible unfavourable consequences (Bryson & Honig, 2019; Remington et al., 2018; Nassiri et al., 2020). However, intervention-specific risks associated with the presence of specific physical conditions have not been well researched. Thus, the kinds of medical concerns raised by TGD people during the assessment are typically no different from those of any other surgical candidate.

Taking into consideration the mental and physical health disparities (Brown & Jones, 2016) and barriers to health care (Safer et al., 2016) experienced by TGD people, the assessment of physical conditions by healthcare professionals should not be limited to a history of medical interventions. In the presence or emergence of physical health conditions, it is important that care be taken to manage the physical health difficulty while continuing gender treatments whenever possible, with any interruptions in treatment being with a view to the re-initiation of treatment as soon as is practically possible. It is also important that healthcare professionals develop a treatment strategy for physical conditions that facilitates health and consistent adherence to a treatment plan.

Statement 3F:

**Assess the capacity to consent for the specific physical treatments prior to the initiation of this treatment.**

The practice of informed consent to treatment is central in the provision of healthcare. Informed consent is couched in the ethical principle that recipients of healthcare should have an

understanding of the healthcare they receive and an understanding any potential consequences that could result. The importance of informed consent is embedded in many legislative and regulatory practices of healthcare providers around the world (Jefford & Moore, 2008). It is not possible to know of all the potential consequences of a healthcare treatment; instead, considering what would be “reasonable” to expect is often used as a minimum criterion for consent (Jefford & Moore, 2008; Spatz et al., 2016).

Being able to consent to a healthcare procedure or clinical intervention requires several complex cognitive processes. Consent requires the cognitive capacity to understand the potential limitations, risks and benefits of the treatment, and the ability to integrate that understanding into decision-making (American Medical Association, nd; Applebaum, 2007). It is vital that any TGD person is aware of the nature of the treatment sought and the potential effects, both positive and negative, that treatment may have on their life in biological, psychological and social domains.

Psychiatric illness, in particular symptoms of cognitive impairment or psychosis, can impact a person’s ability to grant consent for GAMST and the process most effective for obtaining consent (Hostiuc et al., 2018). The presence of such symptoms do not equate to an inability to give consent as many people with significant mental health symptoms are able to understand the risks and benefits of treatment to make an informed decision (Carpenter et al., 2000). Instead, a careful assessment is encouraged to examine each TGD person’s ability to comprehend the nature of the specific GAMST being considered; reason about treatment options, including risks and benefits; appreciate the potential short term and long-term consequences of the decision; and communicate their choice to receive the treatment (Appelbaum, 2007; Grootens-Wiegers et al., 2017).

There may be instances in which an individual lacks capacity to consent to healthcare. For example, during an acute episode of psychosis or where an individual has long term cognitive impairment. However, limits to capacity to consent to treatment should not be an impediment to individuals receiving appropriate GAMST. For some, understanding the risks and benefits may require the use of repeated explanation in jargon-free language over time, or the use of diagrams to facilitate explanation and comprehension. A comprehensive and thorough assessment undertaken by the multidisciplinary healthcare team can further inform this process. For others, an alternative decision maker, such as a legal guardian or regulatory approved independent decision maker may need to be appointed. These situations would need to be considered on a case by case basis with the ultimate aim to ensure the provision of the most affirmative, least restrictive healthcare for the individual. (Also see *Applicability of the Standards of Care to People Living in Institutional Environments*).

Statement 3G:

**Assess the capacity of gender diverse and transgender adult to understand the effect of gender affirming treatment on reproduction and explore reproductive options with the individual prior to the initiation of gender affirming treatment.**

As gender-affirming medical interventions often affect reproductive capacity, healthcare professionals should ensure that a TGD person is aware of the implications for reproduction of the desired treatments and is familiar with gamete storage and assistive reproductive options. Gender-affirming hormone treatments have been shown to effect reproductive functions and fertility, but with heterogenous consequences among people from both birth assigned-sexes (Adeleye et al., 2019; Jindarak et al., 2018; Taub et al., 2020). As there may be individual

differences and fluctuations in these effects on TGD adults, it is essential that healthcare professionals inform a TGD person about the possible effects of the treatment on their reproductive potential during the assessment and as part of the evaluation of the person's capacity to consent for gender-affirming interventions. Reproductive options should be considered and discussed prior to initiation of physical treatments. This may include information about the necessity of contraception to avoid pregnancy and the different methods of contraception available since data is not clear about the possibility of conception while on hormone treatment (Light et al., 2014; Shubert & Carey, 2020).

Cross-sectional studies in clinical and nonclinical samples from different populations consistently report parental desire and wish to pursue fertility preservation among TGD adults with varying rates associated with age, gender, and duration of gender-affirming hormone treatment (Auer et al., 2018; De Sutter et al., 2002; Defreyne et al., 2020a; 2020b; Wierckx et al., 2012). In a small sample, provision of fertility information was found to have an influence in decision-making related to use of fertility preservation (Chen et al., 2019). Although, a comparison between groups receiving and not receiving fertility counselling was not made, high fertility preservation rates were found after comprehensive fertility counselling among transgender individuals (Amir et al., 2020). Consultation with a specialist was suggested to reduce the regret related to the decision whether to pursue fertility preservation procedure in one study (Vyas et al., 2020). Therefore, a strong recommendation is made that healthcare professionals ensure that the TGD people are aware of the implications of the desired treatments for reproduction, and that healthcare professionals are familiar with fertility preservation and assisted reproductive options. (Please see chapter the Reproductive health for Adolescents and Adults for more information).

Statement 4:

**We suggest that as part of the assessment for gender affirming hormonal or surgical treatment professionals who have competencies in the assessment of transgender and gender diverse people wishing gender related medical treatment should consider, together with the individual, the role of social transition.**

Social transition can be extremely beneficial to many TGD people. However not all TGD people are able to socially transition and not all TGD people wish to socially transition (Bränström & Pachankis, 2021; Koehler, et al., 2018; Nieder, et al., 2020). Consequently, some TGD people seek physical interventions after social transition, some before social transition, some during social transition, and some in the absence of social transitioning. Social transitioning and gender identity disclosure can improve the mental health of the person seeking physical transitioning (Hughto, et al., 2020; McDowell, Hughto, & Reisner, 2019). In addition, chest surgeries in transmen and facial surgeries in transwomen prior to hormone therapy can facilitate social transition (Altman, 2012; Davis & Colton Meier, 2014; Olson-Kennedy et al. 2018; Van Boerum et al., 2019). As part of the assessment process, healthcare professionals are encouraged to discuss which social role is most comfortable for the TGD person, if a social transition is planned, and the timing for any planned social transition (Barker & Wylie, 2008). It is imperative that during the assessment process, healthcare professionals are respectful of the wide diversity of gendered social roles - which includes non-binary identities and presentations, as well as binary ones, and which will vary according to cultural, local community, and individual understandings.

