IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF FLORIDA
TALLAHASSEE DIVISION

JANE DOE et al., Plaintiffs, v. JOSEPH A. LADAPO et al., Defendants.	Civil No. 4:23-cv-00114-RH-MAF

PLAINTIFFS' NOTICE OF FILING TRIAL EXHIBITS

Pursuant to the Court's October 31, 2023 Order Confirming the Deadline to File Exhibits and the Pretrial Stipulation (Dkt. 174), Plaintiffs hereby submit this Notice of Filing Trial Exhibits[1], with copies of each exhibit Plaintiffs expect to or may offer at trial listed on the Exhibit List below and appended hereto.[2] Plaintiffs reserve the right to use additional documents for purposes of impeachment, and to offer any exhibit identified by Defendants.

[1] Due to the extensive number of documents, Plaintiffs are filing multiple, identical copies of this Notice on the case docket, each attaching a separate set of the below listed exhibits.

[2] Sealed versions of Plaintiffs' medical records (Doe Pls' Trial Exs. 80-86) have been filed at Dkt. 147.

Plaintiffs' Exhibit List

Trial Ex. No.	Bates No.	Exhibit Description	Will Use	May Use	Stipulated/ Defendants' Objections
Dekker Exhibits		Any exhibit that was entered into evidence in the *Dekker* trial		X	
Doe Pls' Trial Ex. 1	PL000566 - 000579	Defendants' Response to Pls' First Set of Interrogatories		X	
Doe Pls' Trial Ex. 2	PL000580 - 000625	Expert Report of Dr. Aaron Janssen, M.D. (8.16.2023)		X	Hearsay
Doe Pls' Trial Ex. 3	PL000626- 000683	Expert Report of Dr. Brittany Bruggeman, M.D. (8.16.2023)		X	Hearsay
Doe Pls' Trial Ex. 4	PL000684- 000735	Expert Report of Dr. Dan H. Karasic, M.D. (8.16.2023)		X	Hearsay
Doe Pls' Trial Ex. 5	PL000736 – 000816	Expert Report of Dr. Daniel Shumer, M.D. (8.16.2023)		X	Hearsay
Doe Pls' Trial Ex. 6	PL000817 – 000886	Expert Report of Dr. Loren Schechter, M.D. (8.16.2023)		X	Hearsay
Doe Pls' Trial Ex. 7	PL000887 - 000910	Expert Report of Dr. Vernon Langford, DNP, APRN-CNP, FNP-C (8.16.2023)		X	Hearsay
Doe Pls' Trial Ex. 8	PL000911 - 000929	Expert Report of Dr. Kenneth W. Goodman, PhD, FACMI, FACE (8.16.2023)		X	Hearsay
Doe Pls' Trial Ex. 9	PL000930 - 000938	Expert Rebuttal Report of Dr. Aaron Janssen, M.D. (9.5.2023)		X	Hearsay

Doe Pls' Trial Ex. 10	PL000939 - 000946	Expert Rebuttal Report of Dr. Dan H. Karasic (9.5.2023)		X	Hearsay
Doe Pls' Trial Ex. 11	PL000947	Florida Admin. Code R. 64B8-9.019, *Standards of Practice for the Treatment of Gender Dysphoria in Minors* (effective 3.16. 2023)	X		
Doe Pls' Trial Ex. 12	PL000948	Florida Admin. Code R. 64B15-14.014, *Standards of Practice for the Treatment of Gender Dysphoria in Minors* (effective 3.28.2023)	X		
Doe Pls' Trial Ex. 13	PL000949	Notice of Change, Fla Admin Code R. 64B15-14.014 (filed 2.10.2023)		X	
Doe Pls' Trial Ex. 14	PL000950	Florida Department of Health Guidance, *Treatment of Gender Dysphoria for Children and Adolescents* (4.20.22)	X		
Doe Pls' Trial Ex. 15	PL000951	Surgeon General Ladapo Letter to Florida Boards of Medicine (6.2.22)	X		
Doe Pls' Trial Ex. 16	PL000952 - 000959	Florida Department of Health Petition to Initiate Rulemaking Setting the Standard of Care for the Treatment of Gender Dysphoria (7.28.22)	X		
Doe Pls' Trial Ex. 17	PL000960 – 000969	Florida Senate Bill 254 (2023)	X		
Doe Pls' Trial Ex. 18	PL000970 - 000979	Florida House Bill 1421 (2023)	X		

Doe Pls' Trial Ex. 19	PL000980 - 000981	Section 456.001(1)(8) – (9), Florida Statutes (2023)		X	
Doe Pls' Trial Ex. 20	PL000982 - 000983	Section 456.52, Florida Statutes (2023)		X	
Doe Pls' Trial Ex. 21	PL000984 - 001462	Rulemaking Record (Produced by Defendants)	X		
Doe Pls' Trial Ex. 22	PL001463 - 008066	Public Book for 02.10.2023 Joint Hearing (Produced by Defendants)	X		
Doe Pls' Trial Ex. 23	Med Def_001485 - 001622; PL012003 – PL012012	Transcript of Florida Board of Medicine Meeting 08.05.2022	X		
Doe Pls' Trial Ex. 24	Med Def_001058 – 001349	Transcript of Florida Boards' Joint Rule Workshop 10.28.2022	X		
Doe Pls' Trial Ex. 25	Med Def_000876 - 001016	Transcript of Florida Boards' Joint Meeting 11.04.2022	X		
Doe Pls' Trial Ex. 26	Med Def_001017 – 001043; PL012013 - PL012137	Transcript of Florida Boards' Joint Public Hearing 02.10.2023 (*Incomplete at present)	X		
Doe Pls' Trial Ex. 27	Med Def_001350 – 001484	Transcript of Florida House HHS Committee Meeting 02.21.2023	X		
Doe Pls' Trial Ex. 28	Med Def_002232 - 002234	Excerpt from Speech of Governor Ron DeSantis – Joint Session 03.07.2023		X	

Doe Pls' Trial Ex. 29	Med Def_000087 - 000250	Transcript of Florida Senate Health Policy Committee Meeting 03.13.2023		X	
Doe Pls' Trial Ex. 30	Med Def_002235 - 002335	Transcript of Florida House Healthcare Regulation Subcommittee Meeting 03.22.2023		X	
Doe Pls' Trial Ex. 31	Med Def_001913 - 002001	Transcript of Florida Senate Fiscal Policy Committee Meeting 03.23.2023		X	
Doe Pls' Trial Ex. 32	Med Def_002336 - 002461	Transcript of Florida House HHS Committee Meeting 03.27.2023		X	
Doe Pls' Trial Ex. 33	Med Def_002462 - 002571	Transcript of Florida Senate General Session 04.03.2023		X	
Doe Pls' Trial Ex. 34	Med Def_002002 - 002028	Transcript of Florida Senate General Session 04.04.2023		X	
Doe Pls' Trial Ex. 35	Med Def_002029 – 002144	Transcript of Florida House General Session 04.18.2023		X	
Doe Pls' Trial Ex. 36	Med Def_002145	Transcript of Florida House General Session 04.19.2023		X	
Doe Pls' Trial Ex. 37	Med Def_002215 - 002231	Transcript of Florida Senate General Session 05.04.2023		X	
Doe Pls' Trial Ex. 38	Med Def_002193 - 002214	Transcript of Florida House General Session 05.04.2023		X	
Doe Pls' Trial Ex. 39	Med Def_001623 – 001912	Transcript of Florida Boards' Joint Meeting 06.23.2023		X	

Doe Pls' Trial Ex. 40	Med Def_000251 - 000454	Transcript of Florida Boards' Joint Public Meeting 06.30.2023		X	
Doe Pls' Trial Ex. 41	Med Def_000001 - 000086	Transcript of Florida Boards' Joint Meeting 08.03.2023		X	
Doe Pls' Trial Ex. 42	FDOH_0000 44095-000044100; 000044010–000044014; 000042401-000043407; 000044022-000044026; 000044081-000044086; 000042389-000042398.	Composite Exhibit - Emails between Board of Osteopathic Medicine Executive Director Danielle Terrell and Vernadette Broyles (Oct. 25-28, 2022)	X		
Doe Pls' Trial Ex. 43	FDOH_000065015-000065016	Emails from Board of Osteopathic Medicine Executive Director Terrell (11.07.22)		X	
Doe Pls' Trial Ex. 44	FDOH_000058615-000058616	Gender Dysphoria Roundtable (7.8.22)		X	Foundation Hearsay
Doe Pls' Trial Ex. 45	FDOH_002874150-002874157	Governor Talking Points		X	Foundation Hearsay
Doe Pls' Trial Ex. 46	FDOH_000065735-000065778	Request for Hearing to Board of Medicine		X	Foundation Hearsay

Doe Pls' Trial Ex. 47	FDOH_000 038015-000038019	Open Letter to the Florida Board of Medicine (9.23.22)	X		Foundation Hearsay
Doe Pls' Trial Ex. 48	EOG_0051 21- 005156	FDOH Updates (4.8.22)		X	Hearsay, as to draft material
Doe Pls' Trial Ex. 49	FDOH_000 064667-000064671	Emails between Board of Medicine Executive Director Paul Vazquez and Dr. Laidlaw (10.14.22-10.25.22)		X	Foundation Hearsay Objection as to highlights
Doe Pls' Trial Ex. 50	EOG_0008 49-000864	Governor Talking Points (5.13.22)		X	Foundation Hearsay Objection as to highlights
Doe Pls' Trial Ex. 51	FDOH_000 039058	Emails between Board of Medicine Paul Vazquez and Dr. Patrick Hunter (10.16.22)		X	
Doe Pls' Trial Ex. 52	FDOH_001 9000113	Emails between Dr. Van Mol Dr. Patrick Hunter (9.14.22)		X	Foundation Hearsay Objection as to highlights
Doe Pls' Trial Ex. 53	FDOH_000 030412	Email between Vazquez and Hunter (9.14.22)		X	
Doe Pls' Trial Ex. 54	FDOH_000 030376-000030377	Emails between Vazquez and Hunter (9.13.22)		X	
Doe Pls' Trial Ex. 55	FDOH_000 030366-30369	Email between Hunter and Vazquez (9.12.22)		X	
Doe Pls' Trial Ex. 56	EOG_0005 19-000520	Gender Affirming Guidance Event		X	
Doe Pls' Trial Ex. 57	EOG_0006 67-000682	Governor DeSantis Interview Transcript (4.28.22)		X	

Doe Pls' Trial Ex. 58	Def_000286 709	AHCA Invoice for Dr. Van Meter attendance at Board of Medicine Meeting (8.11.22)	X		
Doe Pls' Trial Ex. 59	EOG_0081 28-008235	Memo on Gender Dysphoria Legislation	X		Foundation Hearsay
Doe Pls' Trial Ex. 60	EOG_0081 25-008127	Email from Maureen Furino with attachments (1.06.23)		X	Hearsay
Doe Pls' Trial Ex. 61	EOG_0052 82- 005284	Email from Savanah Kelly Jefferson with attachment (6.29.22)		X	Foundation Hearsay Objection as to drafts
Doe Pls' Trial Ex. 62	EOG_0051 57 - 005250	Alliance Defending Freedom Binder		X	Foundation Hearsay
Doe Pls' Trial Ex. 63	EOG_ 004414, 004636-004640, 004487-004492	Briefers – Safeguarding Kids from Gender Surgeries and Drugs		X	
Doe Pls' Trial Ex. 64	FDOH_000 035598	Email from Board of Osteopathic Medicine Executive Director Danielle Terrell to Bettye Strickland (10.19.22)		X	
Doe Pls' Trial Ex. 65	FDOH_000 040582 – 000040599	Email from Patrick Hunter to Paul Vazquez (10.23.22)		X	
Doe Pls' Trial Ex. 66	FDOH_000 045008 - 000045010	Appearance Request Form (11.02.22)		X	
Doe Pls' Trial Ex. 67	FDOH_000 034212 – 000034214,	Email from Vazquez to Strickland (9.27.22)		X	

