UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

JANE DOE 2, JANE DOE 3, JANE DOE 4, JANE DOE 5, JANE DOE 6, JANE DOE 7, JOHN DOE 1, JOHN DOE 2, REGAN V. KIBBY, and DYLAN KOHERE, Plaintiffs, v. DONALD J. TRUMP, in his official capacity as President of the United States; JAMES N. MATTIS, in his official capacity as Secretary of Defense; JOSEPH F. DUNFORD, JR., in his official capacity as Chairman of the Joint Chiefs of Staff; the UNITED STATES DEPARTMENT OF THE ARMY; MARK T. ESPER, in his official capacity as Secretary of the Army; the UNITED STATES DEPARTMENT OF THE NAVY; RICHARD V. SPENCER, in his official capacity as Secretary of the Navy; the UNITED STATES DEPARTMENT OF THE AIR FORCE; HEATHER A. WILSON, in her official capacity as Secretary of the Air Force; the UNITED STATES COAST GUARD; KIRSTJEN M. NIELSEN, in her official capacity as Secretary of Homeland Security; the DEFENSE HEALTH AGENCY; RAQUEL C. BONO, in her official capacity as Director of the Defense Health Agency; and the UNITED STATES OF AMERICA, Defendants.	Civil Action No. 17-cv-1597 (CKK)

NOTICE OF ERRATA

Plaintiffs' counsel inadvertently appended the wrong versions of Exhibits B and QQ (ECF Nos. 128-2 and 128-43) to the Declaration of Lauren Godles Milgroom in Support of the Statement of Undisputed Material Facts (ECF No. 128). Plaintiffs have submitted the correct versions of Exhibits B and QQ as attachments to this Errata.

June 22, 2018

Respectfully submitted,

/s/ Alan E. Schoenfeld

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B

Department of Defense

INSTRUCTION

NUMBER 1332.38
November 14, 1996

Incorporating Change 1, July 10, 2006
ASD(FMP)

SUBJECT: Physical Disability Evaluation

References: (a) DoD Directive 1332.18, "Separation or Retirement for Physical Disability," November 4, 1996
(b) Title 10, United States Code
(c) Sections 3502, 5532, 6303, and l8332 of title 5, United States Code
(d) Sections 206 and 502 of title 37, United States Code
(e) through (k), see enclosure 1

1. PURPOSE

This Instruction implements policy, assigns responsibilities, and prescribes procedures under References (a) and (b) for:

1.1. Retiring or separating Service members because of physical disability.

1.2. Making administrative determinations under references (c) and (d) for Service members with Service-incurred or Service aggravated conditions.

1.3. Authorizing a fitness determination for members of the Ready Reserve who are ineligible for benefits under reference (b) because the condition is unrelated to military status and duty.

2. APPLICABILITY

This Instruction applies to the Office of the Secretary of Defense (OSD), the Military Departments (including the Coast Guard when it is operating as a Military Service in the Navy), the Chairman of the Joint Chiefs of Staff, and the Combatant Commands (hereafter referred to collectively as "the DoD Components"). The term "Military Services," as used herein, refers to the Army, the Navy, the Air Force and the Marine Corps.

3. DEFINITIONS

Terms used in this Instruction are defined at enclosure 2.

4. POLICY

It is DoD policy under reference (a) that:

4.1. The DoD Disability Evaluation System (DES) shall be established to conduct physical disability evaluation in a consistent and timely manner.

4.2. Members of the Reserve components who are not on a call to active duty of more than 30 days and who are medically disqualified for impairments unrelated to the member's military status and performance of duty shall be referred into the DES solely for a fitness determination upon the request of the member or when directed by the Secretary concerned.

4.3. The applicable standards for all determinations related to physical disability evaluation shall be consistently and equitably applied, in accordance with 10 U.S.C. (reference (b)), to Active component and Ready Reserve members.

5. RESPONSIBILITIES

5.1. The Under Secretary of Defense for Personnel and Readiness shall:

5.1.1. Exercise cognizance and oversight of the DoD DES.

5.1.2. Make the final decision on requests from the Military Departments for exceptions to the standards of this Instruction.

5.2. The Assistant Secretary of Defense for Force Management Policy, under the Under Secretary of Defense for Personnel and Readiness, shall:

5.2.1. Exercise cognizance of laws, policies, and regulations that affect the DES.

5.2.2. Issue guidance, as required, to further interpret, implement, and govern the policy and procedures for the four elements of the DES.

5.2.3. Establish necessary reporting requirements to monitor and assess the performance of the DES and compliance of the Military Departments with this Instruction and DoD Directive 1332.18 (reference (a)).

5.2.4. Coordinate with the Assistant Secretary of Defense for Reserve Affairs concerning the impact of laws and DoD policy on Reserve members who have conditions that are cause for medical disqualification.

5.2.5. Coordinate with the Assistant Secretary of Defense for Health Affairs in developing procedures for medical issues pertaining to physical disability evaluation.

5.2.6. Review substantive changes proposed by the Military Departments to Departmental policies and procedures for physical disability evaluation that affect the uniformity of standards for separation or retirement for unfitness because of physical disability or separation of Ready Reserve members for medical disqualification.

5.2.7. Develop quality assurance procedures to ensure that policies are applied in a fair and consistent manner.

5.3. The Assistant Secretary of Defense for Health Affairs, under the Under Secretary of Defense for Personnel and Readiness, shall:

5.3.1. Make recommendations for a final decision by the Secretary of Defense on the unfit findings on all officers in pay grade 0-7 or higher and medical officers in any grade who are pending nondisability retirement for age or length of service at the time of their referral into the DES.

5.3.2. Review substantive changes proposed by the Military Departments in their supplemental medical standards to enclosure 4 of this Instruction concerning medical conditions that are cause for referral of a member into the DES.

5.4. The Assistant Secretary of Defense for Reserve Affairs, under the Under Secretary of Defense for Personnel and Readiness, shall coordinate as necessary to ensure that procedures for the DES apply consistently and uniformly to members of the Reserve components.

5.5. The Secretaries of the Military Departments shall:

5.5.1. Ensure that members with conditions that may be cause for referral into the DES are counseled at appropriate stages on the DES process and the member's rights, entitlements, and benefits.

5.5.2. Establish a quality assurance process to ensure that policies and procedures established by DoD Directive 1332.18 (reference (a)) and this Instruction are interpreted uniformly.

5.5.3. Make determinations on unfitness because of medical disqualification or physical disability; entitlement to assignment of percentage of disability at the time of retirement or separation because of physical disability; and, except as limited by 10 U.S.C. 1216(d) (reference (b)), entitlement to and payment of disability retired and severance pay.

5.5.4. Ensure that the record of proceedings for physical disability cases supports the findings and recommendations made.

5.5.5. Ensure the Temporary Disability Retired List (TDRL) is managed to meet the requirements of 10 U.S.C. 1210 (reference (b)) for timely periodic physical examinations, suspension of retired pay, and removal from the TDRL.

5.5.6. Designate a Military Department representative to serve as the Department representative for the Disability Evaluation System.

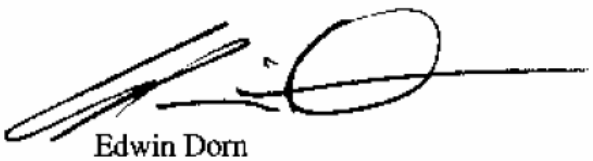
5.5.7. Ensure all matters raising issues of fraud on the DES by members are investigated and resolved as appropriate.

6. PROCEDURES

See enclosure 3.

7. EFFECTIVE DATE

This Instruction is effective for all MEBs 120 days after the date of this Instruction.



Edwin Dorn
Under Secretary of Defense for
Personnel and Readiness

Enclosures - 5

1. References
2. Definitions
3. Procedures
4. Guidelines Regarding Medical Conditions and Physical Defects That Are Cause for Referral into the Disability Evaluation System
5. Conditions *and Circumstances* Not Constituting a Physical Disability

E5. ENCLOSURE 5

CONDITIONS AND CIRCUMSTANCES NOT CONSTITUTING A PHYSICAL DISABILITY

E5.1.1. PURPOSE. To detail conditions which do not constitute a physical disability.

E5.1.2. GENERAL CONSIDERATIONS

E5.1.2.1. Certain conditions*, circumstances* and defects of a developmental nature designated by the Secretary of Defense do not constitute a physical disability and are not ratable in the absence of an underlying ratable causative disorder. If there is a causative disorder it will be rated in accordance with other provisions of this Instruction.

E5.1.2.2. These conditions*, circumstances and defects* include but are not limited to those listed in paragraph E5.1.3., below.

E5.1.2.3. Such conditions*, circumstances and defects* should be referred for appropriate administrative action under other laws and regulations.

E5.1.3. *SPECIFIC CONDITIONS AND OTHER CIRCUMSTANCES*

E5.1.3.1. Enuresis

E5.1.3.2. Sleepwalking and/or Somnambulism

E5.1.*3*.3. Dyslexia and Other Learning Disorders

E5.1.*3*.4. Attention Deficit Hyperactivity Disorder

E5.1.*3*.5. Stammering or Stuttering

E5.1.*3*.6. Incapacitating fear of flying confirmed by a psychiatric evaluation.

E5.1.*3*.7. Airsickness, Motion, and/or Travel Sickness.

E5.1.*3*.8. Phobic fear of Air, Sea and Submarine Modes of Transportation

E5.1.*3*.9. Certain Mental Disorders including:

E5.1.*3*.9.1. Uncomplicated Alcoholism or other Substance Use Disorder

E5.1.*3*.9.2. Personality Disorders

E5.1.*3*.9.3. Mental Retardation

E5.1.*3*.9.4. Adjustment Disorders

E5.1.*3*.9.5. Impulse Control Disorders

E5.1.*3*.9.6. Sexual Gender and Identity Disorders, including Sexual Dysfunctions and Paraphilias

E5.1.*3*.9.7. Factitious Disorder

E5.1.*3*.10. Obesity.

E5.1.*3*.11. Overheight.

E5.1.*3*.12. Psuedofolliculitis barbae of the face and/or neck.

E5.1.*3*.13. Medical Contraindication to the Administration of Required Immunizations.

E5.1.*3*.14. Significant allergic reaction to stinging insect venom.

E5.1.*3*.15. Unsanitary habits including repeated venereal disease infections.

E5.1.*3*.16. Certain Anemias (in the absence of unfitting sequelae) including G6PD Deficiency, other inherited Anemia Trait, and Von Willebrand's Disease.

E5.1.*3*.17. Allergy to Uniformed Clothing.

E5.1.3.18. Homosexuality.

QQ

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

DOE, et al., *Plaintiffs*,	)	
v.	)	Civil Action No. 17-cv-1597 (CKK)
DONALD TRUMP, et al., *Defendants*.	)	

DECLARATION OF GEORGE RICHARD BROWN, MD, DFAPA IN SUPPORT OF OPPOSTION TO DEFENDANTS' MOTION TO DISMISS AND MOTION TO DISSOLVE THE PRELIMINARY INJUNCTION

1. I, George R. Brown, have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation.

2. My professional background and qualifications are set forth in my previous declaration in this case dated August 30, 2017. *See* Dkt. Nos. 13-11 & 13-12. A copy of that declaration is attached as Exhibit A.

3. The purpose of this supplemental declaration is to offer my expert opinion on the "Department of Defense Report and Recommendations of Military Service By Transgender Persons," which I refer to in this declaration as the "Implementation Report."

4. I have knowledge of the matters stated in this declaration and have collected and cite to relevant literature concerning the issues that arise in this litigation.

5. As noted in my previous declaration, I am being compensated at an hourly rate for actual time devoted, at the rate of $400 per hour for work that does not involve depositions or court testimony (e.g., review of materials, emails, preparing reports); $500 per hour for

depositions (there is a half-day fee for depositions); $600 per hour for in-court testimony; and $4000 per full day spent out of the office for depositions and $4800 per full day out of the office for trial testimony. Travel days necessary for work are billed at half the "work day" rate plus expenses. My compensation does not depend on the outcome of this litigation, the opinions I express, or the testimony I provide.

THE IMPLEMENTATION REPORT REJECTS THE OVERWHELMING MEDICAL CONSENSUS REGARDING TRANSGENDER IDENTITY AND TREATMENT FOR GENDER DYSPHORIA

6. Although the Implementation Report refers to a study conducted by a "Panel of Experts," the referenced panel does not appear to have included any experts in treating gender dysphoria or any medical experts at all. The Implementation Report indicates that the panel consulted with such experts, but the Implementation Report appears to have consistently disregarded what those experts say. *See* Implementation Report at 17.

7. As a result, the Implementation Report relies on notions of gender dysphoria and transgender identity that have no basis in fact, science, or medicine and that have been rejected by the mainstream medical community.

8. In my previous declaration, I explained that arguments that the mental health of transgender persons could justify prohibiting such individuals from serving in the military are wholly unfounded and unsupported in medical science. *See* Exhibit A, August 30, 2017 Brown Decl. ¶37. Being transgender—and living in accordance with one's gender identity—is not a mental defect or disorder. To the extent the misalignment between gender identity and assigned birth sex creates clinically significant distress (gender dysphoria), that distress is curable through appropriate medical care that allows the individual to live consistently with their gender identity.

As a class, transgender individuals have suffered, and continue to suffer, severe persecution and discrimination. Being transgender does not limit one's ability to contribute to society.

9. Only a subset of transgender people have gender dysphoria. If a transgender person is able to live in accordance with their gender identity from an early age, they may never develop gender dysphoria as an adult. If a transgender person develops gender dysphoria, they can receive appropriate transition-related care that resolves the clinically significant distress. For transgender people who have resolved symptoms of gender dysphoria, the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (2013) ("DSM-5") provides a separate "post-transition" diagnostic subtype to reflect that the gender dysphoria is in remission and that the person may only need a maintenance dose of cross-sex hormones.

10. The Implementation Report turns this understanding on its head by requiring transgender people to live in accordance with the sex assigned to them at birth. The Implementation Report conceives of a transgender person without gender dysphoria as someone who comfortably lives and functions according to the sex assigned to them at birth without suffering any distress from the incongruence with their gender identity. That hypothetical person is likely not someone who is transgender.

11. The Implementation Report directly contradicts the medical consensus about the nature of gender dysphoria by treating every transgender person who lives according to the person's gender as having a disabling mental health condition even when the person no longer experiences gender dysphoria. The medical community has definitively rejected that view. In response to the Implementation Report, the American Psychological Association stated that it "is alarmed by the administration's misuse of psychological science to stigmatize transgender Americans and justify limiting their ability to serve in uniform and access medically necessary

health care." *See* Exhibit C, APA Statement Regarding Transgender Individuals Serving in Military. The American Medical Association released a similar statement reaffirming that "there is no medically valid reason—including a diagnosis of gender dysphoria—to exclude transgender individuals from military service" and expressing concern that the Implementation Report "mischaracterized and rejected the wide body of peer-reviewed research on the effectiveness of transgender medical care." *See* Exhibit D, AMA Letter to Secretary James Mattis. The American Psychiatric Association also released a statement denouncing the Implementation Report and reiterating that "[t]ransgender people do not have a mental disorder; thus, they suffer no impairment whatsoever in their judgment or ability to work." *See* Exhibit E, APA Statement.

12. Decades of research have demonstrated that attempting to treat gender dysphoria by forcing transgender people to live in accordance with their sex assigned at birth—to "convert" them out of being transgender—is ineffective, unethical, and dangerous. The mainstream medical community overwhelmingly condemns this "conversion therapy."

13. The Implementation Report appears to dispute the consensus of the mainstream medical community that gender dysphoria is amenable to treatment through social and medical transition. The American Medical Association, the Endocrine Society, the American Psychiatric Association, and the American Psychological Association all agree that medical treatment for gender dysphoria is medically necessary and effective. *See* American Medical Association, Resolution 122 (A-08) (2008); American Psychiatric Association, Position Statement on Discrimination Against Transgender & Gender Variant Individuals (2012); Endocrine Treatment of Transsexual Persons: An Endocrine Society Clinical Practice Guideline (2017); American

Psychological Association Policy Statement on Transgender, Gender Identity and Gender Expression Nondiscrimination (2009). *See* Exhibit A, August 30, 2017 Brown Decl. ¶¶ 21-25.

14. Sixty years of clinical experience and data have demonstrated the efficacy of treatment for the distress resulting from gender dysphoria (*see*, for example, the recently published multi-country, long-term follow up study: Tim C. van de Grift et al., Effects of Medical Interventions on Gender Dysphoria and Body Image: A Follow-Up Study, 79 Psychosomatic Med. 815 (Sept. 2017)). The Implementation Report asserts that this evidence is unreliable because there are no "double-blind" scientific studies regarding the efficacy of surgical care for gender dysphoria. But medical standards of care are not determined solely by double-blind studies, especially in the context of surgery. Double-blind studies with "sham" surgeries are often impossible or unethical to conduct.

14. If the military limited all medical care to surgical procedures supported by prospective, controlled, double-blind studies, then only a very few medical conditions would ever be treated. For example, one of the most common surgical procedures performed in the United States is a tonsillectomy, with over 530,000 cases completed a year, using multiple, competing surgical techniques. However, a review of the evidence base for this very common procedure, including when to apply it and the best surgical techniques to utilize, is not supported by "double blind" controlled studies in spite of the common use of this treatment over centuries. *See* Reginald F. Baugh et al., *Clinical Practice Guideline: Tonsillectomy in Children*, 144 Otolaryngology–Head and Neck Surgery S1 (2011)). Baugh and coauthors noted: "While there is a body of literature from which the guidelines were drawn, significant gaps remain in knowledge about preoperative, intraoperative, and postoperative care in children who undergo tonsillectomy." Id. at S22.

15. Similarly, acute appendicitis is one of the most common causes of acute abdominal pain in the United States. However, it remains unclear whether the common approach of appendectomy is superior to nonsurgical treatment with antibiotics in many patients. A recent Cochrane review was inconclusive: "We could not conclude whether antibiotic treatment is or is not inferior to appendectomy. Because of the low to moderate quality of the trials, appendectomy remains the standard treatment for acute appendicitis." *See* Ingrid M. H.A. Wilms et al., *Appendectomy Versus Antibiotic Treatment for Acute Appendicitis*, Cochrane Database of Systematic Rev. (2011). In other words, the prevailing standard of care, in spite of the "low quality" of evidence in support of surgery over a nonsurgical alternative, remains the accepted standard.

16. By insisting that treatment for gender dysphoria—unlike treatment for virtually every other medical condition—be supported by "double blind" studies, the Implementation Report holds the robust medical consensus surrounding treatment for gender dysphoria to an impossible standard—and a standard that few if any medical conditions are required to meet.

17. The Implementation Report also mischaracterizes a recent decision by the U.S. Department of Health & Human Services Center for Medicare and Medicaid Services ("CMS"). *See* Implementation Report at 24–26. In 2014, an impartial adjudicative board in the Department of Health & Human Services concluded, based on decades of studies, that surgical care to treat gender dysphoria is safe, effective, and not experimental. *See* Exhibit F, NCD 140.3, Transsexual Surgery. The decision specifically noted that, regardless of whether the studies were randomized double-blind trials, there was sufficient evidence to prove "a consensus among researchers and mainstream medical organizations that transsexual surgery is an effective, safe and medically necessary treatment for [gender dysphoria]." *Id.* at 20. Ever since the

adjudicative board's decision, Medicare has provided coverage for transition-related surgery based on patients' individual needs.

18. In the document referenced by the Implementation Report, CMS decided to continue covering surgery based on patients' individual needs and refrain from issuing national standards regarding how to determine medical necessity in individualized cases. *See* CMS Report. The Implementation Report incorrectly states that CMS "found insufficient scientific evidence to conclude that such surgeries improve health outcomes for persons with gender dysphoria." Implementation Report at 24 n.82. In fact, the decision specifically clarified that "GRS [gender reassignment surgery] may be a reasonable and necessary service for certain beneficiaries with gender dysphoria," but "[t]he current scientific information is not complete for CMS to make a [national coverage determination] that identifies the precise patient population for whom the service would be reasonable and necessary." CMS Report at 54 (emphasis added). In particular, CMS expressed concern that the Medicare population includes "older adults [who] may respond to health care treatments differently than younger adults." Id. at 57. These differences can be due to, for example, multiple health conditions or co-morbidities, longer duration needed for healing, metabolic variances, and impact of reduced mobility." Id. The CMS memorandum concluded that the appropriateness of surgical care for this population should be determined on an individualized basis. Indeed, most medical and surgical care provided to patients should be individualized, taking into account each patient's unique clinical circumstances.

INDIVIDUALS WHO HAVE UNDERGONE GENDER TRANSITION ARE MEDICALLY FIT TO ENLIST

19. To justify prohibiting transgender people from serving even if they have resolved the distress associated with gender dysphoria, the Implementation Report attempts to use a

transgender person's history of gender dysphoria as a proxy for other mental health conditions such as anxiety, depression, and suicidal behavior.

20. Statistically, transgender people as a group are at greater risk of experiencing those conditions as a result of the stressors inherent in being prevented from transitioning or obtaining medical care throughout all, or much, of their lives. Some studies have documented that these health disparities can persist even after transition-related treatment because of the continuing effects of discrimination and the reality that gender dysphoria-specific treatments are not panaceas for all problems that a person may experience in their life (nor were these treatments designed to be). *See*, e.g., Implementation Report at 25 (citing Cecilia Dhejne et al., Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden, 6 PloS One, 6 (2011)). Transgender people as a group represent a very small subset of society and lack the sort of political power other groups might harness to protect themselves from discrimination.

21. But there is no evidence to support the notion that every individual transgender person is at risk of developing one of these conditions, particularly for those who have been treated early in their lives, as opposed to those who never received treatment or who may have come to treatment much later in life, such as the transgender veterans studied by my research group and cited in the Implementation Report at 21 n.60 (citing George R. Brown & Kenneth T. Jones, Mental Health and Medical Health Disparities in 5135 Transgender Veterans Receiving Healthcare in the Veterans Health Administration: A Case-Control Study, 3 LGBT Health 128 (2016)).

21. Under the Open Service policy, all prospective military service members must undergo a rigorous examination to identify any pre-existing mental health diagnoses that would

preclude enlistment. There is no reason to use a person's transgender status as a proxy for depression, anxiety, or suicidal ideation because the military directly screens for those conditions. Anyone with a history of suicidal behavior—whether transgender or not—is categorically barred from enlisting. *See* DODI 6130.03, Enclosure 4 § 29(n). Anyone with a history of anxiety or depression—whether transgender or not—is barred from enlisting unless, inter alia, they have been stable and without medical treatment for 24 consecutive months or 36 consecutive months respectively. *See id*. §§ 29(f), (p). As a result, any transgender individual who actually has one of those conditions is already screened out without a need for a categorical ban.

22. There is no medical basis for using a transgender person's history of gender dysphoria as a proxy for other medical conditions that the person does not actually have. This approach is akin to assuming non-transgender female applicants are, or should be considered, clinically depressed, as it is well known that depressive disorders are about twice as common in non-transgender females than in non-transgender males. *See* Paul R. Albert, Why Is Depression More Prevalent in Women? 40 J. of Psychiatry & Neuroscience 219-21 (2015). Women are twice as likely as men to have anxiety disorders, but the military does not bar women from military service. Depression, anxiety, and suicide are more common among white people than black people, but the military does not bar white people from military service. One study of California school children shows that children of service members are more than 50 percent more likely to have attempted suicide than the general population. *See* Exhibit B, Vice Admiral Donald C. Arthur, USN (Ret.), Former Surgeon General of the U.S. Navy, et al., *DoD's Rationale for Reinstating the Transgender Ban is Contradicted by Evidence*, Palm Center (April 2018). Yet the military does not bar individuals in this highrisk group from entry. If a

transgender individual who seeks to enlist in the military has already transitioned, no longer experiences gender dysphoria, and has been screened for other mental health conditions (including depression, anxiety, and suicidal ideation) there is no reason to conclude that individual is at elevated risk of developing one of these comorbidities in the future.

23. The Implementation Report distorts my own work by citing a recent study in which I documented that some transgender veterans who have received treatment after years of living in the shadows continue to have health disparities even after their gender dysphoria is resolved through treatment. *See* Implementation Report at 21 n.60. The veterans in my study were untreated veterans for a long period of time and survived—but did not thrive—while living an inauthentic life in the shadows on active duty. Many of the transgender veterans included in this large study had never received treatment for gender dysphoria. Clearly, the population group of transgender individuals in that study is not comparable to the population group of people who have already received medical care, resolved their gender dysphoria, and are coming to the military openly stating they are transgender.

24. The Implementation Report also states that data regarding existing service members has called into question assumptions about the mental health of transgender service members. *See* Implementation Report 21. I have reviewed USDOE 2633-2664, which appears to be a slide-show presentation of the data on which the Implementation Report relies. *See* Exhibit H, USDOE 2633-2664 (produced by Defendants as USDOE 2633-2664 (AF_00007405-7436) and filed as Docket No. 139-27 in the related matter of Stone, et al. v. Trump, et al, No. 17-CV-02459-MJG (D. Md.)). It should be noted that my career as an academic research psychiatrist, including conducting extensive research within the Department of Defense and the

Department of Veterans Affairs for many years, enables me to critically assess research design, methodology, and outcomes.