Not everyone who requests GAMST will wish to or be able to socially transition. Little is known about TGD people who do not socially transition before, during or after medical treatment, as

this has not been systematically studied. The most frequent reasons that have been identified to avoid social transition are being afraid of being abandoned by family or friends, fearing economic loss (Bradford et al. 2013) or being discriminated against and stigmatized (Langenderfer-Magruder et al., 2016; McDowell, Hughto & Reisner, 2019; White Hughto et al., 2015). However, some people choose not to socially transition feeling that hormonal or surgical treatment offers enough subjective improvement to reduce gender dysphoria; for example, in the case of some nonbinary people.

If there is no clear plan for social transition or if a social transition is not planned, especially if surgical treatment is requested, additional assessment can be of assistance to determine the specific nature and advisability of the treatment request. Additional assessment can offer the TGD person an opportunity to consider the possible effects of not socially transitioning prior to or following GAMST. Given the lack of data on health outcomes for TGD people who do not socially transition (Evans et al., 2021; Levine 2009; Turban et al., 2021a), GAMST should be approached cautiously in such circumstances.

## WORLD PROFESSIONAL ASSOCIATION FOR TRANSGENDER HEALTH

Statement 5:

**We suggest that transgender and gender diverse adults who fulfil the criteria for gender affirming medical and surgical treatment require a single opinion from a professional who has competencies in the assessment of trans and gender diverse people wishing gender related medical treatment for the initiation of this treatment.**

Previous versions of the SOC guidelines have required that TGD individuals must be independently assessed by two qualified health professionals for their eligibility and readiness to pursue GAMST. It was considered that two independent opinions would ensure safety and best practice for both TGD people and health professionals. For example, seeing two health professionals can offer potential advantages to TGD adults and assuredness for both TGD people and their assessing health professionals when pursuing irreversible medical interventions.

However, in practice, the necessity of two opinions presents numerous disadvantages and the, albeit limited, research in the area indicated this assessment methodology to be largely unnecessary. In reviewing case notes of highly experienced clinicians, Jones et al. (2017) reported that there was overwhelming congruence between the two independent opinions of health professionals working within a state funded gender service, suggesting that the requirement for two independent assessments may not need to be routine. Bouman et al. (2014) identified that the requirement for two independent assessors reflects paternalism in health services and from an ethical standpoint raises a potential breach of the autonomy of trans and gender diverse individuals. They posit that when clients are adequately prepared and assessed, within a multidisciplinary team, that a second independent assessment is unnecessary.

Therefore general assessment for physical treatments including hormones, and genital, chest, and facial surgeries should be undertaken by a healthcare professional competent to independently assess and diagnose; such physical treatments will usually only require a single opinion/signature (Bouman et al., 2014; Yuan et al, 2021). Further opinions/signatures may be requested as necessary according to specific clinical need.

Statement 6:

**We suggest that healthcare professionals assessing transgender and gender diverse people seeking gonadectomy should consider a minimum of 6 months of hormone therapy as appropriate to the patient's gender goals before the patient undergoes irreversible surgical intervention, (unless hormones are not clinically indicated for the individual).**

The Endocrine Society Clinical Practice Guidelines advise a period of consistent hormone treatment prior to genital surgery (Hembree et al., 2017). While there was limited supportive research, this recommendation was considered 'Good Clinical Practice' as it allows a period of more reversible experience prior to the irreversible experience of surgery.

The effects of endogenous sex steroids may not be wanted by a TGD person as endogenous sex steroids are responsible for the secondary sex characteristics of the person's sex assigned at birth (e.g., beard and body-hair, menstrual bleeding). TGD people who were assigned male sex at birth are sometimes concerned about reduced sexual desire if testosterone is blocked. TGD people assigned male sex at birth can experience a decrease in sexual desire after genital surgery (Wierckx et al. 2014), although some report an increase in desire (Lawrence, 2005). In this context, reversible testosterone suppression can offer a TGD person the possibility to experience the lack of endogenous sex steroids, and to decide if this is the right step for them in their transition. The effects of reduced estrogen on a TGD person's sexual desire and functioning following an oophorectomy is less documented.

A surgery which removes gonads is an irreversible procedure and implies a loss of fertility and a loss of the effects of endogenous sex steroids. Both implications should be discussed as a component of the assessment process (see the Reproductive Health for Adults and Adolescents chapter for additional information).

Statement 7:

**We recommend that healthcare professionals assessing adults who wish to retransition and seek gender related hormonal and/or surgical interventions to do so, should utilize a comprehensive interdisciplinary assessment, which may include further viewpoints from experienced healthcare professionals in transgender health and that considers, together with the individual, the role of social transition as part of the assessment process.**

Many TGD adults may consider a range of identities and elements of gender presentation while they are exploring their gender identity and considering transition options. Accordingly, people may spend some time in a gender identity or presentation before finding it does not feel comfortable and adapting it or shifting to an earlier identity or presentation (Turban et al., 2021b). Some TGD adults may also experience a change in gender identity over time so that their needs for medical treatment evolve. This is a healthy and reasonable process of determining the most comfortable and congruent way of living as informed by the person's gender identity and the context of their life. This process of identity exploration should not necessarily be equated to regret, confusion or poor decision making as a TGD adult's gender identity may change without de-valuing previous transition decisions (MacKinnon et al., 2021; Turban et al., 2021b). TGD adults should be assisted in this exploration and any changes in their identity they experience (Expósito-Campos, 2021). While exploration continues, physical treatments which are irreversible should be avoided until clarity about long-term goals and outcomes is achieved.

Available research shows consistent positive outcomes for the majority of TGD adults who transition through gender affirmative care, including medical transition (Byne et al., 2012; Green & Fleming, 1990; Lawrence, 2003; Motmans et al., 2012; Van de Griff et al., 2018). While little research has been conducted to systematically examine variables that correlate with a TGD adult's decision to halt a transition process or retransition, a recent study found that the vast majority of TGD people who opted to retransition did so due to external factors, such as stigma and lack of social support, not because of changes in gender identity (Turban et al., 2021b). The occurrence of a decision to retransition appears to be rare (Defreyne et al., 2017; Hadje-Moussa et al., 2019; Wiepjes et al., 2018). Guidance in this area is based primarily on individual case studies and expert opinion of clinicians working with TGD adults (Expósito-Campos, 2021; Richards & Barrett, 2020). Estimates of the number of people who retransition due to a change in identity are likely overinflated given how some research has blended very different cohorts (Expósito-Campos, 2021). Retransition research cohorts often include TGD adults who chose to retransition because of a change in their identity and TGD adults who chose to retransition without a change in identity. TGD adults who have not experienced a change in identity may choose to halt transition or retransition to reduce oppression, violence and social/relational conflict, because of surgical complications, as a result of health concerns or physical contraindications, because of a lack of resources, or because of dissatisfaction with results (Expósito-Campos, 2021). While the choice to retransition is proportionally rare, it would be expected that an overall increase in the number of adults who identify as TGD could also result in an increase in the absolute number of people seeking to halt or reverse a transition that has occurred. This is an expected outcome given a population increase; however, the proportion of people seeking to halt or reverse permanent physical changes would still remain very low. The existence of these rare requests should not be used as a justification to interrupt critical, medically necessary care, including hormones and surgery, for the far majority of TGD adults.