	Att. FDOH_000 034022 - 000034111				
Doe Pls' Trial Ex. 68	FDOH_000 069398 – 000061417	Phillip Penna comment (9.19.22)		X	
Doe Pls' Trial Ex. 69	FDOH_000 017897- 000017908	Email from Jeremy Redford (7.10.22)		X	
Doe Pls' Trial Ex. 70	PL008067 - 010525	Public Book for 8.3.23 Joint Meeting (Produced by Defendants)	X		
Doe Pls' Trial Ex. 71	FDOH_000 040530 - 000040542	Email from Hunter to Vazquez (10.22.22)		X	
Doe Pls' Trial Ex. 72	FDOH_000 039931 – 000039932	Email from Vazquez to Strickland (10.18.22)		X	
Doe Pls' Trial Ex. 73	FDOH_000 037928	September 30, 2022 Rule Workshop Agenda (9.30.22)		X	
Doe Pls' Trial Ex. 74	FDOH_000 040020	Original October 28, 2022 Workshop Agenda (10.28.22)		X	
Doe Pls' Trial Ex. 75	FDOH_000 035446 – 000035448	Email from Vazquez to Diamond (10.14.22)		X	
Doe Pls' Trial Ex. 76	FDOH_000 028162 – 000028163; FDOH_000 064956; and FDOH_000 065030	Emails from Senate Committee on Health Policy (Composite)		X	

Doe Pls' Trial Ex. 77	FDOH_000 039513 - 000039516	Emails between Dr. Dayton and Paul Vazquez (10.18.22)		X	
Doe Pls' Trial Ex. 78	FDOH_000 035604- 000035604	Email from Board of Osteopathic Medicine Danielle Terrell (10.19.22)		X	Completeness
Doe Pls' Trial Ex. 79	FDOH_000 039521 - 000039522	Email from Paul Vazquez to Danielle Terrell (10.18.22)		X	
Doe Pls' Trial Ex. 80	PL000022- 000048	Plaintiff Susan Doe Medical Records (SEALED)	X		
Doe Pls' Trial Ex. 81	PL000001 - 000015	Plaintiff Gavin Goe Medical Records (SEALED)	X		
Doe Pls' Trial Ex. 82	PL000366- 408; 000509-565	Plaintiff Lucien Hamel Medical Records (SEALED)		X	
Doe Pls' Trial Ex. 83	PL000418 - 000483	Plaintiff Olivia Noel Medical Records (SEALED)		X	
Doe Pls' Trial Ex. 84	PL000016 - 000021	Plaintiff Lisa Loe Medical Records (SEALED)		X	
Doe Pls' Trial Ex. 85	PL000409- 417; 000484-508	Plaintiff Kai Pope Medical Records (SEALED)		X	
Doe Pls' Trial Ex. 86	PL000049 - 000365	Plaintiff Rebeca Cruz Evia Medical Records (SEALED)		X	
Doe Pls' Trial Ex. 87	FDOH_000 035423 - 000035428	Emails between Hunter, Diamond, and Vazquez (10.04.22)		X	

Doe Pls' Trial Ex. 88	FDOH_000 062034 - 000062035	Emails between Hunter and Vazquez (9.23.22)		X	
Doe Pls' Trial Ex. 89	FDOH_000 061277 - 000061279	Emails between Hunter, Vazquez and Biggs (9.19.22)		X	
Doe Pls' Trial Ex. 90	FDOH_000 030412	Email from Hunter to Vazquez (9.14.22)		X	
Doe Pls' Trial Ex. 91	PL010526 – 010528	Governor Ron DeSantis Appoints Four to the Board of Medicine (6.17.22)		X	
Doe Pls' Trial Ex. 92	PL010529-010530	Dr. Hunter article "Political Issues Surrounding Gender-Affirming Care for Transgender Youth" (JAMA Pediatr., December 20, 2021, doi:10.1001/jamapediatrics.2021.5348)		X	Hearsay
Doe Pls' Trial Ex. 93	PL010531-011801	*Eknes-Tucker v. Ivey,* 2:22-cv-00184, ECF 69-6 (5.02.22)		X	Relevance Foundation Hearsay
Doe Pls' Trial Ex. 94	PL011802-011804	Catholic Medical Association Resolutions 8-7 through 8-14		X	Authentication Foundation Hearsay
Doe Pls' Trial Ex. 95	PL011805 - 001806	Catholic Medical Association 92nd Annual Education Conference (9.18.23)		X	Authentication Foundation Hearsay
Doe Pls' Trial Ex. 96	EOG_0081 25 - 008127	Email from Furino with texts attached (1.06.23)		X	Foundation Hearsay
Doe Pls' Trial Ex. 97	PL011807 - 011811	AAP Resolution # 27		X	Authentication Foundation Hearsay

Doe Pls' Trial Ex. 98	PL011812 - 011817	WSJ article "Youth Gender Transition Is Pushed Without Evidence" by Hunter, Roman, Kaltiala, Malone, etc. (7.13.23)		X	Hearsay
Doe Pls' Trial Ex. 99	PL011818 - 011819	U.S. EO 12866 Meeting 0945-AA17 (4.25.22)		X	Foundation Hearsay
Doe Pls' Trial Ex. 100	PL011820 – PL011825	SEGM "About Us" Page		X	Foundation Hearsay
Doe Pls' Trial Ex. 101	PL011826 - 011827	"Challenges in Timing Puberty Suppression for Gender-Nonconforming Adolescents" (de Vries, 7.14.20)			Hearsay
Doe Pls' Trial Ex. 102	PL011828 - 011830	Governor Ron DeSantis Appoints Three to the Board of Osteopathic Medicine (12.06.22)			
Doe Pls' Trial Ex. 103	PL011831 - 011833	Governor Ron DeSantis Appoints Two to the Board of Medicine (12.28.22)			
Doe Pls' Trial Ex. 104	PL011834 - 011857	NYT Article, Dr. Benson quoted (11.14.22)		X	Hearsay
Doe Pls' Trial Ex. 105	PL011858 - 011866	Smalley, et al., *Improving Global Access to Transgender Health Care*, Transgender Health, Vol. 7, No. 2 (2022)		X	Hearsay
Doe Pls' Trial Ex. 106	PL011867	Fla. Admin R. 64B8-30.008		X	

Doe Pls' Trial Ex. 107	PL011868	Fla. Admin. R. 64B8-30.012		X	
Doe Pls' Trial Ex. 108	PL011869 - 011871	Fla. Stat. 464.0123		X	
Doe Pls' Trial Ex. 109	PL011872 - 011874	Fla. Stat. 464.012		X	
Doe Pls' Trial Ex. 110	PL011875 - 011880	Fla. Stat. 458.347		X	
Doe Pls' Trial Ex. 111	PL011881	20 CFR 10.310		X	
Doe Pls' Trial Ex. 112	PL011882 - 011888	A Letter to Christian Physicians_CMDA Today		X	Hearsay
Doe Pls' Trial Ex. 113	PL011889 - 0011890	Composite Exhibit (Jonathan Clemens Tweets)		X	Hearsay
Doe Pls' Trial Ex. 114	PL011891 - 011938	FSU Student Handbook 2022-2023		X	Hearsay
Doe Pls' Trial Ex. 115	PL011939 - 011948	Detransitioners in Your Church Doorway		X	Hearsay
Doe Pls' Trial Ex. 116	PL011949 - 011973	Composite Exhibit – Tweets from Defendants and Lawmakers		X	Foundation Relevance Hearsay
Doe Pls' Trial Ex. 117	PL01974 - 011975	SB 254 Amendment (350064 - Failed)		X	

Doe Pls' Trial Ex. 118	PL011976 – 011977	SB 254 Amendment (299002 – Failed)		X	
Doe Pls' Trial Ex. 119	PL011978 - 011979	SB 254 Amendment (212692 - Failed)		X	
Doe Pls' Trial Ex. 120	PL011980 - 011981	SB 254 Amendment (374289 - Failed)		X	
Doe Pls' Trial Ex. 121	PL011982 - 011996	SB 254 Amendment (256341) (and Failed Amndts to Amndt)		X	
Doe Pls' Trial Ex. 122	PL011997	SB 254 Amendment (388571 - Failed)		X	
Doe Pls' Trial Ex. 123	PL011998 - 012000	Dr. Hunter Letter to the Editor, JACCP, DOI: 10.1002/jac5.1691 (6.06.22)		X	Hearsay
Doe Pls' Trial Ex. 124	Def_000177 905 - 000177906	Email from Jeremy Redfern re: Surgeon General Ladapo Meeting (7.10.22)		X	
Doe Pls' Trial Ex. 125	PL012001 - 012002	ALEC Legislative Membership List		X	Authentication Foundation Relevance Hearsay
Doe Pls' Trial Ex. 126	PL012138 – PL012143	Notice of Emergency Rules 64B8ER23-11 and 64B15ER23-12	X		

Dated: November 6, 2023

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CERTIFICATE OF SERVICE

I hereby certify that, on November 6, 2023, I electronically filed the foregoing with the Clerk of the Court by using the CM/ECF system.

By: /s/ Thomas Redburn, Jr.

Challenges in Timing Puberty Suppression for Gender-Nonconforming Adolescents

Annelou L.C. de Vries, MD, PhD

Sorbara et al,[1] in their report "Mental Health and Timing of Gender-Affirming Care" in this issue of *Pediatrics*, focus on the interesting matter of age of clinical presentation for gender-affirming medical interventions and its association with mental health in transgender youth. Because experiencing puberty is often stressful for gender-nonconforming youth, puberty suppression as a reversible medical intervention was introduced in clinical care in the early 2000s by Dutch clinicians Cohen-Kettenis et al.[2] The aim of puberty suppression was to prevent the psychological suffering stemming from undesired physical changes when puberty starts and allowing the adolescent time to make plans regarding further transition or not. Following this rationale, younger age at the time of starting medical-affirming treatment (puberty suppression or hormones) would be expected to correlate with fewer psychological difficulties related to physical changes than older individuals. Sorbara et al[1] confirmed this in their study. Adolescents presenting at younger age (<15 years) reported lower rates of self-reported diagnosed depression, self-harm, suicide thoughts or attempts, and use of psychoactive medication.

