

Supplemental Online Content

Borah L, Zebib L, Sanders HM, Lane M, Stroumsa D, Chung KC. State Restrictions and Geographic Access to Gender-Affirming Care for Transgender Youth. *JAMA*. Published July 25, 2023. doi:10.1001/jama.2023.11299

Supplement 1. eMethods

This supplemental material has been provided by the authors to give readers additional information about their work..

eMethods.

Search Methods to Identify Gender Clinics

Online searches were conducted in March 2023. There is currently no centralized national dataset of validated locations providing gender-affirming care for transgender youth. Therefore, clinic addresses were extracted from online searches and resources that transgender youth and their families might use to find a provider. We identified clinics from public directories and resource lists from the Human Rights Campaign, Transgender Legal Defense & Education Fund, World Professional Association for Transgender Health, LGBTQ+ Healthcare Directory, Campaign for Southern Equality Trans in the South Directory, Callen-Lorde TransAtlas, American Trans Resource Hub, and Transgender Care Listings.

Clinics were included if they self-advertised as providing gender-affirming medical care for patients under 18 years old. Clinics were included if they provided puberty suppressing medications (eg, gonadotropin-releasing hormone analogs) and gender-affirming hormones (eg, testosterone, estrogen). Clinics were excluded if they provided gender-affirming surgery only.

Additional gender clinics were identified using the following Google searches: (“pediatric” OR “adolescent” OR “youth” OR “minors” OR “children” OR “teens” OR “kids” OR “less than 18” or “under 18” or “<18” or “< 18”) AND (“gender clinic” OR “transgender clinic” OR “gender program” OR “transgender program” OR “gender health” OR “transgender health” OR “gender center” OR “transgender center” OR “puberty blockers” OR “gender hormones” OR “Hormone Replacement Therapy” OR “HRT” OR “gender-affirming” OR “gender affirming” OR “gender care” OR “transition care” OR “transgender medicine”) AND “[State]”. Searches were repeated for all 50 states and the District of Columbia.

All clinic listings were individually verified through websites and/or phone calls to determine the type of services provided, patient age limits, and location address. For clinics unable to be verified through websites or phone calls, we searched the Internet Archive Wayback Machine for cached websites. Gender clinics were then included if the cached website was archived on or before January 1, 2021.

Determination of State Restrictions on Gender-Affirming Care

States were considered to have restrictions based on the presence of enacted legislation, executive action, or other policies that limited availability of gender-affirming care for patients under age 18 passed as of May 22, 2023. States considered to have restricted gender-affirming care were Alabama (SB184), Arkansas (HB1570), Florida (S254, Rule 64B8-9.019), Georgia (SB140), Idaho (HB71), Indiana (SB480), Iowa (SF538), Kentucky (SB150), Mississippi (HB1125), Missouri (SB49, Rule 15CSR60-17.010), Montana (SB99), Nebraska (LB574), North Dakota (HB1254), Oklahoma (SB613), South Carolina (Proviso 23.4), South Dakota (HB1080), Tennessee (SB1), Texas (SB14), Utah (SB16), and West Virginia (HB007). Two states (Texas, Missouri) were included based on passed legislation with governor support and expected signature. Of note, some restrictions were temporarily enjoined in court or not immediately effective following enactment.

Geographic Analysis

All analysis was performed in May 2023. Population-weighted centroids of US counties and Washington DC were obtained from the 2020 US Census.¹ County demographics were taken from the US Census Bureau 2016-2020 American Community Survey (ACS).² Clinic addresses identified by this study were geocoded using ArcGIS Pro 3.0. Drive times were calculated using the shortest travel time from each population-weighted county centroid to the nearest clinic. We utilized Network Analysis in ArcGIS Pro 3.0 (closest facility analysis) and ESRI World Routing Service. Computations were based on road-specific rules (eg, obeys speed limits, one way roads, illegal turns) under optimal conditions (eg, no traffic).

The proportion of youth who lived more than 1 hour (60 minutes) from the nearest clinic was selected as a conservative estimate for an acceptable threshold to travel for gender-affirming care. An estimated 1.43% of youth identify as transgender and there is a limited number of pediatricians with advanced training in gender-affirming care or sub-specialization in pediatric endocrinology and adolescent medicine. Our analysis does not consider traffic, therefore shorter (<30 minutes) travel times calculated in this study may represent underestimates. We also analyzed the proportion of youth who lived more than a day's drive from the nearest clinic (4 hours one-way, 8 hours round-trip), as this may result in increased travel costs including overnight lodging, missed school days for youth, and time off work for parents and caregivers.

eReferences.

¹ US Census Bureau. Centers of Population for the 2020 Census. Accessed April 10, 2023. <https://www.census.gov/geographies/reference-files/time-series/geo/centers-population.html>

² *2016-2020 American Community Survey*. US Census Bureau; 2021.