If a TGD adult has undergone permanent physical changes and seeks to undo them, the healthcare professional should be part of a comprehensive interdisciplinary team assessment. An interdisciplinary team allows additional viewpoints from healthcare professionals experienced in transgender health. In collaboration with the TGD adult, the interdisciplinary team is encouraged to thoroughly investigate the motivations for the original treatment and for the decision to retransition. Any concerns with the previous physical changes should be carefully explored, with significant effort to ensure that similar concerns are not replicated with the reversal. To ensure the greatest likelihood of satisfaction and comfort with a reversal of permanent physical changes, the TGD adult and the interdisciplinary team should explore the role of social transition in the assessment and in preparation for the reversal. It is highly likely in such instances that a persisting period of living in role will be necessary before further physical changes are recommended. Healthcare professionals should support the TGD adult through any feelings of failure, shame, depression, or guilt in deciding to make such a change. It will be important help the TGD adult to remain engaged in care throughout the process (Narayan et al., 2021).

While available research shows consistent positive outcomes for the majority of TGD adults who chose to transition (Aldridge et al., 2020; Byne et al., 2012; Gorin-Lazard et al., 2012; Owen-Smith et al., 2018; White Hughto & Reisner, 2016), some TGD adults may decompensate or experience a worsened condition following transition. Little research has been conducted to systematically examine variables that correlate with poor or worsened biological, psychological or social condition following transition (Hall et al., 2021; Littman, 2021). This occurrence appears to be rare (Hall et al., 2021; Wiepjes et al., 2018). In cases where people decompensate after physical or social transition and then remain in a poorer biological, psychological, or social condition than they had prior to transition, consideration should be given

as to whether transition is helpful at this time and/or for this person. In cases where treatment is no longer supported, assistance should be arranged to support the person to manage the process of stopping treatment; and to manage any concomitant difficulties (Narayan et al., 2021).

## References:

Adeleye, A.J., Reid, G., Kao, C.N., Mok-Lin, E., & Smith, J.F. (2019). Semen parameters among transgender women with a history of hormonal treatment. *Urology*, 124, p. 136-141. doi: 10.1016/j.urology.2018.10.005.

Altman, K. (2012). Facial feminization surgery: Current state of the art. *International Journal Oral Maxillofac Surgery*, 41(8), p. 885-894. doi: 10.1016/j.ijom.2012.04.024.

Aldridge, Z., Patel, S., Guo, B., Nixon, E., Bouman, W.P., Witcomb, G., & Arcelus, J. (2020). Long term effect of gender affirming hormone treatment on depression and anxiety symptoms in transgender people: A prospective cohort study, *Andrology*. DOI: 10.1111/andr.12884

American Medical Association. (nd). Ethics: Informed consent. Downloaded September 11, 2021 from <https://www.ama-assn.org/delivering-care/ethics/informed-consent>.

American Psychological Association. (2015). Guidelines for professional practice with transgender and gender non-conforming people. *American Psychologist*, 70(9), 832-864.

Applebaum, P.S. (2007). Assessment of patients' competence to consent to treatment. *New England Journal of Medicine*, 357(18), p. 1834-1840. DOI: 10.1056/NEJMcp074045

Amir, H., Yaish, I., Oren, A., Groutz, A., Greenman, Y., & Azem, F. (2020). Fertility preservation rates among transgender women compared with transgender men receiving comprehensive fertility counselling. *Reprod Biomed Online*, 41(3), p. 546-554. DOI: 10.1016/j.rbmo.2020.05.003.

Arcelus, J., Claes, L., Witcomb, G.L., Marshall, E., & Bouman, W.P. (2016). Risk factors for non suicidal self injury among trans youth. *Journal of Sexual Medicine*, 13(3), 402-412.

Auer, M.K., Fuss, J., Nieder, T.O., Briken, P., Biedermann, S.V., Stalla, G.K., Beckmann, M.W., & Hildebrandt, T. (2018). Desire to have children among transgender people in Germany: A cross-sectional multi-center study. *The Journal of Sexual Medicine*, 15(5), p. 757-767. DOI: 10.1016/j.jsxm.2018.03.083.

Austin, A., & Goodman, R. (2017). The impact of social connectedness and internalized transphobic stigma on self-esteem among transgender and gender non-conforming adults. *Journal of Homosexuality*, 64(6), p. 825-841. DOI: 10.1080/00918369.2016.1236587.

Barker, H., & Wylie, K. (2008). Are the criteria for the 'real-life experience' (RLE) stage of assessment for GID useful to patients and clinicians? *International Journal of Transgenderism*, 10(3-4), 121-131.

Becker, I., Auer, M., Barkmann, C., Fuss, J., Möller, B., Nieder, T.O., Fahrenkrug, S., Hildebrandt, T., & Richter-Appelt, H. (2018). A cross-sectional multicenter study of multidimensional body image in adolescents and adults with gender dysphoria before and after

transition-related medical interventions. *Arch Sex Behav*, 47(8), p. 2335-2347. DOI: 10.1007/s10508-018-1278-4.

Bouman, W.P., Claes, L., Brewin, N., Crawford, J.R., Millet, N., Fernandez-Aranda, F., & Arcelus, J. (2017). Gender dysphoria and anxiety: A comparative study between transgender people and the general population. *International Journal of Transgenderism*, 18(1), p. 16-26.

Bouman, W.P., Richards, C., Addinall, R.M., Arango de Montis, I., Duisin, D., Estiva, I., Fisher, A., Harte, F., Khoury, B., Lu, Z., Marais, A., Mattila, A., Nayarana R.D., Nieder, T.O., Robles-Garcia, R., Roque Guerra, A., Tereshkevich, D., T'Sjoen, G., & Wilson, D. (2014). Yes and yes again: Are standards of care which require two signatures for genital reconstructive surgery ethical? *Sex and Relationship Therapy*, 29 (4), 377-389.