One could claim from these findings that gender-affirming medical interventions including puberty suppression should be offered at an early age (age <15 in the Sorbara study). Some caution is warranted, however, as the authors acknowledge in their report. One reason is that, despite the increased availability of gender-affirming medical interventions for younger ages in recent years, there has not been a proportional decline in older presenting youth with gender incongruence (GI), which is the discrepancy between one's birth-assigned sex and experienced gender identity.[3] It is even the case that most transgender people still present as older adolescents, as in the study by Sorbara et al[1], or as adults.[4] Interestingly, this older adolescent group did not only have more mental health difficulties but also a later age of onset of GI. As seen by using medical records, the older presenting youth "simply experienced gender history events at older ages" before attending the clinic.[1]

According to the original Dutch protocol, one of the criteria to start puberty suppression was "a presence of gender dysphoria from early childhood on."[2] Prospective follow-up studies evaluating these Dutch transgender adolescents showed improved psychological functioning.[5] However, authors of case histories and a parent-report study warrant that gender identity development is diverse, and a new developmental pathway is proposed involving youth with postpuberty adolescent-onset transgender histories.[6–8] These youth did not yet participate in the early evaluation studies.[5,9] This raises the question whether the positive

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outcomes of early medical interventions also apply to adolescents who more recently present in overwhelming large numbers for transgender care, including those that come at an older age, possibly without a childhood history of GI. It also asks for caution because some case histories illustrate the complexities that may be associated with later-presenting transgender adolescents and describe that some eventually detransition.[9,10]

A study at the Amsterdam transgender clinic, one of the oldest in the world, whose researchers aimed to gain insight in the possible changes of certain key characteristics of earlier compared with recent applicants, revealed no changes in intensity of gender dysphoria, psychological functioning, and age over time between 2000 and 2016.[11] The only yet-unexplained observed change was a shift in sex ratio in favor of assigned female individuals. However, researchers of this time-trend study did not focus on differences between younger and older referred youth nor on the age of onset of gender nonconformity. In future, more-detailed studies like the one by Sorbara et al[1] and the time-trend study by Arnoldussen et al,[11] researchers should investigate whether older transgender adolescents might include individuals who experience later onset of GI, possibly postpuberty, and with more mental health challenges.

So far, researchers of the limited follow-up studies after puberty suppression show that the rate of adolescents that stop the reversible blockers is low (1.4%, 1.9%, and 3.5%).[4,12,13] However, systematic studies on the rate of adolescents who discontinue their transitions after they have started affirming hormones or surgeries with lasting effects are lacking at present. Given these uncertainties, providing early medical treatment to transgender adolescents remains a challenging area to work in. Prospective longer-term follow-up studies of clinical samples like the study of Sorbara et al[1] are needed to inform clinicians so that an individualized approach can be offered that differentiates who will benefit from medical gender affirmation and for whom (additional) mental health support might be more appropriate.

ABBREVIATION

GI: gender incongruence

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Ron DeSantis
46th Governor of Florida

Governor Ron DeSantis Appoints Three to the Board of Osteopathic Medicine

On December 6, 2022, in News Releases, by Staff

TALLAHASSEE, Fla. — Today, Governor Ron DeSantis announced the appointment of Christopher Creegan, Dr. Monica Mortensen, and Dr. Gregory Williams to the Board of Osteopathic Medicine.

Christopher Creegan
Creegan is the Owner and Broker of Creegan Group. He was recognized in 2022 by RealTrends as one of the top Realtors based on number of homes sold, ranking #31 out of all Realtors in the United States. Creegan earned his associate degree from Seminole State College.

Dr. Monica Mortensen
Dr. Mortensen is a Pediatric Endocrinologist with Nemours Children's Health. She is a Courtesy Assistant Professor for the Department of Pediatrics at the University of Florida College of Medicine – Jacksonville. Dr. Mortensen earned her bachelor's degree in biology from Loyola University, her Doctor of Osteopathic Medicine from Midwestern University, and completed her fellowship in pediatric endocrinology from the University of Chicago.

Dr. Gregory Williams
Dr. Williams is a Physician with Tallahassee Primary Care Associates. He is a Fellow of the American Academy of Family Physicians and is a Clinical Assistant Professor for the Florida State University College of Medicine. Dr. Williams earned his bachelor's degree from Palm Beach Atlantic College and his Doctor of Osteopathic Medicine from Southeastern University.
These appointments are subject to confirmation by the Florida Senate.

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Ron DeSantis
46th Governor of Florida

Governor Ron DeSantis Appoints Two to the Board of Medicine

On December 28, 2022, in News Releases, Recent Appointments, by Staff

TALLAHASSEE, Fla. — Today, Governor Ron DeSantis announced the appointment of Dr. Gregory Coffman and Dr. Matthew Benson to the Board of Medicine.

Dr. Gregory Coffman

Dr. Coffman is a Pediatrician at Orlando Health Physician Associates. With over 28 years of experience, he currently serves as the Co-Vice Chair of the Department of Pediatrics for the Orlando Health Physician Association. Dr. Coffman is a United States Air Force veteran who earned his bachelor's degree from the University of South Florida and his Doctor of Medicine from Emory University.

Dr. Matthew Benson

Dr. Benson is a Pediatric Endocrinologist for Nemours Children's Health. He is a current member of the American Society of Bone and Mineral Research as well as the Pediatric Endocrine Society. Dr. Benson earned his bachelor's degree from Pensacola Christian College and his Doctor of Medicine from Ben-Gurion University of the Negev.

These appointments are subject to confirmation by the Florida Senate.

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The New York Times https://www.nytimes.com/2022/11/14/health/puberty-blockers-transgender.html

They Paused Puberty, but Is There a Cost?

Puberty blockers can ease transgender youths' anguish and buy time to weigh options. But concerns are growing about long-term physical effects and other consequences.

By Megan Twohey and Christina Jewett
Nov. 14, 2022

The medical guidance was direct.

Eleven-year-old Emma Basques had identified as a girl since toddlerhood. Now, as she worried about male puberty starting, a Phoenix pediatrician advised: Take a drug to stop it.

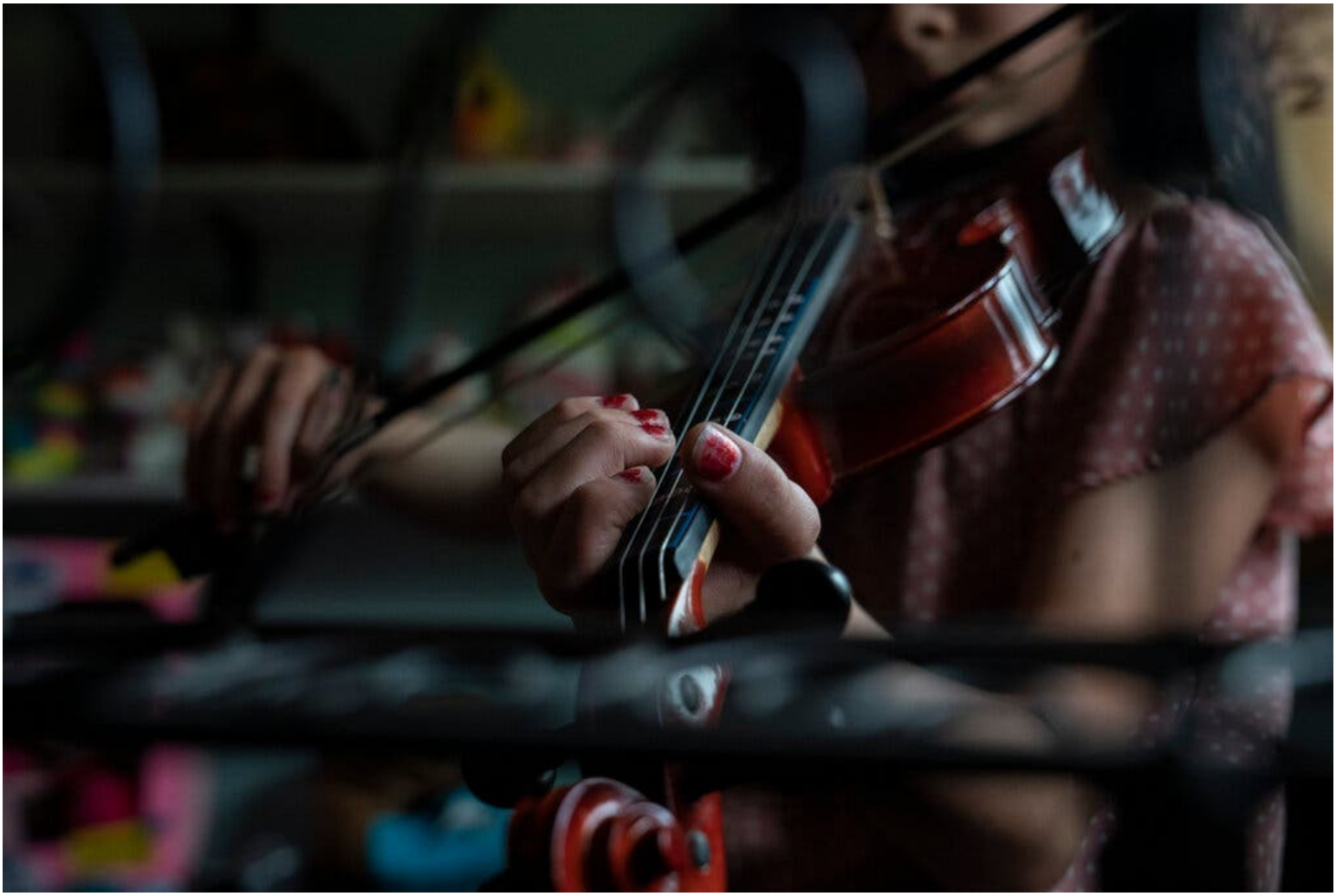
At 13, Jacy Chavira felt increasingly uncomfortable with her maturing body and was beginning to believe she was a boy. Use the drug, her endocrinologist in Southern California recommended, and puberty would be suspended.

An 11-year-old in New York with deepening depression expressed a desire to no longer be a girl. A therapist told the family the drug was the preteen's best option, and a local doctor agreed.

"'Puberty blockers really help kids like this,'" the child's mother recalled the therapist saying. "It was presented as a tourniquet that would stop the hemorrhaging."

As the number of adolescents who identify as transgender grows, drugs known as puberty blockers have become the first line of intervention for the youngest ones seeking medical treatment.

Their use is typically framed as a safe — and reversible — way to buy time to weigh a medical transition and avoid the anguish of growing into a body that feels wrong. Transgender adolescents suffer from disproportionately high rates of depression and other mental health issues. Studies show that the drugs have eased some patients' gender dysphoria — a distress over the mismatch of their birth sex and gender identity.



Emma, now 14, has identified as a girl since toddlerhood and feels that she's on the right path. Verónica G. Cárdenas for The New York Times

"Anxiety drains away," said Dr. Norman Spack, who pioneered the use of puberty blockers for trans youth in the United States and is one of many physicians who believe the drugs can be lifesaving. "You can see these kids being so relieved."

But as an increasing number of adolescents identify as transgender — in the United States, an estimated 300,000 ages 13 to 17 and an untold number who are younger — concerns are growing among some medical professionals about the consequences of the drugs, a New York Times examination found. The questions are fueling government reviews in Europe, prompting a push for more research and leading some prominent specialists to reconsider at what age to prescribe them and for how long. A small number of doctors won't recommend them at all.

Dutch doctors first offered puberty blockers to transgender adolescents three decades ago, typically following up with hormone treatment to help patients transition. Since then, the practice has spread to other countries, with varying protocols, little documentation of outcomes and no government approval of the drugs for that use, including by the U.S. Food and Drug Administration.

But there is emerging evidence of potential harm from using blockers, according to reviews of scientific papers and interviews with more than 50 doctors and academic experts around the world.

Behind Our Reporting on Puberty Blockers


Megan Twohey and Christina Jewett
Reporting for the Investigations Desk

As growing numbers of adolescents who identify as transgender are prescribed drugs to block puberty, the treatment is becoming a source of confusion and controversy.

We spent months scouring the scientific evidence, interviewing doctors around the world and speaking to patients and families.

Here's a closer look at what we found →

The drugs suppress estrogen and testosterone, hormones that help develop the reproductive system but also affect the bones, the brain and other parts of the body.