25. As an initial matter, none of the data relates to service members who have completed transition and are enlisting for the first time—the group of people who meet the Open Service standards and began the process of enlisting on or after January 1, 2018. The data are exclusively from service members who were diagnosed with gender dysphoria while already serving, in some cases well before any guidance was provided by DOD for treatment. Again, this means that the data reflects a group of people who were serving in the shadows for years before they were allowed to serve openly.

26. Even with respect to these service members, the data is fundamentally flawed and presented in a grossly misleading manner. The study period for the data was for the 22-month period from October 1, 2015 to July 26, 2017. But Secretary Carter's Open Service Directive was not issued until June 30, 2016, and the military did not issue force-wide treatment protocols for gender dysphoria until October 1, 2016. As a result, for 12 out of the 22 months in the study, the service members were, with few exceptions, not serving openly and not receiving DOD-sanctioned treatments for gender dysphoria.

27. If the purpose of the study is to draw conclusions about the health of transgender service members under the Open Service policy, it is fundamentally illegitimate to include data from before that policy went into effect and before those service members were allowed to receive health care under DOD guidelines to treat their gender dysphoria.

28. For example, the Implementation Report cites data from the study for the proposition that transgender service members had an average of 28.1 mental health encounters over a 22-month period. *See* Implementation Report at 24; Exhibit H, USDOE 2633-2664 at 8.

But it is impossible to determine whether these mental health encounters occurred before or after the Open Service policy went into effect. If the utilization rate dropped once service members started receiving care for gender dysphoria, then the data would actually support the efficacy of the Open Service policy.

29. The Implementation Report also ignores the critical fact that service members were required to meet with mental health providers numerous times to document their gender dysphoria as a precondition for receiving health care for gender dysphoria, and for continued access to cross-sex hormones. It is unknown how many of these visits were mandated/required, as opposed to visits voluntarily requested by service members for mental health care. As a result, without more specific data, there is no reason to conclude that mental health visits by transgender service members who are initiating transition-related care are a sign of co-morbid mental health conditions. The report is quite misleading is this regard, as it implies that all mental health visits by transgender service members were initiated for the treatment of mental illnesses, when this is far from the truth.

30. Similarly, the Implementation Report cites data from the study for the proposition that service members with gender dysphoria are "eight times more likely to attempt suicide than Service members as a whole." Implementation Report at 12. In fact, the underlying data refer to "suicidal ideation," not actual suicide attempts. Exhibit H, USDOE 2633-2664 at 9. Moreover, with respect to suicidal ideation, the data does not reveal whether the suicidal ideation was reported before or after the service member was allowed to serve openly and receive treatment. Given the fundamental flaws with the study methodology and the low number of observed events, the data presented on this, and other, mental health questions are not interpretable in any meaningful way.

31. In short, transgender individuals should be screened and evaluated for mental health conditions the same way every other person is screened and evaluated. There is no medical basis to using a transgender individual's history of gender dysphoria as a proxy for other mental health conditions that they do not have.

TRANSGENDER SERVICE MEMBERS WHO HAVE TRANSITIONED ARE PHYSICALLY FIT TO ENLIST AND DEPLOY

32. The argument that cross-sex hormone treatment should be a bar to service for transgender individuals is not supported by medical science or current military medical protocols. Experts in the endocrine treatment of transgender people have previously advised military medical providers that cross-sex hormone treatments can be accomplished without difficulty, both before accession and after service has begun. *See* WPATH Timeline Guide for United States Armed Service Members Going Through Transgender Hormonal or Surgical Transition (Jan. 2017), https://www.wpath.org/newsroom/policies (attached as Exhibit I).

33. The military allows people with a history of other medical conditions to enlist even when the condition is currently being managed by medication. Individuals with abnormal menstruation, dysmenorrhea, and endometriosis may enlist if their conditions are adequately managed through hormone medication. *See* DODI 6130.03, Enclosure 4 §§ 14(a), (d), (e). Individuals with Gastro-Esophageal Reflux Disease or high cholesterol may enlist if they are taking medication with no relevant side effects. *Id*. §§ 13(a), 25(i).

34. The Implementation Report asserts that transgender service members receiving cross-sex hormone therapy would risk having their treatment disrupted if they are deployed. But the same concerns about interruptions apply to every service member who is deployed while taking medication. These concerns have not been a barrier to deployment for service members

who require hormones for other medical conditions or who require medications for other mental health conditions that allow for deployment.

35. Military policy also allows service members to take a range of medications, including hormones, while deployed in combat settings. Access to medication is predictable, as "[t]he Military Health Service maintains a sophisticated and effective system for distributing prescription medications to deployed service members worldwide." *See* M. Joycelyn Elders et al., Medical Aspects of Transgender Military Service, 41 Armed Forces & Soc'y 199, 207 (Aug. 2014) (the "Elders Commission Report").

36. Hormone therapy is neither too risky nor too complicated for military medical personnel to administer and monitor. The risks associated with use of cross-sex hormone therapy to treat gender dysphoria are low and not any higher than for the hormones that many non-transgender active duty military personnel currently take. The medications do not have to be refrigerated, and alternatives to injectables are readily available, further simplifying treatment plans. Clinical monitoring for risks and effects is not complicated and, with training and/or access to consultations, can be performed by a variety of medical personnel in the DOD, just as is the case in the VHA. This is the military services' current practice in support of the limited medical needs of their transgender troops in CONUS (Continental United States) and in deployment stations worldwide. Guidance on this issue was provided in January 2017 to military medical providers who care for transgender service members and shows that stable, transitioned troops require only yearly laboratory monitoring for cross-sex hormone treatment (which is consistent with the yearly, routine laboratory health screenings that all active duty troops receive). *See* Exhibit I, WPATH Timeline Guide.

37. Transgender service members—including service members who receive hormone medication—are just as capable of deploying as service members who are not transgender. DOD rules expressly permit deployment, without need for a waiver, for a number of medical conditions that present a much more significant degree of risk in a harsh environment than simply being transgender. For example, hypertension is not disqualifying if controlled by medication, despite the inherent risks in becoming dehydrated in desert deployment situations. Heart attacks experienced while on active duty or treatment with coronary artery bypass grafts are also not disqualifying, if they occur more than a year preceding deployment. These are very serious, life-threatening medical conditions with a high rate of recurrence, yet these service members with cardiac disease are nonetheless allowed to stay on active duty and deploy under prescribed conditions.

38. Under the Department of Defense's generally applicable policies, service members may deploy with certain psychiatric conditions, if they demonstrate stability under treatment for at least three months. *See* DODI 6490.07, Enclosure 3 § h(2); Dep't of Defense, Clinical Practice Guidance for Deployment-Limiting Mental Disorders and Psychotropic Medications (2013). Army regulations specifically provide that "[a] psychiatric condition controlled by medication should not automatically lead to non-deployment." *See* AR 40-501 § 5-14(8)(a).

39. Instead of discussing these medical conditions, the Implementation Report compares cross-sex hormone therapy for gender dysphoria with other medical conditions that are plainly not comparable. For example, the Implementation Report states that "[a]ny DSM-5 psychiatric disorder with residual symptoms or medication side effects, which impair social or occupational performance, require a waiver for the Service member to deploy." Implementation

Report at 34. As I previously explained, gender dysphoria is a treatable and curable condition. With medically appropriate care, it is possible for transgender service members to resolve the clinically significant gender dysphoria without any residual symptoms or impairment. Comparisons made to schizophrenia and bipolar disorder in the Implementation Report are inappropriate, as these two conditions constitute serious mental illnesses for which treatments are often ineffective and for which the notion of "cure" is nonsensical.

40. In any case, the military recently adopted universal deployment standards that already mandate the discharge of service members who are nondeployable "for more than 12 consecutive months, for any reason." Exhibit G, Memorandum for Secretaries of Military Departments, "DoD Retention Policy for Non-Deployable Service Members," February 14, 2018.

SERVICE MEMBERS WHO TRANSITION WHILE IN SERVICE CAN MEET THE SAME RETENTION STANDARDS THAT APPLY TO NON-TRANSGENDER SERVICE MEMBERS

41. Service members who are diagnosed with gender dysphoria after already enlisting can transition while in service and still meet the same retention standards that apply to non-transgender service members. The military has generally applicable standards for determining whether a service member may continue to serve despite periods of limited non-deployability. If a transgender service member's limited period of non-deployability complies with those generally applicable standards, there is no reason why the service member should be automatically discharged simply because they were receiving surgery for gender dysphoria as opposed to a different medical condition. A determination of non-deployability must be based on the status of the individual and not on arbitrary, non-evidence based determinations. There is some evidence that the latter is occurring, based on the widely disparate between-service data

reported on days of limited duty for service members receiving treatment for gender dysphoria as reported by the various services. *See* Exhibit H, USDOE 2633-2664 at 17. This DOD data strongly suggests that non-medical factors are playing an outsized role in determination of days spent in other than full-duty capacities for transgender service members on service-level treatment plans.

42. Although the Implementation Report states that one commander predicted that transgender service members beginning a course of hormone therapy will be non-deployable for as long as two-and-a-half years, the Implementation Report does not cite any data to support that assertion. Implementation Report at 33–34. To the contrary, the presentation of the data states that service members initiating hormone therapy were non-deployable for 3–6 months in the Navy and for an average of 5–6 months in the Army and Air Force. Exhibit H, USDOE 2633-2664 at 17. There is no medical basis for the Implementation Reports suggestion that cross-sex hormone therapy could render a transgender service member non-deployable for a full twelve months. Implementation Report at 23. In fact, expert guidance on this very issue was provided to military medical providers by WPATH in January 2017, as previously noted.

43. There is also no basis to presume that surgical care for gender dysphoria will render transgender service members non-deployable for extended periods of time. The recovery time for non-genital surgeries, which are the most common procedures performed, is only 2–8 weeks. Exhibit H, USDOE 2633-2664 at 19.

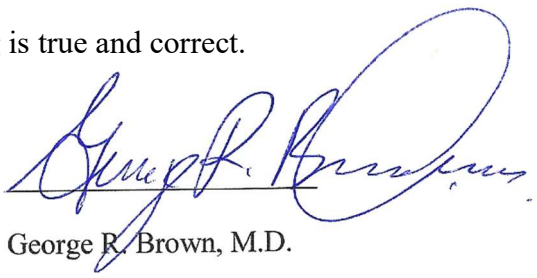
44. Moreover, transgender service members can schedule medical procedures to ensure that they do not interfere with deployment. This approach is routinely done for other medically necessary procedures, such as orthopedic surgeries that allow for flexibility in the timing of the surgery. As the Implementation Report acknowledges, "[t]his conclusion was

echoed by some experts in endocrinology who found no harm in stopping or adjusting hormone therapy treatment to accommodate deployment during the first year of hormone use." Implementation Report at 34.

45. To be sure, there may be some transgender service members whose individualized medical needs make it impossible to transition while satisfying the military's generally applicable standards for deployment and retention. But those determinations can and should be made on a case-by-case basis depending on the individual's fitness to serve, as is done with other treatable conditions. There is no medical basis to conclude that all, or even most, service members undergoing treatment for gender dysphoria are categorically unfit to serve.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 11th day of May, 2018



George R. Brown, M.D.

EXHIBIT A

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

DOE, et al.,	)	
	)	
Plaintiffs,	)	
	)	
v.	)	Civil Action No. 17-cv-1597 (CKK)
	)	
DONALD TRUMP, et al.,	)	
	)	
Defendants.	)	

DECLARATION OF GEORGE RICHARD BROWN, MD, DFAPA IN SUPPORT OF PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

I, George R. Brown, declare as follows:

1. I make this declaration based on my own personal knowledge.

PROFESSIONAL BACKGROUND

2. I am a Professor of Psychiatry and the Associate Chairman for Veterans Affairs in the Department of Psychiatry at the East Tennessee State University, Quillen College of Medicine. My responsibilities include advising the Chairman, contributing to administrative, teaching, and research missions of the Department of Psychiatry, consulting on clinical cases at the University and at Mountain Home Veterans Health Administration ("VHA") Medical Center, where I also hold an appointment, and acting as a liaison between the VHA Medical Center and the East Tennessee State University Department of Psychiatry. The majority of my work involves research, teaching, and consulting about transgender health in military and civilian populations.

3. I also hold a teaching appointment related to my expertise with transgender healthcare and research at the University of North Texas Health Services Center ("UNTHSC"). My

responsibilities include teaching and consultation with UNTHSC and the Federal Bureau of Prisons staff regarding transgender health issues.

4. I graduated from the University of Rochester in Rochester, New York in 1979 Summa Cum Laude with a double major in biology and geology. I earned my Doctor of Medicine degree with Honors from the University of Rochester School of Medicine in 1983. From 1983-1984, I served as an intern at the United States Air Force Medical Center at Wright-Patterson Air Force Base in Ohio. From 1984-1987, I worked in and completed the United States Air Force Integrated Residency Program in Psychiatry at Wright State University and Wright-Patterson Air Force Base in Dayton, Ohio. A true and correct copy of my Curriculum Vitae is attached hereto as Exhibit A.

5. I began seeing patients in 1983, and I have been a practicing psychiatrist since 1987 when I completed my residency. Over the last 33 years, I have evaluated, treated, and/or conducted research with between 600 and 1000 individuals with gender disorders in person, and over 5100 patients with Gender Dysphoria during the course of research-related chart reviews. The vast majority of those patients have been active duty military personnel or veterans.

6. For three decades, my research and clinical practice has included extensive study of transgender health and care of transgender individuals, including three of the largest studies focused on the health-care needs of transgender service members and veterans. Throughout that time, I have done research with, taught on, and published peer-reviewed professional publications specifically addressing the needs of transgender military service members. *See* Brown Ex. A (CV).

7. I have authored or coauthored 38 papers in peer-reviewed journals and 19 book chapters on topics related to Gender Dysphoria and transgender healthcare, including the chapter

on Gender Dysphoria in Treatments of Psychiatric Disorders (3d ed. 2001), a definitive medical text published by the American Psychiatric Association.

8. In 2014, I coauthored a study along with former Surgeon General Joycelyn Elders and other military health experts, including a retired General and a retired Admiral, entitled "Medical Aspects of Transgender Military Service." Elders J, Brown GR, Coleman E, Kolditz TA, *Medical Aspects of Transgender Military Service*. Armed Forces and Society, 41(2): 199-220, 2015; published online ahead of print, DOI: 10.1177/0095327X14545625 (Aug. 2014) ("2014 Report"). The study was published in the military peer-reviewed journal, Armed Forces and Society. A true and correct copy of that report is attached hereto as Exhibit B.

9. I have served for more than fifteen years on the Board of Directors of the World Professional Association for Transgender Health ("WPATH"), the leading international organization focused on transgender health care. WPATH has over 2,000 members throughout the world and is comprised of physicians, psychiatrists, psychologists, social workers, surgeons, and other health professionals who specialize in the diagnosis and treatment of Gender Dysphoria.

10. I was a member of the WPATH committee that authored Version 7 of the Standards of Care, published in 2011, which is the current version, and I am on the committee to revise the Standards of Care (Version 8).

11. I have been an active member of WPATH since 1987 without interruption and I have presented original research work on topics relating to Gender Dysphoria and the clinical treatment of transgender people nationally and internationally frequently over the past 3 decades. I have testified or otherwise served as an expert on transgender health issues in cases heard by numerous federal district courts and a federal tax court. I have provided and continue to provide

trainings on transgender health issues for the VHA as well as throughout the Department of Defense.

12. After the Department of Defense announced the change in policy towards transgender servicemembers in 2016, I conducted the first two large military trainings on the provision of health care to transgender service members. The first was for the Marine Corp in the spring of 2016. The second was for a tri-service meeting of several hundred active duty military clinicians and commanders in the fall of 2016. Since the issuance of Department of Defense Instruction 1300.28 in October 2016, which, among other things, implemented the policies and procedures in Directive-type Memorandum 16-005 and established a construct by which transgender service members may transition gender while serving, I have also conducted trainings for a national group of military examiners (MEPSCOM) and for Army clinicians at Fort Knox, Kentucky. I have been centrally involved in the development, writing, and review of all national directives in the VHA relating to the provision of transgender health care for veterans. Finally, I coauthored the national formulary that lists the medications provided by the VHA for the treatment of Gender Dysphoria in veterans.

GENDER DYSPHORIA

13. The term "transgender" is a term used to describe someone who experiences any significant degree of misalignment between their gender identity and their assigned sex at birth.

14. Gender identity describes a person's internalized, felt sense of who they are as male or female. For most people, their gender identity is consistent with their assigned birth sex. Most individuals assigned female at birth, grow up, develop, and manifest a gender identity typically associated with girls and women. Most individuals assigned male at birth, grow up, develop, and manifest a gender identity typically associated with boys and men. For transgender

people, that is not the case. Transgender women are individuals assigned male at birth who have a persistent gender identification associated with female identity. Transgender men are individuals assigned female at birth who have a persistent gender identification associated with male identity.

15. Experts agree that gender identity has a major biological component. Experts also agree that gender identity is set early in life, is deep-seated, and impervious to external influences. Gender identity is often referred to as a person's brain sex. This is, in part, because studies focused on determining the origins of a person's gender identity have shown that the human brain is significantly influenced by exposure to hormone levels before birth. Brain studies that correlate brain patterns of transgender individuals with non-transgender individuals who have the same gender identity further contribute to a body of research that supports a biological basis for gender identity and transgender identities.

16. The Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association ("DSM-5") (2013) is the current, generally recognized authoritative handbook on the diagnosis of mental disorders relied upon by mental health professionals in the United States, Canada, and other countries. The content of the DSM-5 reflects a science-based, peer-reviewed process by experts in the field.

17. According to the DSM-5, transgender identity is not a mental disorder. Gender dysphoria is a diagnostic term that refers to clinically significant distress associated with an incongruence or mismatch between a person's gender identity and assigned sex.

18. Gender Dysphoria is mental distress or discomfort based on the experience of discordance between the sex assigned at birth and a person's gender identity or brain sex. Because of the inflexibility of the brain sex, the experience of being transgender is sometimes

described as having, or being born in, the wrong body. The emotional distress experienced as a result of being in the wrong body is the hallmark symptom associated with Gender Dysphoria.

19. Only the subset of transgender people who have clinically significant distress or impairment qualify for a diagnosis of Gender Dysphoria.

20. Gender dysphoric persons may live for a significant period of their lives in denial of those symptoms. Some transgender people may not initially understand the emotions associated with gender dysphoria and not have the language or resources to find support for the distress as experienced as a result of them until well into adulthood. Younger people in increasing numbers have access to medical and mental health resources that help them understand their experience and allow them to obtain medical support at an earlier age.

TREATMENT FOR GENDER DYSPHORIA

21. Gender Dysphoria is understood as a condition that is amenable to treatment. Commission Report at 9; WPATH Standards of Care, Version 7; William Byne, et al., *Report of the American Psychiatric Association Task Force on Treatment of Gender Identity Disorder* (2012).[1] With appropriate treatment, individuals with a Gender Dysphoria diagnosis can be fully cured of all symptoms.

22. Treatment of Gender Dysphoria is well-established and highly effective. The protocol is set forth in the WPATH Standards of Care and in the Endocrine Society Guidelines.[2] The WPATH Standards of Care were first developed in 1979. Currently in their seventh version, the Standards of Care set forth the authoritative protocol for the evaluation and treatment of

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[1] *Available at* https://www.researchgate.net/publication/228071071_Report_of_the_American_Psychiatric_Association_Task_Force_on_Treatment_of_Gender_Identity_Disorder.

[2] *Available at* https://www.endocrine.org/guidelines-and-clinical-practice/clinical-practice-guidelines.

Gender Dysphoria. This is the approach followed by clinicians caring for transgender veterans with Gender Dysphoria nationally in the VHA. As stated above, I was a member of the WPATH committee that authored Version 7 of the Standards of Care, published in 2011. That document is attached hereto as Exhibit C.

23. Depending on the individual, a treatment plan for persons diagnosed with Gender Dysphoria may involve psychotherapeutic, pharmacological, and surgical components. The goal in all cases for which there is a treatment plan is to enable the individual to live all aspects of one's life consistent with his or her gender identity or brain sex.

24. Pharmacological care, when needed, typically includes hormonal reassignment. Surgical care, often referred to as either sex reassignment or gender confirmation surgery, includes a range of procedures that conform the person's body to be consistent with persons of the same gender identity. There is a wide range in the treatment sought by those suffering from Gender Dysphoria. Some need both hormone therapy and surgery, while others need both or neither.

25. The care and treatment necessary for transgender individuals in the military is already provided to non-transgender individuals, whether therapy, hormonal treatments, or surgeries. Accordingly "[t]ransgender medical care should be managed in terms of the same standards that apply to all medical care, and there is no medical reason to presume transgender individuals are unfit for duty." 2014 Report at 14.

PRE-2016 MILITARY POLICY

26. Prior to 2016, military policy treated Gender Dysphoria inconsistently with other curable conditions. Department of Defense instructions contain an extensive list of physical and mental conditions that disqualify a person from enlisting in the military and which can be used as

the basis to separate someone from service. For instance, persons with autism, schizophrenia and delusional disorders (or a history of treatment for these conditions) are excluded from enlistment. Prior to 2016, that list also contained conditions relating to Gender Dysphoria, such as change of sex and transsexualism.

27. The purpose of disqualifying applicants based on certain physical and mental conditions is to ensure that service members are free of contagious diseases that endanger others, free of conditions or defects that would result in excessive duty-time lost and would probably result in separation, able to perform without aggravating existing conditions, and capable of completing training and adapting to military life.

28. Because Gender Dysphoria is a treatable and curable condition, unlike other excluded conditions, its inclusion on the list of disqualifying conditions was inappropriate. Despite having a treatable condition, persons who had a change of sex were disqualified from joining the military.

29. This was inconsistent with how persons with other curable medical conditions were treated. The result of this inconsistency was that transgender personnel were excluded or singled out for disqualification even when they were mentally and physically healthy.

30. For example, persons with certain illnesses, such as Attention Deficit Hyperactivity Disorder and simple phobias, could be admitted when their conditions could be managed without imposing undue burdens on others. Individuals with Attention Deficit Hyperactivity Disorder are prohibited from enlisting unless they meet five criteria including documenting that they maintained a 2.0 grade point average after the age of 14. Similarly, individuals with simple phobias are banned from enlisting unless they meet three criteria including documenting that they have not required medication for the past 24 continuous months. Likewise, members with

mood and anxiety disorders treated by medication were not categorically barred from deployment despite the well-known high rates of recurrence of these psychiatric disorders.

31. In short, even though the Defense Department allowed those with manageable conditions to serve, the former regulation barred transgender service without regard to its treatability and the person's ability to serve.

JUNE 2016 POLICY CHANGE

32. The military lifted the ban on open service by transgender military personnel following a June 30, 2016 announcement made by then Secretary of Defense Ashton B. Carter.

33. Under new accessions procedures – which were adopted but never put into effect – transgender individuals whose condition was stable for 18 months at the time of enlistment would be eligible to enlist. As the procedures describe, a "history of gender dysphoria" as well as a "history of medical treatment associated with gender transition" are disqualifying *unless*, as to the former, a licensed medical provider certifies that the applicant has been stable without clinically significant distress or impairment in social, occupational, or other important areas of functioning for 18 months, and as to the latter, that "the applicant has completed all medical treatment associated with the applicant's gender transition; and the applicant has been stable in the preferred gender for 18 months." DTM-16-005 Memorandum and Attachment (June 30, 2016). Finally, for applicants presently receiving cross-sex hormone therapy post-gender transition, the individual has been stable on such hormones for 18 months. *Id.*

34. In other words, the procedures require those seeking to enlist who had any therapy or surgeries to have medical confirmation that they have been stable for the last 18 months. Similarly, those applicants taking cross-sex hormones as follow-up to their transition would also need certification that they had been stable on such hormones for 18 months.

MEDICAL JUSTIFICATIONS FOR THE TRANSGENDER BAN ARE UNFOUNDED

35. Based on my extensive research and experience treating transgender people, most of whom have served this country in uniform, my experience reviewing the medical implications of a ban on transgender service members, and my involvement in implementing the 2016 policies allowing transgender individuals to serve openly, it is my opinion that the medical objections to open service by transgender service members are wholly unsubstantiated.

36. Similarly, in a unanimous resolution published on April 29, 2015, the American Medical Association announced its support for lifting the ban on transgender service in the military.[3]

MENTAL HEALTH

37. Arguments based on mental health of transgender persons are completely inadequate to justify prohibiting transgender individuals from serving in the military. Being transgender is not a mental defect or disorder. Scientists have long abandoned psychopathological understandings of transgender identity, and do not classify the incongruity between a person's brain sex and one's assigned sex as a mental illness. To the extent a person's incongruity between their brain sex and their birth sex creates clinically significant distress (Gender Dysphoria), that distress is curable through appropriate medical care. The availability of a cure distinguishes Gender Dysphoria from other mental health conditions such as autism, bipolar disorder, or schizophrenia for which there are no cures. There is no reason to single out transgender personnel for separation or even limitation of service based only on the diagnosis or

[3] *Available at* http://archive.palmcenter.org/files/A-15%20Resoultion%20011.pdf.

treatment of Gender Dysphoria. Rather, determinations should be made on a case-by-case basis depending on the individual's fitness to serve, as is done with other treatable conditions.

38. Moreover, the military already provides mental health evaluation services and counseling, which is the first component of treatment for Gender Dysphoria. RAND Corporation, *Assessing the Implications of Allowing Transgender Personnel to Serve Openly* ("RAND Report") at 79, attached as Exhibit D.