Bradford, J., Reisner, S.L., Honnold, J.A., & Xavier, J. (2013). Experiences of transgender-related discrimination and implications for health: Results from the Virginia Transgender Health Initiative Study. *American Journal of Public Health*, 103 (10), p. 1820-1829. DOI: 10.2105/AJPH.2012.300796.

Bränström, R., & Pachankis, J.E. (2021). Country-level structural stigma, identity concealment, and day-to-day discrimination as determinants of transgender people's life satisfaction. *Social Psychiatry and Psychiatric Epidemiology*, 56(9), p. 1537-1545. DOI: 10.1007/s00127-021-02036-6.

Brown, G.R., Jones, K.T. (2016). Mental health and medical health disparities in 5135 transgender veterans receiving healthcare in the veterans health administration: A case-control study. *LGBT Health*, 3(2), p. 122-131. DOI: 10.1089/lgbt.2015.0058.

Brumbaugh-Johnson, S.M., & Hull, K.E. (2019). Coming out as transgender: Navigating the social implications of a transgender identity. *Journal of Homosexuality*, 66(8), p. 1148-1177. DOI: 1080/00918369.2018.1493253.

Bryson, C., & Honig, S.C. (2019). Genitourinary complications of gender-affirming surgery. *Current Urology Reports*, 20(6). DOI:10.1007/s11934-019-0894-4.

Budge, S.L., Adelson, J.L., & Howard, K.A. (2013). Anxiety and depression in transgender individuals: The roles of transition status, loss, social support, and coping. *Journal of Consult Clin Psychol*, 81(3), p. 545-557. DOI: 10.1037/a0031774.

Byne, W., Karasic, D.H., Coleman, E., Eyler, A.E., Kidd, J.D., Meyer-Bahlburg, H.F.L., Pleak, R.R., & Pula, J. (2020). Gender dysphoria in adults: An overview and primer for psychiatrists. *Focus (Am Psychiatr Publ)*, 18(3), p. 336-350. DOI: 10.1176/appi.focus.18304.

Byne, W., Bradley, S. J., Coleman, E., Eyler, A.E., Green, R., Menvielle, E.J., ... & Tompkins, D.A. (2012). Report of the American Psychiatric Association task force on treatment of gender identity disorder. *Archives of Sexual Behavior*, 41(4), 759-796.

Byne, W., Karasic, D.H., Coleman, E., Eyler, A.E., Kidd, J.D., Meyer-Bahlburg, H.F.L., Pleak, R.R., & Pula, J. (2018) Gender dysphoria in adults: An overview and primer for psychiatrists. *Transgender Health*, 3(1), p. 57-70.

Carpenter, W.T., Gold, J.M., Lahti, A.C., Queern, C.A., Conley, R.R., Bartko, J.J., Kovnik, J., & Applebaum, P.S. (2000). Decisional capacity for informed consent in schizophrenia research. *Arch Gen Psychiatry*, 57(6), p. 533–538. DOI:10-1001/pubs.Arch Gen Psychiatry-ISSN-0003-990x-57-6-yoa9156.

Center of Excellence for Transgender Health. (2016). Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People, 2<sup>nd</sup> edition, Madeline B Deutsch (Ed). Center of Excellence for Transgender Health, UCSF. Downloaded on November 1, 2021 from <https://transcare.ucsf.edu/guidelines>.

Chen, D., Kyweluk, M.A., Sajwani, A., Gordon, E.J., Johnson, E.K., Finlayson, C.A., & Woodruff, T.K. (2019). Factors Affecting Fertility Decision-Making Among Transgender Adolescents and Young Adults. *LGBT Health*, 6(3), 107-115. doi: 10.1089/lgbt.2018.0250.

Chen, S., & Loshak, H. (2020). Primary Care Initiated Gender-Affirming Therapy for Gender Dysphoria: A Review of Evidence Based Guidelines: Canadian Agency for Drugs and Technologies in Health. <https://www.ncbi.nlm.nih.gov/books/NBK563451/>.

Claes, L., Bouman, W.P., Witcomb, G., Thurston, M., & Arcelus, J. (2015). Non-Suicidal Self-Injury in Transsexualism: Associations with Psychological Symptoms, Victimization, Interpersonal Functioning and Perceived Social Support. *Journal of Sexual Medicine*, 12(1), 168-79

Costa, L.B.F., Rosa-E-Silva, A.C.J.S., Medeiros, S.F., Nacul, A.P., Carvalho, B.R., Benetti-Pinto, C.L., Yela, D.A., Maciel, G.A.R., Soares Júnior, J.M., & Maranhão, T.M.O. (2018). Recommendations for the Use of Testosterone in Male Transgender. *Rev Bras Ginecol Obstet.* 40(5), 275-280. DOI: 10.1055/s-0038-1657788.

Davis SA, Colton Meier S. Effects of Testosterone Treatment and Chest Reconstruction Surgery on Mental Health and Sexuality in Female-to-Male Transgender people. *International Journal of Sexual Health*. 2014;26(2):113-28. Doi: 10.1080/19317611.2013.833152.

Defreyne J, Motmans J, T'sjoen G. (2017) Healthcare costs and quality of life outcomes following gender affirming surgery in trans men: a review. *Expert Rev Pharmacoecon Outcomes Res.* 2017 Dec;17(6):543-556. doi: 10.1080/14737167.2017.1388164

Defreyne J, Van de Bruaene LDL, Rietzschel E, Van Schuylenbergh J, T'Sjoen GGR. (2019). Effects of Gender-Affirming Hormones on Lipid, Metabolic, and Cardiac Surrogate Blood Markers in Transgender Persons. *Clin Chem.* 2019 Jan;65(1):119-134. doi: 10.1373/clinchem.2018.288241.

Defreyne J, Van Schuylenbergh J, Motmans J, Tilleman KL, T'Sjoen GGR. (2020a). Parental desire and fertility preservation in assigned female at birth transgender people living in Belgium. *Fertil Steril.* 2020 Jan;113(1):149-157.e2. doi: 10.1016/j.fertnstert.2019.09.002.

Defreyne J, Van Schuylenbergh J, Motmans J, Tilleman K, T'Sjoen G. (2020b). Parental desire and fertility preservation in assigned male at birth transgender people living in Belgium. *Int J Transgend Health.* 21(1):45-57. doi: 10.1080/15532739.2019.1692750.

De Sutter P., Kira K., Verschoor A., & Hotimsky (2002). The desire to have children and the preservation of fertility in transsexual women: A survey. *International Journal of Transgenderism*, 6(3), 3–97.

Deutsch, M.B. (2011). Use of the informed consent model in the provision of cross-sex hormone therapy: A survey of the practices of selected clinics. *International Journal of Transgenderism*, 13, 140-146.