During puberty, bone mass typically surges, determining a lifetime of bone health. When adolescents are using blockers, bone density growth flatlines, on average, according to an analysis commissioned by The Times of observational studies examining the effects.

Jacy Chavira, 22, thinks puberty blockers were prescribed to her too quickly. After treatment with blockers starting at 13, followed by testosterone, she has resumed her female identity. Verónica G. Cárdenas for The New York Times

Many doctors treating trans patients believe they will recover that loss when they go off blockers. But two studies from the analysis that tracked trans patients' bone strength while using blockers and through the first years of sex hormone treatment found that many do not fully rebound and lag behind their peers.

That could lead to heightened risk of debilitating fractures earlier than would be expected from normal aging — in their 50s instead of 60s — and more immediate harm for patients who start treatment with already weak bones, experts say.

"There's going to be a price," said Dr. Sundeep Khosla, who leads a bone research lab at the Mayo Clinic. "And the price is probably going to be some deficit in skeletal mass."

Many physicians in the United States and elsewhere are prescribing blockers to patients at the first stage of puberty — as early as age 8 — and allowing them to progress to sex hormones as soon as 12 or 13. Starting treatment at young ages, they believe, helps patients become better aligned physically with their gender identity and helps protect their bones.

But that could force life-altering choices, other doctors warn, before patients know who they really are. Puberty can help clarify gender, the doctors say — for some adolescents reinforcing their sex at birth, and for others confirming that they are transgender.

“The most difficult question is whether puberty blockers do indeed provide valuable time for children and young people to consider their options, or whether they effectively ‘lock in’ children and young people to a treatment pathway,” wrote Dr. Hilary Cass, a pediatrician leading an independent review in England of medical treatments of adolescents presenting as transgender.

“There’s going to be a price,” said Dr. Sundeep Khosla, who leads a bone research lab at the Mayo Clinic. “And the price is probably going to be some deficit in skeletal mass.” Jenn Ackerman for The New York Times

On her recommendation, England’s National Health Service last month proposed restricting use of the drugs for trans youths to research settings. Sweden and Finland have also placed limits on the treatment, concerned not just with the risk of blockers, but the steep rise in young patients, the psychiatric issues that many exhibit, and the extent to which their mental health should be assessed before treatment.

In the United States, though, there is no universal policy, and the public discussion is polarized.

Republican governors and lawmakers in more than a dozen states are working to limit or even criminalize the treatments, as some in their party also seek to restrict access to sports and bathrooms, ban discussion of gender in public schools, and call into question whether transgender identity even exists. (This month, the Florida medical board banned medications and surgeries for new patients under 18.) Meanwhile, the Biden administration describes transgender medicine as a civil right. And some advocates criticize anyone who questions the treatments' safety.

Long-awaited research funded by the National Institutes of Health could provide more guidance. In 2015, four prominent American gender clinics were awarded $7 million to examine the effects of blockers and hormone treatment on transgender youth. In explaining their study, the researchers pointed out that the United States had produced no data on the impact or safety of blockers, particularly among transgender patients under 12, leaving a "gap in evidence for this practice." Seven years in, they have yet to report key outcomes of their work, but say the findings are coming soon.

Many young patients and their families have concluded that the benefits of easing the despair of gender dysphoria far outweigh the risks of taking blockers. For others, the limited studies and politicization of trans medicine can make it difficult to fully evaluate the decision. A Reuters examination of a range of transgender treatments also found scant research into the long-term effects.

Three years after starting the drugs, Emma Basques believes she's on the right path.

Jacy Chavira, now 22, decided that the medical treatment was not appropriate for her and resumed her female identity.

And the New York adolescent had such a significant loss in bone density after more than two years on blockers that the parents halted use of the drugs.

"We went into this because we wanted to help," the mother said. "Now I worry that we got into a situation with a very powerful drug and don't understand what the long-term effects will be."

Emma's mother, Cherise Basques, right, and father let her grow her hair longer and take other steps to socially transition when she was 5. Verónica G. Cárdenas for The New York Times

'Time to Start'

It didn't take long for Cherise and Arick Basques to realize that their toddler was different. The child rejected pants, toy trucks and sports in favor of dresses, Barbie dolls and ballet. When Ms. Basques ran into a friend at a restaurant in their Phoenix suburb and introduced her then-4-year-old as her son, the child shouted: "No! I'm your daughter!"

The couple worked with children — Ms. Basques as an occupational therapist, her husband as a teacher and school administrator — but this was unfamiliar territory. None of the therapists the parents called felt equipped to help. Their pediatrician offered only that things could change once the child started school, Ms. Basques said. Eventually, the couple discovered a local support group for parents of transgender children.

The next year, they allowed the child, then 5, to begin using the name Emma, grow longer hair and take other steps to socially transition. In 2019, when Emma turned 11, a physician at a local gender clinic advised starting blockers.

“At the first subtle signs of puberty, it was like: ‘Yep, that’s it. Time to start!’” recalled Ms. Basques. Along with her husband and Emma, she asked that their full names be used because they consider themselves advocates of the treatment.

For decades, transgender medical treatment in multiple countries was restricted to patients 18 and older. But in the 1990s, a hospital clinic in Amsterdam began treating adolescents.

By the time Emma began taking blockers, in 2019, multiple medical groups had endorsed their use for gender dysphoria. Verónica G. Cárdenas for The New York Times

Puberty blockers can be given as an injection or an implant. (The best known is Lupron, made by AbbVie.) They were being used in the United States and elsewhere, with approval by the F.D.A. and its counterparts overseas, to treat prostate cancer; endometriosis, a painful disease that causes uterine tissue to grow elsewhere in the body; and the unusually early onset of puberty, typically age 6 or 7. If blockers were safe for patients with that rare condition, known as central precocious puberty, the Dutch doctors reasoned, they were likely to be safe for trans adolescents too.

The first trans patient treated with blockers, from age 13 to 18, moved on to testosterone, the male sex hormone. Halting female puberty had offered emotional relief and helped him look more masculine. As the Dutch clinicians prescribed blockers, followed by hormones, to a half-dozen other patients in those early years, the medical team found that their mental health and well-being improved.

“They were usually coming in very miserable, feeling like an outsider in school, depressed or anxious,” recalled Dr. Peggy Cohen-Kettenis, a retired psychologist at the clinic. “And then you start to do this treatment, and a few years later, you see them blossoming.”

In 1998, she worked with a small international group — which would later expand and become known as the World Professional Association for Transgender Health, or WPATH — to include puberty blockers and hormones for adolescents in their treatment guidelines.

The Dutch doctors had yet to publish any research findings, she acknowledged. Some other physicians, including the one overseeing transgender medical treatment in England, were wary of potential harm.

But doctors in the group considered the early results from Amsterdam as reassuring enough to move forward. They were eager to treat the psychological distress observed in many trans adolescents.

"It was just really exciting," Emma said of starting her transition. "I finally got to be who I was." Verónica G. Cárdenas for The New York Times

Doctors debated about whether "starting the puberty blockers would somehow damage the children," recalled Dr. Walter Meyer, a Texas pediatric endocrinologist and psychiatrist involved with the 1998 standards of care.

"The Dutch were saying, 'Oh, no, it's not causing a problem,'" said Dr. Meyer, who continues to support the use of the drugs.

Dr. Cohen-Kettenis hoped physicians in other countries would adopt the Dutch protocol, and document and share the outcomes as she and her colleagues in Amsterdam planned. Her clinic treated only patients who had consistently presented as transgender since early childhood and did not suffer from distinct psychiatric disorders that could interfere with diagnosis or treatment. They had to be at least 12 for puberty blockers, with the option of moving on to hormones at 16.

The international standards of care advised similar criteria. But they were recommendations, not requirements. Soon, the use of puberty blockers spread. In the United States and Canada, countries without centralized health systems, protocols were largely left to the discretion of individual clinics and practitioners. Dr. Spack, the pediatric endocrinologist who led U.S. adoption of the treatment, opened the first American clinic in 2007 at Boston Children's Hospital; others eventually followed in nearly every state.

Some started children on blockers at the first signs of puberty and prescribed testosterone or estrogen to patients 14 or younger. Doctors believed that earlier treatment would lead to more successful medical transitions, and wanted to spare patients the difficulty of watching their peers develop while their own bodies remained unchanged.

The doctor in Arizona who treated Emma, for example, tells preteen patients that if he prescribed blockers and didn't start hormones for five years, they would look 12 at age 16.

Dr. Peggy Cohen-Kettenis was a psychologist in the Dutch clinic that pioneered treatments for transgender youths. “They were usually coming in very miserable,” she recalled. With treatment, she said, “you see them blossoming.” Marlena Waldthausen for The New York Times

Transgender activists across the country pushed for early and easy access to the treatment. At a 2006 Philadelphia medical convention, Jenn Burleton, an advocate from Oregon, heard Dr. Spack describe his experience starting to treat adolescents with blockers. Like others of her generation, Ms. Burleton, now 68, could not medically transition until adulthood, and puberty had been traumatic. Treating adolescents with blockers was “game-changing,” said Ms. Burleton, founder and program director of the organization now known as the TransActive Gender Project at the Lewis & Clark Graduate School for Education and Counseling.

Back home, Ms. Burleton prodded pediatric endocrinologists to adopt the practice for their patients. “We have a chance to prevent them from being emotionally broken,” she recalled saying.

Advocates successfully pushed Oregon, Massachusetts, California and other states to allow for Medicaid coverage of puberty blockers for adolescents identifying as trans. They also helped win approval in Oregon for a variety of medical workers — doctors, nurse practitioners, naturopaths — to administer blockers if overseen, even long-distance, by an endocrinologist.

“It went so quickly that not even centers but individual clinicians, people who were not knowledgeable, were just giving this kind of treatment,” said Dr. Cohen-Kettenis, the Dutch psychologist. “There was a great concern.”

By the time Emma Basques began taking blockers in 2019, multiple medical groups had endorsed their use for gender dysphoria. Among them were the American Academy of Pediatrics and the international Endocrine Society, which in 2017 had described the limited research on the effects of the drugs on trans youth as “low-quality.” Still, the organizations were encouraged by what they saw as a promising treatment.

Many doctors point out that it’s not unusual for research to lag behind the launch of new treatments and for drugs to be used off-label on patients without F.D.A. approval, especially in pediatric medicine.

Jenn Burleton, an advocate from Oregon, speaking at a support group for parents whose children identify as transgender. Verónica G. Cárdenas for The New York Times

An F.D.A. spokeswoman said in a statement that doctors have the discretion to do so, but also noted that just because a drug has been approved for one class of patients doesn’t mean it’s safe for another.

There is no centralized tracking of blocker prescriptions in the United States. Komodo Health, a health technology company, compiled private and public insurance data for Reuters, showing a sharp increase in the number of children ages 6 to 17 diagnosed with gender dysphoria, from about 15,000 in 2017 to about 42,000 in 2021. During that time, 4,780 patients with that diagnosis were put on puberty blockers covered by insurance, the data shows, with new prescriptions growing each year. But the data does not capture the many cases in which insurance does not cover the drugs for that use, leaving families to pay out of pocket.

Some leading American practitioners asked AbbVie and Endo Pharmaceuticals, maker of another blocker, to seek F.D.A. approval for the drugs' use among trans adolescents. The drugmakers would have to fund research for a patient population that made up just a small part of their market. But the physicians argued that regulatory approval could help establish the safety of the treatment and broaden insurance coverage of the drugs, which can cost tens of thousands of dollars a year. In the end, AbbVie and Endo said no. The companies declined to comment on the decision.