39. Sixty years of clinical experience have demonstrated the efficacy of treatment of the distress resulting from Gender Dysphoria. *See* 2014 Report at 6 ("a significant body of evidence shows that treatment can alleviate symptoms among those who do experience distress"). Moreover, "empirical data suggest that many non-transgender service members continue to serve despite psychological conditions that may not be as amenable to treatment as gender dysphoria." *Id.* at 7.

40. Concerns about suicide and substance abuse rates among transgender individuals are also irrelevant. At accession, all prospective military servicemembers undergo a rigorous examination to identify any pre-existing mental health diagnoses that would preclude accessions. Once someone is serving in the military, they must undergo an annual mental and physical health screen, which includes a drug screen. If one of these screenings indicates that a person suffers from a mental illness or substance abuse, then that would be the potential impediment to joining or remaining in the military. The mere fact that a person is transgender, however, does not mean that person has a mental health issue, substance abuse problem, or is suicidal.

HORMONE TREATMENT

41. The argument that cross-sex hormone treatment is too risky and complicated for military medical personnel to administer and monitor is unsubstantiated and illogical. The risks

associated with cross-sex hormone treatment are low and not any higher than for the hormones that many non-transgender personnel currently take.

42. The military has vast experience with accessing, retaining and treating non-transgender individuals who need hormone therapies or replacement. These include gynecological conditions such as dysmenorrhea, endometriosis, menopausal syndrome, chronic pelvic pain, hysterectomy or oophorectomy and genitourinary conditions like renal or voiding functions, any of which are referred for a fitness evaluation only when they affect duty performance.

43. In addition, when service members develop hormonal conditions during service whose remedies are biologically similar to cross-sex hormone treatment, those members are not discharged and may not even be referred for a medical evaluation board. Examples include male hypogonadism, menstrual disorders and current, or history of, pituitary dysfunction.

44. Military policy also allows service members to take a range of medications, including hormones, while deployed in combat settings. 2014 Report at 9. Whether anabolic steroids or antipsychotic drugs, Department of Defense policy provides "few medications are inherently disqualifying for deployment." *Id.* (quoting Dept. of Defense, Policy Guidance for Deployment-Limiting Psychiatric Conditions and Medications, 2006 at para. 4.2.3). Access is predictable, as "[t]he Military Health Service maintains a sophisticated and effective system for distributing prescription medications to deployed service members worldwide." *Id.* As to cross-sex hormones at least, clinical monitoring for risks and effects is not complicated, and with training and/or access to consultations, can be performed by a variety of medical personnel in the Department of Defense, just as is the case in the VHA.

45. A study done by the RAND Corporation, an independent, nonpartisan, military think tank confirms the conclusions I draw from my experience with the military and in the 2014 Report. *See* RAND Report. Specifically, the RAND Report noted that Military Health Services maintains and supports all of the medications used for treatment of Gender Dysphoria and has done so for treatment of non-transgender service members. In other words, all of the medications used by transgender service members for treatment of Gender Dysphoria are used by other service members for conditions unrelated to Gender Dysphoria. *See* RAND Report at 8 ("Both psychotherapy and hormone therapies are available and regularly provided through the military's direct care system, though providers would need some additional continuing education to develop clinical and cultural competence for the proper care of transgender patients."). Part of my role with the Department of Defense over the past 18 months has been to provide this continuing education.

SURGERY

46. Nor is there any basis for the argument that a transgender servicemember's potential need for transition surgery presents unreasonable risks or burden. The risks associated with gender-confirming surgery are low.

47. Critics have also cited non-deployability, medical readiness, and constraints on fitness for duty as reasons to exclude transgender individuals from service. Such arguments are also unsubstantiated and illogical. As a general matter, transgender servicemembers are just as medically fit for service and deployable as non-transgender servicemembers.

48. Even prior to the 2016 transgender policy change, military surgeons were called upon to perform surgeries, such as those for blast victims, whose core procedures are the same as or similar to surgeries needed for transgender health. RAND Report at 8 ("Surgical procedures

quite similar to those used for gender transition are already performed within the MHS for other clinical indications."). The RAND Report noted the benefit of military coverage of transgender surgeries because of the contribution it can make to surgical readiness and training. *Id.* ("performing these surgeries on transgender patients may help maintain a vitally important skill required of military surgeons to effectively treat combat injuries during a period in which fewer combat injuries are sustained.").

CONCLUSION

49. There is no evidence that being transgender alone affects military performance or readiness and there is no medical justification for the categorical exclusion of transgender individuals from the Armed Forces.

I declare under penalty of perjury that the foregoing is true and correct.

DATED: August 30, 2017

George R. Brown, MD

EXHIBIT B

PALM CENTER

BLUEPRINTS FOR SOUND PUBLIC POLICY

DoD's Rationale for Reinstating the Transgender Ban Is Contradicted by Evidence

Vice Admiral Donald C. Arthur, USN (Ret.)
Former Surgeon General of the U.S. Navy

Major General Gale Pollock, USA (Ret.)
Former Acting Surgeon General of the U.S. Army

Rear Admiral Alan M. Steinman, USPHS/USCG (Ret.)
Former Director of Health and Safety (Surgeon General equivalent) of the U.S. Coast Guard

Nathaniel Frank, PhD
Director, What We Know Project, Cornell University

Professor Diane H. Mazur, JD
Legal Research Director, Palm Center

Professor Aaron Belkin, PhD
Director, Palm Center

April 2018

PALM CENTER

BLUEPRINTS FOR SOUND PUBLIC POLICY

Executive Summary

On March 23, 2018, the White House released a report, endorsed by Defense Secretary James Mattis, entitled, "Department of Defense Report and Recommendations on Military Service by Transgender Persons" ("Implementation Report"). The 44-page document contains recommendations that, if enacted into policy, would have the effect of banning many transgender individuals from military service. As of the writing of this study, inclusive policy for transgender individuals remains in effect because federal courts have enjoined the administration from reinstating the ban, and because the Report's recommendations have not yet been entered into the Federal Register or enacted into policy. The Justice Department, however, has asked the courts to allow the administration to reinstate the ban.

Given the possibility that the Implementation Report's recommendations could become policy, it is important to assess the plausibility of DoD's justification for reinstating the ban. This report undertakes that assessment and finds its rationale wholly unpersuasive.

The Implementation Report claims that inclusive policy would compromise medical fitness because there is "considerable scientific uncertainty" about the efficacy of medical care for gender dysphoria (incongruity between birth gender and gender identity), and because troops diagnosed with gender dysphoria are medically unfit and less available for deployment. Cohesion, privacy, fairness, and safety would be sacrificed because inclusive policy blurs the "clear lines that demarcate male and female standards and policies." Finally, according to the Report, financial costs would burden the military's health care system because the annual cost of medical care for service members diagnosed with gender dysphoria is three times higher than for other troops.

After carefully considering the recommendations and their justification in the Implementation Report, we have concluded that the case for reinstating the transgender ban is contradicted by ample evidence clearly demonstrating that transition-related care is effective, that transgender personnel diagnosed with gender dysphoria are deployable and medically fit, that inclusive policy has not compromised cohesion and instead promotes readiness, and that the financial costs of inclusion are not high. Specifically, we make the following eight findings:

1. **Scholars and experts agree that transition-related care is reliable, safe, and effective.** The Implementation Report makes a series of erroneous assertions and mischaracterizations about the scientific research on the mental health and fitness of individuals with gender dysphoria. Relying on a highly selective review of the evidence, and distorting the findings of the research it cites, the Report

inaccurately claims there is "considerable scientific uncertainty" about the efficacy of transition-related care, ignoring an international consensus among medical experts that transition-related care is effective and allows transgender individuals to function well.

2. **The proposed ban would impose double standards on transgender service members, applying medical rules and expectations to them that do not apply to any other members.** The Implementation Report's claim that individuals who transition gender are unfit for service only appears tenable when applying this double standard. When service members diagnosed with gender dysphoria are held to the same standards as all other personnel, they meet medical, fitness, and deployability standards.

3. **Scholarly research and DoD's own data confirm that transgender personnel, even those with diagnoses of gender dysphoria, are deployable and medically fit.** Research shows that individuals who are diagnosed with gender dysphoria and receive adequate medical care are no less deployable than their peers. DoD's own data show that 40 percent of service members diagnosed with gender dysphoria deployed to the Middle East and only one of those individuals could not complete deployment for mental health reasons.

4. **The Implementation Report offers no evidence that inclusive policy has compromised or could compromise cohesion, privacy, fairness, or safety**. Despite the lack of evidence, DoD advances these implausible claims anyway, citing only hypothetical scenarios and "professional military judgment." Yet the military's top Admirals and Generals have explicitly stated that, while the impact on cohesion is being "monitored very closely," they have received "precisely zero reports of issues of cohesion, discipline, morale," and related concerns after two years of inclusive service.

5. **The Report's contention that inclusive policy could compromise cohesion, privacy, fairness, and safety echoes discredited rationales for historical prohibitions against African Americans, women, and gays and lesbians**. In each of these historical cases, military leaders advanced unsupported arguments about cohesion, privacy, fairness, and safety. In each case, evidence showed that inclusive policies did not bring about the harmful consequences that were predicted, suggesting the fears were misplaced and unfounded.

6. **Research shows that inclusive policy promotes readiness, while exclusion harms it.** A more rigorous and comprehensive assessment of the implications of transgender service shows that a policy of equal treatment improves readiness by promoting integrity, reinforcing equal standards, increasing morale for minorities, and expanding the talent pool available to the military, while banning transgender service or access to health care harms readiness through forced dishonesty, double standards, wasted talent, and barriers to adequate care.

7. **The Implementation Report fails to consider the readiness benefits of inclusive policy or the costs to readiness of the proposed ban**. All policy changes involve costs and benefits, yet DoD's research focuses solely on the costs of inclusion, entirely ignoring the readiness benefits of inclusion and the costs of exclusion.

8. **The Implementation Report's presentation of financial cost data inaccurately suggests that transition-related care is expensive**. The Report states that medical costs for troops with gender dysphoria are higher than average, but isolating any population for the presence of a health condition will raise the average cost of care for that population. In truth, DoD's total cost for transition-related care in FY2017 was just $2.2 million, less than one tenth of one percent of its annual health care budget for the Active Component, amounting to just 9¢ (nine cents) per service member per month, or $12.47 per transgender service member per month.

Introduction[1]

On March 23, 2017, the White House released "Department of Defense Report and Recommendations on Military Service by Transgender Persons" ("Implementation Report"), a 44-page document whose recommendations would, if enacted into policy, have the effect of banning many transgender individuals from military service. Alongside the Implementation Report, the White House released a "Memorandum for the President" in which Defense Secretary James Mattis endorsed the Implementation Report's recommendations. As of the writing of this study, inclusive policy for transgender individuals remains in effect because federal courts have enjoined the administration from reinstating the ban, and because the Report's recommendations have not yet been entered into the Federal Register or enacted into policy. Although inclusive policy remains in effect at this time, the Justice Department has asked courts to dissolve the preliminary injunctions that prevent the administration from banning transgender service members. If courts grant the request, the administration will almost certainly reinstate the ban by implementing recommendations contained in the Implementation Report.

Given the possibility that the Implementation Report's recommendations could be enacted into policy, it is important to assess the plausibility of DoD's justification for the proposed reinstatement of the ban. According to DoD's Implementation Report, inclusive policy for transgender service members could compromise the medical fitness of the force; undermine unit cohesion, privacy, fairness, and safety; and impose burdensome financial costs. According to the Report, inclusive policy would compromise medical fitness because there is "considerable scientific uncertainty" about the efficacy of medical care for gender dysphoria (incongruity between birth gender and gender identity), and because troops diagnosed with gender dysphoria are medically unfit and less available for deployment. Cohesion, privacy, fairness, and safety would be sacrificed because inclusive policy "blur[s] the clear lines that demarcate male and female standards and policies."[2] Finally, according to the Report, financial costs would burden the military's health care system because the annual cost of medical care for service members diagnosed with gender dysphoria is three times higher than for other troops.

After carefully considering the recommendations and their justification in the Implementation Report, we have concluded that the case for reinstating the transgender ban is contradicted by the evidence: (1) Scholars and experts agree that transition-related care is, in fact, reliable, safe, and effective; (2) The proposed ban would impose double standards on transgender service members, in that DoD would apply medical rules and expectations to them that it does not apply to any other members; (3) Scholarly research as well as DoD's own data confirm that transgender personnel, even those with diagnoses of gender dysphoria, are deployable and medically fit; (4) The Report does not offer any evidence that inclusive policy has compromised or could compromise cohesion, privacy, fairness, and safety, and assertions and hypothetical scenarios offered in support of these concerns are implausible; (5) The Report's contention that inclusive policy could compromise cohesion, privacy, fairness, and safety echoes discredited rationales for historical prohibitions against African Americans, women, and gays and lesbians; (6) A more comprehensive assessment of costs and benefits indicates that inclusive policy

promotes readiness, while the proposed ban would compromise it; (7) The Report fails to consider the benefits of inclusive policy or the costs of the proposed ban; and (8) The Report's presentation of financial cost data inaccurately suggests that transition-related care is expensive.

Gender Transition Is Effective

The Implementation Report relies on a series of erroneous assertions and mischaracterizations about the substantial scientific research on the mental health and fitness of transgender individuals with gender dysphoria. As a result, it draws unfounded conclusions about the efficacy of gender transition and related care in successfully treating gender dysphoria and the health conditions that are sometimes associated with it. The Implementation Report argues that there is "considerable scientific uncertainty" about the efficacy of transition-related care, and that the military cannot be burdened with a group of service members for whom medical treatment may not restore medical fitness and "fully remedy" symptoms. This assertion, however, relies on a highly selective review of the relevant scientific evidence. In truth, the data in this field show a clear scholarly consensus, rooted in decades of robust research, that transgender individuals who have equal access to health care can and do function effectively.[3]

Consensus about the efficacy of care

An international consensus among medical experts affirms the efficacy of transition-related health care. The consensus does not reflect advocacy positions or simple value judgments but is based on tens of thousands of hours of clinical observations and on decades of peer-reviewed scholarly studies. This scholarship was conducted using multiple methodologies, study designs, outcome measures, and population pools widely accepted as standard in the disciplinary fields in which they were published. In many cases, the studies evaluated the complete universe of a country or region's medically transitioning population, not a selection or a sample.

The American Medical Association (AMA) has stated that "An established body of medical research demonstrates the effectiveness and medical necessity of mental health care, hormone therapy and sex reassignment surgery as forms of therapeutic treatment" for those with gender dysphoria. In response to the publication of DoD's Implementation Report, the AMA reiterated its view that "there is no medically valid reason—including a diagnosis of gender dysphoria—to exclude transgender individuals from military service." The AMA stated that the Pentagon's rationale for banning transgender service "mischaracterized and rejected the wide body of peer-reviewed research on the effectiveness of transgender medical care."[4]

The American Psychological Association responded to the publication of the Implementation Report by stating that "substantial psychological research shows that gender dysphoria is a treatable condition, and does not, by itself, limit the ability of individuals to function well and excel in their work, including in military service." A statement released by six former U.S. Surgeons General cited "a global medical

consensus" that transgender medical care "is reliable, safe, and effective." The American Psychiatric Association has recognized that "appropriately evaluated transgender and gender variant individuals can benefit greatly from medical and surgical gender transition treatments." The World Professional Association for Transgender Health has stated that gender transition, when "properly indicated and performed as provided by the Standards of Care, has proven to be beneficial and effective in the treatment of individuals with transsexualism, gender identity disorder, and/or gender dysphoria" and that "sex reassignment plays an undisputed role in contributing toward favorable outcomes" in transgender individuals.[5]

The global consensus reflected in this scholarship—that gender transition is an effective treatment for gender dysphoria—is made clear in numerous comprehensive literature reviews conducted across the last thirty years (which themselves confirm conclusions reached in earlier research). By conducting systematic, global literature searches and classifying the studies generated by the search, researchers and policymakers can avoid basing conclusions and policies on cherry-picked evidence that can distort the full range of what is known by scholars in the field.

Most recently, researchers at Cornell University's "What We Know Project" conducted a global search of peer-reviewed studies that addressed transgender health to assess the findings on the impact of transition-related care on the well-being of transgender people. The research team conducted a keyword search that returned 4,347 articles on transgender health published over the last 25 years. These were evaluated by reading titles, abstracts, and text to identify all those that directly address the impact of transition-related care on overall well-being of transgender individuals. Of the final 56 peer-reviewed studies that conducted primary research on outcomes of individuals who underwent gender transition, the team found that 52, or 93 percent, showed overall improvements, whereas only 4, or 7 percent, found mixed results or no change. No studies were found that showed harms. The research team concluded there was a "robust international consensus in the peer-reviewed literature that gender transition, including medical treatments such as hormone therapy and surgeries, improves the overall well-being of transgender individuals."[6]

The "What We Know" researchers assessed evidence from the last 25 years because it represents the most recent generation of scholarship. But the consensus dates to well before this period. In 1992, one of the first comprehensive literature reviews on transitioning outcomes was published in Germany. It examined 76 follow-up studies from 12 countries published between 1961 and 1991, covering more than 2,000 individuals. The review concluded that overall outcomes of gender transition were positive, stating that "sex reassignment, properly indicated and performed, has proven to be a valuable tool in the treatment of individuals with transgenderism."[7] A 1999 study notes that, throughout the 1990s, comparative research found uniformly positive outcomes from gender transition surgery, stating: "A review of postoperative cases [during this decade] concluded that transsexuals who underwent such surgery were many times more likely to have a satisfactory outcome than transsexuals who were denied this surgery."[8]

The positive results of research on transition-related care have only grown more robust with time. For more detailed information on the global consensus that transition-related care is effective, please see the Appendix.

DoD's critique of efficacy literature is contradicted by evidence

The Implementation Report claims that permitting service by transgender individuals treated for gender dysphoria poses an unacceptable risk to military effectiveness because "the available scientific evidence on the extent to which such treatments fully remedy all of the issues associated with gender dysphoria is unclear." The Report argues that the evidence that does exist is insufficient or of too poor quality to form a robust consensus. In support of that claim, the Implementation Report cites one government report by the U.S. Centers for Medicare and Medicaid Services (CMS) concluding that there is "not enough high quality evidence to determine whether gender reassignment surgery improves health outcomes" for individuals with gender dysphoria. In addition, the Implementation Report cites two literature reviews and one research study suggesting that the quality of efficacy evidence is low.

Yet DoD's findings rely on a selective reading of scholarship. Despite decades of peer-reviewed research, the Implementation Report could identify only four studies to sustain its conclusion. Critically, even these four studies, supposedly representing the best evidence documenting the uncertainty about transition-related care's efficacy, all conclude that such care mitigates symptoms of gender dysphoria. As we show below, these four studies do not sustain the Implementation Report's assertion about scientific uncertainty.

Before addressing each study that the Implementation Report relies on individually, several observations about standards of evidence require elaboration. To begin, the Implementation Report's critique that efficacy studies are not randomized controlled trials does not, in and of itself, impeach the quality or the force of the evidence. The Implementation Report places considerable weight on the absence of randomized controlled trials in the efficacy literature, but it fails to acknowledge that there are many criteria for assessing the quality of clinical research and many acceptable study designs. The CMS study that the Implementation Report relies on to indict the efficacy literature explains that while "randomized controlled studies have been typically assigned the greatest strength, . . . a well-designed and conducted observational study with a large sample size may provide stronger evidence than a poorly designed and conducted randomized controlled trial." CMS concludes that "Methodological strength is, therefore, a multidimensional concept that relates to the design, implementation, and analysis of a clinical study."[9]

Elsewhere, CMS explains that random trials are not the only preferred form of evidence, which can include "randomized clinical trials *or* other definitive studies."[10] CMS continues that other forms of evidence can support Medicare policy as well, including "scientific data or research studies published in peer-reviewed journals" and "Consensus of expert medical opinion."[11] Finally, there is a good reason why the efficacy literature

does not include randomized controlled trials of treatments for gender dysphoria: the condition is rare, and treatments need to be individually tailored. Given these circumstances, randomized controlled trials are unrealistic.[12]

The Implementation Report mentions four times that transition-related care does not "fully remedy" symptoms of gender dysphoria, but that is not a standard that the military or other public health entities apply to efficacy evaluation. Using this phrase falsely implies that the military enjoys a level of complete certainty about the medical evidence on which it relies in all other areas of health policy formulation. Yet as six former U.S. Surgeons General explain in a recent response to the Implementation Report, "An expectation of certainty is an unrealistic and counterproductive standard of evidence for health policy—whether civilian or military—because even the most well-established medical treatments could not satisfy that standard. Indeed, setting certainty as a standard suggests an inability to refute the research."[13] Many medical conditions are not categorically disqualifying for accession or retention, and none come with a guarantee that available treatments always "fully remedy" them, suggesting that a double standard is being applied to the transgender population. As documented above, decades of research confirm the efficacy of medical treatments for gender dysphoria, and recent research underscores that as treatments have improved and social stigma has decreased, transgender individuals who obtain the care that they need can achieve health parity with non-transgender individuals.

Parallel to its "fully remedy" double standard, the Implementation Report attempts to indict the efficacy literature because studies do not "account for the added stress of military life, deployments, and combat."[14] Given the historical transgender ban, it is unclear how efficacy literature could ever meet this standard, as DoD did not allow treatment for gender dysphoria while the ban was in effect, so service members could not have participated as subjects in efficacy studies. Generally, service members are not subjects in civilian research studies, and while service member medical and performance data, such as disability separation statistics, are studied to inform policy decisions about accession standards, civilian studies on the efficacy of medical treatments are not.[15]

CMS Study

The Implementation Report relies heavily on a 2016 CMS review of literature to sustain its claim about scientific uncertainty concerning the efficacy of gender transition surgery. According to the Implementation Report, CMS "conducted a comprehensive review of the relevant literature, [including] over 500 articles, studies, and reports, [and] identified 33 studies sufficiently rigorous to merit further review." It then cited CMS's conclusion that "the quality and strength of evidence were low."[16]

Yet the Implementation Report's interpretation and application of the CMS findings are highly misleading. By omitting a crucial point of context, the Implementation Report implies that CMS ultimately found insufficient evidence for the efficacy of gender reassignment surgery, when in fact it found the opposite. That point of context turns on the distinction between negative and affirmative National Coverage Determinations

(NCDs). Negative NCDs are blanket denials of coverage that prohibit Medicare from reimbursing for the cost of medical treatment. Prior to 2014, a negative NCD prohibited Medicare from covering the cost of gender reassignment surgery, but a Department of Health and Human Services Appeals Board ("Board") overturned the NCD after a comprehensive review of the efficacy literature determined surgery to be safe, effective, and medically necessary. As a result, under Medicare policy the need for gender reassignment surgery is determined on a case-by-case basis after consultation between doctor and patient, and there is no surgical procedure that is required in every case.

An affirmative NCD, by contrast, is a blanket entitlement mandating reimbursement of a treatment, the mirror opposite of a negative NCD. Affirmative NCDs are rare. The CMS review that the Implementation Report relies on did not contradict the Board's 2014 conclusion that there is "a consensus among researchers and mainstream medical organizations that transsexual surgery is an effective, safe and medically necessary treatment for transsexualism."[17] Nor did it contradict the Board's 2014 findings that "concern about an alleged lack of controlled, long-term studies is not reasonable in light of the new evidence"[18] and that "Nothing in the record puts into question the authoritativeness of the studies cited in new evidence based on methodology (or any other ground)." Rather, CMS concluded in 2016 that there was not enough evidence to sustain a blanket mandate that would automatically entitle *every* Medicare beneficiary diagnosed with gender dysphoria to surgery.

In addition, CMS only found that the evidence was "inconclusive *for the Medicare population*," not for all persons with gender dysphoria. CMS acknowledged that gender reassignment surgery "may be a reasonable and necessary service for certain beneficiaries with gender dysphoria," and confined its conclusions to the Medicare population, noting that "current scientific information is not complete for CMS to make a NCD that identifies *the precise patient population for whom the service would be reasonable and necessary*." CMS explained that the Medicare population "is different from the general population" and "due to the biology of aging, older adults may respond to health care treatments differently than younger adults. These differences can be due to, for example, multiple health conditions or co-morbidities, longer duration needed for healing, metabolic variances, and impact of reduced mobility. All of these factors can impact health outcomes."[19]

The Board's 2014 repeal of the negative NCD and CMS's 2016 decision not to establish an affirmative NCD means that, like most medical treatments, the need for gender reassignment surgery is determined on a case-by-case basis after consultation between doctor and patient under Medicare policy. The Implementation Report's depiction of the 2016 CMS review, however, obscures that point. In noting that CMS "decline[d] to require all Medicare insurers to cover sex reassignment surgeries," DoD mischaracterizes the CMS decision and erroneously states that its review "found insufficient scientific evidence to conclude that such surgeries improve health outcomes for persons with gender dysphoria." CMS did not bar transition-related coverage for the Medicare population, but determined that care should be offered on an individualized basis, which is the general standard applied to most medical care.

Perhaps the most misleading aspect of the Implementation Report's discussion is the suggestion that the 2016 CMS review undercuts the case for inclusive policy and the provision of medically necessary care. Quite to the contrary, both the 2014 Board review and the 2016 CMS review closely align Medicare policy with DoD's inclusive policy established by former Defense Secretary Ashton Carter. Under the Carter policy, treatment for gender dysphoria is determined on a case-by-case basis after consultation between doctor and patient, and there is no blanket entitlement to care for service members diagnosed with gender dysphoria. The 2016 CMS review may undercut the case for a blanket entitlement to gender reassignment surgery for Medicare beneficiaries. But it does not, as the Implementation Report insists, undercut the rationale for providing care to service members on an individualized basis as determined by doctor and patient.