Deutsch, M.B. (2016). Initiating hormone therapy. UCSF Transgender Care & Treatment Guidelines. Downloaded on November 10, 2021 from <https://transcare.ucsf.edu/guidelines/initiating-hormone-therapy>.

Dhejne, C., Van Vlerken, R., Heylens, G., & Arcelus, J. (2016). Mental health and gender dysphoria: A review of the literature. *International Review of Psychiatry*, 28(1), 44-57.

Durwood L, McLaughlin KA, Olson KR. Mental Health and Self-Worth in Socially Transitioned Transgender Youth. *J Am Acad Child Adolesc Psychiatry*. 2017 Feb;56(2):116-123.e2. doi: 10.1016/j.jaac.2016.10.016. Epub 2016 Nov 27. Erratum in: *J Am Acad Child Adolesc Psychiatry*. 2018 Nov;57(11):899. PMID: 28117057; PMCID: PMC5302003.

El-Hadi H, Stone J, Temple-Oberle C, Harrop AR. Gender-Affirming Surgery for Transgender Individuals: Perceived Satisfaction and Barriers to Care. *Plast Surg (Oakv)*. 2018 Nov;26(4):263-268. doi: 10.1177/2292550318767437

Sonja J. Ellis, Louis Bailey & Jay McNeil (2015) Trans People's Experiences of Mental Health and Gender Identity Services: A UK Study, *Journal of Gay & Lesbian Mental Health*, 19:1, 4-20, DOI: [10.1080/19359705.2014.960990](https://doi.org/10.1080/19359705.2014.960990)

Evans S, Crawley J, Kane D, Edmunds K. The process of transitioning for the transgender individual and the nursing imperative: A narrative review. *J Adv Nurs*. 2021 Jul 12. doi: 10.1111/jan.14943. Epub ahead of print. PMID: 34252206.

Expósito-Campos, P. (2021) A Typology of Gender Detransition and Its Implications for Healthcare Providers, *Journal of Sex & Marital Therapy*, DOI: [10.1080/0092623X.2020.1869126](https://doi.org/10.1080/0092623X.2020.1869126)

Giovanardi, G., Mirabella, M., Di Giuseppe, M., Lombardo, F., Speranza, A.M., Lingiardi, V. (2021). Defensive functioning of individuals diagnosed with gender dysphoria at the beginning of their hormonal treatment. *Front Psychol*. Aug 12:665547. Doi: 10.3389/fpsyg.2021.665547. eCollection 2021.

Glynn TR, Gamarel KE, Kahler CW, Iwamoto M, Operario D, Nemoto T. The role of gender affirmation in psychological well-being among transgender women. *Psychol Sex Orientat Gen Divers*. 2016 Sep;3(3):336-344. doi: 10.1037/sgd0000171. Epub 2016 Apr 28. PMID: 27747257; PMCID: PMC5061456.

Gorin-Lazard, A., Baumstarck, K., Boyer, L., Maquigneau, A., Gebleux, S., Penochet, J. C., ... & Bonierbale, M. (2012). Is hormonal therapy associated with better quality of life in transsexuals? A cross-sectional study. *The journal of sexual medicine*, 9(2), pp.531-541.

Green, R., & Fleming, D. T. (1990). Transsexual surgery follow-up: Status in the 1990s. *Annual review of sex research*, 1(1), 163-174.

Grootens-Wiegers, P., Hein, I., van den Broek, J., de Vries, M. (2017). Medical decision-making in children and adolescents: developmental and neuroscientific aspects. *BMC Pediatrics*. 17:120. DOI: 10.1186/s12887-017-0869

Hadj-Moussa M, Agarwal S, Ohl DA, Kuzon WM Jr. Masculinizing Genital Gender Confirmation Surgery. *Sex Med Rev*. 2019 Jan;7(1):141-155. doi: 10.1016/j.sxmr.2018.06.004. Epub 2018 Aug 16. PMID: 30122339.

Hall, R., Mitchell, L., Sachdeva, J. (2021). Access to care and frequency of detransition among a cohort discharged by a UK national adult gender identity clinic: Retrospective case-note review. *BJPsych Open*. 7(6):e184. Doi: 10.1192/bjo.2021.1022.

Hembree, W. C., Cohen-Kettenis, P. T., Gooren, L., Hannema, S. E., Meyer, W. J., Murad, M. H., ... & T'Sjoen, G. G. (2017). Endocrine treatment of gender-dysphoric/gender-incongruent persons: an endocrine society clinical practice guideline. *The Journal of Clinical Endocrinology & Metabolism*, 102(11), 3869-3903

Heylens G, Elaut E, Kreukels BP, Paap MC, Cerwenka S, Richter-Appelt H, Cohen-Kettenis PT, Haraldsen IR, De Cuypere G. (2014a). Psychiatric characteristics in transsexual individuals: multicentre study in four European countries. *Br J Psychiatry*. 2014 Feb;204(2):151-6. doi: 10.1192/bjp.bp.112.121954. Epub 2013 May 9. PMID: 23869030.

Heylens G, Verroken C, De Cock S, T'Sjoen G, De Cuypere G. (2014b). Effects of different steps in gender reassignment therapy on psychopathology: a prospective study of persons with a gender identity disorder. *J Sex Med*. 2014 Jan;11(1):119-26. doi: 10.1111/jsm.12363. Epub 2013 Oct 28. PMID: 24344788.

Hostiuc, S., Rusu, M. C., Negoii, I., & Drima, E. (2018). Testing decision-making competency of schizophrenia participants in clinical trials. A meta-analysis and meta-regression. *BMC psychiatry*, 18(1), 1-11. doi: 10.1186/s12888-017-1580-z

Hughto JMW, Gunn HA, Rood BA, Pantalone DW. Social and Medical Gender Affirmation Experiences Are Inversely Associated with Mental Health Problems in a U.S. Non-Probability Sample of Transgender Adults. *Arch Sex Behav*. 2020 Oct;49(7):2635-2647. doi: 10.1007/s10508-020-01655-5. Epub 2020 Mar 25. PMID: 32215775; PMCID: PMC7494544.

White Hughto JM, Reisner SL. A Systematic Review of the Effects of Hormone Therapy on Psychological Functioning and Quality of Life in Transgender Individuals. *Transgend Health*. 2016 Jan;1(1):21-31. doi: 10.1089/trgh.2015.0008. Epub 2016 Jan 13. PMID: 27595141; PMCID: PMC5010234.

Iwamoto SJ, Defreyne J, Rothman MS, Van Schuylenbergh J, Van de Bruaene L, Motmans J, T'Sjoen G. Health considerations for transgender women and remaining unknowns: a narrative review. *Ther Adv Endocrinol Metab*. 2019 Aug 30;10:2042018819871166. doi: 10.1177/2042018819871166. PMID: 31516689; PMCID: PMC6719479.