Emma Basques was on blockers for two years. Then, after she turned 13 in October of last year, a doctor in the Portland, Ore., suburb where her family had moved, prescribed estrogen, starting her transition. It had become increasingly awkward to feel left behind as her classmates physically matured. And she felt confident that she was ready.

"It was just really exciting," Emma said. "I finally got to be who I was."

A skeleton model at the Baylor College of Medicine in Houston. A full accounting of blockers' risk to bones is not possible. Because most treatment is provided outside of research studies, there's little public documentation of outcomes. Callaghan O'Hare for The New York Times

'We Need to Give This a Chance'

The 11-year-old in New York, who had begun puberty and started at a new school, was increasingly distressed — refusing to bathe or go to class and, for the first time, expressing a desire to no longer have a girl's body.

When the parents consented to blockers in 2018, they hoped the drug would bring emotional stability and time to consider next steps.

"If everyone thinks this will help, and it's reversible, then we need to give this a chance," said the mother, who asked that her name be withheld to protect the family's privacy.

The first two years were promising, with the patient, by then a teen, taking Prozac in addition to the blockers. But at the start of the third year, a bone scan was alarming. During treatment, the teen's bone density plummeted — as much as 15 percent in some bones — from average levels to the range of osteoporosis, a condition of weakened bones more common in older adults.

The doctor recommended starting testosterone, explaining that it would help the teen regain bone strength. But the parents had lost faith in the medical counsel.

“I was furious,” the mother recalled. “I’m thinking, ‘I worry we’ve done permanent damage.’”

A Texas teenager had very low bone density in the lumbar spine after a year on blockers, records show. No baseline bone scan had been performed at the outset of treatment. The New York Times

A full accounting of blockers’ risk to bones is not possible. While the Endocrine Society recommends baseline bone scans and then repeat scans every one to two years for trans youths, WPATH and the American Academy of Pediatrics provide little guidance about whether to do so. Some doctors require regular scans and recommend calcium and exercise to help to protect bones; others do not. Because most treatment is provided outside of research studies, there’s little public documentation of outcomes.

But it’s increasingly clear that the drugs are associated with deficits in bone development. During the teen years, bone density typically surges by about 8 to 12 percent a year. The analysis commissioned by The Times examined seven studies from the Netherlands, Canada and England involving about 500 transgender teens from 1998 through 2021. Researchers observed that while on blockers, the teens did not gain any bone density, on average — and lost significant ground compared to their peers, according to the analysis by Farid Foroutan, an expert on health research methods at McMaster University in Canada.

The findings match what practitioners of the treatment have seen, including Dr. Catherine Gordon, a pediatric endocrinologist and bone researcher at Baylor College of Medicine in Houston. “When they lose bone density, they’re really getting behind,” said Dr. Gordon, who is leading a separate study on why the drugs have such an effect.

Many doctors caring for young trans patients are reassured by the rebounds seen in the children who take blockers for unusually early puberty. In most cases, their bone strength fully recovers after they stop the drugs at about age 11 and resume full puberty, which can last up to five years. But patients identifying as trans take the drugs later, interrupting their normally timed puberty and limiting that crucial period of development.

“That’s the difference,” Dr. Gordon said. “You shorten that critical window of puberty.”

So far, only two small studies, published by Dutch doctors, have tracked the bone development of trans patients from beginning blockers through early hormone treatment. In both studies, dozens of patients started blockers at 14 or 15, on average, and began estrogen or testosterone at 16. The participants, followed in one study through age 18, and in the other through age 22, saw their bones strengthen, on average, once on hormones. Still, most patients continued to lag behind their peers; trans men neared average levels, but trans women fell far below.

Dr. Catherine Gordon, a pediatric endocrinologist and bone researcher at Baylor, is leading a study on the effects of puberty blockers on bone development in transgender youths. Callaghan O'Hare for The New York Times

“I think there’s a false sense of security,” said Dr. Khosla, the Mayo Clinic specialist, who is skeptical that all trans patients can catch up.

Dr. Khosla and Dr. Gordon don’t believe the effects on bones are reason for medical providers to halt use of the drugs in adolescents. But they think the risks should be factored into patient decisions and that bones should be carefully monitored.

If any harm resulted from the use of blockers, it likely would not be evident until decades later, with fractures. However, for children who already have weak bones as they start treatment, the dangers could be more immediate. While there is no systematic record-keeping of such cases, some anecdotal evidence is available.

After more than a year on blockers, a 15-year-old in Texas, who had not had a baseline scan, showed spinal bone density so low that it was below the first percentile for the teen's age and weight, indicating osteoporosis, according to medical records from earlier this year.

Emma takes calcium, makes an effort to exercise and has undergone scans showing that her bones are healthy. Verónica G. Cárdenas for The New York Times

A transgender adolescent in Sweden who took the drugs from age 11 to 14 with no bone scans until the last year of treatment developed osteoporosis and sustained a compression fracture in his spine, an X-ray showed in 2021, as reported earlier in a documentary on Swedish television.

"The patient now suffers from continued back pain," medical records note, describing a "permanent disability" caused by the blockers.

Some practitioners in the United States and Australia do not provide the drugs to patients who are well into puberty, concerned that the treatment poses the greatest threat to bones in that period.

“You’re potentially taking on risks that I felt should be avoided,” said Dr. Stephen Rosenthal, medical director of the University of California, San Francisco, Child and Adolescent Gender Center.

He won’t prescribe blockers as a stand-alone treatment to anyone over 14. That includes the growing number of nonbinary youths who don’t want to mature into either male or female bodies. “We make it very clear that no one stays on a blocker,” he said.

Dr. Rosenthal is a principal investigator in the yearslong N.I.H. study, which also involves gender clinics in Los Angeles, Chicago and Boston. Asked why they have yet to report on key outcomes, he said their research was delayed when the pandemic halted in-person treatment. Papers on the effects of blockers on bones and other findings should be published next year, he said.

Like many physicians, Dr. Rosenthal believes the benefits of using blockers to alleviate gender dysphoria are much greater than any risks to bones. (He was among the doctors who filed statements in a lawsuit against an Alabama ban on medical treatment of trans youth.)

Emma Basques, for example, takes calcium, makes an effort to exercise and has undergone scans that showed her bones are healthy. “I can’t even imagine how life would be for Emma,” said her mother, Ms. Basques, “if she was not given blockers and had to go through male puberty.”

Emma added: “I wouldn’t like my body at all.”

But the parents in New York insisted on ending treatment for their teen, who has yet to have a follow-up scan to see if bone density has improved since going off blockers.

“I don’t think we have the science behind them to be prescribing these drugs,” the mother said.

"I wish I hadn't been steered into transitioning the way I was, and that I had been told there were other ways to cope with the discomfort of puberty," Ms. Chavira said. Verónica G. Cárdenas for The New York Times

'I Wish There Had Been More Questions'

Jacy Chavira, in Southern California, had already cut her hair short and begun binding her chest when she was prescribed blockers at age 13. A therapist and her parents agreed that gender dysphoria, a condition Jacy learned about from a magazine, could explain the mounting anxiety and discomfort that she was experiencing during early puberty.

Once on blockers, Ms. Chavira said, she became fixated on moving ahead with a medical transition. She was thrilled shortly after turning 16 when her pediatric endocrinologist prescribed testosterone. But soon she started having doubts. Her body was growing more masculine, but she was secretly putting on dresses. At 17, in a consultation for breast removal, she worried aloud about the potential loss of feeling in the nipples. To her, this was a sign of not wanting to go through with the surgery.

She came to realize that her anguish had stemmed from a larger inner conflict, and that continuing with a gender transition would be a mistake. “I believe it was an issue with my identity, accepting who I was, and not just the physical female portion of it,” she said.

Like Ms. Chavira, most patients who take puberty blockers move on to hormones to transition, as many as 98 percent in British and Dutch studies. While many doctors see that as evidence that the right adolescents are getting the drugs, others worry that some young people are being swept into medical interventions too soon.

Over the past decade, growing numbers of medical providers have lowered the ages at which they prescribe the treatments. Today, the WPATH and Endocrine Society advise that blockers can be prescribed at the first signs of puberty and hormone treatment, in some cases, earlier than 16. The American Academy of Pediatrics says blockers can be provided anytime during puberty and hormones from “early adolescence onward.”

Some doctors and researchers are concerned that puberty blockers may somehow disrupt a formative period of mental growth. With adolescence comes critical thinking, more sophisticated self-reflection and other significant leaps in brain development. Sex hormones have been shown to affect social and problem-solving skills. It’s believed that brain growth is connected to gender identity, but research in these areas is still very new.

Jacy at age 14, while on blockers. “I believe it was an issue with my identity,” she said, “accepting who I was, and not just the physical female portion of it.” Verónica G. Cárdenas for The New York Times

In a 2020 paper, 31 psychologists, neuroscientists and hormone experts from around the world urged more study of the effects of blockers on the brain.

“If the brain is expecting to receive those hormones at a certain time and doesn’t, what happens?” said Dr. Sheri Berenbaum, head of a gender research lab at Penn State, and one of the authors of the paper. “We don’t know.”

The physicians in the Amsterdam clinic, where the treatment began, have lowered their minimum ages for starting blockers and hormones. But they are very cautious in selecting patients.

“Our concern is always: When is gender identity fixed or not fluid anymore? And when do you fully understand the lifelong consequences of such treatment?” said Dr. Annelou de Vries, head therapist at the clinic.

For some medical professionals across the country, there are too many uncertainties about the effects of blockers to provide the treatment.

Among them are seven pediatric endocrinologists and pediatric endocrine nurse practitioners in Florida who recently wrote to the state health department that evidence to support the use of those treatments in adolescents “is simply lacking” and asking that it be confined to research settings.

“Without much data, it’s hard to make a conclusion that we’re doing the right thing,” said Dr. Matthew Benson, an assistant professor of pediatrics at Mayo Clinic College of Medicine in Jacksonville and an author of the letter. (He also voiced concerns at a state hearing in July on whether to stop allowing Medicaid coverage in Florida for transgender medical treatment.)

Ms. Chavira halted her medical treatment at 18, but she is left with a voice that sounds like a man's and other enduring physical changes. Verónica G. Cárdenas for The New York Times

Even enthusiasts, like Emma and her parents, acknowledge it can be hard to fully grasp all the potential results of treatment. Infertility is among other lasting effects for patients who start blockers at the first stage of puberty and proceed to hormones and surgery. Emma was advised that, to possibly preserve fertility, she would need to pause treatment at some point down the line, with the hopes of developing and freezing sperm.

"I knew what I wanted," Emma said of her medical transition. "But all this other stuff was kind of just confusing." Her father said, "We worked really hard to talk to her at her age level to make sure she understood some of these more complicated things."

When Dutch doctors launched the use of blockers and hormones on trans youth decades ago, they warned in their early papers of the possibility of "false positives" — patients who medically transition, then later declare they are not transgender.

There's no official tracking of those cases and many practitioners believe the total numbers are small. So far, scores of accounts have emerged in social media, news stories and published research.

Keira Bell, who was prescribed blockers at age 16, then moved on to testosterone and breast-removal surgery, no longer identified as transgender five years after starting to transition. She sued the Tavistock gender clinic in London where she had been treated. (A judge ruled that patients under 16 were unable to consent to puberty blockers — a decision later overturned on appeal.)