According to Andrew M. Slavitt, Acting Administrator of CMS from March 2015 to January 2017, "It is dangerous and discriminatory to fire transgender service members and deny them the medical care they need. It is particularly disingenuous to justify it by a purposeful misreading of an unrelated 2016 CMS decision. Both the 2014 Board review and the 2016 CMS review closely align Medicare policy with DoD's inclusive policy established by former Secretary Carter. Under both Medicare and military policy, treatment for gender dysphoria is determined on a case-by-case basis after consultation between doctor and patient."[20]

Hayes Directory

DoD's Implementation Report cites the Hayes Directory in arguing that there is "considerable scientific uncertainty" about whether transition-related treatment fully remedies symptoms of gender dysphoria:

> According to the Hayes Directory, which conducted a review of 19 peer-reviewed studies on sex reassignment surgery, the "evidence suggests positive benefits," . . . but "because of serious limitations," these findings "permit only weak conclusions." It rated the quality of evidence as "very low" due to the numerous limitations in the studies . . . With respect to hormone therapy, the Hayes Directory examined 10 peer-reviewed studies and concluded that a "substantial number of studies of cross-sex hormone therapy each show some positive findings suggesting improvement in well-being after cross-sex hormone therapy." Yet again, it rated the quality of evidence as "very low" . . . Importantly, the Hayes Directory also found: "Hormone therapy and subsequent [gender transition surgery] failed to bring the overall mortality, suicide rates, or death from illicit drug use in [male-to-female] patients close to rates observed in the general male population."[21]

Hayes is not a scholarly organization and the Hayes Reports have not been published in a peer-reviewed journal, unlike the numerous literature reviews cited above. But Dr. Nick Gorton, a nationally recognized expert on transgender health, conducted a critical

analysis of the report cited by DoD as well as a 2004 Hayes Report addressing related research, and he shared his findings with us in a memo. "The Hayes Reports evaluating transition-related care," writes Dr. Gorton, "make repeated substantive errors, evidence poor systematic review technique, are inconsistent in applying their criteria to the evidence, make conclusions not supported by the evidence they present, misrepresent the statements made by professional organizations treating transgender patients, and have a strong systematic negative bias." He concludes that "these problems fatally damage the credibility of their analysis, casting substantial doubt on their conclusions. The reports cannot be relied upon as a valid systematic clinical review of the evidence on transition-related health care."[22]

For example, Hayes claims that its reports are comprehensive, but its 2004 report omitted dozens of relevant studies from its analysis. Dr. Gorton identified 31 applicable scholarly articles that Hayes failed to include in its review.[23] Hayes labels 13 studies it chose for one analysis as consisting only of "chart reviews or case series studies" and concludes that the "studies selected for detailed review were considered to be very poor." But Hayes does not explain why it selected what it considered to be poor quality studies when numerous high quality studies were available. Furthermore, the 13 studies Hayes did choose to review were not, in fact, only chart reviews and case series studies, but included cohort studies, which are considered higher quality evidence. "By mislabeling all the studies as 'chart reviews or case series,'" Dr. Gorton observed, Hayes is "saying they are lower level evidence than what is actually found in that group of studies."[24] Finally, Hayes erroneously states that none of the 13 studies "assessed subjective outcome measures before treatment." Dr. Gorton's review of the studies, however, shows that three of the studies included such baseline measures.

Hayes also asserts that a 2012 Task Force report of the American Psychiatric Association "concluded that the available evidence for treatment of gender dysphoria was low for all populations and treatments, and in some cases insufficient for support of evidence-based practice guidelines." Yet Hayes misrepresents the conclusion of the Task Force by taking quotes out of context and omitting mention of the higher quality evidence the APA also cites—*and uses as a basis for recommending consensus-based treatment options that include gender transition*. The "insufficient" evidence conclusion that Hayes cites applied only to studies of children and adolescents. What the Task Force concluded about adults with gender dysphoria was that there is sufficient evidence to recommend that treatment including gender transition be made available.[25]

Quoting the APA fully on this matter illustrates Hayes's misrepresentation: "The quality of evidence pertaining to most aspects of treatment in all subgroups was determined to be low; however, areas of broad clinical consensus were identified and were deemed sufficient to support recommendations for treatment in all subgroups. With subjective improvement as the primary outcome measure, current evidence was judged sufficient to support recommendations for adults in the form of an evidence-based APA Practice Guideline with gaps in the empirical data supplemented by clinical consensus."[26]

Finally, Dr. Gorton observes that, "Hayes writes reports that are aimed to please their customers who are all health care payers interested in being able to refuse to cover expensive or, in the case of transgender patients, politically controversial care. They obscure the nature of their systematically biased analysis by preventing scientists and clinicians from reading the reports and calling attention to their poor quality and systematic bias as would happen to any other evidence based review of health care treatments." Thus, clients of Hayes who may have paid for the meta-analyses could have a financial interest in declining to reimburse patients for transition-related care.[27]

Swedish research

Of the four studies that the Implementation Report cited to sustain its claim that there is scientific uncertainty about the efficacy of transition-related care, only one, a 2011 study from Sweden co-authored by Cecilia Dhejne, offers original research. According to the Swedish study, individuals receiving gender transition surgery had higher mortality rates than a healthy control group.

Yet much of the data on which the 2011 Swedish study relied in assessing outcomes was collected decades prior, when life for transgender individuals was more grim, with many subjects in the study undergoing gender transition as long ago as 1973. Importantly, the Swedish study, which assessed health data across three decades, compared outcomes from the first 15 years to those from the more recent 15 years and found that individuals who underwent transition since 1989 fared far better. This "improvement over time" is elaborated on in a more recent study co-authored by the same Swedish scholar in 2016 that states, "Rates of psychiatric disorders and suicide became more similar to controls over time; for the period 1989–2003, there was *no difference* in the number of suicide attempts compared to controls."[28]

Dhejne's 2016 study reviewed more than three dozen cross-sectional and longitudinal studies of prevalence rates of psychiatric conditions among people with gender dysphoria. The authors found, contrary to research cited in the Implementation Report, that transgender individuals who obtain adequate care can be just as healthy as their peers. Among its study sample, most diagnoses were of the common variety (general anxiety and depression) whereas "major psychiatric disorders, such as schizophrenia and bipolar disorder, were rare and were no more prevalent than in the general population." They concluded that, even when individuals start out with heightened anxiety or depression, they "improve following gender-confirming medical intervention, in many cases reaching *normative values*."[29]

In a 2015 interview, Dhejne explained that anti-transgender advocates consistently "misuse the study" she published in 2011 "to support ridiculous claims," including that transition-related care is not efficacious, which is not what her study found. She said that, "If we look at the literature, we find that several recent studies conclude that WPATH Standards of Care compliant treatment decrease[s] gender dysphoria and improves mental health."[30]

Mayo Clinic research

Similar to the CMS study, the Hayes Directory, and the Swedish research, the Mayo Clinic study actually concludes that transition-related care mitigates the symptoms of gender dysphoria, with 80 percent of subjects reporting "significant improvement" in gender dysphoria and quality of life, and 78 percent reporting "significant improvement" in psychological symptoms. Moreover, data cited in the Mayo Clinic report reach as far back as 1966, more than 50 years ago, covering a period when the social and medical climates for gender transition were far less evolved than they are today. As we show in this report, more recent research demonstrates even more positive results.[31]

As we note above, the AMA responded to the release of the Implementation Report by stating that DoD "mischaracterized and rejected the wide body of peer-reviewed research on the effectiveness of transgender medical care," and six former U.S. Surgeons General responded to DoD by citing "a global medical consensus" that transgender medical care "is reliable, safe, and effective." Similar to AMA, both APAs, WPATH, and the former Surgeons General, we are wholly unpersuaded by the Implementation Report's contention that there is "considerable scientific uncertainty" about the efficacy of transition-related care. Such a conclusion relies on a selective reading of a much larger body of evidence that flatly contradicts these claims.

Ban Would Create Separate Standards for Transgender Personnel

DoD's current, inclusive regulations hold transgender personnel to the same medical, fitness, and deployability standards as all other personnel. Contrary to the Implementation Report's assertion that former Defense Secretary Carter "relaxed" standards for transgender personnel,[32] the policy that he established requires transgender service members to meet all general medical, fitness, and deployability requirements. There are no exceptions for transgender personnel or for gender transition. The proposed ban, in contrast, would impose double standards on transgender troops, as DoD would apply unique rules and expectations to them that it does not apply to any other members. The Implementation Report's recommendations are not about requiring transgender personnel to meet military standards, because they already do. Under the guise of maintaining standards, the recommendations are about establishing separate standards that target transgender people alone. Separate standards, in other words, are bans in disguise.

The Implementation Report frequently emphasizes the importance of military standards and the necessity that all service members be required to meet them. It refers to "standards" well over one hundred times in the course of the Report. In endorsing the Implementation Report, the Secretary of Defense also pointed to the importance of standards, writing the following with respect to accession and retention of individuals with a history of gender dysphoria:

> Furthermore, the Department also finds that exempting such persons from well-established mental health, physical health, and sex-based standards,

> which apply to all Service members, including transgender Service members without gender dysphoria, could undermine readiness, disrupt unit cohesion, and impose an unreasonable burden on the military that is not conducive to military effectiveness and lethality.[33]

No one objects to the fundamental principle that a single standard should apply equitably to all service members. But the Implementation Report redefines the usual military understanding of a "standard" in order to create what are in fact two separate standards, one for transgender service members and one for everyone else.

DoD's regulation on disability evaluation offers a pertinent example of a true single standard, applicable to all. It states that service members will be referred for medical evaluation possibly leading to separation if they have a medical condition that may "prevent the Service member from reasonably performing the duties of their office, grade, rank, or rating . . . for more than 1 year after diagnosis"; or that "represents an obvious medical risk to the health of the member or to the health or safety of other members"; or that "imposes unreasonable requirements on the military to maintain or protect the Service member."[34]

A February 2018 memo from the Under Secretary of Defense, Personnel and Readiness, announced a stricter enforcement of this retention policy with respect to availability for deployment. It directed, consistent with the DoD regulation, that "Service members who have been non-deployable for more than 12 consecutive months, for any reason" will be processed for administrative or disability separation, absent a waiver at the service headquarters level.[35] Again, however, the standard that service members cannot remain non-deployable for more than 12 consecutive months is presumably a standard that applies across the board to all who are subject to the policy.

The Implementation Report on transgender policy turns the idea of a single standard on its head. Rather than determining whether transgender service members, who have been serving openly for almost two years now, have met this or other generally applicable standards, the Implementation Report recommends a behavior-based standard that only affects transgender personnel. Moreover, the only way to meet this targeted standard is to behave as if one is not transgender. The Implementation Report attempts to cast this as a single standard—that no one can behave as if they are transgender—but it obviously works as a ban targeted only at transgender personnel.

According to the Implementation Report, transgender individuals are eligible to serve if they can prove themselves indistinguishable from individuals who are not transgender. For example, at accession, transgender applicants with a history of gender dysphoria must submit medical documentation showing they are stable living in birth gender—not the gender in which they identify—for at least three years.[36] For transgender persons already in uniform (other than a specifically excepted registry of service members diagnosed with gender dysphoria prior to an effective date), retention is technically permitted but only if they serve in birth gender for the duration and receive no medical care in support of gender identity.[37]

In other words, transgender service members can be retained only if they suppress or conceal their identity as transgender. The Implementation Report characterized this as an equal treatment of, and a single standard for, all service members, whether transgender or not. Nominally, everyone must serve in birth gender, and no one can receive medical care in support of a gender identity that is inconsistent with birth gender:

> Service members who are diagnosed with gender dysphoria after entering military service may be retained without waiver, provided that they are *willing and able to adhere to all standards associated with their biological sex*, the Service member *does not require gender transition*, and the Service member is not otherwise non-deployable for more than 12 months or for a period of time in excess of that established by Service policy (which may be less than 12 months).[38]

This is the "standard" to which all service members will be held. According to the Implementation Report, this standard is necessary to maintain equity not only with colleagues who are not transgender, but also with transgender colleagues who, "like all other persons, satisfy all mental and physical health standards and are capable of adhering to the standards associated with their biological sex."[39] This incorrectly suggests that the problem with transgender personnel is that they cannot meet the standard, but the "standard" is drafted to target them by definition. The Implementation Report also casts those needing to transition gender as simply "unwilling" to meet standards, as in "unwilling to adhere to the standards associated with their biological sex."[40]

The Implementation Report carefully avoids any direct evaluation of transgender service members under a true single standard of fitness. It even misstates current accession standards in a way that makes it appear transgender individuals cannot meet them. For example, the Implementation Report incorrectly states that a history of chest surgery is disqualifying for enlistment.[41] The actual enlistment standard states that a history of chest surgery is only disqualifying for six months, assuming no persistent functional limitations.[42] The Implementation Report also incorrectly states that hormone therapy is specifically disqualifying.[43] It is not. The actual enlistment standard in fact permits enlistment by women who are prescribed hormones for medical management of gynecological conditions.[44]

The consistent theme of the Implementation Report is that transgender service members are so uniquely unfit and uniquely disruptive that they must be measured by unique and separate standards. But the strength of a traditional and single standard is that each service member is measured by the same expectation. Standards are no longer standards when they are not consistent across all members and are instead targeted narrowly to exclude or disqualify only one group.

This is why the current DoD regulation that governs gender transition in military service made clear that not only must transgender members be "subject to the same standards and procedures as other members with regard to their medical fitness," but also that command

decisions and policies should ensure individuals in comparable circumstances are treated comparably. For example, the primary regulation governing gender transition directs as follows:

> Any determination that a transgender Service member is non-deployable at any time will be consistent with established Military Department and Service standards, as applied to other Service members whose deployability is similarly affected in comparable circumstances unrelated to gender transition.[45]

The Implementation Report's recommendations are not about requiring transgender personnel to meet military standards because, as we show in the next section of this study, they already do. The recommendations are about establishing separate standards that target transgender people alone. Those separate standards are nothing less than bans in disguise.

Transgender Service Members Are Medically Fit

According to a statement by six former U.S. Surgeons General, "transgender troops are as medically fit as their non-transgender peers and there is no medically valid reason—including a diagnosis of gender dysphoria—to exclude them from military service or to limit their access to medically necessary care."[46] The Implementation Report concludes, however, that individuals who transition gender are uniquely unfit for service. As we demonstrate below, when service members diagnosed with gender dysphoria are held to the same standards as all other personnel, they meet medical, fitness, and deployability standards. The Implementation Report's characterization of unfitness depends on the application of standards that apply only to transgender service members, but not to anyone else.

DOD's claim: Medically unfit by definition

The Implementation Report contends that service members with gender dysphoria who need to transition gender are, *by definition*, medically unfit. According to the Report, transgender service members may or may not be medically fit. But any transgender service member with a medical need to transition gender is automatically unfit. The Report observes that, "Today, transsexualism is no longer considered by most mental health practitioners as a mental health condition . . . Gender dysphoria, by contrast, is a mental health condition that can require substantial medical treatment . . . According to the APA, the 'condition is associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning.'"[47]

Although the Implementation Report is correct in noting that "clinically significant distress or impairment" is a criterion of the diagnosis, it failed to contextualize the observation in terms of the American Psychiatric Association's (APA) reasoning for defining gender dysphoria in this way. In creating the diagnosis, APA was well aware that many transgender individuals who need to transition are fully functional. In the

American medical system, however, patients cannot obtain treatment without a diagnosis code. Insurance companies tend not to reimburse care for mental health conditions that do not include the "clinically significant distress or impairment" language.

At the same time, APA was mindful that defining gender dysphoria in terms of clinically significant symptoms could risk stigmatizing transgender individuals as mentally ill. According to Dr. Jack Drescher, who helped create the gender dysphoria diagnosis during his service on the APA's DSM-5 Workgroup on Sexual and Gender Identity Disorders, "one challenge has been to find a balance between concerns related to the stigmatization of mental disorders and the need for diagnostic categories that facilitate access to healthcare."[48] Dr. Drescher explained to us in a personal communication why a diagnosis of gender dysphoria should not be conflated with unfitness:

> Many transgender individuals who receive gender dysphoria diagnoses are fully functional in all aspects of their lives. When APA revised the diagnosis, words were chosen carefully. Thus, making a diagnosis requires the presence of distress *or* impairment, not distress *and* impairment. One cannot and should not conflate "clinically significant distress" with impairment, as many recipients of the diagnosis experience no impairment whatsoever. In addition, "clinically significant distress" is a purely subjective measure that is difficult to objectively quantify. Many fully functional individuals may have clinically significant distress, such as a soldier separated from his family during deployment. However, being distressed does not mean the individual is impaired.[49]

The fact that DoD's own data reveal, as we discuss below, that 40 percent of service members diagnosed with gender dysphoria have deployed in support of Operations Enduring Freedom, Iraqi Freedom, or New Dawn, and that after the ban was lifted only one individual deploying with a diagnosis of gender dysphoria was unable to complete the deployment for mental health reasons, underscores the inaccuracy of conflating a diagnosis of gender dysphoria with unfitness. In response to DoD's release of the Implementation Report, the American Psychiatric Association's CEO and Medical Director Saul Levin stated that, "Transgender people do not have a mental disorder; thus, they suffer no impairment whatsoever in their judgment or ability to work."[50]

Artificial restrictions on deployment status

The Implementation Report's discussion of deployability illustrates how attributions of unfitness to transgender personnel depend on double standards. The Report overlooks that the small minority of transgender service members who are unfit, or who become unfit as a result of gender transition, can be managed under existing standards that apply to all service members. This includes the small minority of transgender personnel who, like other personnel, may be temporarily non-deployable. As with its recommendation for accession and retention policy, however, the Implementation Report avoids evaluating transgender members under existing deployability standards and instead assumes a separate standard that no one else will be required to meet. It assumes that transgender

members are uniquely at risk of becoming non-deployable and then concludes—contrary to policy—that therefore they must be measured by unique standards.

The Implementation Report makes the uncontroversial observation that deployment is a universal military obligation. No one disagrees that all must take their fair share of the burden:

> Above all, whether they serve on the frontlines or in relative safety in non-combat positions, every Service member is important to mission accomplishment and must be available to perform their duties globally whenever called upon . . . To access recruits with higher rates of anticipated unavailability for deployment thrusts a heavier burden on those who would deploy more often.[51]

Determination of medical eligibility for deployment, however, requires an individual assessment of fitness. Army deployment standards, as a representative example, state: "Because of certain medical conditions, some Soldiers may require administrative consideration when assignment to combat areas or certain geographical areas is contemplated."[52] The Army guidance goes on in greater detail to describe considerations that should be taken into account when evaluating certain conditions, including mental health conditions. For example, most psychiatric disorders are not disqualifying, provided the individual can "demonstrate a pattern of stability without significant symptoms for at least 3 months prior to deployment."[53] Medications are also generally not disqualifying for deployment, although the regulation includes a list of medications "most likely to be used for serious and/or complex medical conditions that could likely result in adverse health consequences," and these medications should be reviewed as part of a complete medical evaluation. Hormones, however, are not on this list of medications most likely to be used for serious or complex medical conditions.[54]

Given that medical deployment standards would not appear to be a significant obstacle for service members who are *not* transgender but have been diagnosed with a mental health condition or may be taking prescription medication, the Implementation Report's conclusion that gender transition makes someone uniquely unfit for deployment is difficult to understand. The Implementation Report does not rely on general standards that apply to service members across the board. Instead, the Report shifts focus to what "could" happen to "render Service members with gender dysphoria non-deployable for a significant period of time—perhaps even a year" or longer.[55]

Neither does the Implementation Report take into account the prior DoD professional judgment that gender transition can often be planned in ways that do not interfere with deployment or pose a risk to service member health. Instead, the Implementation Report sets up a false choice between assuming the risk of treatment and assuming the risk of complete denial of treatment.[56] In contrast, the Commander's Handbook—a DoD document containing military judgment on best practices for managing gender transition—relies on planning a schedule of transition care "that meets the individual's medical requirements and unit readiness requirements."[57] The policy explicitly authorizes

commanders to schedule gender transition so as not to interfere with deployment, and this balance is no different from the balance that commanders apply in managing deployment readiness for any other service member. Indeed, current military regulation requires that all service members be determined fit or unfit for deployment in accordance with established standards, "as applied to other Service members whose deployability is similarly affected in comparable circumstances unrelated to gender transition."[58]

The Implementation Report claims that "limited data" make it "difficult to predict with any precision the impact on readiness of allowing gender transition," but it cites the "potential" that individuals who transition gender will be "sent home from the deployment and render the deployed unit with less manpower."[59] But DoD's own data on deployment of service members diagnosed with gender dysphoria show these conclusions to be incorrect. Out of 994 service members diagnosed with gender dysphoria in FY2016 and the first half of 2017, 393 (40 percent) deployed in support of Operation Enduring Freedom, Operation Iraqi Freedom, or Operation New Dawn. *Exactly one* individual deploying with a diagnosis of gender dysphoria was unable to complete the deployment for mental health reasons since policy protecting transgender personnel from arbitrary dismissal was established in June 2016.[60] While the Implementation Report stated that "the Panel's analysis was informed by the Department's own data and experience obtained since the Carter policy took effect,"[61] the Panel's use of data is selective in nature. This information about actual deployment did not appear in the Implementation Report.

What did appear in the Implementation Report instead was a reference to service data showing that "cumulatively, transitioning Service members in the Army and Air Force have averaged 167 and 159 days of limited duty, respectively, over a one-year period."[62] This data was not connected to deployment and did not demonstrate any failure to meet a deployment obligation. What it did demonstrate, however, is the arbitrary way in which separate standards for fitness, targeted specifically against transgender personnel, can make them appear less medically fit and less deployable than their peers. Note that the Implementation Report's discussion of limited-duty status did not include the Navy. That is because, as the data source itself explains, the Navy does not automatically assign limited-duty status for gender transition without specific justification, which leads to a much smaller percentage of individuals on limited duty.[63] It stands to reason that average days of limited duty will be higher if the status is assigned arbitrarily without individual assessment, unlike the standard practice for personnel who are not transgender.

The Implementation Report cites the specific deployment guidelines[64] applicable to the U.S. Central Command (CENTCOM) combatant command in support of its contention that gender dysphoria limits ability to deploy and also presents risk to the service member and to others in a deployed environment.[65] First, as was the case with respect to accession standards, the Implementation Report mischaracterizes the content of CENTCOM deployment standards in order to buttress its case that service members who will transition gender cannot meet them. Second, the CENTCOM deployment standards supply another example of creating a separate standard that targets only transgender

service members, rather than applying a single standard that evaluates fitness in comparable fashion to personnel who are not transgender.

It is correct, as the Implementation Report states, that diagnosed psychiatric conditions can, in some circumstances, require individual waiver prior to deployment. However, it is not correct that "most mental health conditions, as well as the medication used to treat them, limit Service members' ability to deploy."[66] Waivers are normally required only if the condition presents special risk: residual impairment of social and/or occupational performance, substantial risk of deterioration, or need for periodic counseling.[67] A judgment based on these factors would necessarily be individual and case-by-case. All other psychiatric concerns in the CENTCOM standard are tied to the use of particular psychiatric medication such as benzodiazepines, recent hospitalization or suicide ideation/attempt, or recent treatment for substance abuse.[68]

Gender dysphoria, however, stands apart as the only condition requiring waiver regardless of lack of impairment, regardless of lack of risk of deterioration, and regardless of need for counseling. The CENTCOM standard automatically designates gender dysphoria as a condition with "complex needs" that must be treated differently. Not only does the standard require waiver in every instance regardless of mental fitness and stability, it specifically recommends that waiver should *not* be granted ("generally disqualified") for the duration of gender transition, "until the process, including all necessary follow-up and stabilization, is completed."[69]

Standards that designate anyone as automatically unfit for indefinite periods of time, without consideration of individual fitness, are extremely rare. In fact, the only mental health diagnoses that CENTCOM designates as a greater risk than gender dysphoria are psychotic and bipolar disorders, which are "strictly" disqualifying rather than "generally" disqualifying. This is clearly a circumstance in which gender dysphoria and gender transition are being evaluated under a standard that is unique to transgender service members. No other service members with mental health diagnoses are so completely restricted from deployment, with extremely rare and justified exception. This artificial restriction on deployment is then used to justify a ban on transgender service members and gender transition.