Iwamoto SJ, Grimstad F, Irwig MS, Rothman MS. Routine Screening for Transgender and Gender Diverse Adults Taking Gender-Affirming Hormone Therapy: a Narrative Review. *J Gen Intern Med*. 2021 Feb 5. doi: 10.1007/s11606-021-06634-7. Epub ahead of print. PMID: 33547576.

Jefford M, Moore R. Improvement of informed consent and the quality of consent documents. *Lancet Oncol*. 2008 May;9(5):485-93. doi: 10.1016/S1470-2045(08)70128-1. PMID: 18452859.

Jindarak S, Nilprapha K, Atikankul T, Angspatt A, Pungrasmi P, Iamphongsai S, Promniyom P, Suwajo P, Selvaggi G, Tiewtranon P. Spermatogenesis Abnormalities following Hormonal Therapy in Transwomen. *Biomed Res Int*. 2018 Apr 2;2018:7919481. doi: 10.1155/2018/7919481. PMID: 29808166; PMCID: PMC5902106.

Jones, B. A., Brewin, N., Richards, C., Van Eijk, M., Stephenson-Allen, A., & Arcelus, J. (2017). Investigating the outcome of the initial assessment at a national transgender health service: Time to review the process?. *International Journal of Transgenderism*, 18(4), 427-432.

Karasic DH, Fraser L. Multidisciplinary Care and the Standards of Care for Transgender and Gender Nonconforming Individuals. *Clin Plast Surg*. 2018 Jul;45(3):295-299. doi: 10.1016/j.cps.2018.03.016. PMID: 29908615.

Kattari, S.K., Walls, N.E., Speer, S.R., Kattari, L. (2016). Exploring the relationship between transgender-inclusive providers and mental health outcomes among transgender/gender variant people. *Soc Work Health Care*. 55(8):635-650. Doi: 10/1080/00981389.2016.1193099.

Koehler, A., Eyssel, J., Nieder, T.O. (2018). Genders and individual treatment progress in (non-)binary trans individuals. *J Sex Med*. 15(1):102-113. Doi: 10.1016/j.jsxm.2017.11.007.

Langenderfer-Magruder L, Whitfield DL, Walls NE, Kattari SK, Ramos D. Experiences of Intimate Partner Violence and Subsequent Police Reporting Among Lesbian, Gay, Bisexual, Transgender, and Queer Adults in Colorado: Comparing Rates of Cisgender and Transgender Victimization. *J Interpers Violence*. 2016 Mar;31(5):855-71. doi: 10.1177/0886260514556767. Epub 2014 Nov 11. PMID: 25392392.

Lawrence, A. A. (2003). Factors associated with satisfaction or regret following male-to-female sex reassignment surgery. *Archives of Sexual Behavior*, 32 (4), 299-315.

Lawrence, A. A. (2005). Sexuality after male-to-female sex reassignment surgery. *Archives of Sexual Behaviour*, 34 (2), 147-166.

Levine SB. (2009). Real-Life Test Experience: Recommendations for Revisions to the Standards of Care of the World Professional Association for Transgender Health, *International Journal of Transgenderism*. 11(3), 186-193, DOI: 10.1080/15532730903383773

Light, A. D., Obedin-Maliver, Sevelius, J. M., & Kerns, J. L. (2014). Transgender men who experienced pregnancy after female-to-male gender transitioning. *Obstetrics & Gynecology*, 124(6), 1120-1127.

Littman L. Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners. *Arch Sex Behav*. 2021 Oct 19. doi: 10.1007/s10508-021-02163-w.

MacKinnon, K.R., Ashley, F., Kia, H., Lam, J.S.H., Krakowsky, Y., Ross, L.E. (2021). Preventing transition "regret": An institutional ethnography of gender-affirming medical care assessment practices in Canada. *Soc Sci Med*. 291(1):114477. Doi: 10.1016/j.socscimed.2021.114477.

MacKinnon, K.R., Ng, S.L., Grace, D., Sicchia, S.R., Ross, L.E. (2020). Protocols as curriculum? Learning health advocacy skills by working with transgender patients in the context of gender-affirming medicine. *Adv Health Sci Educ Theory Pract*, 25(1), 7-18.

McDowell MJ, Hughto JMW, Reisner SL. Risk and protective factors for mental health morbidity in a community sample of female-to-male trans-masculine adults. *BMC Psychiatry*. 2019 Jan 9;19(1):16. doi: 10.1186/s12888-018-2008-0. Erratum in: *BMC Psychiatry*. 2019 Jan 28;19(1):45.

Morenz, A.M., Goldhammer, H., Lambert, C.A., Hopwood, R., & Keuroghlian, A. S. (2020). A blueprint for planning and implementing a transgender health program. *Annals of Family Medicine*, 18(1), 73-79.

Motmans, J., Meier, P., Ponnet, K., T'Sjoen, G. (2012). Female and male transgender quality of life: socioeconomic and medical differences. *J Sex Med*. 9(3):743-750. Doi: 10.1111/j.1743-6109.2011.02569.x.

Narayan, S.K., Hontscharuk, R., Danker, S., Guerriero, J., Carter, A., Blasdel, G., Bluebond-Langer, R., Ettner, R., Radix, A., Schechter, L., Berli, J.U. (2021). Guiding the conversation-types of regret after gender-affirming surgery and their associated etiologies. *Ann Transl Med*. 9(7):605. Doi: 10.21037/atm-20-6204.

Nassiri, N., Maas, M., Basin, M., Cacciamani, G. E., & Doumanian, L. R. (2020). Urethral complications after gender reassignment surgery: a systematic review. *International Journal of Impotence Research*. doi:10.1038/s41443-020-0304-y

Nieder, T.O., Eyssel, J., Kohler, A. (2020). Being trans without medical transition: Exploring characteristics of trans individuals from Germany not seeking gender-affirmative medical interventions. *Arch Sex Behav*, 49(7), 2661-2672. DOI: 10.1007/s10508-019-01559-z.

Nieder, T.O., Mayer, T.K., Hinz, S. Fahrenkrug, S., Herrmann, L., Becker-Hebly, I. (2021). Individual treatment progress predicts satisfaction with transition-related care for youth with gender dysphoria: A prospective clinical cohort study. *Journal of Sexual Medicine*, 18(3), 632-645. DOI: 10/1016/j.jsxm.2020.12.010.f

Nobili, A. Glazebrook, C. Arcelus, J. (2018). Quality of life of treatment-seeking transgender adults: a systematic review and meta-analysis. *Rev Endo Met Disord*. 19(3);199-220.