Jacy Chavira, looking back on her own experience, thinks that drugs were prescribed too quickly. At 18, she halted her medical treatment and resumed her female identity. Now, she is left with a voice that sounds like a man's and other enduring physical changes.

"I wish there had been more questions asked by the doctors," she said. "I wish I hadn't been steered into transitioning the way I was, and that I had been told there were other ways to cope with the discomfort of puberty."

Alarmed by the uncertain number of cases like Jacy's, as well as the rising numbers of patients with gender dysphoria and the psychiatric disorders many display, Sweden is working to standardize adolescent transgender medical treatment and restrict it to research settings.

Finland is also limiting treatment, more closely following the Dutch protocol, and doctors there remain concerned about the physical effects of blockers, including on brain development, said Dr. Riittakerttu Kaltiala, chief of adolescent psychiatry at a gender clinic in Tampere. (Dr. Kaltiala testified this fall before the Florida medical board as it was considering its ban on treatment.)

As European countries continue to examine and tailor their treatment, in the United States the public discourse about transgender care is growing more incendiary.

Last month, the American Academy of Pediatrics and other medical groups wrote to Attorney General Merrick B. Garland, urging the Justice Department to investigate growing threats of violence against physicians and hospitals that provide transgender medical treatment to adolescents. As more Republicans frame the treatment as child abuse, some doctors have become wary of discussing their work for fear of becoming targets.

More than a dozen doctors declined to be interviewed for this article, and several who spoke to The Times — some who support treatment, others who question it — asked not to be named.

The climate could have a chilling effect on research, said Dr. Natalie Nokoff, assistant professor of pediatric endocrinology at the University of Colorado, who recently conducted a soon-to-be-published study showing that a longer treatment period on puberty blockers was associated with a lower bone density.

"It's leading to concerns that people's well-intentioned scientific research could be misconstrued" and exploited for political gain, she said.

The prospect of such an outcome is disheartening for the families of Emma Basques, Ms. Chavira and the teen in New York. Despite their differing experiences, they share the same hopes for transgender medicine: less vitriol, more science.

Methodology

The analysis commissioned by The Times examined the findings of seven observational studies from the Netherlands, England and Canada, documenting the association between puberty blockers and bone density in about 500 adolescents.

In each study, bone density was measured at the spine and the hip using Dual-energy X-ray absorptiometry, or DEXA scan. The analysis looked at group means, because not every study released individual person data. Each study's findings were weighted based on its number of participants.

The change in bone density while adolescents were on blockers was observed to be zero. The analysis also showed that the adolescents' Z-scores, a measure of bone density that is benchmarked to peers, consistently fell during treatment with blockers.

The studies included are:

"Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents With Gender Dysphoria," Klink et. al, Journal of Clinical Endocrinology & Metabolism, 2015

"Effect of Pubertal Suppression and Cross-Sex Hormone Therapy on Bone Turnover Markers and Bone Mineral Apparent Density (BMAD) in Transgender Adolescents," Vlot et. al, Bone, 2017

"The Effect of GnRH Analogue Treatment on Bone Mineral Density in Young Adolescents With Gender Dysphoria: Findings From a Large National Cohort," Joseph et. al, Journal of Pediatric Endocrinology and Metabolism, 2019

"Physical Changes, Laboratory Parameters and Bone Mineral Density During Testosterone Treatment in Adolescents With Gender Dysphoria," Stoffers et. al, The Journal of Sexual Medicine, 2019

"Bone Development in Transgender Adolescents Treated With GnRH Analogues and Subsequent Gender-Affirming Hormones," Schagen et. al, Journal of Clinical Endocrinology & Metabolism, 2020

"Short-Term Outcomes of Pubertal Suppression in a Selected Cohort of 12- to 15-Year-Old Young People With Persistent Gender Dysphoria in the U.K.," Carmichael et. al, PLOS One, 2021

"Pubertal Suppression, Bone Mass and Body Composition in Youth With Gender Dysphoria," Navabi et. al, Pediatrics, 2021

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ORIGINAL ARTICLE

Improving Global Access to Transgender Health Care: Outcomes of a Telehealth Quality Improvement Study for the Air Force Transgender Program

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Abstract

Purpose: To describe the development of the United States Air Force's (USAF) telehealth program from fall 2017 through fall of 2020 in response to the unique challenges associated with providing care for a global transgender military population.

Methods: Telehealth visit completion rates were monitored at time of encounters and through electronic health record reports. Patient satisfaction data were obtained by immediate postvisit survey, across provider care received, logistics of setting up the appointment, and quality of the virtual health system connection. Patient cases highlighting opportunities for transgender telehealth were summarized.

Results: Between September 9, 2019 and October 28, 2020, 99 telehealth encounters with video-to-video connection occurred. Twenty-three of the encounters were for gender-affirming hormone therapy, 17 for mental health visits, and 59 for speech therapy. Thirty-five surveys were collected from 20 patients. Overall patients were "satisfied" or "very satisfied" with providers' ability to manage their chief complaint through this modality (average 4.9 out of 5 on 1 to 5 scale with 1 being "very dissatisfied" and 5 being "very satisfied") and "strongly agree" that telehealth is an effective means to accomplish care (average score 4.8 on 1 to 5 scale with 1 being "strongly disagree" and 5 "strongly agree"). Services provided spanned 11 USAF bases worldwide.

Conclusions: Telehealth is successful in ensuring ongoing transgender health care services for a global military population. The success of this program may have implications for future military and civilian endeavors to bridge care gaps for transgender patients in resource-poor or distant-site locations.

Keywords: access; gender; military; telehealth; telemedicine; transgender

Background

In October of 2016, the United States Department of Defense (DoD) implemented new policy allowing transgender service members to openly serve. Each service was charged with developing a team to oversee the gender-affirming medical care for any members seeking an in-service military gender marker change.[1] The United States Air Force (USAF) opted to create a single, centralized team, the Medical Multidisciplinary Team (MMDT) in policy directives.[2] Initially the goal was for the MMDT to provide oversight and case management services remotely. Direct care for mental health (MH) services, gender-affirming hormones, surgical care, and other services such as speech therapy (ST) were to be done directly in the patient's clinic or "military treatment facility" (MTF), or referred off-base for care in the civilian health care system. Unfortunately, two issues prevented this from occurring across the USAF. First, Primary Care Managers were reluctant to provide care in an unfamiliar care area. Indeed, national deficits in transgender education in health care training programs are a known issue[3,4] and a study in 2017 among USAF family physicians reflected similar findings.[5] Second, several service members in small civilian communities were without

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specialty care resources. This concern is compounded for patients stationed in overseas locations, where all care is typically done at the on-base clinic. By fall of 2017, it was clear to MMDT providers and USAF medical leadership that if transgender patients were going to remain as operationally effective as their cisgender peers, these health care disparities would need to be addressed.

At that time, telehealth had already been utilized by some military specialties across the DoD. Telepsychiatry was an early user of telemedicine,[6] with advances in telemedicine for radiology, dermatology, and pathology as well. As a result, a USAF Telehealth Program Office (USAFTPO) was already functioning to provide systems support for treatment facilities. Because virtual telecommunication (VTC) technology had already been installed in at least one clinic at each MTF across the USAF to support telepsychiatry, the MMDT opted to launch telemedicine as a means to provide direct patient care services for transgender service members in resource-poor, distant locations. The purpose of this article is to present visit completion rates, patient satisfaction data, and case vignettes from the MMDT telehealth program development efforts, as well as showcase successful provision of varying transgender services across this medium.

Methods

Setting

The MMDT consists of nursing case managers, MH providers, adolescent medicine specialists, endocrinologists, speech-language pathologists (SLPs), and surgical subspecialists. In 2017, most AF members with gender dysphoria were just starting gender-affirming medical care; therefore, the initial goal was to ensure direct virtual health services were available for MH, gender-affirming hormone therapy, and ST. The MMDT is located within one of the USAF's largest MTFs and thus was sufficiently resourced to support the global telehealth initiative.

Participants

There are ~75 MTFs across the AF and most are responsible for the medical care of at least one transgender member stationed at that base. All active-duty USAF transgender patients were eligible to receive direct video and audio virtual visits starting September 1, 2019. Providers hosting virtual video encounters included one MMDT licensed clinical social worker, one adult endocrinologist, one adolescent medicine provider, and two SLPs with expertise in voice.

Development of telehealth service

Systems set-up. In fall of 2017, MMDT leadership requested support from the USAFTPO for a transgender virtual telehealth service initiative. Hardware consisted of web cameras installed at each MTF. Initially, the USAFTPO installed two web cameras within the MMDT clinic. Remote transgender patients were then able to connect to their MMDT provider through a camera within their MTF. The USAF subsequently purchased several stand-alone monitors with embedded cameras (i.e., CISCO DX80) capable of using "one-touch" telehealth connection technology between MTFs with compatible devices.

DISA GVS was a Skype-like, HIPPA-compliant, secure room software initially utilized for these encounters. With the onset of the coronavirus disease 2019 (COVID-19) pandemic, the USAF approved the use of other civilian VTC platforms, such as Adobe Connect, Skype, FaceTime, and Google Duo, to ensure patient care during shelter-in-place orders.[7] Additionally, MMDT providers reported Doximity to be a useful VTC modality as the application could be utilized over the patient's cell phone without prior account creation by the patient. Although the initial goal was to connect with patients MTF to MTF, some patient encounters were hosted on the alternative platforms listed above.

Credentialing. USAF providers are required to have state licensure; however, as they are often stationed at several bases throughout their careers, the military allows practice privileges across any federal military installation regardless of where the provider resides. Therefore, to move the telehealth initiative forward, telehealth-only "privileging-by-proxy" requests were granted. Early on these requests were coupled with several delays for each requesting provider; however, USAF leadership eventually streamlined the process.[8,9] After that, once medical leadership at the patient's MTF site identified a need for particular transgender health services, the MMDT was able to establish telehealth privileging-by-proxy for each provider within a 2-week period.

Appointment booking. Once systems set-up and privileging-by-proxy were established at the patient's MTF, a clinical point of contact (POC) was identified to assist in scheduling and the logistical handling of the appointment itself. This POC coordinated with MMDT nursing for scheduling between the patient

and provider. During appointments, the MTF clinical POC established the VTC connection, collected vitals, and administered appropriate screeners and consent forms. The POC would then leave the room for the remainder of the encounter. As needed, aftercare surveys were administered and uploaded into the military's electronic medical record (EMR) systems along with the provider's clinical documentation. The military medical record is universal across the DoD, allowing viewing of nursing and provider notes at any location.

For the encounters not conducted in the MTF and instead over civilian VTC platforms through the patient's personal smart devices, the MTF POC still liaised scheduling needs and sent out all relevant screeners, consents, and surveys before and after the visit.

Legal process

As per Defense Health Agency guidelines,[9] before receiving telehealth services, patients are required to sign a consent form that reviews the risks and benefits of VTC services as well as procedures, should the technology fail resulting in a loss of the encounter. Additional information was collected from the patients not being seen within their MTF, including physical location and an emergency contact in case medical assistance was needed.

Data collection and analysis

Visit outcome information and demographics were captured by the military's EMR system and verified by compliance visit counts. Completed visits were defined as those in which patients were seen over audio and visual modalities. Noncompleted visits were defined as no-shows.

The MMDT developed a VTC-specific patient satisfaction survey in anticipation of launching telehealth services. The survey consisted of 14 satisfaction questions related to appointment logistics, MMDT provider service, VTC connection, and thoughts on telehealth overall as a means of accessing care (Table 1). While every provider sent out the survey following the initial encounter, frequency of administration beyond that was service specific. For example, patients were provided surveys following each MH and hormone visit while ST sent out the survey at minimum monthly due to the higher encounter frequency.