Service members routinely deploy with medication requirements, including hormones, but a transgender person's use of hormones is again assessed in unique fashion. The CENTCOM standard states that hormone therapies for endocrine conditions must be stable, require no laboratory monitoring or specialty consultation, and be administered by oral or transdermal means.[70] Part of the justification for the Implementation Report's conclusion that gender transition is inconsistent with deployment is the assumption that hormone therapy requires quarterly lab monitoring for the first year of treatment.[71] The Implementation Report cited civilian Endocrine Society guidelines in support of that monitoring requirement. According to the Implementation Report:

> Endocrine Society guidelines for cross-sex hormone therapy recommend quarterly bloodwork and laboratory monitoring of hormone levels during the

> first year of treatment . . . If the operational environment does not permit access to a lab for monitoring hormones (and there is certainly debate over how common this would be), then the Service member must be prepared to forego treatment, monitoring, or the deployment. Either outcome carries risks for readiness.[72]

While it is true that Endocrine Society standards of care recommend one year of monitoring after the commencement of hormone therapy, the Implementation Report did not disclose that the author of those guidelines communicated in writing to DoD to explain his medical judgment that monitoring hormone levels for three months prior to deployment, not twelve, was easily sufficient and that "there is no reason to designate individuals as non-deployable after the commencement of hormone replacement therapy."[73] Dr. Wylie C. Hembree, author of the Endocrine Society's standards of care, wrote the following in an October 2015 letter to the Pentagon's transgender policy group:

> (1) The recommendation for clinical monitoring was intended to cover a diverse, civilian population, including older, unreliable and/or unhealthy individuals who are not characteristic of the population of service members; (2) An initial monitoring at the 2–3 month mark is important to determine whether the initial prescribed hormone dose is appropriate for bringing an individual's hormone levels into the desired range. The initial dose will be accurate for approximately 80% of young, healthy individuals. Of the remaining 20% whose hormone levels will be discovered to be slightly too high or too low at the initial monitoring, adjusting the dose to bring levels into the desired clinical range is a simple matter; (3) Of the approximately 20% whose hormone levels will be discovered to be slightly too high or too low at initial monitoring, the health consequences of being slightly out of range are not significant; (4) The monitoring and, if necessary, re-adjustment of prescribed doses do not need to be performed by endocrinologists or specialists. Any physicians or nurses who have received a modest amount of training can perform these tasks; (5) Research is quite clear that hormone replacement therapy, especially for young, healthy individuals, is safe, with complication rates of less than 5%.

Hembree concluded that "There is no reason to designate individuals as non-deployable after the commencement of hormone replacement therapy. While individuals might be placed on limited duty (office work) until the initial monitoring at the 2–3 month mark, they can perform their jobs overseas in a wide range of deployed settings both before and after the initial monitoring."

The Hembree letter was provided directly to a Pentagon official who played a prominent role on the Transgender Service Review Working Group (TSRWG) that former Defense Secretary Carter created to study readiness implications of inclusive policy. The TSRWG, in turn, relied on the letter in determining how to implement inclusive policy without compromising readiness. That same official played a prominent role in Secretary Mattis's Panel of Experts, but the Implementation Report did not mention the Hembree

letter. Instead, it inaccurately claimed that a need for long-term monitoring would preclude deployment. The Report then established a false choice in claiming that service members commencing hormone therapy would have to "forego treatment, monitoring, or the deployment."[74] The Report added that "some experts in endocrinology . . . found no harm in stopping or adjusting hormone therapy treatment to accommodate deployment during the first year of hormone use."[75] As the author of the Endocrine Society's standards of care explained, however, there is no need to forego deployment after the initial 2–3 month period of monitoring.

Nor is refrigeration an obstacle to deployment. The Implementation Report cites a RAND study observation that British service members taking hormones serve in deployed settings, but that "deployment to all areas may not be possible, depending on the needs associated with any medication (e.g. refrigeration)."[76] However, hormone medications do not require refrigeration.

More broadly, singling out transgender service members as warranting a downgrade in medical fitness or deployment status is at odds with the way that the Defense Department treats hormone therapy for non-transgender troops. In 2014, former U.S. Surgeon General Joycelyn Elders co-directed a commission with a co-author of this study (Steinman), and the commission published a peer-reviewed study addressing hormones, gender identity, deployability, and fitness. While the commission's discussion of hormones is lengthy, we quote it in full because it underscores the contrast between the Implementation Report's treatment of hormone therapy for transgender personnel and the way that non-transgender service members requiring hormones are managed. The commission conducted its research before the implementation of inclusive policy, yet its observations about the double standards of the historical ban are fully applicable to the Implementation Report's proposed ban:

> [T]he military consistently retains non-transgender men and women who have conditions that may require hormone replacement. For example, the military lists several gynecological conditions (dysmenorrhea, endometriosis, menopausal syndrome, chronic pelvic pain, hysterectomy, or oophorectomy) as requiring referral for evaluation only when they affect duty performance. And the only male genitourinary conditions that require referral for evaluation involve renal or voiding dysfunctions. The need for cross-sex hormone treatment is not listed as a reason for referral for either men or women. The military also allows enlistment in some cases despite a need for hormone replacement. DoDI 6130.03, for example, does not disqualify all female applicants with hormonal imbalance. Polycystic ovarian syndrome is not disqualifying unless it causes metabolic complications of diabetes, obesity, hypertension, or hypercholesterolemia. Virilizing effects, which can be treated by hormone replacement, are expressly not disqualifying.
>
> Hormonal conditions whose remedies are biologically similar to cross-sex hormone treatment are grounds neither for discharge nor even for referral for medical evaluation, if service members develop them once they join the

> armed forces. Male hypogonadism, for example, is a disqualifying condition for enlistment, but does not require referral for medical evaluation if a service member develops it after enlisting. Similarly, DoDI 6130.03 lists "current or history of pituitary dysfunction" and various disorders of menstruation as disqualifying enlistment conditions, but personnel who develop these conditions once in service are not necessarily referred for evaluation. Conditions directly related to gender dysphoria are the only gender-related conditions that carry over from enlistment disqualification and continue to disqualify members during military service, and gender dysphoria appears to be the only gender-related condition of any kind that requires discharge irrespective of ability to perform duty.
>
> Military policy allows service members to take a range of medications, including hormones, while deployed in combat settings. According to a Defense Department study, 1.4 percent of all US service members (approximately 31,700 service members) reported prescription anabolic steroid use during the previous year, of whom 55.1 percent (approximately 17,500 service members) said that they obtained the medications from a military treatment facility. One percent of US service members exposed to high levels of combat reported using anabolic steroids during a deployment. According to Defense Department deployment policy, "There are few medications that are inherently disqualifying for deployment." And, Army deployment policy requires that "A minimum of a 180-day supply of medications for chronic conditions will be dispensed to all deploying Soldiers." A former primary behavioral health officer for brigade combat teams in Iraq and Afghanistan told Army Times that "Any soldier can deploy on anything." Although Tricare officials claimed not to have estimates of the amounts and types of medications distributed to combat personnel, Tricare data indicated that in 2008, "About 89,000 antipsychotic pills and 578,000 anti-convulsants [were] being issued to troops heading overseas." The Military Health Service maintains a sophisticated and effective system for distributing prescription medications to deployed service members worldwide.[77]

The Implementation Report's contention that transgender service members commencing hormone therapy must "forego treatment, monitoring, or the deployment" is inaccurate. Such therapy is not grounds for characterizing transgender service members as non-deployable or medically unfit beyond the initial 2–3 month monitoring period. Nor are such characterizations consistent with DoD's willingness to access, retain, and deploy tens of thousands of non-transgender service members who require hormones.

DoD's rationale for reinstating the ban cannot be about lost duty time during gender transition, because DoD's latest policy recommendation disqualifies from enlistment applicants who have already transitioned gender. The consistent theme across the Implementation Report is to create separate standards that target gender dysphoria and gender transition as uniquely disqualifying circumstances requiring uniquely

disqualifying measures, but to disregard generally applicable standards that transgender members would in fact meet. This allows the Implementation Report to suggest that transgender service members must be seeking "special accommodations,"[78] when the only accommodation they seek is the opportunity to meet general standards that apply to all.

Mental health encounters mandated by policy

The Implementation Report observes that "Service members with gender dysphoria are also nine times more likely to have mental health encounters than the Service member population as a whole (28.l average encounters per Service member versus 2.7 average encounters per Service member)."[79] [The encounters took place over 22 months, from October 2015 to July 2017.] However, the Implementation Report overlooked the main reason why service members diagnosed with gender dysphoria have high mental health utilization, leaving the incorrect impression that high usage is a reflection of medical unfitness or the difficulty of treating gender dysphoria.

In particular, the Implementation Report neglected to consider over-prescription of appointments for administrative rather than medical reasons. We determined in our research that service members with gender dysphoria diagnoses have high rates of utilization not because they are medically unfit, but because the military has over-prescribed visits as part of the process of providing transition-related care, requiring numerous medically unnecessary encounters for service members diagnosed with gender dysphoria, but not other medical conditions.

The over-prescription of appointments in the military has resulted from two distinct considerations, neither of which reflects medical unfitness. First, it has resulted from the medicalization of administrative matters, as aspects of care that would normally be handled administratively have been assigned to medical providers. As a result, the gender transition process can require a dozen or more mental health appointments regardless of the individual's actual mental health status and without regard to stability, fitness, or need for care. For example, a command decision to grant permission to wear a different uniform to work (exception to policy) requires a mental health workup and recommendation. Each step of the transition process, regardless of import or need, requires mental health workup and recommendation, and the medicalization of non-medical decisions inevitably increases usage.

The reason for the extra layer of administrative "ticket-punching" is not medical. It is the result, rather, of a military determination that it cannot allow transition-related medical care to occur without command supervision designed to ensure that changes in uniforms, grooming standards, facilities use, and the like do not undermine good order and discipline. And while these considerations are important and necessary to maintain operational readiness, they are not indicators of impaired mental health in the transgender member. The military, of course, follows standard professional guidelines for the diagnosis of gender dysphoria, the prescription of hormone therapy, and the authorization of surgery. The generation of unnecessary mental health visits comes not from these

decisions directly, but from the fact that, in the military, mental health providers serve as emissaries between the medical system and commanders. Mental health providers need to sign off on various administrative decisions along the way that have no counterpart in the civilian system, and no counterpart in the military's treatment of other mental health conditions. The military adds on an extra layer of medical approval to what otherwise would be purely administrative or workplace decisions, and this necessarily affects the degree to which medical providers are involved.

We reviewed a range of documents that mandate or guide the steps taken by military medical teams responsible for the care of transgender service members. For example, the principal DoD regulation governing gender transition[80] expands a medical provider's responsibility beyond making medical diagnoses and determining medically necessary treatment. In addition to those traditional and necessary aspects of health care, medical providers are responsible for justifying those medical judgments "for submission to the commander."[81] Medical providers must "advise the commander" on matters of gender transition, and in turn commanders must "coordinate with the military medical provider regarding any medical care or treatment provided to the Service member, and any medical issues that arise in the course of a Service member's gender transition."[82] The commander must approve every step along the path of gender transition, including the timing of any medical treatment and the timing of gender transition itself. Even with respect to military matters such as an exception to policy to wear a different-gender uniform, a military medical provider is responsible for consultation as part of requesting a commander's approval. These extra administrative consultations cannot help but increase medical utilization, even though they are not medically necessary in a traditional sense and do not reflect any lack of medical fitness.

The Commander's Handbook similarly emphasizes the unusual dual layer of justification and approval for decisions affecting transgender service members: "The oversight and management of the gender transition process is a team effort with the commander, the Service member, and the military medical provider." [83] Our observations are not intended to suggest there is anything inappropriate or militarily unnecessary about regulatory requirements that medical providers serve as emissaries between the medical system and the command structure. The point is simply that these dual layers of consultation and approval cannot help but drive up utilization of mental health care, but for reasons that are unrelated to mental health or fitness for duty.

Service-specific regulations produce over-prescriptions as well. According to interim guidance contained in a Navy Bureau of Medicine and Surgery document, a mental health diagnosis of gender dysphoria, coupled with a provider's determination that gender transition is medically necessary to relieve gender dysphoria, is only the first step in a series of requirements for approval of that medical care. Once a diagnosis and a recommendation for treatment is made, that diagnosis and recommendation must be referred for another layer of medical approval from the Transgender Care Team (TGCT). The TGCT will either validate or revise those medical decisions and forward the plan back to the originating provider. These decisions must then be documented once again as part of the package prepared to obtain a commander's approval: "Once the . . . medical

provider has received the validated medical treatment plan from the TGCT, the Service member and . . . medical provider should incorporate the validated medical treatment plan into the full gender transition plan for the Service member's commanding officer's review."[84]

Even at the end of the process of gender transition, the service member's "psychological stability" must be validated by a treating provider, validated a second time by the TGCT, and then validated a third time by a commander, all before an official gender marker change can occur. It might make sense to rely on a service member's duty performance as part of the judgment of whether he or she "consistently demonstrated psychological stability to transition to the preferred gender,"[85] but service-level procedures can instead substitute arbitrary numbers of mental-health visits over arbitrary minimums of time to satisfy a finding of "psychological stability." An "Individualized TGCT Care Plan" obtained from the Naval Medical Center in San Diego recommends that "At a minimum, the service member [undergoing transition] should follow up with a mental health provider or psychosocial support group on a monthly basis." These at-least-monthly visits are used to demonstrate a "6 month period of stability in real life experience documented by a mental health professional" and a "6 month period of emotional/psychosocial stability documented by a mental health professional."[86]

A senior military psychologist who has worked with transgender military members confirmed to us that in order to transition gender, a medical team must document several benchmarks of readiness for treatment and also for permission to change one's gender marker in the military identification system. As a result, he explained, many transgender service members may be required to attend multiple, inexpensive support group sessions that are essentially used as "ticket-punching" to verify administrative requirements. "It almost requires them to have those individual sessions on an ongoing basis," the psychologist said.[87] These requirements established by departments throughout the military health system are far more voluminous than anything required by the civilian medical system. Satisfying them necessitates extensive documentation, which creates incentives for over-prescribing health care appointments.

Lack of experience is the second reason for the over-prescribing of mental health visits, as well-intentioned medical providers inexperienced in transition-related care have been overly cautious in documenting gender stability. It is inevitable that an adjustment period would be needed for the military medical system, given how new it is to transgender health care. A survey of military medical providers found that even after the lifting of the ban, physicians were unprepared to treat transgender service members, as most respondents "did not receive any formal training on transgender care, most had not treated a patient with known gender dysphoria, and most had not received sufficient training" to oversee cross-hormone therapy.[88] This inevitable learning curve is closely connected to the over-prescribing of visits, in that overly cautious medical providers are requiring numerous, medically unnecessary appointments to document stability.

One social worker who is a clinical case manager for transgender service members explained that "The only way to verify that someone has been stable in their gender for

six months is if they communicate with someone showing that they're stable. So they must be checking in at least once per month," and sometimes more. As a result of that requirement, he said his department put recommendations in their transition treatment plans that service members check in with either a primary care provider or mental health provider regularly, or that they attend one of the transgender support groups. "Most of the naval hospitals within our region have a weekly trans support group," he said, "and that tends to be provided through the mental health department. People may be attending those meetings every week and that would show up in their notes as going to a mental health appointment every week." In short, to establish required stability, individuals "have to be reporting that to someone so it's documented so we can point to it and say, 'See? They're stable,' so we can draft a memo verifying it."[89]

A Veterans Affairs psychiatrist familiar with the military's management of transgender personnel told us that doctors "could be requiring the person to go to a mental health provider to check on their stability, and they *have* to go. These are situations that would be absent any specific need for mental health on the part of the service member. They're either explicitly required to go or implicitly required: you can't demonstrate stability if you're not seen by someone." He estimated that "people may have four to seven appointments, *absent any particular need*, just to demonstrate that they're stable in the course of their in-service transition." He added that most military clinicians "are unfamiliar with the process, and they don't yet have capacity. They're trying to learn this as they go along, and so they're being cautious. There's a kind of learning curve. As the system becomes more adept at working with this population, it could be that the number of visits goes down because the clinicians don't need the comfort of seeing the people as often as they do now."[90]

Transgender service members confirm that most of their mental health encounters are the result of over-prescribing visits, not medical need. We assessed the experiences of ten Active Duty transgender troops who transitioned or started to transition over the past two years. Out of 81 total mental health visits reported, 97.5 percent (79 visits) were classified as obligatory. A large number of these visits were mandated monthly counseling sessions that helped provide administrators with ways to document readiness and stability of transitioning service members. An Army First Lieutenant told us that upon beginning hormone therapy, he had "monthly checkups with my behavioral health clinical social worker, monthly checkups with my nurse case manager." A sailor reported that "I have to go for a five-minute consultation for them just to say, 'this is when your surgery is.'"[91]

An analysis by the Veterans Health Administration demonstrates that when a system is not characterized by over-prescribing, mental health care utilization among transgender individuals is far lower than the rate reported by DoD, and also that utilization among transgender and non-transgender individuals is roughly equivalent (as suggested below by the California Health Interview Survey). VHA data reveal that from FY2011 to FY2016, transgender patients averaged between 2.3 and 4.4 mental health encounters per year, as compared to slightly lower utilization among non-transgender patients diagnosed with depression.[92] These data suggest that DoD's finding that service members diagnosed

with gender dysphoria have an average of 15.3 mental health encounters per year is not a reflection of medical need.

Table 1. Incidence proportion of mental health utilization among VA patients by FY

	FY11	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**
TRANSGENDER GROUP	**n**	**n**	**n**	**n**	**n**	**n**
Total unique patients	396	487	562	680	879	1089
Total # of mental health encounters	923	1454	1584	2653	2943	4806
Incidence of encounters/patient	2.3	3.0	2.8	3.9	3.3	4.4
SAMPLE OF NONTRANSGENDER PATIENTS						
Total unique patients	1188	1461	1686	2040	2637	3267
Total patients with depression diagnosis	173	201	230	276	338	446
Total # of mental health encounters	248	274	432	438	745	1381
Incidence of encounters/patient	1.4	1.4	1.9	1.6	2.2	3.1

Research indicates that when health care delivery is not over-prescribed, utilization among transgender and non-transgender adults is roughly equivalent. A 2018 study drew on California Health Interview Survey (CHIS) data to assess "utilization rates in access to primary and specialty care among a large cohort of insured transgender and cisgender [i.e., not transgender] patients." The authors calculated the "percentage of patients accessing primary care providers or specialty care providers among patients who reported having insurance coverage" and categorized patients as low, medium, or high utilizers. The results were that transgender patients "accessed both primary and specialty care services at a lower frequency than cisgender individuals and were more likely to fall into the low and medium utilizer groups." Fully 72.9 percent of transgender individuals were low utilizers (0–3 annual visits) compared to 70.9 percent of non-transgender individuals. Just 0.8 percent of transgender individuals were high utilizers (13–25 annual visits) compared to 4.6 percent of non-transgender people. The authors concluded that "transgender individuals are less likely to utilize healthcare services" than the overall population.[93]

Table 2: Frequency of Doctor Visits by Gender Identity

	GENDER IDENTITY					
NUMBER OF DOCTOR VISITS IN PAST YEAR	Not transgender (i.e., cisgender)		Transgender or gender non-conforming		All	
Low Utilizers (0–3 visits)	70.9%	15,117,000	72.9%	81,000	70.9%	15,197,000
Medium Utilizers (4–12 visits)	24.4%	5,203,000	26.3%	29,000	24.4%	5,232,000
High Utilizers (13–25 visits)	4.6%	990,000	0.8%	1,000	4.6%	991,000
Total	100%	21,310,000	100%	110,000	100%	21,421,000

High utilization is not evidence of unfitness, the burdensome needs of transgender troops, or the difficulty of treating gender dysphoria. To the extent that service members diagnosed with gender dysphoria log more mental health visits than average, it is because the system treats them differently and requires more engagement with mental health providers. It has little to do with need for care or fitness for duty. Military medical providers are taking extra steps, sometimes to comply with regulations, and other times out of excessive caution, to justify medical and administrative decisions during the transition process. DoD's failure to address this possibility in its research creates the misimpression that excessive utilization demonstrates the medical unfitness of transgender troops. But it is the military bureaucracy that creates elevated usage figures, not transgender service members.

Suicide is a military problem, not a transgender problem

Children of service members are more than 50 percent more likely to have attempted suicide than the general population, yet the military does not bar individuals in this high-risk group from entry.[94] The Implementation Report, however, attempts to invoke an analogous risk factor among transgender people in general as a basis for disqualification. The Implementation Report claims that "high rates of suicide ideation, attempts, and completion among people who are transgender are also well documented in the medical literature," and cites research indicating lifetime rates of suicide attempts among transgender civilians ranging from 41 percent to as high as 57 percent. But neither applicants for military service nor serving members in uniform are evaluated by characteristics of larger groups; they are measured by standards as individuals.

The Implementation Report also mischaracterizes and selectively cites DoD data on military personnel that, if accurately presented, would in fact demonstrate that rates of suicidal ideation among transgender and non-transgender service members are roughly equivalent. The Implementation Report claims that among military personnel, "Service members with gender dysphoria are eight times more likely to attempt suicide than Service members as a whole (12% versus 1.5%)" during a 22-month study window.[95] This is an inaccurate reading of DoD's own data as well as an inaccurate interpretation of what the data mean. First, the DoD data do not show that service members with gender dysphoria were eight times more likely to *attempt* suicide than other service members during the 22-month study period, but to *contemplate* suicide, a major distinction that the Implementation Report misconstrued.

Second, service members with gender dysphoria are not eight times more likely to contemplate suicide than other service members, because the data under-report the frequency of suicidal thoughts among service members as a whole. The reported 1.5 percent suicidal ideation rate among service members as a whole was based on a review of administrative records.[96] When DoD used more sophisticated methods to determine rates of suicidality among service members not being treated for behavioral health problems, military researchers determined that 14 percent of service members have had suicidal thoughts at some time in their lives, 11 percent had suicidal thoughts at some

point during their military careers, and 6 percent had suicidal thoughts during the past year.[97] Suicide is a military problem. It is not a transgender problem.

Finally, while DoD data indicate that service members diagnosed with gender dysphoria are slightly more prone to suicidal ideation than other service members, the Implementation Report did not take the historical legacy of the transgender ban into account. Extensive research has confirmed that both stigma and the denial of medically necessary care can lead to suicidality.[98] The historical transgender ban, in other words, contributed to stigma and deprivation of health care, which exacerbates the problems the Implementation Report has deemed disqualifying.

The reaction of professional mental health providers to this circular reasoning—denying necessary health care to transgender troops and then citing suboptimal health as the reason for exclusion—is summed up by statements recently released by two of the largest mental health associations in America. The CEO of the American Psychological Association recently stated that he was "alarmed by the administration's misuse of psychological science to stigmatize transgender Americans and justify limiting their ability to serve in uniform and access medically necessary health care."[99] And the American Psychiatric Association stated that the Pentagon's anti-transgender "discrimination has a negative impact on the mental health of those targeted."[100] If inclusive policy remains in effect, DoD will continue to provide medically necessary care to transgender service members. As a result, we would expect the slightly elevated ideation rate among service members diagnosed with gender dysphoria to disappear over time.

Unit Cohesion Has Not Been Compromised

The Implementation Report concludes that inclusive policy for transgender personnel could compromise unit cohesion, privacy, fairness, and safety by allowing transgender men who retain some physiological characteristics of their birth sex and transgender women who retain some physiological characteristics of their birth sex to serve in the military, thus blurring the line that distinguishes male and female bodies:

> [B]y allowing a biological male who retains male anatomy to use female berthing, bathroom, and shower facilities, it [inclusive policy] undermines the reasonable expectations of privacy and dignity of female Service members. By allowing a biological male to meet the female physical fitness and body fat standards and to compete against females in gender-specific physical training and athletic competition, it undermines fairness (or perceptions of fairness) because males competing as females will likely score higher on the female test than on the male test and possibly compromise safety.[101]

According to the Implementation Report, "sex-based standards ensure fairness, equity, and safety; satisfy reasonable expectations of privacy; reflect common practice in society; and promote core military values of dignity and respect between men and women—all of which promote good order, discipline, steady leadership, unit cohesion, and ultimately

military effectiveness and lethality."[102] Yet the Report does not include any evidence to support its contention that inclusive policy has had these effects. Three weeks after the Report's publication, Army Chief of Staff General Mark Milley responded to Senator Kirsten Gillibrand, who asked whether he had heard "anything about how transgender service members are harming unit cohesion," by testifying that "I have received precisely zero reports of issues of cohesion, discipline, morale and all those sorts of things."[103] Chief of Naval Operations Admiral John Richardson, Air Force Chief of Staff General David Goldfein, and Marine Corps Commandant General Robert Neller subsequently confirmed that inclusive policy has not compromised cohesion.[104]

The Implementation Report's explanation for failing to provide evidence is that cohesion "cannot be easily quantified" and that "Not all standards . . . are capable of scientific validation or quantification. Instead, they are the product of professional military judgment acquired from hard-earned experience leading Service members in peace and war or otherwise arising from expertise in military affairs. Although necessarily subjective, this judgment is the best, if not only, way to assess the impact of any given military standard on the intangible ingredients of military effectiveness mentioned above—leadership, training, good order and discipline, and unit cohesion."[105]

This contention, however, does not withstand scrutiny. In response to Senator Gillibrand's question about whether transgender troops have harmed unit cohesion, General Milley testified that "it is monitored very closely because I am concerned about that."[106] In addition, many military experts have quantified cohesion and other dimensions of readiness, and have assessed cause-and-effect claims about those phenomena in their research.[107] In 2011 and 2012, for example, a group of Service Academy professors used multiple methods including surveys, interviews, field observations, and longitudinal analysis to assess whether the repeal of "don't ask, don't tell" (DADT) had impacted readiness and its component dimensions, including unit cohesion and morale, and results were published in a leading peer-reviewed military studies journal.[108]

In the case at hand, DoD could have studied the validity of its contentions about cohesion, privacy, fairness, and safety without difficulty. For example, DoD could have (1) assessed readiness by comparing the performance of units that include a service member diagnosed with gender dysphoria with units that do not include anyone with a diagnosis; (2) measured cohesion via interviews, surveys, and/or field observations and then compared results from units that include a service member diagnosed with gender dysphoria with units that do not include anyone with a diagnosis; (3) assessed privacy and fairness via interviews, surveys, and/or field observations and then compared results from units that include a service member diagnosed with gender dysphoria with units that do not include anyone with a diagnosis; and (4) assessed safety by comparing disciplinary records of units that include a service member diagnosed with gender dysphoria with units that do not include anyone with a diagnosis.