Olson-Kennedy J, Cohen-Kettenis PT, Kreukels BP, Meyer-Bahlburg HF, Garofalo R, Meyer W, Rosenthal SM. Research priorities for gender nonconforming/transgender youth: gender identity development and biopsychosocial outcomes. *Curr Opin Endocrinol Diabetes Obes*. 2016 Apr;23(2):172-9. doi: 10.1097/MED.0000000000000236.

Olson-Kennedy J, Warus J, Okonta V, Belzer M, Clark LF. Chest Reconstruction and Chest Dysphoria in Transmasculine Minors and Young Adults: Comparisons of Nonsurgical and Postsurgical Cohorts. *JAMA Pediatr*. 2018 May 1;172(5):431-436. doi: 10.1001/jamapediatrics.2017.5440.

Owen-Smith AA, Gerth J, Sineath RC, Barzilay J, Becerra-Culqui TA, Getahun D, Giammattei S, Hunkeler E, Lash TL, Millman A, Nash R, Quinn VP, Robinson B, Roblin D, Sanchez T, Silverberg MJ, Tangpricha V, Valentine C, Winter S, Woodyatt C, Song Y, & Goodman M. (2018). Association Between Gender Confirmation Treatments and Perceived Gender Congruence, Body Image Satisfaction, and Mental Health in a Cohort of Transgender Individuals. *J Sex Med*, 15(4), 591-600. doi: 10.1016/j.jsxm.2018.01.017. Epub 2018 Feb 17. PMID: 29463478; PMCID: PMC5882508.

RCGP (2019). *The role of the GP in caring for gender-questioning and transgender patients: RCGP Position Statement*. Retrieved 25 September 2021 from: <https://www.rcgp.org.uk/-/media/Files/Policy/A-Z-policy/2019/RCGP-position-statement-providing-care-for-gender-transgender-patients-june-2019.ashx?la=en>

Reed, G. M., Drescher, J., Krueger, R. B., Atalla, E., Cochran, S. D., First, M. B., ... & Briken, P. (2016). Disorders related to sexuality and gender identity in the ICD-11: revising the ICD-10 classification based on current scientific evidence, best clinical practices, and human rights considerations. *World Psychiatry*, 15(3), 205-221.

Remington AC, Morrison SD, Massie JP, Crowe CS, Shakir A, Wilson SC, Vyas KS, Lee GK, Friedrich JB. Outcomes after Phalloplasty: Do Transgender Patients and Multiple Urethral Procedures Carry a Higher Rate of Complication? *Plast Reconstr Surg*. 2018 Feb;141(2):220e-229e. doi: 10.1097/PRS.0000000000004061. PMID: 29019859.

Richards, C., & Barrett, J. (2020). *Trans and non-binary gender healthcare for psychiatrists, psychologists, and other mental health professionals*. London: Royal College of Psychiatrists/Cambridge University Press.

Robles, R., Fresán, A., Vega-Ramírez, H., Cruz-Islas, J., Rodríguez-Pérez, V., Domínguez-Martínez, T., & Reed, G. M. (2016). Removing transgender identity from the classification of mental disorders: a Mexican field study for ICD-11. *The Lancet Psychiatry*, 3(9), 850-859.

Brian A. Rood, Sari L. Reisner, Jae A. Puckett, Francisco I. Surace, Ariel K. Berman & David W. Pantalone (2017) Internalized transphobia: Exploring perceptions of social messages in transgender and gender-nonconforming adults, *International Journal of Transgenderism*, 18:4, 411-426, DOI: [10.1080/15532739.2017.1329048](https://doi.org/10.1080/15532739.2017.1329048)

Safer JD, Coleman E, Feldman J, Garofalo R, Hembree W, Radix A, Sevelius J. Barriers to healthcare for transgender individuals. *Curr Opin Endocrinol Diabetes Obes*. 2016 Apr;23(2):168-71. doi: 10.1097/MED.0000000000000227. PMID: 26910276; PMCID: PMC4802845.

Saeed A., Mughal, U., Farooq, S. (2018). It's complicated: sociocultural factors and the disclosure decision of transgender individuals in Pakistan. *J Homosex*. 65(8):1051-1070. Doi: 10.1080/00918369.2017.1368766.

Schubert FD, Carey JM. Data unclear on pregnancy risk in transmasculine individuals on testosterone. *Am J Obstet Gynecol*. 2020 Apr; 222(4):393-394. doi: 10.1016/j.ajog.2019.12.014. Epub 2019 Dec 20. PMID: 31870734.

Sequeira G.M., Ray, K.N., Miller, E. Coulter, R.W.S. (2020). Transgender youth's disclosure of gender identity to providers outside of specialized gender centers. *J Adolesc Health*. 66(6):691-698. Doi: 10.1016/j.jadohealth.2019.12.010.

Spanos, C., Bretherton, I., Zajac, J. D., & Cheung, A. S. (2020). Effects of gender-affirming hormone therapy on insulin resistance and body composition in transgender individuals: A systematic review. *World journal of diabetes*, 11(3), 66–77. <https://doi.org/10.4239/wjd.v11.i3.66>

Spatz, E. S., Krumholz, H. M., & Moulton, B. W. (2016). The New Era of Informed Consent: Getting to a Reasonable-Patient Standard Through Shared Decision Making. *JAMA*, 315(19), 2063–2064. <https://doi.org/10.1001/jama.2016.3070>

Steensma, T. D., McGuire, J. K., Kreukels, B. P., Beekman, A. J., & Cohen-Kettenis, P. T. (2013). Factors associated with desistence and persistence of childhood gender dysphoria: a quantitative follow-up study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(6), 582-590.

Staples JM, Bird ER, Gregg JJ, George W. Improving the Gender-Affirmation Process for Transgender and Gender-Nonconforming Individuals: Associations Among Time Since Transition Began, Body Satisfaction, and Sexual Distress. *J Sex Res*. 2020 Mar-Apr;57(3):375-383. doi: 10.1080/00224499.2019.1617829. Epub 2019 May 29. PMID: 31140876.

Taub RL, Ellis SA, Neal-Perry G, Magaret AS, Prager SW, Micks EA. The effect of testosterone on ovulatory function in transmasculine individuals. *Am J Obstet Gynecol*. 2020 Aug;223(2):229.e1-229.e8. doi: 10.1016/j.ajog.2020.01.059. Epub 2020 Feb 8. PMID: 32044312.