Surveys were collected by the MTF POC for the visit and e-mailed to the MMDT case manager, who then uploaded the results to the MMDT restricted access/encrypted drive on the MMDT hospital server for later analysis. Descriptive statistics were used to tabulate survey results, with averages shown for the service as a whole and each subspecialty service individually.

Table 1. Survey Questions. Survey Questions Regarding the Quality of the Health Care Visit; Each Item Was Rated by Participants on a 5-Point Likert Scale

Survey questions: Likert Scale 1 (least) to 5 (best) quality of experience
(1) Scheduling the telehealth appointment with the MMDT
(2) Scheduling the telehealth appointment with the MTF
(3) Nursing/tech support for telehealth at MTF
(4) Ease of completing any encounter follow-up instructions
(5) Provider's professionalism
(6) Provider's interaction with webcam
(7) Provider's cultural sensitivity
(8) Provider's ability to manage my chief complaint
(9) Provider's inclusion of me in developing my treatment plan
(10) Ability to understand the provider
(11) Clarity of picture/visuals
(12) System Connection (degree of "sticking" or "freezes")
(13) Telemedicine is an effective means to accomplish my care
(14) I would recommend this to other of my diagnosis

MMDT, Medical Multidisciplinary Team; MTF, military treatment facility.

Patient cases highlighting type of care provided through telehealth were decided upon by author consensus and included to showcase various challenges and benefits of transgender VTC health care services. Patient names were replaced by pseudonyms. The Wilford Hall Ambulatory Surgical Center (WHASC) Institutional Review Board deemed the telehealth service and patient satisfaction surveys to be quality improvement and did not require formal review.

Results

The first USAF transgender patient seen by MMDT VTC services occurred on September 9, 2019. Between then and October 28, 2020, the team completed 99 encounters for 20 patients across 11 bases worldwide (Fig. 1). The average age of patient was 28.4 years with range from 19 to 42 (median age 28). Sixteen patients were trans women, whereas four were trans men. Seven patients received more than one type of service by VTC. Thirty-five patient surveys were collected over this time (14 for hormone management encounters, 10 for MH, and 11 for ST). No-shows were minimal; there were a total of 4 across the 99 visits conducted and were all for patients forgetting when their scheduled appointment was to be held.

Overall, telemedicine for transgender care was positive for patients. All patients indicated they "agree" or "strongly agree" that "Telemedicine is an effective

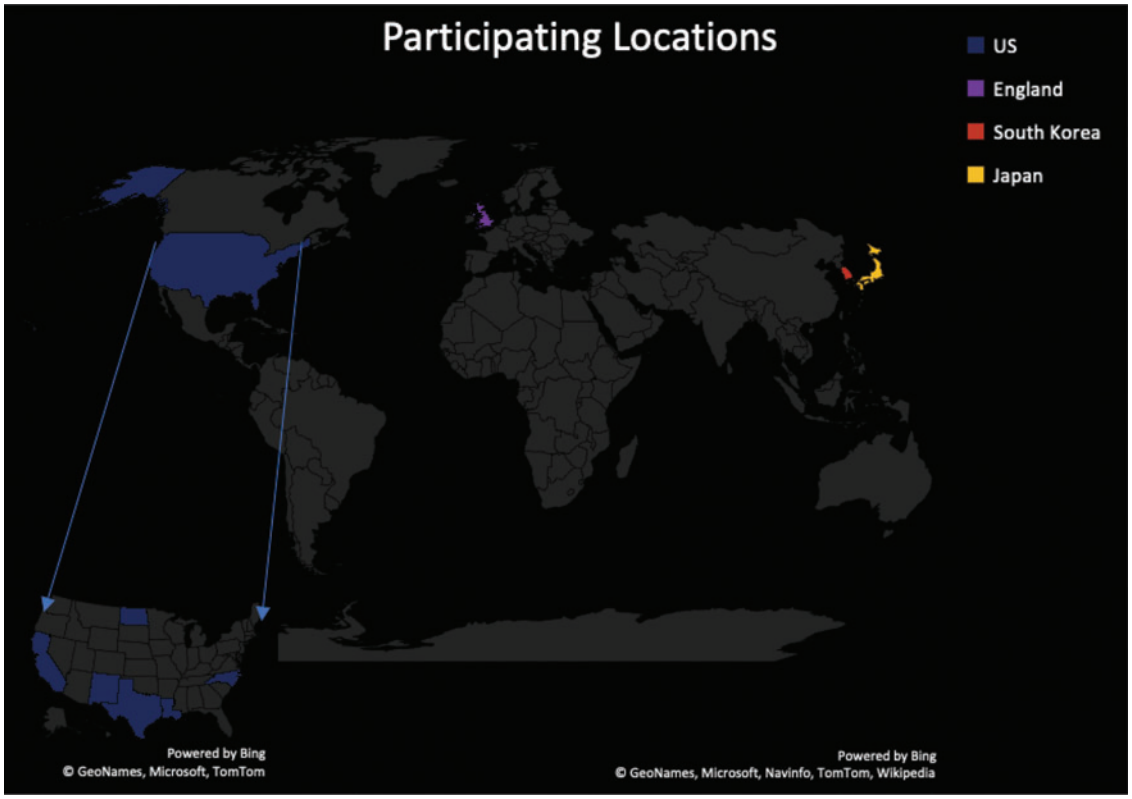

FIG. 1. Participating locations World Map. The Country of each participating MTF is highlighted in a unique color. The blue arrows point to a detailed Map of the United States with the State of each participating MTF highlighted in a unique color. Produced in Office 365 PowerPoint Maps. MTF, military treatment facility.

means to accomplish my care (average score 4.8 on 1 to 5 scale with 1 being "strongly disagree" and 5 "strongly agree")" and "I would recommend this to others with my diagnosis (average score 4.9 on same scale)." Generally, MMDT providers were rated highly across all surveys. Patients rated providers' interaction with the webcam and ability to manage the chief complaint as overall "very satisfied" (average 4.9 out of 5).

Postvisit surveys that evaluated the system-related aspects of telemedicine were similarly rated as "very satisfied." Patients were "very satisfied" with their ability to understand the provider during the visit (4.9 out of 5), with the clarity of the picture/visuals (4.6 out of 5), and degree of "freezes" in the connection (4.6 out of 5).

Survey questions asking about satisfaction with appointment scheduling were similarly positive overall, but not as high. For example, while overall patients were "very satisfied" with scheduling the virtual appointment with the MMDT (4.7 out of 5), they were largely "satisfied" with scheduling the appointment through their own local MTF (4.3 out of 5), and comparably indicated "satisfied" with nursing and tech support for telehealth at their MTF (4.2 out of 5).

Specifics for each specialty area are listed below (Figs. 2–4) and show similar trends in patient feedback. The overall comparison of average ratings are demonstrated in Figure 5.

Patient cases

Brief patient cases exemplifying each type of transgender health service provided through VTC are noted below to demonstrate scope of care and highlight challenges and benefits.

Case #1: MH. Jay is a 29-year-old trans woman who sought telehealth services after a history of in-person MH treatment with inconsistent attendance on the part of the patient. Initially, the patient was experiencing suicidal ideations without intent or plan and was very reserved, speaking of their concerns in

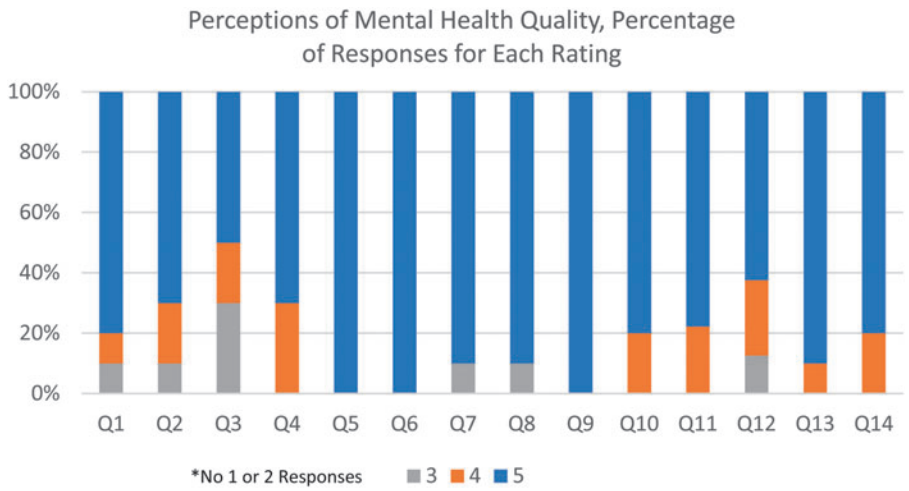

FIG. 2. Perception of MH quality, percentage of responses for each rating. Each question referenced in Table 1 is represented on the X-axis and pertains to those visits held by MH. The Likert Scale ratings of 3, 4, or 5 are identified by a unique bar color, the height of which demonstrates the percentage of responses for that rating. No ratings of 1 or 2 occurred. MH, mental health.

vague terms and resisting attempts to elicit clarifying details. By the third session, the patient was diagnosed with adjustment disorder and cognitive behavioral therapy intervention was implemented.

Over the course of four additional sessions, Jay became significantly more engaged in the therapeutic process. They responded to therapy and reduced their suicidal ideations. The patient's scores on the Columbia Screener-Lifetime reflected a reduction of suicidal ideations starting in session 3 and maintained through session 7, which was the patient's most recent session with provider. Jay's feedback survey also reflects an increase

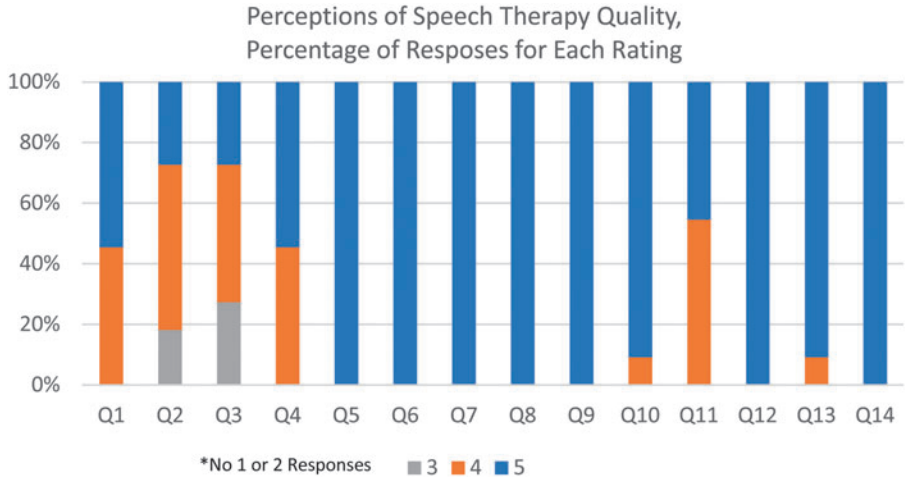

FIG. 3. Perception of ST quality, percentage of responses for each rating. Each question referenced in Table 1 is represented on the X-axis and pertains to those visits held by ST. The Likert Scale ratings of 3, 4, or 5 are identified by a unique bar color, the height of which demonstrates the percentage of responses for that rating. No ratings of 1 or 2 occurred. ST, speech therapy.