Instead, and in lieu of evidence, the Implementation Report offers three scenarios, two of which are hypothetical, to sustain its assertions. The scenarios, however, do not sustain

the conclusion that inclusive policy has compromised or could compromise cohesion, privacy, fairness, or safety. Under the first hypothetical scenario, fairness and safety are compromised when transgender women compete with cisgender women in sporting events, for example boxing competitions.[109] The Report assumes incorrectly that "biologically-based standards will be applied uniformly to all Service members of the same biological sex," contrary to current practice in which gender-based presumptions are adjustable based on circumstances. At the U.S. Military Academy, for example, the Implementation Report observes that "Matching men and women according to weight may not adequately account for gender differences regarding striking force." But the Report ignores that Cadets' skill level and aggression, not just weight, are factored into safety decisions, and West Point allows men and women to box each other during training.[110]

While sex-based standards are used in concert with other factors to promote fairness and safety, male-female segregation is not absolute—and it is not sufficient. Ensuring fairness and safety in combative training is always a command concern because of the wide variation in body size and weight within gender even when gender is defined by birth. Commanders at all levels are able to make judgments about how to conduct training in ways that adequately protect the participants, and they are able to do the same thing for transgender service members when and if needed. This hypothetical scenario does not lend any credence to the contention that inclusive policy has compromised or could compromise cohesion, privacy, fairness, or safety.

Under the second hypothetical scenario, a transgender man who has not had chest-reduction surgery wants to perform a swim test with no shirt and breasts exposed. It is farfetched to imagine a transgender service member making such a request, and the Implementation Report does not offer any actual examples to buttress this hypothetical concern despite almost two years of inclusive policy. Despite the low likelihood of such a scenario, the Commander's Handbook guides commanders in what to do, and the guidance is sufficient. The Handbook holds the transgender service member responsible for maintaining decorum: "It is courteous and respectful to consider social norms and mandatory to adhere to military standards of conduct."[111] Then, the Handbook advises commanders that they may counsel the service member on this responsibility, but also may consider other options such as having everyone wear a shirt. Ultimately, according to the Handbook, the fundamental principle for commanders is that, "It is within your discretion to take measures ensuring good order and discipline."[112] Similar to the first hypothetical scenario, this scenario does not sustain a conclusion that inclusive policy has compromised or could compromise cohesion, privacy, fairness, or safety.

The third scenario, the only scenario that is not hypothetical, describes a cisgender female who claimed that the presence in shower facilities of a transgender female who retained some physiological characteristics of birth sex undermined her privacy, and the transgender service member claimed that her commander had not been supportive of her rights.[113] DoD guidance offers commanders tools that should have been sufficient for resolving the matter. The situation closely matches scenarios 11 and 15 in the Commander's Handbook, which emphasize that all members of the command should be

treated with dignity and respect: "In every case, you may employ reasonable accommodations to respect the privacy interests of Service members."[114] Commanders are given the following guidance on reasonable accommodations: "If concerns are raised by Service members about their privacy in showers, bathrooms, or other shared spaces, you may employ reasonable accommodations, such as installing shower curtains and placing towel and clothing hooks inside individual shower stalls, to respect the privacy interests of Service members. In cases where accommodations are not practicable, you may authorize alternative measures to respect personal privacy, such as adjustments to timing of the use of shower or changing facilities."[115]

The Commander's Handbook also makes clear that the transgender service member has responsibility: "Maintaining dignity and respect for all is important. You will need to consider both your own privacy needs and the privacy needs of others. This includes, but is not limited to, maintaining personal privacy in locker rooms, showers, and living quarters. One strategy might include adjusting personal hygiene hours."[116]

Inclusive policy cannot be blamed if commanders fail to follow the guidance or to implement it properly, and this scenario does not lend any credibility to the Implementation Report's contention that inclusive policy has compromised or could compromise cohesion, privacy, fairness, or safety. Army training materials are even more straightforward, essentially reminding Soldiers that military life involves a loss of privacy and instructing them that it is not the Army's job to protect tender sensibilities: "Understand that you may encounter individuals in barracks, bathrooms, or shower facilities with physical characteristics of the opposite sex despite having the same gender marker in DEERS."[117]

Cohesion and Related Concerns Have Historically Proven Unfounded

The Implementation Report's contention that inclusive policy could compromise cohesion, privacy, fairness, and safety echoes discredited rationales for historical prohibitions against African Americans, women, and gays and lesbians. In each case, military leaders made arguments about cohesion, privacy, fairness, and safety.[118] In the case of "don't ask, don't tell," for example, leaders insisted that because heterosexual service members did not like or trust gay and lesbian peers, lifting the ban would undermine unit cohesion. One of the principal architects of the policy, the late professor Charles Moskos, insisted that allowing gay men and lesbians to shower with heterosexuals would compromise privacy, and a judge advocate general argued that a "privacy injury" would take place every time an openly gay or lesbian service member witnessed the naked body of a heterosexual peer.[119] Others argued that the repeal of DADT would lead to an increase in male-male sexual assault.[120] One year after the ban's repeal, military professors published a study repudiating these predictions, and the New York Times editorialized that "politicians and others who warned of disastrous consequences if gay people were allowed to serve openly in the military are looking pretty foolish."[121]

Inclusive Policy Promotes Readiness

Scholarly research has shown that inclusive policy for transgender personnel promotes military readiness. According to a comprehensive implementation analysis by retired General Officers and scholars writing before the 2016 lifting of the ban, "when the US military allows transgender personnel to serve, commanders will be better equipped to take care of the service members under their charge."[122] While scholars have explored the relationship between readiness and inclusive policy for transgender personnel from a variety of angles including medical fitness, implementation, command climate, and deployability, all available research has reached the same conclusion: At worst, inclusive policy does not compromise readiness. At best, it enhances readiness by holding all service members to a single standard and promoting medical readiness.[123]

After a year of in-depth research, the Pentagon's Transgender Service Review Working Group (TSRWG) reached that very conclusion. Former Secretary of Defense Carter created the TSRWG on July 28, 2015, to study "the policy and readiness implications of welcoming transgender persons to serve openly."[124] The TSRWG included dozens of civilian and military policy analysts who engaged in extensive research, and who concluded that holding transgender service members "to the same standards and procedures as other members with regard to their medical fitness for duty, physical fitness, uniform and grooming, deployability, and retention, is consistent with military readiness."[125] DoD senior civilian leaders as well as the Service Chiefs signed off on the lifting of the transgender ban on June 30, 2016, because they concluded that inclusive policy would be "consistent with military readiness." The Office of the Secretary of Defense as well as the Services published 257 pages of implementing guidance spread across 14 documents and regulations.[126] These documents instruct commanders and service members how to implement inclusive policy without compromising readiness.

As part of the TSRWG's research, DoD commissioned the RAND Corporation to study whether inclusive policy for transgender personnel would compromise readiness. RAND studied the health care needs of transgender service members and estimated expected health care utilization rates as well as the expected financial cost of providing care following the lifting of the ban. In addition, RAND studied the impact of inclusive policy on unit cohesion and availability to deploy. Finally, RAND studied whether readiness had been compromised in foreign militaries that allow transgender personnel to serve openly. RAND published a 91-page study concluding that the impact of inclusive policy would be "negligible."[127]

Organizational experiences confirm the findings of the scholarly research. Eighteen foreign militaries allow transgender personnel to serve openly, and none has reported any compromise to readiness, cohesion, or any other indicator of military performance. A peer-reviewed study of 22 years of inclusive policy for transgender personnel in the Canadian Forces concluded that "allowing transgender personnel to serve openly has not harmed the CF's effectiveness."[128] According to RAND's analysis of foreign militaries that allow transgender personnel to serve openly, "In no case was there any evidence of

an effect on the operational effectiveness, operational readiness, or cohesion of the force."[129]

In the U.S., transgender service members have been serving openly for almost two years and have been widely praised by commanders. We interviewed four former senior DoD officials who oversaw personnel policy for more than 6 months of inclusive policy, as well as one current senior DoD official who oversaw personnel policy for more than 9 months of inclusive policy. During their combined 35 months of collective responsibility for personnel policy, none of these senior officials was aware of any evidence that inclusive policy compromised readiness. According to one of the former officials, "As of the time we left office, we had not seen any evidence that the Department's new transgender policy had resulted in a negative impact on readiness." When we asked former Navy Secretary Ray Mabus if inclusive policy for transgender personnel promoted readiness, he observed, "Absolutely . . . A more diverse force enhances readiness and combat effectiveness."[130]

DoD's critique of prior readiness research is unsupported by evidence

In recommending reinstatement of the ban, however, the Implementation Report takes aim at RAND's methodology as well as the validity of its conclusions. According to a memorandum from Secretary Mattis that accompanied the release of the Implementation Report, the RAND study "contained significant shortcomings. It referred to limited and heavily caveated data to support its conclusions, glossed over the impacts of healthcare costs, readiness, and unit cohesion, and erroneously relied on the selective experiences of foreign militaries with different operational requirements than our own."[131] The Implementation Report elaborated:

> The RAND report thus acknowledged that there will be an adverse impact on health care utilization, readiness, and unit cohesion, but concluded nonetheless that the impact will be "negligible" and "marginal" because of the small estimated number of transgender Service members . . . Because of the RAND report's macro focus, however, it failed to analyze the impact at the micro level of allowing gender transition by individuals with gender dysphoria. For example, . . . the report did not examine the potential impact on unit readiness, perceptions of fairness and equity, personnel safety, and reasonable expectations of privacy at the unit and sub-unit levels, all of which are critical to unit cohesion. Nor did the report meaningfully address the significant mental health problems that accompany gender dysphoria—from high rates of comorbidities and psychiatric hospitalizations to high rates of suicide ideation and suicidality—and the scope of the scientific uncertainty regarding whether gender transition treatment fully remedies those problems.[132]

Referring to both the TSRWG as well as the RAND study, the Implementation Report concludes that "the realities associated with service by transgender individuals are more complicated than the prior administration or RAND had assumed."[133]

The Implementation Report's critique of the RAND study is unsupported by evidence. Before addressing flaws in the critique, we underscore the depth of RAND's military expertise and trustworthiness. The RAND Corporation is perhaps the most distinguished and trusted research institute in the U.S. on matters of defense and national security, and RAND operates three federally funded research and development centers engaging in military research: RAND Arroyo Center, sponsored by the U.S. Army, RAND Project Air Force, sponsored by the U.S. Air Force, and RAND National Defense Research Institute, sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Department of the Navy, and other defense agencies.

While these centers are not government entities, they cooperate closely with their Defense Department sponsors. According to RAND Arroyo's 2015 annual report, for example, the Arroyo Center Policy Committee consisted of 17 General Officers (including the U.S. Army Vice Chief of Staff, the Chief of the National Guard Bureau, five Deputy Chiefs of Staff, and the Commanding General of U.S. Army Forces Command) and five Assistant Secretaries of the Army. RAND Arroyo's Director reported that "We collaborate closely with our Army sponsors not only as we develop our research agenda and design individual analysis, but also as we conduct our research."[134]

The Defense Department relies on RAND to provide nonpartisan, methodologically sophisticated research studies on strategy, doctrine, resources, personnel, training, health, logistics, weapons acquisition, intelligence, and other critically important topics. During the past several decades, RAND has published more than 2,500 military reports, and three of those reports concerned military service by LGBT individuals. In 1993, DoD commissioned RAND to do a $1.3 million study of whether allowing gays and lesbians to serve openly in the military would undermine readiness. RAND assembled a team of 53 researchers who studied foreign militaries, police and fire departments, prior experiences of minority integration into the military, and other aspects of the topic. RAND then published a 518-page report concluding that sexual orientation was "not germane" to military service and that lifting the ban would not undermine readiness. Military and political leaders disagreed with that conclusion, however, and the report was shelved. Seventeen years later, in 2010, DoD hired RAND to replicate its earlier study, and RAND again engaged in comprehensive research and again concluded that allowing gay men and lesbians to serve openly would not compromise readiness. DADT was repealed shortly after the publication of the second RAND study, and subsequent research confirmed the validity of RAND's 1993 and 2010 analyses, in that inclusion did not undermine any aspect of readiness including unit cohesion, morale, retention, and recruitment.[135]

The Implementation Report's critique of the 2016 RAND study on transgender military service is no more persuasive than earlier critiques of RAND's studies on gays and lesbians in the military. First, as argued throughout this study, and despite almost two years of inclusive policy, the Implementation Report has not produced any evidence showing that inclusive policy for transgender personnel has compromised any aspect of readiness, including medical fitness, unit cohesion, or good order and discipline. It is instructive that in its extensive analysis of the ways in which inclusive policy is expected

to undermine cohesion, privacy, fairness, and safety, the Implementation Report did not offer any supporting data. The Implementation Report critiques RAND for failing to assess unit cohesion "at the unit and sub-unit levels," but as noted above, three Service Chiefs confirmed after the Report's publication that inclusive policy has not compromised unit cohesion, including Army Chief of Staff Milley's testimony that cohesion "is monitored very closely because I am concerned about that and want to make sure that they [transgender Soldiers] are in fact treated with dignity and respect and no, I have received precisely zero reports of issues of cohesion, discipline, morale and all those sorts of things."

Second, DoD data validate most of RAND's statistical predictions. RAND estimated that between 1,320 and 6,630 transgender service members serve in the Active Component, and DoD data now show that there are 8,980 active duty transgender troops. RAND estimated that transgender service members in the Active Component would require an overall total of 45 surgeries per year, and DoD data indicate that the actual number was 34 surgeries during a 12-month window, from September 1, 2016, to August 31, 2017.[136] RAND estimated that transition-related health care would cost between $2.4 and $8.4 million per year, and DoD data indicate that the cost in FY2017 was $2.2 million.[137]

Third, the Implementation Report mischaracterized RAND's overall finding by drawing selectively from the study. According to the Implementation Report, RAND "acknowledged that there will be an adverse impact on health care utilization, readiness, and unit cohesion, but concluded nonetheless that the impact will be 'negligible' and 'marginal' because of the small estimated number of transgender Service members." But the Implementation Report misconstrues RAND's analysis. Any policy change yields some costs and some benefits, and RAND found that inclusive policy for transgender troops would have some negative effects, such as the financial cost of health care. But RAND found that inclusive policy would have some positive effects as well, and that continuing to ban transgender troops would entail some costs.[138] RAND did conclude that the effect of lifting the ban would be "negligible" because of the small number of transgender troops, but the Implementation Report fails to acknowledge the context of that conclusion, namely that RAND identified the benefits of inclusive policy and the costs of reinstating the ban, both of which would offset the minor downsides of the policy shift.

Fourth, while it is true that RAND did not address "perceptions of fairness and equity, personnel safety, and reasonable expectations of privacy at the unit and sub-unit levels, all of which are critical to unit cohesion," RAND had a good reason for restricting the scope of its analysis, in that available evidence indicated that cohesion was not compromised in any military force allowing transgender personnel to serve openly. Hence, there was no reason to focus on cohesion at a more granular level. Given that DoD has not offered any evidence to sustain any of its assertions about cohesion, privacy, fairness, and safety despite almost two years of inclusive policy, it seems unreasonable to critique RAND for neglecting to address a problem that does not exist.

Fifth and finally, the Implementation Report's critique of RAND's analysis of foreign militaries is unsupported by evidence. Neither RAND nor DoD has identified any evidence that any foreign military that allows transgender personnel to serve openly has experienced a decline in readiness or cohesion. But the Implementation Report mischaracterizes evidence in the RAND study to obscure that simple fact. An in-depth study of transgender military service in the Canadian Forces (CF) "found no evidence of any effect on unit or overall cohesion," but did find that the CF's failure to provide commanders with sufficient guidance and failure to train service members in inclusive policy led to implementation problems. But the CF's failure to provide implementation guidance does not mean that inclusive policy compromised readiness or cohesion. Rather, it means that the CF should have provided more guidance. Secretary Carter's TSRWG studied the Canadian example, learned from it, and issued extensive guidance and training materials, thus avoiding the CF's implementation challenges.

The Implementation Report claims that because the CF chain of command "has not fully earned the trust of the transgender personnel," there are "serious problems with unit cohesion." But according to the authors of the study, one of whom is a professor at the Canadian Forces College and one of the world's leading experts on personnel policy in the CF, the lack of trust is not evidence that inclusive policy has compromised unit cohesion. Rather, it is a reflection of the CF's failure to implement inclusive policy effectively, for the reasons discussed above.

The study of the CF that informed the RAND report was published in a leading, peer-reviewed military studies journal and was based on careful methodology, including an "extensive literature review, using 216 search permutations, to identity all relevant media stories, governmental reports, books, journal articles and chapters."[139] In addition, the authors received written, interview, and focus group data from 26 individuals, including 2 senior military leaders, 10 commanders, 2 non-transgender service members who served with transgender peers, 4 transgender service members and veterans, and 8 scholarly experts on readiness in the CF. By contrast, the Implementation Report presents exactly zero original research on the CF. If a professor in the Canadian Forces College concludes in a peer-reviewed study, and on the basis of extensive research, that inclusive policy, despite implementation problems, has not compromised readiness or cohesion, DoD cannot dismiss the weight of the conclusion by selectively relying on a handful of quotes.

The Implementation Report makes a similar attempt to dismiss RAND's conclusions about readiness and inclusive policy in the Israel Defense Forces (IDF). Available research on transgender service in the IDF is not as thorough as research on the CF, but RAND nonetheless analyzed a study that was based on several interviews, including interviews with two senior IDF leaders who confirmed that inclusive policy had not compromised readiness or cohesion. The Implementation Report dismisses these "sweeping and categorical claims," but offers no evidence to the contrary. If two senior leaders in a military organization confirm that a policy has a certain effect, that counts as data, especially absent contradictory evidence, and especially when the data line up with evidence from other military forces.

The Implementation Report is correct that operational and other differences distinguish the U.S. armed forces from other militaries. That does not detract, however, from the fact that RAND was unable to find any evidence that readiness or cohesion had declined as a result of inclusive policy in any of the 18 nations that allow transgender personnel to serve openly.

DoD Does Not Consider Benefits of Inclusive Policy or Costs of Ban

Every change of policy involves costs and benefits, and when analysts study whether or not to abandon the status quo in favor of an alternative policy option, typically they address the costs and benefits of both the status quo as well as the contemplated policy modification. DoD's research, however, was artificially narrowed at the outset to focus exclusively on the costs of inclusion, and the Implementation Report did not include any assessment of the benefits of inclusive policy or the costs of the proposed ban. DoD could have framed its research question broadly by asking, "What impact has inclusive policy for transgender troops had on military readiness?" Instead, the Implementation Report addressed only the costs of inclusive policy and failed to consider overall readiness implications. A more rigorous and comprehensive assessment of readiness indicates that inclusive policy for transgender personnel promotes readiness, while banning transgender personnel and denying them medically necessary care compromises it.

Failure to consider benefits of inclusive policy

If DoD researchers had studied benefits as well as costs, they could have assessed promotion rates, time-in-service, and commendations to determine whether transgender personnel have served successfully. They could have conducted case studies of transgender personnel who have completed gender transition to determine whether transitions have been effective. DoD researchers could have studied the experience of Lieutenant Colonel Bryan (Bree) Fram, an astronautical engineer currently serving as the Air Force's Iraq Country Director at the Pentagon, overseeing all Air Force security cooperation and assistance activity for operations in Iraq. They could have evaluated the experience of Air Force Staff Sergeant Logan Ireland, who deployed to Afghanistan after transitioning gender and was named "NCO of the Quarter." DoD could have studied the experience of Staff Sergeant Ashleigh Buch, whose commander said that "She means the world to this unit. She makes us better. And we would have done that [supported gender transition] for any airman but it made it really easy for one of your best." Or DoD could have assessed the experience of Lance Corporal Aaron Wixson, whose commander reported that "We are lucky to have such talent in our ranks and will benefit from his retention if he decides to undertake a subsequent tour of duty . . . Enabling LCpl Wixson to openly serve as a transgender Marine necessarily increases readiness and broadens the overall talent of the organization."[140]

The Implementation Report's explanation for failing to study the performance of transgender troops is that "Limited data exists regarding the performance of transgender Service members due to policy restrictions . . . that prevent the Department from tracking individuals who may identify as transgender as a potentially unwarranted invasion of

personal privacy."[141] But this excuse in unpersuasive, as DoD researchers could have asked data analysts to match medical records of service members diagnosed with gender dysphoria with administrative records concerning promotion rates, time-in-service, commendations, and other indicators of performance without revealing names or identifying details. Instead, DoD failed to consider any benefits of inclusive policy, and it focused exclusively on costs.

By omitting any analysis of benefits, the Implementation Report failed to address critical ways in which the accession and retention of transgender personnel promote readiness. To begin, inclusive policy for transgender service members promotes medical readiness by ensuring adequate health care to a population that would otherwise serve "underground." As we mention in our discussion of efficacy, a robust body of scholarly research shows that transgender people who receive the care they need are better off and function well at work and beyond.[142]

After the repeal of "don't ask, don't tell," gay and lesbian service members experienced a decline in harassment, because they could approach offending colleagues and politely point out that unprofessional behavior was no longer acceptable in the workplace, or could safely report inappropriate behavior if it persisted.[143] Inclusive policy for transgender personnel is expected to produce a similar effect, but the Implementation Report does not address this possibility.

Finally, the Implementation Report ignores the financial gains of retaining transgender personnel. DoD data indicate that the per-person cost of care in FY2017 was $18,000 for each service member diagnosed with gender dysphoria, but the Report does not mention that by DoD's own estimate, recruiting and training one service member costs $75,000.[144] It is much cheaper to provide medical care than to replace service members who need it.

Failure to consider costs of the ban

In response to DoD's release of the Implementation Report, the American Psychiatric Association's CEO and Medical Director Saul Levin stated that the proposed transgender ban "not only harms those who have chosen to serve our country, but it also casts a pall over all transgender Americans. This discrimination has a negative impact on the mental health of those targeted." The Implementation Report, however, seems premised on the notion that the proposed ban would incur no costs. In addition to evidence that enables us to assess costs directly, scholars and experts have produced a great deal of evidence concerning the costs of "don't ask, don't tell," and it is not unreasonable to expect that some of the burdens associated with that failed policy could recur if the transgender ban were reinstated.

Research on transgender military service as well as DADT suggests that reinstating the ban could (1) undermine medical readiness by depriving 14,700 transgender service members of medically necessary care should they require it;[145] (2) increase harassment of transgender personnel, just as DADT promoted harassment of gay men and lesbians;[146] and (3) drain financial resources due to the cost of replacing transgender personnel and

the cost of litigation.[147] In addition, the ban could (4) compromise unit cohesion by introducing divisiveness in the ranks; (5) discourage enlistment and re-enlistment by lesbians, gays, and bisexuals, who would be wary of serving in an anti-LGBT atmosphere; (6) discourage enlistment and re-enlistment by women, because this ban is based on discomfort with people who cross gender lines or otherwise violate traditional gender roles; and (7) promote policy instability. The ban would constitute the fifth policy on transgender military service over the past two years. As former U.S. Navy Judge Advocate General Admiral John D. Hutson observed, "Whatever one thinks about transgender service . . . , there is no question that careening personnel policy from one pole to the other is bad for the armed forces."[148]

Similar to DADT, the reinstatement of the ban would (8) force many transgender service members to hide their gender identity, given the stigma that the Implementation Report implicitly authorizes. Scholars have demonstrated that the requirement to serve in silence effectively forces troops to lie about their identity, leading to elevated incidence of depression and anxiety.[149] (9) When service members lie about their identity, peers suspect that they are not being forthcoming, and both social isolation and general distrust can result.[150] In turn, (10) forcing service members to lie about their identity compromises military integrity. Prior to the repeal of DADT, former Chairman of the Joint Chiefs of Staff Admiral Mike Mullen said that, "I cannot escape being troubled by the fact that we have in place a policy which forces young men and women to lie about who they are in order to defend their fellow citizens. For me, personally, it comes down to integrity—theirs as individuals and ours as an institution."[151]

Finally, (11) the ban would signal to the youth of America that the military is not a modern institution. Scholarly research established that DADT was an ongoing public relations embarrassment for the Pentagon and that ripple effects impacted recruitment. Every major editorial page in the U.S. opposed DADT, and anti-military activists used the policy to rally opposition.[152] Approximately three-quarters of the public opposed DADT.[153] According to one report, high schools denied military recruiters access to their campuses on 19,228 separate occasions in 1999 alone, in part as an effort "to challenge the Pentagon's policy on homosexuals in the military."[154] In the case of military service by transgender personnel, the Implementation Report cites one poll suggesting that service members oppose inclusive policy. Other polling, however, indicates that service members, veterans, retirees, and military family members favor inclusion, as does the public at large.[155] There is every reason to believe that the transgender ban would be just as unpopular as was DADT.