The Yogyakarta Principles (2017). *The Yogyakarta Principles Plus 10: Additional principles and state obligations on the application of international human rights law in relation to sexual orientation, gender identity, gender expression, and sex characteristics to complement the Yogyakarta Principles*. Retrieved 25 September 2021 from: [http://yogyakartaprinciples.org/wp-content/uploads/2017/11/A5\\_yogyakartaWEB-2.pdf](http://yogyakartaprinciples.org/wp-content/uploads/2017/11/A5_yogyakartaWEB-2.pdf)

Thorne, A., Kam-Tuck, Y., Walter Pierre Bouman, Ellen Marshall & Jon Arcelus (2019) The terminology of identities between, outside and beyond the gender binary – A systematic review, *International Journal of Transgenderism*, 20:2-3, 138-154, DOI: [10.1080/15532739.2019.1640654](https://doi.org/10.1080/15532739.2019.1640654)

Thorne, N., Kam-Tuck Yip, A., Bouman, W.P., Marshall, E., & Arcelus, J. (2019) The terminology of identities between, outside and beyond the gender binary – A systematic review, *International Journal of Transgenderism*, 20:2-3, 138-154, DOI: [10.1080/15532739.2019.1640654](https://doi.org/10.1080/15532739.2019.1640654)

T'Sjoen G, Arcelus J, De Vries ALC, Fisher AD, Nieder TO, Özer M, Motmans J. European Society for Sexual Medicine Position Statement "Assessment and Hormonal Management in Adolescent and Adult Trans People, With Attention for Sexual Function and Satisfaction". *J Sex Med*. 2020 Apr;17(4):570-584. doi: 10.1016/j.jsxm.2020.01.012. Epub 2020 Feb 26. PMID: 32111534.

Turban JL, King D, Li JJ, Keuroghlian AS. Timing of Social Transition for Transgender and Gender Diverse Youth, K-12 Harassment, and Adult Mental Health Outcomes. (2021a). *J*

Adolesc Health. 2021 Jul 13:S1054-139X(21)00283-4. doi: 10.1016/j.jadohealth.2021.06.001. Epub ahead of print. PMID: 34272170.

Turban, J.L., Loo, S.S., Almazan, A.N., Keuroghlian, A.S. (2021b). Factors leading to “detransition” among transgender and gender diverse people in the United States: a mixed-methods analysis. *LGBT Health*. 8(4):273-280. DOI: 10.1089/lgbt.2020.0437.

Van Boerum MS, Salibian AA, Bluebond-Langner R, Agarwal C. Chest and facial surgery for the transgender patient. *Transl Androl Urol*. 2019 Jun;8(3):219-227. doi: 10.21037/tau.2019.06.18. PMID: 31380228; PMCID: PMC6626311.

van de Grift TC, Elaut E, Cerwenka SC, Cohen-Kettenis PT, Kreukels BPC. Surgical Satisfaction, Quality of Life, and Their Association After Gender-Affirming Surgery: A Follow-up Study. *J Sex Marital Ther*. 2018 Feb 17;44(2):138-148. doi: 10.1080/0092623X.2017.1326190.

Vyas N, Douglas CR, Mann C, Weimer AK, Quinn MM. Access, barriers, and decisional regret in pursuit of fertility preservation among transgender and gender-diverse individuals. *Fertil Steril*. 2020 Nov 30:S0015-0282(20)32208-1. doi: 10.1016/j.fertnstert.2020.09.007. Epub ahead of print. PMID: 33276964.

White Hughto JM, Reisner SL. A Systematic Review of the Effects of Hormone Therapy on Psychological Functioning and Quality of Life in Transgender Individuals. *Transgend Health*. (2016). Jan;1(1):21-31. doi: 10.1089/trgh.2015.0008. Epub 2016 Jan 13. PMID: 27595141; PMCID: PMC5010234.

White Hughto JM, Reisner SL, Pachankis JE. Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Soc Sci Med*. 2015;147:222-231. doi:10.1016/j.socscimed.2015.11.010

Wiepjes CM, Nota NM, de Blok CJM, Klaver M, de Vries ALC, Wensing-Kruger SA, de Jongh RT, Bouman MB, Steensma TD, Cohen-Kettenis P, Gooren LJJ, Kreukels BPC, den Heijer M. The Amsterdam Cohort of Gender Dysphoria Study (1972-2015): Trends in Prevalence, Treatment, and Regrets. *J Sex Med*. 2018 Apr;15(4):582-590. doi: 10.1016/j.jsxm.2018.01.016. Epub 2018 Feb 17. PMID: 29463477.

Wierckx K, Van Caenegem E, Pennings G, Elaut E, Dedecker D, Van de Peer F, Weyers S, De Sutter P, T'Sjoen G. Reproductive wish in transsexual men. *Hum Reprod*. 2012 Feb;27(2):483-7. doi: 10.1093/humrep/der406. Epub 2011 Nov 28. PMID: 22128292.

Wierckx K, Elaut E, Van Hoorde B, Heylens G, De Cuypere G, Monstrey S, Weyers S, Hoebeke P, T'Sjoen G. (2014). Sexual desire in trans persons: associations with sex reassignment treatment. *J Sex Med*. 2014 Jan;11(1):107-18. doi: 10.1111/jsm.12365. Epub 2013 Oct 24. PMID: 24165564.

Wilson EC, Chen YH, Arayasirikul S, Wenzel C, Raymond HF. Connecting the dots: examining transgender women's utilization of transition-related medical care and associations with mental health, substance use, and HIV. *J Urban Health*. 2015 Feb;92(1):182-92. doi: 10.1007/s11524-014-9921-4. PMID: 25476958; PMCID: PMC4338120.

Witcomb, G.L., Bouman, W.P., Claes, L., Brewin, N., Crawford, J., & Arcelus, J. (2018). Levels of depression in transgender people and its predictors: Results of a large matched control study

with transgender people accessing clinical services. *Journal of Affective Disorders*, 235, 308-315.

World Health Organization (WHO). (2019). *International Statistical Classification of Diseases and Related Health Problems 11*. Geneva: WHO.

Yuan N, Chung T, Ray EC, Sioni C, Jimenez-Eichelberger A, Garcia MM. Requirement of mental health referral letters for staged and revision genital gender-affirming surgeries: An unsanctioned barrier to care. *Andrology*. 2021 May 7. doi: 10.1111/andr.13028. Epub ahead of print. PMID: 33960709.

Yang X, Wang L, Gu Y, Song W, Hao C, Zhou J, Zhang Q, Zhao Q. A cross-sectional study of associations between casual partner, friend discrimination, social support and anxiety symptoms among Chinese transgender women. *J Affect Disord*. 2016 Oct;203:22-29. doi: 10.1016/j.jad.2016.05.051. Epub 2016 May 28. PMID: 27267953.

WORLD PROFESSIONAL ASSOCIATION FOR TRANSGENDER HEALTH

CONFIDENTIAL DRAFT

FOR PUBLIC COMMENT ONLY

WPATH PROPERTY

NOT TO BE COPIED OR DISTRIBUTED

DECEMBER 2021