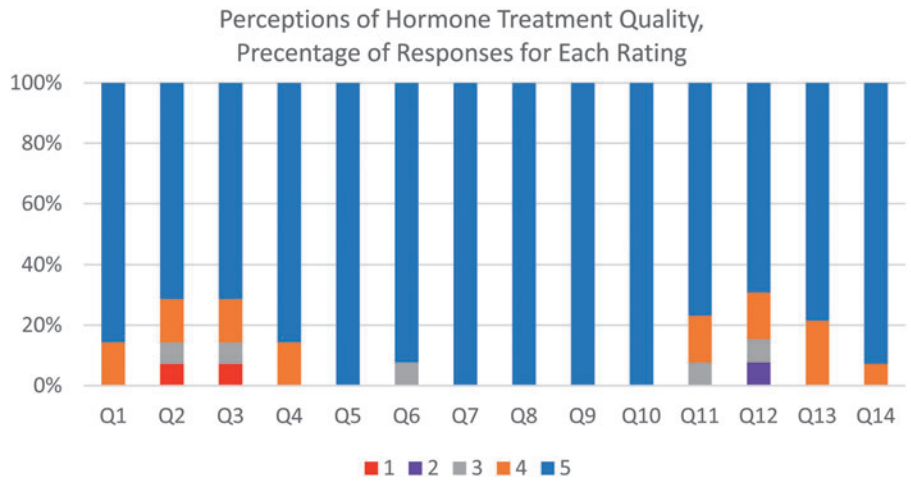

FIG. 4. Perception of hormone treatment, percentage of responses for each rating. Each question referenced in Table 1 is represented on the X-axis and pertains to those visits held by hormone treatment providers. The Likert Scale ratings of 1, 2, 3, 4, or 5 are identified by a unique bar color, the height of which demonstrates the percentage of responses for that rating.

in satisfaction with the telehealth modality. As per patient report, they feel better equipped to handle life stressors than they were before seeking telehealth MH services.

Case #2: ST. Sal is a 36-year-old trans woman who requested a referral to speech pathology for gender-affirming voice training. This was an unavailable service within her base's MTF; therefore, she was referred for VTC services. She demonstrated high levels of motivation throughout and was compliant with her home exercise programs and generalization tasks. At the time of this writing, she had been seen for seven VTC voice feminization training sessions targeting pitch, vocal loudness, resonance, intonation, and nonverbal communication. She reported being "very satisfied" with

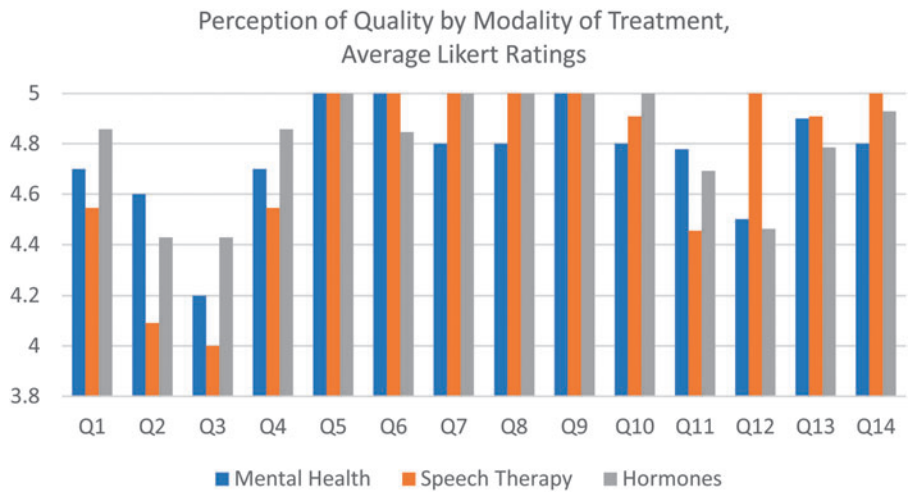

FIG. 5. Perception of quality by modality of treatment, average Likert ratings. Each question referenced in Table 1 is represented on the X-axis. MH, ST, and hormone therapy visits are identified by a unique bar color, the height of which demonstrates the average Likert rating.

provider treatment delivery and the technological aspects of the telehealth encounters. Sal "strongly agreed" she would recommend telehealth to others.

Case #3: Hormone management. Andy is a 24-year-old trans man. His MTF was located overseas where transgender resources were limited for service members, so his leadership was concerned that he could not start gender-affirming medical care. Because Andy's chosen military career field was heavily tied to this particular region of the world, there were not many options for moving, effectively jeopardizing his future in the military.

Medical leadership at his location worked in conjunction with the MMDT to develop telehealth. Initially, MMDT providers could not order laboratories or meds for the patient as each MTF laboratory and medication ordering system is limited to the providers stationed there. This was circumvented by finding a provider in the clinic who ordered needed laboratories per MMDT recommendations. Andy signed up for Express Scripts, the Tricare mail delivery pharmacy service, which allows providers from any DoD MTF to fax in prescription orders. This allowed the patient to effectively start hormone therapy until MMDT providers were granted access to Andy's local ordering system. The successful launch of VTC services for transgender patients at Andy's MTF removed the limitations previously placed on transgender USAF members to work in that part of the world.

Discussion

Our initial data show that VTC services for gender-affirming care across several disciplines is well received by USAF transgender members. Satisfaction scores overall remain high for providers' ability to meet clinical needs and interact over the VTC medium, for the scheduling and logistics of setting up a telehealth appointment, and for the connection of the VTC system itself. This was consistent across our various specialty offerings as a whole and for each individual specialty service provided.

To some extent, favorable scores are to be expected. Given the recent advent of transgender members in the service and limitations in training programs nationally,[3,4] a paucity of resources for providing transgender health care services still exists in some locations. This is especially true for sites that are located in more rural areas or overseas locations that lack an easy referral source in the civilian community. For some services, this is more evident than in others. For example, there are very few voice specialists in the field of Speech-Language Pathology, fewer that have the competencies to provide gender-affirming voice training, and fewer still that are employed within the military health system.[10] As noted previously, among potential hormone providers in the military setting there is a lack of comfort to provide care for transgender patients.[5] When it comes to specialty services like these, the military's resources, consequentially, are often proportionately small. As a result, provision of care through VTC with experienced gender-affirming providers is a choice between no health care service at all, or the use of virtual services. This may also explain the low no-show rates we saw. Not only is there more direct nursing coordination with the patient to facilitate appointment times across time zones between the MMDT provider and local MTF, but patients have little other options for care if they do not make their appointment. It is unclear what the impact may be on future use of transgender VTC services as MMDT and USAF medical leadership work to expand transgender-specific health care education.

Our cases demonstrate some of the challenges and benefits of transgender telehealth services. In addition to the increased access to care, the incorporation of services from the MMDT assures that patients are offered care that is affirming of their gender identity. In essence, interdisciplinary telehealth care allows for comprehensive end-to-end delivery of transgender-related services for military members.

Several advantages exist for launching a telehealth effort in the military setting. The use of the central USAFTPO means that system compatibility issues are kept to a minimum. The USAFTPO knows all software platforms in use across the USAF Medical Service and can leverage that information to ensure the chosen VTC platform will function optimally at each MTF. Furthermore, DoD's development of a universal protocol for telehealth privileging-by-proxy means that state-to-state care hurdles are minimized and providers can be credentialed at a patient's MTF within 2 weeks. The use of a standardized EMR across the DoD is beneficial in that documentation can be reviewed by both MMDT providers and the patient's MTF.

Challenges do remain in setting up telehealth services. Despite system compatibility and solutions for privileging, bringing care to an MTF that has not previously utilized the platform requires considerable administrative workload. MMDT staff liaise with multiple offices to verify system compatibility, push through

privileging-by-proxy requests, ensure laboratory and medication ordering access, develop templates for provider appointments, and train MTF POCs on logistical procedures for scheduling, administering screeners, and taking vitals for various appointments. At first, navigating these hurdles required considerable time and explains the 2-year gap between when the MMDT first sought to provide VTC services and the first encounter in September 2019. However, as telehealth for the MMDT becomes more commonplace, onboarding new MTFs is becoming more efficient and new sites are often able to host a new patient appointment within a few weeks. As noted earlier, due to limitations of the COVID-19 pandemic, alternative civilian VTC platforms are also available for use. In some cases, this allows for faster care; however, without the MTF support this does introduce additional tasks for the patient and provider. It remains unclear at the time of this writing whether military policy will allow continued use of home virtual health services beyond the current pandemic.

There are some limitations of our data presented. One is that while 35 surveys were collected, they represent the feedback from 20 total patients seen. As a result, some patients completed the survey twice, although at different points in their care. In addition, despite generally high scores across the survey responses, there was a noted disparity between satisfaction with MMDT provider care and scheduling logistics and nursing/tech support at the patient's MTF. Unfortunately, few comments were written to highlight the specific concerns when lower scores were given, making correction of deficits at the local clinics difficult. Furthermore, as this particular survey instrument is not universally given across all Air Force clinics providing telehealth services (the definition of which may vary from clinic to clinic, i.e., audio to audio patient care versus with a visual component), it is unknown if similar concerns exist for telehealth services provided for other patient populations. Further use of this modality for patient care and refinement of the data collection tools used may clarify these concerns.

Another possible limitation is the makeup of the patient population. As Air Force members, our patients are subject to various policy requirements that may provide additional hurdles for clinical care that may influence the decision to use telehealth as a modality or not. Furthermore, the overall age of our patients tends to be younger. Consequently, this may represent a patient population that embraces VTC as a modality for care more than other patients may; therefore, increasing our ratings. Indeed, several qualitative studies exist that highlight the affinity transgender patients in general have for technological resources.[11,12] Whether age of patients or the patient population itself had an impact may require further evaluation. Our data also only show patient satisfaction, and not any measures for efficacy of care delivered. For example, during VTC ST encounters, the "DevExtra's Voice Tools" application was downloaded by the patient. Various tools within the app were used during sessions, with the clinician providing guidelines for utilizing the application independently. Although the application was not biomedically calibrated, it provided an interim solution for test measures. In the future, these may be considered as outcome measures. More formal research comparing treatment effect in telehealth versus in-person clinic care is needed.

Conclusion

In summary, our team showed that a "proof-of-concept" quality improvement project to provide gender-affirming health care services to USAF transgender service members is a way to ensure care on a global scale. Patients showed high satisfaction scores across MH, ST, and gender-affirming hormone encounters. In our experience, this modality for health care has expanded readiness options for our USAF transgender members and may be applicable in reducing barriers to transgender medical services for any patient in distant or resource-poor settings.

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Authors' Contributions

J.M.S., J.M.L., C.J.M., and J.A.C. all contributed to the design of the project, participated in the collection of results, and contributed to the analysis and interpretation of the data. J.M.S. wrote the first draft of the article, and all authors contributed to its revision; all authors approved the submitted article.

Author Disclosure Statement

The authors have no conflicts of interest to declare. The views expressed are solely those of the authors and do not reflect the official policy or position of the U.S. Air Force, the Department of Defense, or the U.S. Government.

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Abbreviations Used

COVID-19 = coronavirus disease 2019
EMR = electronic medical record
MH = mental health
MMDT = Medical Multidisciplinary Team
MTF = military treatment facility
POC = point of contact
SLPs = speech-language pathologists
ST = speech therapy
USAF = United States Air Force
USAFTPO = USAF Telehealth Program Office
VTC = virtual telecommunication
WHASC = Wilford Hall Ambulatory Surgical Center