DoD Cites Misleading Figures on Financial Costs of Inclusion

The Implementation Report observed that "Since the implementation of the Carter policy, the medical costs for Service members with gender dysphoria have increased nearly three times—or 300 percent—compared to Service members without gender dysphoria."[156] While the Implementation Report's claim is correct, the cost data are taken out of context and reported in a misleading way. DoD data indicate that the average annual per-person cost for service members diagnosed with gender dysphoria is approximately $18,000, as

opposed to the $6,000 annual cost of care for other service members.[157] But the higher average per-person cost would appear any time a population is selected *for the presence of a specific health condition* and then compared to an average cohort of all other service members.

The Report's claim that medical costs for service members diagnosed with gender dysphoria are three times, or 300 percent, higher than for other troops implies that medical care for transgender personnel is expensive. But the Report does not mention that DoD's total cost for transition-related care in FY2017 was only $2.2 million, which is less than one tenth of one percent of DoD's annual health care budget for the Active Component.

Insurance actuaries sometimes calculate costs in terms of the cost of care per plan member per month of coverage. With financial costs of transition-related care distributed force-wide, the cost of providing transition-related care is 9¢ (nine cents) per service member per month.[158] Even if the per-member/per-month cost estimate were restricted to the cohort of transgender service members, the financial impact of providing care would be low, because very few of the currently serving 14,700 transgender troops required *any* transition-related care during FY2017: $2.2 million / 14,700 = $149.66 per transgender service member per year; $149.66 / 12 = $12.47 per transgender service member per month.

Higher average per-person costs would appear any time a population is selected for the presence of a specific condition and then compared to an average cohort of other service members. Even setting this qualification aside, reporting the cost of care for service members with gender dysphoria as 300 percent higher than the cost of care for other troops, without contextualizing the observation in terms of the low overall cost, could mislead readers into believing that transition-related care is expensive, which it is not.

Conclusion

Scholars and experts agree that transition-related care is reliable, safe, and effective, and medical research as well as DoD's own data confirm that transgender personnel, even those with diagnoses of gender dysphoria, are deployable and medically fit. In advancing its case for the reinstatement of the transgender ban, however, the Implementation Report mischaracterized the medical research that sustains these conclusions. The proposed transgender ban is based on double standards consisting of rules and expectations that DoD would apply only to transgender service members, but to no one else. The Report did not present any evidence showing that inclusive policy has compromised or could compromise cohesion, privacy, fairness, or safety. Finally, the Implementation Report's justification depends on partial and misleading assessments of costs and benefits, as DoD neglected to assess the benefits of inclusive policy or the costs of the ban.

The RAND study was correct in concluding that inclusive policy was unlikely to pose a meaningful risk to the readiness of the armed forces. If anything, the evidence suggests that inclusive policy for transgender service members has promoted readiness. Just like

justifications for prohibitions against women and African Americans in the military as well as the failed DADT policy, the case for banning transgender individuals from the armed forces is not supported by evidence and is unpersuasive.

Appendix

Efficacy of transition-related care

As we described earlier, an international consensus among medical experts affirms the efficacy of transition-related health care. This Appendix details that scholarship, showing that the DoD Report selected only a small slice of available evidence to reach its conclusions about the efficacy of transition-related care.

A large Dutch study published in 2007 reported follow-up data of 807 individuals who underwent surgical gender transition. Summarizing their results, the authors reaffirmed the conclusion of a much-cited 1990 study that gender transition dramatically reduces the symptoms of gender dysphoria, and hence "is the most appropriate treatment to alleviate the suffering of extremely gender dysphoric individuals." They found that, across 18 outcome studies published over two decades, 96 percent of subjects were satisfied with transitioning, and "regret was rare." The authors wrote that, even though there were "methodological shortcomings" to many of the studies they reviewed (lacking controls or randomized samples), "we conclude that SRS [sex reassignment surgery] is an effective treatment for transsexualism and the only treatment that has been evaluated empirically with large clinical case series." Gender transition, they stated, "is not strongly theory driven, but a pragmatic and effective way to strongly diminish the suffering of persons with gender dysphoria." It must be noted that not all studies of the efficacy of gender transition lack controls. The Dutch authors cite a controlled study from 1990 that compared a waiting-list condition with a treatment condition and found "strong evidence for the effectiveness" of surgical gender transition.[159]

In a 2010 meta-analysis noted by the Implementation Report, researchers at the Mayo Clinic conducted a systematic review of 28 scholarly studies enrolling 1,833 participants who underwent hormone therapy as part of gender transition. The reviewed studies were published between 1966 and February 2008. Results indicated that 80 percent of individuals reported "significant improvement" in gender dysphoria and in quality of life, and 78 percent reported "significant improvement" in psychological symptoms. The authors concluded that "sex reassignment that includes hormonal interventions… likely improves gender dysphoria, psychological functioning and comorbidities, sexual function and overall quality of life."[160]

A 2015 Harvard and University of Houston longitudinal study of testosterone treatment also reviewed prior literature and found that numerous recent cross-sectional studies "suggest that testosterone treatment among transgender men is associated with improved mental health and well-being," including improved quality of life, less anxiety, depression and social distress, and a reduction in overall mental stress.[161]

A 2016 literature review screened 647 studies to identify eleven longitudinal studies providing data on transgender individuals. Ten of them found "an improvement of psychiatric morbidity and psycho-pathology following" medical intervention (hormone therapy and/or gender-confirming surgery). Sizing up the overall research body on

transgender psychiatric outcomes, Cecilia Dhejne and her co-authors wrote: "This review found that longitudinal studies investigating the same cohort of trans people pre- and post-interventions showed an overall improvement in psychopathology and psychiatric disorders post-treatment. In fact, the findings from *most studies showed that the scores of trans people following GCMI were similar to those of the general population*."[162] Another 2016 study, a systematic review of literature, identified numerous longitudinal studies finding that "depression, global psychopathology, and psychosocial functioning difficulties appear to reduce" in transgender individuals who get treatment for gender dysphoria, leading to "improved mental health."[163]

Copious studies reflecting a wide range of methodologies, population samples, and nationalities reached similarly positive conclusions to what was found by the researchers mentioned above, namely that individuals who obtain the care they need achieve health parity with non-transgender individuals. A 2009 study using a probability sample of 50 transgender Belgian women found "no significant differences" in overall health between subjects and the general population, which the study noted was "in accordance with a previous study in which no differences in psychological and physical complaints between transsexuals and the general Belgian population were found."[164] A 2012 study reported that "Most transsexual patients attending a gender identity unit reported subclinical levels of social distress, anxiety, and depression" and did "not appear to notably differ from the normative sample in terms of mean levels of social distress, anxiety, and depression." Patients who were not yet treated for gender dysphoria had "marginally higher distress scores than average, and treated subjects [were] *in the normal range*."[165] An Italian study that assessed the impact of hormonal treatment on the mental health of transgender patients found that "the majority of transsexual patients have no psychiatric comorbidity, suggesting that transsexualism is not necessarily associated with severe comorbid psychiatric findings."[166] A Croatian study from the same year concluded that, "Despite the unfavorable circumstances in Croatian society, participants demonstrated stable mental, social, and professional functioning, as well as a relative resilience to minority stress."[167]

Efficacy of hormone therapy

Studies show clearly that hormone treatment is effective at treating gender dysphoria and improving well-being. In 2015, Harvard and University of Houston researchers published the first controlled longitudinal follow-up study to examine the immediate effects of testosterone treatment on the psychological functioning of transgender men. The study used the Minnesota Multiphasic Personality Inventory test (2nd ed.) to take an empirical measure of psychological well-being after hormone treatment, assessing outcomes before and after treatment. (The MMPI-2 is one of the oldest, most commonly used psychological tests and is considered so rigorous that it typically requires many years of intensive psychotherapy to generate notable improvements in outcomes.) The results showed marked change in just three months: Transgender subjects who presented with clinical distress and demonstrated "poorer psychological functioning than nontransgender males" prior to treatment functioned "as well as male and female controls and demonstrated positive gains in multiple clinical domains" after just three months of

testosterone. "There were no longer statistically significant differences between transgender men and male controls" on a range of symptoms including hypochondria, hysteria, paranoia, and others after three months of treatment, the study concluded. "Overall findings here," concluded the study, "suggest significant, rapid, and positive effects of initiating testosterone treatment on the psychological functioning in transgender men."[168]

These findings echoed earlier research on the efficacy of hormone therapy for treating gender dysphoria. A 2006 U.S. study of 446 female-to-male (FTM) subjects found improvements when comparing those who had and had not received hormone treatment: "FTM transgender participants who received testosterone (67 percent) reported statistically significant higher quality of life scores ($p<0.01$) than those who had not received hormone therapy." The study concluded that providing transgender individuals "with the hormonal care they request is associated with improved quality of life."[169] A 2012 study assessed outcome differences between transgender patients who obtained hormone treatment and those who did not among 187 subjects. It found that "patients who have not yet initiated cross-sex hormonal treatment showed significantly higher levels of social distress and emotional disturbances than patients under this treatment."[170]

An Italian study published in 2014 that assessed hormone therapy found that "when treated, transsexual patients reported less anxiety, depression, psychological symptoms and functional impairment" with the improvements between baseline and one-year follow-up being "statistically significant." The study stated that "psychiatric distress and functional impairment were present in a significantly higher percentage of patients before starting the hormonal treatment than after 12 months."[171] Another study published in 2014 found that "participants who were receiving testosterone endorsed fewer symptoms of anxiety and depression as well as less anger than the untreated group."[172]

Efficacy of surgery

A wide body of scholarly literature also demonstrates the effectiveness of gender-transition surgery. A 1999 follow-up study using multi-point questionnaires and rigorous qualitative methods including in-depth, blind follow-up interviews evaluated 28 MTF subjects who underwent transition surgery at Albert Einstein College of Medicine. The study was authored by four physicians who conducted transition surgeries at university centers in New York and Israel. *All* their subjects reported satisfaction in having transitioned, and they responded positively when asked if their lives were "becoming easier and more comfortable" following transition. Large majorities said that reassignment surgery "solved most of their emotional problems," adding in follow-up assessments comments such as: "I am now a complete person in every way," "I feel more self-confident and more socially adapted," "I am more confident and feel better about myself," and "I am happier." Summarizing their conclusions, the authors noted "a marked decrease of suicide attempts, criminal activity, and drug use in our postoperative population. This might indicate that there is a marked improvement in antisocial and self-destructive behavior, that was evident prior to sex reassignment surgery. Most patients

were able to maintain their standard of living and to continue working, usually at the same jobs."[173]

A 2010 study of thirty patients found that "gender reassignment surgery improves the QoL [quality of life] for transsexuals in several different important areas: most are satisfied of their sexual reassignment (28/30), their social (21/30) and sexual QoL (25/30) are improved."[174] A long-term follow-up study of 62 Belgian patients who underwent gender transition surgery, published in 2006, found that, while transgender subjects remain a vulnerable population "in some respects" following treatment, the vast majority "proclaimed an overall positive change in their family and social life." The authors concluded that "SRS proves to be an effective therapy for transsexuals even after a longer period, mainly because of its positive effect on the gender dysphoria."[175]

Efficacy of the combination of hormone therapy and surgery

Some studies assessed global outcomes from a combination of hormone treatment and transition surgery, or they did not isolate one form of treatment from the other in reporting their overall results. They consistently found improved outcomes when transgender individuals obtained the specific care recommended by their doctor.

A 2011 Canadian study found that "the odds of depression were 2.8 times greater for FTMs not currently using hormones compared with current users" and that FTM subjects "who were planning to medically transition (hormones and/or surgery) but had not begun were five times more likely to be depressed than FTMs who had medically transitioned." The finding shows that gender transition is strongly correlated with improved well-being for transgender individuals.[176] An Australian study found that "the combination of current hormone use and having had some form of gender affirmative surgery provided a significant contribution to lower depressive symptoms over and above control variables."[177]

A 2015 study conducted in Germany with follow-up periods up to 24 years, with a mean of 13.8 years, tracked 71 transgender participants using a combination of quantitative and qualitative outcome measures that included structured interviews, standardized questionnaires, and validated psychological assessment tools. It found that "positive and desired changes were determined by all of the instruments." The improvements included that "participants showed significantly fewer psychological problems and interpersonal difficulties as well as a strongly increased life satisfaction at follow-up than at the time of the initial consultation." The authors cautioned that, notwithstanding the positive results, "the treatment of transsexualism is far from being perfect," but noted that, in addition to the positive result they found in the current study, "numerous studies with shorter follow-up times have already demonstrated positive outcomes after sex reassignment" and that this study added to that body of research the finding that "these positive outcomes persist even 10 or more years" beyond their legal gender transition.[178]

Regrets low

A strong indicator of the efficacy of gender transition is the extremely low rate of regrets that studies have found across the board. A recent focus in popular culture on anecdotes by individuals who regretted their gender transition has served to obscure the overall statistics on regret rates. A 2014 study co-authored by Cecilia Dhejne evaluated the entirety of individuals who were granted a legal gender change in Sweden across the 50-year period from 1960 through 2010. Of the total number of 681 individuals, the number who sought a reversal was 15, a regret rate of 2.2 percent. The study also found a "significant decline of regrets over the time period." For the most recent decade covered by Dhejne's data, 2000 to 2010, the regret rate was just three tenths of one percent. Researchers attribute the improvements over time to advances in surgical technique and in social support for gender minorities, suggesting that today's transgender population is the most treatable in history, while also sounding a caution that institutional stigma and discrimination can themselves become barriers to adequate care.[179]

The low regret rate is consistent in the scholarly literature, and it is confirmed by qualitative studies and quantitative assessments. A 1992 study authored by one of the world's leading researchers on transgender health put the average regret rate at between 1 and 1.5 percent. This figure was based on cumulative numbers from 74 different follow-up studies conducted over three decades, as well as a separate clinical follow-up sample of more than 600 patients.[180] A 2002 literature review also put the figure at 1 percent.[181] A 1998 study put the figure as high as 3.8 percent, but attributed most regret to family rejection of the subjects' transgender identity.[182] The 1999 study of transition surgery outcomes at Albert Einstein College of Medicine found that "None of the patients regretted or had doubts about having undergone sex-reassignment surgery."[183] The 2006 Belgian study mentioned elsewhere followed 62 subjects who underwent transition surgery and "none of them showed any regrets" about their transition. "Even after several years, they feel happy, adapt well socially and feel no regrets," the authors concluded.[184] And the 2015 German follow-up study of adults with gender dysphoria found that none of its 71 participants expressed a wish to reverse their transition.[185]

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[121] "A Military Success Story," *New York Times* (editorial), September 15, 2012.
[122] Gale S. Pollock and Shannon Minter (2014), "Report of the Planning Commission on Transgender Military Service," Palm Center, 21.
[123] Schaefer et al., "Assessing the Implications"; M. Joycelyn Elders, George R. Brown, Eli Coleman, Thomas A. Kolditz, and Alan M. Steinman (2014), "Medical Aspects of Transgender Military Service," *Armed Forces and Society*, 41(2): 199–220; Pollock and Minter, "Report of the Planning Commission"; Alan Okros and Denise Scott (2014), "Gender Identity in the Canadian Forces: A Review of Possible Impacts on Operational Effectiveness," *Armed Forces and Society*, 41(2): 243–56.
[124] Department of Defense, "Statement by Secretary of Defense Ash Carter on DoD Transgender Policy," (press release), July 13, 2015, Memorandum from Ashton Carter, Secretary of Defense, "Transgender Service Members" (July 28, 2015).
[125] DTM 16-005, Military Service of Transgender Service Members (June 30, 2016); DoDI 1300.28, In-Service Transition for Transgender Service Members (June 30, 2016), 2.
[126] This list does not include service-level training materials or Military Entrance Processing Command accession documents: DTM 16-005, Military Service of Transgender Service Members (June 30, 2016); DoDI 1300.28, In-Service Transition for Transgender Service Members (June 30, 2016); Department of Defense, Transgender Service in the U. S. Military: An Implementation Handbook (September 30, 2016); Assistant Secretary of Defense, Health Affairs, Guidance for Treatment of Gender Dysphoria for Active and Reserve Component Service Members (July 29, 2016); Interim Defense Health Agency Procedures for Reviewing Requests for Waivers to Allow Supplemental Health Care Program Coverage of Sex Reassignment Surgical Procedures (November 13, 2017); Army Directive 2016-30, Army Policy on Military Service of Transgender Soldiers (July 1, 2016); Army Directive 2016-35, Army Policy on Military Service of Transgender Soldiers (October 7, 2016); OTSG/MEDCOM Policy Memo 16-060, Interim

AMEDD Guidance for Transgender Medical Care (August 3, 2016); SECNAV Instruction 1000.11, Service of Transgender Sailors and Marines (November 4, 2016); U.S. Navy, Transgender and Gender Transition: Commanding Officer's Toolkit (2016); Department of the Navy, BUMED Notice 6000, Medical Treatment of Transgender Service Members–Interim Guidance (September 27, 2016); AFPM 2016-36-01, Air Force Policy Memorandum for In-Service Transition for Airmen Identifying as Transgender (October 6, 2016); Marine Corps Bulletin 1121, Transgender Service (November 22, 2016); U.S. Coast Guard, COMDTINST M1000.13, Military Transgender Service (December 22, 2016).

[127] Schaefer et al., "Assessing the Implications," 70.

[128] Okros and Scott, "Gender Identity in the Canadian Forces," 243.

[129] Schaefer et al., "Assessing the Implications," xiii.

[130] Correspondence with senior civilian DoD official, April 21, 2017; Telephone interview with former Navy Secretary Ray Mabus, April 20, 2017; Correspondence with former Air Force Secretary Deborah James, April 20, 2017; Correspondence with former Army Secretary Eric Fanning, April 24, 2017; Correspondence with former senior civilian DoD official, April 19, 2017.

[131] Memorandum, Secretary of Defense, Military Service by Transgender Individuals (February 22, 2018), 2.

[132] DoD Report, 14.

[133] Ibid., 44.

[134] Rand Arroyo Center Annual Report 2015, 1.

[135] Belkin et al., "Readiness and DADT Repeal."

[136] Department of Defense, Health Data on Active Duty Service Members with Gender Dysphoria, 21.

[137] Ibid., 31.

[138] For various benefits of inclusive policy and costs of the ban, see Schaefer et al., "Assessing the Implications," 8 (surgical skills); 45, 60–61 (diversity and readiness); and 10 (denial of care).

[139] Okros and Scott, "Gender Identity in the Canadian Forces," 246.

[140] John D. Hutson, "An Unwarranted Attack on Transgender Service," *Stars and Stripes*, February 6, 2018; Steve Liewer, "Transgender Offutt Airman – Finally 'Able to Live as My True Self' – Finds Support, Acceptance during Transition," *Omaha World-Herald*, April 22, 2017; Emanuella Grinberg, "A transgender Marine Comes Out, Tests Military's New Policy," *CNN*.com, November 19, 2016.

[141] DoD Report, 37, Note 143.

[142] Dhejne et. al, "Mental Health and Gender Dysphoria."

[143] Gay and lesbian service members reported an increase in morale after DADT repeal. See Belkin et al., "Readiness and DADT Repeal."

[144] According to a 2015 estimate by Accession Medical Standards Analysis and Research Activity (AMSARA), "Recruiting, screening and training costs are approximately $75,000 per enlistee." Accession Medical Standards Analysis & Research Activity, http://www.amsara.amedd.army.mil/Default.aspx, last modified date April 1, 2015, accessed August 3, 2017.

[145] See Schaefer et al., "Assessing the Implications," 9–10. For the estimate that 14,700 transgender personnel serve currently in the Active Component and Selected Reserve, see Palm Center, "Breaking Down the March 23, 2018 Transgender Military Ban," March 27, 2018.

[146] For extensive evidence on this point, see the ten annual reports of the Servicemembers Legal Defense Network that are posted at http://dont.law.stanford.edu/commentary/, accessed April 23, 2018. Sharon Terman argues that harassment cannot be regulated in institutions that allow formal discrimination. See Sharon Terman, "The Practical and Conceptual Problems with Regulating Harassment in a Discriminatory Institution," Center for the Study of Sexual Minorities in the Military, 2004.

[147] Aaron Belkin, Frank J. Barrett, Mark J. Eitelberg, and Marc J. Ventresca (2017), "Discharging Transgender Troops Would Cost $960 Million," Palm Center.

[148] Hutson, "An Unwarranted Attack."

[149] Tobias Barrington Wolff (1997), "Compelled Affirmations, Free Speech, and the U.S. Military's Don't Ask, Don't Tell Policy," Brooklyn Law Review, 63: 1141–1211.

[150] Frank, *Unfriendly Fire*, xix.

[151] "Top Military Officer: Gays Should Serve," *NBC News*, February 2, 2010.

[152] Aaron Belkin (2008), "'Don't Ask, Don't Tell': Does the Gay Ban Undermine the Military's Reputation?" *Armed Forces and Society*, 34(2): 276–91.

[153] Belkin, "'Don't Ask, Don't Tell.'"

[154] "Easier Access for Military Recruiters," *Tampa Tribune*, July 6, 2000, as cited in Belkin, "'Don't Ask, Don't Tell,'" 283, and David F. Burrelli and Jody Feder (2009), "Homosexuals in the U.S. Military: Current Issues," Congressional Research Service, 24.
[155] According to a poll that was administered to 5,650 service members, retirees, veterans, and their family members in October and November 2017, "twice as many respondents support transgender individuals serving in the military as those who don't." See "Survey 2017 Results," Military Family Advisory Network, 31. According to an August 2017 Quinnipiac poll, 68 percent of voters support allowing transgender individuals to serve in the military, with 27 percent opposing. See Quinnipiac University, "U.S. Voters Say 68–27% Let Transgender People Serve," (press release), August 3, 2017.
[156] DoD Report, 41.
[157] Department of Defense, Health Data on Active Duty Service Members with Gender Dysphoria, 31-32.
[158] $2.2 million / 2.1 million service members / 12 months = 9 cents per member per month.
[159] Luk Gijs and Anne Brewaeys (2007), "Surgical Treatment of Gender Dysphoria in Adults and Adolescents: Recent Developments, Effectiveness, and Challenges," *Annual Review of Sex Research*, 18(1): 178–224. The 1990 study was Charles Mate-Kole, Maurizio Freschi, and Ashley Robin (1990), "A Controlled Study of Psychological and Social Change after Surgical Gender Reassignment in Selected Male Transsexuals," *The British Journal of Psychiatry*, 157(2): 261–64.
[160] Murad et al., "Hormonal Therapy." The DoD Report notes that the Murad study found the quality of most evidence to be "low," a claim we address elsewhere in this report.
[161] Colton Keo-Meier, Levi Herman, Sari Reisner, Seth Pardo, Carla Sharp, and Julia Babcock (2015), "Testosterone Treatment and MMPI-2 Improvement in Transgender Men: A Prospective Controlled Study," *Journal of Consulting and Clinical Psychology*, 83(1): 143–56.
[162] Dhejne et. al, "Mental Health and Gender Dysphoria."
[163] Rosalià Costa and Marco Colizzi (2016), "The Effect of Cross-Sex Hormonal Treatment on Gender Dysphoria Individuals' Mental Health: A Systematic Review," *Neuropsychiatric Disease and Treatment* 12: 1953–66.
[164] Steven Weyers et al. (2009), "Long-Term Assessment of the Physical, Mental, and Sexual Health among Transsexual Women," *The Journal of Sexual Medicine*, 6(3): 752–60.
[165] Ester Gomez-Gil et al. (2012), "Hormone-Treated Transsexuals Report Less Social Distress, Anxiety and Depression," *Psychoneuroendocrinology*, 37(5): 662–70.
[166] Marco Colizzi, Rosalià Costa, and Orlando Todarello (2014), "Transsexual Patients' Psychiatric Comorbidity and Positive Effect of Cross-Sex Hormonal Treatment on Mental Health: Results from a Longitudinal Study," *Psychoneuroendocrinology*, 39: 65–73.
[167] Nataša Jokic-Begic, Anita Lauri Korajlija, and Tanja Jurin (2014), "Psychosocial Adjustment to Sex Reassignment Surgery: A Qualitative Examination and Personal Experiences of Six Transsexual Persons in Croatia," *Scientific World Journal 2014*, 6.
[168] Keo-Meier et al., "Testosterone Treatment."
[169] Emily Newfield, Stacey Hart, Suzanne Dibble, and Lori Kohler (2006), "Female-to-Male Transgender Quality of Life," *Quality of Life Research*, 15(9): 1447–57.
[170] Gomez-Gil et al., "Hormone-Treated Transsexuals."
[171] Colizzi, Costa, and Todarello, "Transsexual Patients' Psychiatric Comorbidity."
[172] Samuel Davis and S. Colton Meier, (2014), "Effects of Testosterone Treatment and Chest Reconstruction Surgery on Mental Health and Sexuality in Female-to-Male Transgender People," *International Journal of Sexual Health*, 26(2): 113–28.
[173] Rehman et al., "The Reported Sex and Surgery Satisfactions."
[174] Nathalie Parola et al. (2010), "Study of Quality of Life for Transsexuals after Hormonal and Surgical Reassignment," *Sexologies*, 19(1): 24–28.
[175] Griet De Cuypere et al. (2006), "Long-Term Follow-up: Psychosocial Outcome of Belgian Transsexuals after Sex Reassignment Surgery," *Sexologies*, 15(2): 126–33.
[176] Nooshin Khobzi Rotondi et al. (2011), "Prevalence of and Risk and Protective Factors for Depression in Female-to-Male Transgender Ontarians: Trans PULSE Project," *Canadian Journal of Community Mental Health*, 30(2): 135–55.
[177] Crystal Boza and Kathryn Nicholson Perry (2014), "Gender-Related Victimization, Perceived Social Support, and Predictors of Depression among Transgender Australians," *International Journal of Transgenderism*, 15(1): 35–52.

