My name is Dr. Nicole ("Nikki") Mihalopoulos. I am an Adolescent Medicine physician in Salt Lake City, Utah and am employed by the University of Utah. I am not representing the University of Utah.

1. **PREVALENCE OF CONDITION AND TREATMENT**
   a. How many Utah minors identify as transgender?
   In 2020, 1,400 individuals between 13-17 years identified as transgender in Utah. This constitutes 0.5% of individuals 13-17 years. In the US the 2020 estimate of individuals 13-17 years who identified as transgender was 0.73% (95% CI 0.54-1%).
   Resources: Public Health Indicator Based Information System (IBIS), William's Institute: LGBT YOUTH

   b. How many Utah minors experience gender dysphoria?
   At the University of Utah Department of Pediatrics, about 1.4% of patients seen by a pediatric provider have a diagnosis of gender dysphoria. This number is not representative of the state population because the University of Utah is not the only pediatric healthcare provider in the state of Utah.

   c. How many Utah minors are treated for gender dysphoria?
   This is difficult to estimate. Treatment for gender dysphoria can include behavioral health, speech therapy, medications, surgery. Not all seek care for gender dysphoria. Additionally, there are many people with gender dysphoria who may not have access to resources to treat gender dysphoria.
   Resource: Hembree et al. *JCEM* 2017

   d. How many Utah minors are treated for gender dysphoria with:
      i. puberty blocking drugs?
      This is difficult to estimate. Nationally: A study reported that 63 minors were treated with one type of puberty blocker in 2016.
      Ref: Lopez CM, et al *J Ped Endo Metab* 2018.

      ii. masculinizing or femininizing drugs?
      This is difficult to estimate. Nationally: A study reported use of gender-affirming hormone therapy in 958 youth with a gender-dysphoria related diagnosis and found that 25% were prescribed gender-affirming hormone therapy at 3.5 years of follow-up.
      Ref: Wagner S, et al *Pediatrics* 2021.

      There is testosterone prescription data for minors. However, testosterone is also used to treat other conditions separate from gender dysphoria.

      iii. gender affirming/reassignment surgery?
      We do not have numbers of patients who are seen by private practice providers and providers outside of the University, or those who have surgery outside of Utah.
      Gender-affirming genital surgeries are NOT performed on minors under 18 years regardless of emancipation status. Top surgery, also called chest masculinization surgery, is rare. The average age is 17 years. These patients are the highest risk for serious mental health outcomes if they wait to have surgery until after 18 years of age. We have a rigorous process in place before these highest risk minors undergo surgery. Before surgery can be

performed, a minor is required to have letters from mental health and medical providers stating that the surgery is medically necessary. The very few minors who have surgery have identified as boys for years before seeking care in the Adolescent Medicine Clinic and have been vetted extensively. The parents have struggled with making this decision and do not delay waiting because their child struggles so much with gender dysphoria. Individuals are insistent, consistent, and persistent in their identity as a boy since early childhood before having surgery. Both parents provide written informed consent for the minor to have surgery. If any of these requirements are not met, the surgery is not performed.

e. How many Utah minors treated for gender dysphoria with a puberty blocking drug are subsequently treated with masculinizing or femininizing drugs?
Difficult to estimate. The number subsequently treated with gender-affirming hormones is probably less than those treated with puberty blockers. Not all minors receive treatment with a puberty blocking drug before treatment with masculinizing or feminizing drugs because they may present to the healthcare system after the completion of puberty.

f. How many Utah minors treated for gender dysphoria with puberty blocking or masculinizing or femininizing drugs are subsequently treated with gender affirming/reassignment surgery?
Difficult to estimate. The number subsequently treated with gender-affirming surgery is probably less than those treated with hormones. One study published in 2019 reported that 21% of 417 patients seeking gender-affirming care underwent gender-affirming surgery.
Ref: Handler T, et al *Pediatrics* 2019

g. How are social awareness, population growth, and the evolving understanding of appropriate treatment for gender dysphoria likely to affect the estimates above?
As per the Williams Institute data, there has been an increase in the percentage of people identifying as transgender from 0.3% in 2010 to 0.7% in 2016.

2. **OUTCOMES**

Gender dysphoria is a mental health condition that affects some transgender minors. Guidelines established by professional organizations inform the standards of care for the treatment of gender dysphoria. These guidelines strongly recommend the involvement of a mental healthcare professional to explore gender identity with an individual. For those who experience moderate to severe gender dysphoria, treatment with medications that cause partially reversible changes decreases gender dysphoria. A very small number experience severe gender dysphoria as a result of having chests or genitalia that are incongruent with their gender identity. In these rare cases, gender-affirming surgery decreases gender dysphoria and improves quality of life.

a. What are the short- and long-term potential benefits and harms of addressing gender dysphoria in minors with:
   i. puberty blocking drugs?
   Short-term: benefits: fully reversible; improves mental health by decreasing anxiety and depression associated with gender dysphoria by pauses puberty;
   long-term: benefits: improved psychosocial outcomes (education, employment, relationships, substance use);
   risks: none

   ii. masculinizing or femininizing drugs?

Short-term: decreases gender dysphoria;
long-term: does not appear to increase risks of cancer/CVD greater than the risks of cis-gender peers.

iii. gender affirming/reassignment surgery?
Genital surgery is not performed in minors. In the rare cases where top surgery is performed on a minor, top surgery further decreases gender dysphoria.

iv. only treatments other than those listed above?
Behavioral health is necessary for most individuals to evaluate gender dysphoria and underlying mental health conditions. Additional gender-affirming treatments are no different than in someone who is NOT transgender and wishes to modify their bodies with body-shapers (padded bras, Spanx, etc.), hair style, wigs, body hair/face removal, clothing, name, pronouns, gender marker.

b. How should potential harms and benefits be weighed in treatment decisions?
Existing guidelines assist healthcare providers to counsel patients and families about the potential harms and benefits of gender-affirming treatments.
WPATH, SOC V7; Endocrine Society 2017 and executive update 2020

c. To what extent have long-term outcomes, including physical health, mental health, satisfaction, and regret, been tracked in individuals receiving various treatments for gender dysphoria? What do those studies indicate?
We are not aware of any national registry that collects information about gender dysphoria and treatment outcomes. This is an area of great need for funding to support research and establishment of a voluntary patient registry.

3. **CLINICAL GUIDELINES**
   a. Are the flexible clinical guidelines published by the World Professional Association for Transgender Health, the clinical guidelines published by the Endocrine Society, and other information published to guide providers of transgender healthcare sufficient to protect the interests of minors?

   Healthcare providers are regulated by state departments of professional licensing, as well as medical professional specialty boards and hospital privileges to protect the interest of patients. Health insurance providers have policies to protect patients. Clinical guidelines provide recommendations to inform standards of medical care.

4. **UTAH POLICY**
   a. Should any particular treatments for gender dysphoria be limited to adults and emancipated minors? Why or why not?
   This is already in place as per standard of care guidelines.
   b. Is there statutory, regulatory, or case law you believe the committee should be particularly mindful of?
   No. However, providing funding for a voluntary registry could help answer these questions in the future.

5. **IS THERE OTHER INFORMATION YOU WISH TO BRING TO THE COMMITTEE'S ATTENTION?**

The care of transgender and gender-diverse individuals (minors or “majors”) is complex and continued research and clinical practice will contribute to the evolution of the standards of care as with any medical or mental health condition. I encourage the committee to keep regulation and monitoring of healthcare in the Department of Professional Licensing and with national professional medical boards.

Thank you for the opportunity to provide the above information and to talk with the committee.