[178] Ulrike Ruppin, and Freidemann Pfäfflin (2015), "Long-Term Follow-up of Adults with Gender Identity Disorder," *Archives of Sexual Behavior*, 44(5): 1321–29.
[179] Cecilia Dhejne, Katarina Öberg, Stefan Arver, and Mikael Landén (2014), "An Analysis of All Applications for Sex Reassignment Surgery in Sweden, 1960-2010: Prevalence, Incidence, and Regrets," *Archives of Sexual Behavior*, 43(8): 1535–45.
[180] Freidemann Pfäfflin (1992; sometimes listed as 1993), "Regrets after Sex Reassignment Surgery," *Journal of Psychology and Human Sexuality*, 5(4): 69–85.
[181] Aude Michel, Marc Ansseau, Jean-Jacques Legros, William Pitchot, and Christian Mormont (2002), "The Transsexual: What about the Future?" *European Psychiatry*, 17(6): 353–62.
[182] Mikael Landén, Jan Wålinder, Gunnar Hambert, and Bengt Lundström (1998), "Factors Predictive of Regret in Sex Reassignment," *Acta Psychiatrica Scandinavica*, 97(4): 284–89.
[183] Rehman et al., "The Reported Sex and Surgery Satisfactions."
[184] De Cuypere et al., "Long-Term Follow-up."
[185] Ruppin and Pfäfflin, "Long-Term Follow-up."

EXHIBIT C

AMERICAN PSYCHOLOGICAL ASSOCIATION

March 26, 2018

APA Statement Regarding Transgender Individuals Serving in Military

WASHINGTON — Following is a statement by Arthur C. Evans Jr., PhD, regarding President Trump's placing new limits on transgender individuals serving in the military:

"The American Psychological Association is alarmed by the administration's misuse of psychological science to stigmatize transgender Americans and justify limiting their ability to serve in uniform and access medically necessary health care."

"Substantial psychological research shows that gender dysphoria is a treatable condition, and does not, by itself, limit the ability of individuals to function well and excel in their work, including in military service. The science is clear that individuals who are adequately treated for gender dysphoria should not be considered mentally unstable. Additionally, the incidence of gender dysphoria is extremely low."

"No scientific evidence has shown that allowing transgender people to serve in the armed forces has an adverse impact on readiness or unit cohesion. What research does show is that discrimination and stigma undermine morale and readiness by creating a significant source of stress for sexual minorities that can harm their health and well-being."

APA's governing Council of Representatives adopted a resolution (http://www.apa.org/about/policy/chapter-12b.aspx#transgender) in 2008 supporting full equality for transgender and gender-variant people and calling for legal and social recognition of transgender individuals.

The American Psychological Association, in Washington, D.C., is the largest scientific and professional organization representing psychology in the United States. APA's membership includes nearly 115,700 researchers, educators, clinicians, consultants and students. Through its divisions in 54 subfields of psychology and affiliations with 60 state, territorial and Canadian provincial associations, APA works to advance the creation, communication and application of psychological knowledge to benefit society and improve people's lives.

Find this article at:
http://www.apa.org/news/press/releases/2018/03/transgender-military.aspx

EXHIBIT D

AMA
AMERICAN MEDICAL ASSOCIATION

JAMES L. MADARA, MD
EXECUTIVE VICE PRESIDENT, CEO

ama-assn.org
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April 3, 2018

The Honorable James N. Mattis
Secretary
Department of Defense
1000 Defense Pentagon
Washington, DC 20301-1000

Dear Secretary Mattis:

On behalf of the physician and medical student members of the American Medical Association (AMA), I am writing to express our concern about the new policy recently approved by President Trump imposing limits on transgender individuals serving in the military. This new policy, based on recommendations you made in February to President Trump, states that "transgender persons with a history or diagnosis of gender dysphoria—individuals who the policies state may require substantial medical treatment, including medications and surgery—are disqualified from military service except under certain limited circumstances" (Presidential Memorandum for the Secretary of Defense and the Secretary of Homeland Security Regarding Military Service by Transgender Individuals, May 23, 2018).

We believe there is no medically valid reason—including a diagnosis of gender dysphoria—to exclude transgender individuals from military service. Transgender individuals have served, and continue to serve, our country with honor, and we believe they should be allowed to continue doing so. We share the concerns recently expressed by former Surgeons General M. Joycelyn Elders and David Satcher that the Defense Department's February 22, 2018, Memorandum for the President mischaracterized and rejected the wide body of peer-reviewed research on the effectiveness of transgender medical care. This research, demonstrating that medical care for gender dysphoria is effective, was the rationale for the AMA's adoption of policy by our House of Delegates in 2015, that there is no medically valid reason to exclude transgender individuals from military service.

The AMA also supports public and private health insurance coverage for treatment of gender dysphoria as recommended by the patient's physician. We support the finding of the RAND study conducted for the Department of Defense on the impact of transgender individuals in the military that the financial cost is negligible and a rounding error in the defense budget. It should not be used as a reason to deny patriotic Americans an opportunity to serve their country. We should be honoring their service.

Sincerely,

James L. Madara, MD

EXHIBIT E

AMERICAN PSYCHIATRIC ASSOCIATION

< News Releases

Mar 24, 2018

APA Reiterates Its Strong Opposition to Ban of Transgender Americans from Serving in U.S. Military

WASHINGTON, D.C. —The American Psychiatric Association (APA) today reiterated its strong opposition to a ban of transgender Americans from the U.S. military, first announced by President Trump in July of last year and brought to the forefront today with the release of a White House memo announcing that transgender individuals are disqualified from military services except under limited circumstances.

"The APA stands firmly against discrimination against anyone, and this ban is a discriminatory action," said APA CEO and Medical Director Saul Levin, M.D., M.P.A. "This ban not only harms those who have chosen to serve our country, but it also casts a pall over all transgender Americans. This discrimination has a negative impact on the mental health of those targeted."

The APA in 2012 passed a policy statement that opposed discrimination against transgender people and called for their civil rights to be protected. Transgender people do not have a mental disorder; thus, they suffer no impairment whatsoever in their judgment or ability to work.

"All Americans who meet the strenuous requirements and volunteer to serve in U.S. military should be given the opportunity to do so." Levin said.

American Psychiatric Association

The American Psychiatric Association, founded in 1844, is the oldest medical association in the country. The APA is also the largest psychiatric association in the world with more than 37,800 physician members specializing in the diagnosis, treatment, prevention and research of mental illnesses. APA's vision is to ensure access to quality psychiatric diagnosis and treatment. For more information please visit www.psychiatry.org.

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EXHIBIT F

Department of Health and Human Services
DEPARTMENTAL APPEALS BOARD
Appellate Division

NCD 140.3, Transsexual Surgery
Docket No. A-13-87
Decision No. 2576
May 30, 2014

DECISION

The Board has determined that the National Coverage Determination (NCD) denying Medicare coverage of all transsexual surgery as a treatment for transsexualism is not valid under the "reasonableness standard" the Board applies. The NCD was based on information compiled in 1981. The record developed before the Board in response to a complaint filed by the aggrieved party (AP), a Medicare beneficiary denied coverage, shows that even assuming the NCD's exclusion of coverage at the time the NCD was adopted was reasonable, that coverage exclusion is no longer reasonable. This record includes expert medical testimony and studies published in the years after publication of the NCD. The Centers for Medicare & Medicaid Services (CMS), which is responsible for issuing and revising NCDs, did not defend the NCD or the NCD record in this proceeding and did not challenge any of the new evidence submitted to the Board.

Effect of this decision

Since the NCD is no longer valid, its provisions are no longer a valid basis for denying claims for Medicare coverage of transsexual surgery, and local coverage determinations (LCDs) used to adjudicate such claims may not rely on the provisions of the NCD. The decision does not bar CMS or its contractors from denying individual claims for payment for transsexual surgery for other reasons permitted by law. Nor does the decision address treatments for transsexualism other than transsexual surgery. The decision does not require CMS to revise the NCD or issue a new NCD, although CMS, of course, may choose to do so. CMS may not reinstate the invalidated NCD unless it has a different basis than that evaluated by the Board. 42 C.F.R. § 426.563.

CMS must implement this Board decision within 30 days and apply any resulting policy changes to claims or service requests made by Medicare beneficiaries other than the AP for any dates of service after that implementation. With respect to the AP's claim in

particular, CMS and its contractors must "adjudicate the claim without using the provision(s) of the NCD that the Board found invalid." 42 C.F.R. § 426.560(b)(1).[1]

Legal background

With exceptions not relevant here, section 1862(a)(l)(A) of the Social Security Act (Act) (42 U.S.C. § 1395y(a)(l)(A)) bars Medicare payment for items or services "not reasonable and necessary for the diagnosis or treatment of illness or injury[.]"[2] CMS refers to this requirement as the "medical necessity provision." 67 Fed. Reg. 54,534, 54,536 (Aug. 22, 2002). An NCD is "a determination by the Secretary [of Health and Human Services] with respect to whether or not a particular item or service is covered nationally under [title XVIII (Medicare)]." Act §§ 1862(l)(6)(A),1869(f)(1)(B); *see also* 42 C.F.R. § 400.202 (NCD "means a decision that CMS makes regarding whether to cover a particular service nationally under title XVIII of the Act."). NCDs "describe the clinical circumstances and settings under which particular [Medicare items and] services are reasonable and necessary (or are not reasonable and necessary)." 67 Fed. Reg. at 54,535. When CMS issues NCDs, they apply nationally and are binding at all levels of administrative review of Medicare claims. 42 C.F.R. § 405.1060. CMS and its contractors use applicable NCDs in determining whether a beneficiary may receive Medicare reimbursement for a particular item or service. 42 C.F.R. §§ 405.920, 405.921.

A Medicare beneficiary "in need of coverage for a service that is denied based on … an NCD" is an "aggrieved party" who may challenge the NCD by filing a "complaint" with the Board.[3] Act § 1869(f)(1); 42 C.F.R. §§ 426.110, 426.320. The complaint must comply with the requirements for a valid complaint in 42 C.F.R. § 426.500 in order to be accepted by the Board. 42 C.F.R. §§ 426.510(b)(2), 426.505(c)(2). After the Board notifies CMS of the receipt of a complaint that is acceptable under the regulations, CMS produces the "NCD record," which "consists of any document or material that CMS

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[1] *See generally* 42 C.F.R. § 426.560(b) (setting out the effects of a Board NCD decision); 42 C.F.R. § 426.555 (specifying what the Board's decision "may not do"). This decision has no effects beyond those set out in 42 C.F.R.§ 426.560(b) and does not impose on CMS or its contractors any orders or requirements prohibited by 42 C.F.R. § 426.555.

[2] The table of contents to the current version of the Social Security Act, with references to the corresponding United States Code chapter and sections, can be found at http://www.socialsecurity.gov/OP_Home/ssact/ssact-toc.htm.

[3] The regulations also provide that a person other than the aggrieved party with an interest in the issues may petition to participate in the review process as an amicus curiae. 42 C.F.R. §§ 426.510(f), 426.513. The Board posts on its website notice of the NCD complaint specifying a time period for requests to participate in the review. 42 C.F.R. § 426.510(f).

considered during the development of the NCD" including "medical evidence considered on or before the date the NCD was issued . . . ." 42 C.F.R. §§ 426.510(d)(3), 426.515, 426.518(a). The aggrieved party submits a statement "explaining why the NCD record is not complete, or not adequate to support the validity of the NCD under the reasonableness standard," and CMS may submit a response "in order to defend the NCD." 42 C.F.R. § 426.525(a), (b). If the Board determines that the NCD record "is complete and adequate to support the validity of the NCD," the review process ends with the Board's "[i]ssuance of a decision finding the record complete and adequate to support the validity of the NCD . . . ." 42 C.F.R. § 426.525(c)(1), (2). If the Board determines that the record is *not* complete and adequate to support the validity of the NCD, the Board "permits discovery and the taking of evidence . . . and evaluates the NCD" in accordance with the requirements of Part 426, including conducting a hearing, unless the matter can be decided on the written record. 42 C.F.R. §§ 426.525(c)(3), 426.531(a)(2).

Prior to issuing a decision, the Board must review any "new evidence" admitted to the record before the Board and determine whether it "has the potential to significantly affect" the Board's evaluation. 42 C.F .R. §§ 426.340(a), (b), 426.505(d)(3). "New evidence" is defined as "clinical or scientific evidence that was not previously considered by … CMS before the … NCD was issued." 42 C.F.R. § 426.110. If the Board so concludes, the Board stays proceedings for CMS "to examine the new evidence, and to decide whether [to] initiate[] … a reconsideration" of the NCD. 42 C.F.R. § 426.340(d). If CMS does not reconsider the NCD, or reconsiders it but does not change the challenged provision, the Board lifts the stay and the NCD challenge process continues. 42 C.F.R. § 426.340(f). At the end of that process, the Board closes the record and issues a decision that the challenged "provision of the NCD is valid" or "is not valid under the reasonableness standard."[4] 42 C.F.R. § 426.550. The Board's decision "constitutes a final agency action and is subject to judicial review" on appeal by an aggrieved party. 42 C.F.R. § 426.566.

[4] Section 426.547(b) states that the Board must make the decision available at the HHS Medicare Internet site and that "the posted decision does not include any information that identifies any individual, provider of service, or supplier." CMS has indicated in the preamble to the Part 426 regulations that this provision was meant to protect the privacy of Medicare beneficiaries such as the AP. *See, e.g.*, 68 Fed. Reg. 63,692, 63,708 (Nov. 7, 2003) ("Board decisions regarding NCDs will be made available on the Medicare Internet site, without beneficiary identifying information").

Case background

The NCD and the NCD record

The challenged NCD, titled "140.3, Transsexual Surgery," states:[5]

> **Item/Service Description**
>
> Transsexual surgery, also known as sex reassignment surgery or intersex surgery, is the culmination of a series of procedures designed to change the anatomy of transsexuals to conform to their gender identity. Transsexuals are persons with an overwhelming desire to change anatomic sex because of their fixed conviction that they are members of the opposite sex. For the male-to-female, transsexual surgery entails castration, penectomy and vulva-vaginal construction. Surgery for the female-to-male transsexual consists of bilateral mammectomy, hysterectomy and salpingo-oophorectomy, which may be followed by phalloplasty and the insertion of testicular prostheses.
>
> **Indications and Limitations of Coverage**
>
> Transsexual surgery for sex reassignment of transsexuals is controversial. Because of the lack of well controlled, long-term studies of the safety and effectiveness of the surgical procedures and attendant therapies for transsexualism, the treatment is considered experimental. Moreover, there is a high rate of serious complications for these surgical procedures. For these reasons, transsexual surgery is not covered.

NCD Record at 93. CMS's predecessor, the Health Care Financing Administration (HCFA), published the NCD in the Federal Register on August 21, 1989.[6] 54 Fed. Reg. 34,555, 34,572 (Aug. 21, 1989); NCD Record at 76, 78, 93, 128. The NCD quotes or paraphrases portions of an 11-page report that the former National Center for Health Care Technology (NCHCT) of the HHS Public Health Service (PHS) issued in 1981, titled

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[5] NCDs are available at http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx?list_type=ncd.

[6] The Federal Register notice stated, "This notice lists those current Medicare national coverage decisions which have been issued in the Medicare Coverage Issues Manual (HCFA Pub. 6)." 54 Fed. Reg. at 34,555.

"Evaluation of Transsexual Surgery" (1981 report).[7] NCD Record at 13-23. The NCHCT forwarded the 1981 report to HCFA with a May 6, 1981 memorandum stating that the 1981 report "concludes that transsexual surgery should be considered experimental because of the lack of proven safety and efficacy of the procedures for the treatment of transsexualism" and recommending "that transsexual surgery not be covered by Medicare at this time." *Id*. at 12.

The NCD record includes three April 1982 letters from the American Civil Liberties Union (ACLU) of Southern California disagreeing with HCFA's noncoverage determination. *Id*. at 24-25, 26, 41-42. The ACLU submitted letters and affidavits from physicians and therapists supporting the medical necessity of transsexual surgery and taking issue with the non-coverage determination. *Id*. at 27-75. On May 11, 1982, the HCFA physicians panel, by a vote of five to two, recommended against referring the ACLU's submissions to PHS, "on the basis that it does not contain information about new clinical studies or other medical and scientific evidence sufficiently substantive to justify reopening the previous PHS assessment." *Id*. at 7, 9. Thus, although the NCD was issued in 1989, it was based on the analysis of medical and scientific publications in the 1981 report.

The NCD complaint

The AP in this case, a Medicare beneficiary whose insurer denied a physician's order for sex reassignment surgery (transsexual surgery), filed an acceptable NCD complaint and supporting materials. CMS submitted the NCD record on May 15, 2013, and the AP submitted a statement of why the NCD record is not complete or adequate to support the validity of the NCD under the reasonableness standard (AP Statement) on June 14, 2013. The Board granted unopposed requests by six advocacy organizations to participate as amici curiae in the NCD review by filing written briefs arguing that the NCD was invalid. (Four of the amici submitted a joint brief.)[8]

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[7] The concluding summary of the 1981 NCHTC report stated in relevant part:

> Transsexual surgery for sex reassignment of transsexuals is controversial. There is a lack of well controlled, long-term studies of the safety and effectiveness of the surgical procedures and attendant therapies for transsexualism. There is evidence of a high rate of serious complications of these surgical procedures. The safety and effectiveness of transsexual surgery as a treatment of transsexualism is not proven and is questioned. Therefore, transsexual surgery must be considered still experimental.

NCD Record at 19.

[8] The six amici are the Human Rights Campaign (HRC) and the World Professional Association for Transgender Health (WPATH), which each submitted briefs, and the FORGE Transgender Aging Network, the National Center for Transgender Equality, the Sylvia Rivera Law Project, and the Transgender Law Center, which submitted a joint brief.

On June 26, 2013, CMS notified the Board that it "declines to submit a response" to the AP's statement. On December 2, 2013, the Board ruled that the NCD record "is not complete and adequate to support the validity of the NCD[.]" *NCD 140.3, Transsexual Surgery*, NCD Ruling No. 2 (Dec. 2, 2013) (NCD Ruling).[9] The parties then jointly reported that they did not intend to submit additional evidence (except for curricula vitae (CVs) of the AP's witnesses) or cross-examine any witness and asked the Board to close the NCD review record to the taking of evidence and decide the case based on the written record.

The Board determined that the new evidence in the record had the potential to significantly affect its review of the NCD and, as required, stayed proceedings for 10 days for CMS to examine the new evidence and decide whether to reconsider the NCD.[10] *Order Closing Record & Staying Proceedings for CMS to Determine Whether to Reconsider NCD* (Feb. 25, 2014) (Order); 42 C.F.R. §§ 426.340(d), 426.505(d)(3). Two days later, CMS informed the Board by email that it "does not wish to reconsider the NCD." On February 28, 2014, the Board lifted the stay and informed the parties that it would proceed to decision.

The record developed before the Board

The record before the Board consists of the NCD record, the briefs submitted by the AP and the amici and evidence submitted by the AP and one of the amici, the Human Rights Campaign. Since neither party submitted argument or evidence (except for the CVs) after the Board's Ruling, the Board treats the AP statement as the AP's brief in this appeal.[11] The AP submitted written declarations made under penalty of perjury from a clinical psychologist and a physician, and two notarized physician letters submitted to an Administrative Law Judge in the Department of Health and Human Services Office of Medicare Hearings and Appeals in another matter. The AP described the witnesses, who are active in the field of treating transgender persons, as experts and submitted their resumes or CVs. AP Statement at 9; AP complaint; AP/CMS e-mail (Jan. 7, 2014).

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[9] The NCD Ruling is at http://www.hhs.gov/dab/decisions/dabdecisions/ncd1403.pdf.

[10] The Board also published on its website notice providing an additional time period for interested parties to submit participation requests; none were received.

[11] Most of the AP's evidence other than witness statements is an appendix of sources the clinical psychologist cited in her declaration. We refer to these materials as the AP's exhibits (AP Exs.) and cite to the page numbers used in the publications in which they appeared. In addition, the physician's declaration includes an appendix of 20 unnumbered pages of insurance regulations from four states and the District of Columbia barring exclusion of sex reassignment surgery as medically necessary treatment for severe gender dysphoria. One of the amici, the Human Rights Campaign, submitted 62 exhibits with its brief ("HRC Exs.").

CMS did not challenge the witnesses' qualifications as experts or seek to cross-examine them. We summarize their qualifications when we address their testimony below. In this decision we use the term "new evidence" to refer to the evidence submitted to us by the AP and amici to distinguish it from the evidence used to support the NCD which, as noted, consists principally of the 1981 report. Under the regulatory definition in 42 C.F.R. § 426.110, "new evidence" would also include any evidence submitted by CMS in response to an NCD complaint that was not considered by CMS before the NCD was issued. In this case, however, as we discuss below, CMS submitted no "new evidence."

Standard of review

The Board "evaluate[s] the reasonableness" of an NCD by determining whether it "is valid [or] is not valid under the reasonableness standard," which requires us to uphold the NCD "if the findings of fact, interpretations of law, and applications of fact to law by … CMS are reasonable" based on the NCD record and the relevant record developed before us. Act § 1869(f)(1)(A)(iii); 42 C.F.R. §§ 426.110, 426.531(a), 426.550(a). The Board "defer[s] only to the reasonable findings of fact, reasonable interpretations of law, and reasonable applications of fact to law by the Secretary." Act § 1869(f)(1)(A)(iii); 42 C.F.R. § 426.505(b).

During the review, the aggrieved party bears the burden of proof and the burden of persuasion for the issues raised in an NCD complaint; the burden of persuasion is judged by a preponderance of the evidence. 42 C.F.R. § 426.330. CMS has explained that "[s]o long as the outcome [in the NCD] is one that could be reached by a rational person, based on the evidence in the record as a whole (including logical inferences drawn from that evidence), the determination must be upheld," and that if CMS "has a logical reason as to why some evidence is given more weight than other evidence," the Board "may not overturn the determination simply because they would have accorded more weight to the evidence in support of coverage." 68 Fed. Reg. at 63,703.

Analysis

The NCD is invalid because a preponderance of the evidence in the record as a whole supports a conclusion that the NCD's stated bases for its blanket denial of coverage for transsexual surgery are not reasonable.

As previously stated, the NCD was based principally on the 1981 report findings that the safety and effectiveness of transsexual surgery had not been proven. The AP argues that these findings are not "supportable by the current state of medical science" and "not reasonable in light of the current state of scientific and clinical evidence and current medical standards of care" and are contradicted by studies conducted in the 32 years since the 1981 report. AP Statement at 6-7, 14. The amici made similar arguments. *See, e.g.*, WPATH Br. at 13 ("since [the NCD] was issued, it has been repeatedly

demonstrated that SRS [sex reassignment surgery] is safe, effective, and indisputably necessary treatment for certain individuals with severe GID [gender identity disorder]"). As we discuss below, the new evidence, which is unchallenged, indicates that the bases stated in the NCD and the NCD record for denying coverage, even assuming they were reasonable when the NCD was issued, are no longer reasonable.

A. The fact that the new evidence is unchallenged and the NCD record undefended is significant.

As we stated earlier, the AP has the burden of proof by a preponderance of the evidence that an NCD is invalid under a reasonableness standard. In deciding whether the AP has met this burden, we must weigh the evidence in the record before us. Thus, we consider it important to note at the outset that the only evidence before us, other than the record for the NCD, which consists principally of the 1981 report, is the new evidence submitted by the AP and the amicus HRC. CMS submitted the NCD record, as it was required to do, but has not argued that that record or any other evidence supports the NCD. CMS also did not elect to cross-examine the AP's witnesses, has not challenged their testimony or professional qualifications and joined the AP in asking the Board to decide the appeal based on the written record. *See* AP/CMS e-mail (Jan. 7, 2014). The preamble to the regulations that implement the NCD statute states that the "reasonableness standard . . . recognizes the expertise of … CMS in the Medicare program—specifically, in the area of coverage requiring the exercise of clinical or scientific judgment." 68 Fed. Reg. at 63,703 (emphasis added). Accordingly, in determining whether the NCD is valid under the reasonableness standard, we must accord some deference to CMS's position, and its decision not to defend the NCD or challenge the new evidence in this case has some significance for our decision-making.

Apart from the absence of any challenge to the new evidence or defense of the NCD record, we find the new evidence credible and persuasive on its face.[12] We have no difficulty concluding that the new evidence, which includes medical studies published in the more than 32 years since issuance of the 1981 report underlying the NCD, outweighs the NCD record and demonstrates that transsexual surgery is safe and effective and not experimental. Thus, as we discuss below, the grounds for the NCD's exclusion of coverage are not reasonable, and the NCD is invalid.

[12] For this reason, we found it unnecessary to exercise our independent authority to "consult with appropriate scientific or clinical experts concerning clinical and scientific evidence." *See* 42 C.F.R. § 426.531(b).

B. The new evidence indicates acceptance of criteria for diagnosing transsexualism.

Transsexual surgery is a treatment option for the medical condition of transsexualism. The NCD recognized that transsexualism is a diagnosed medical condition. The 1981 report stated that transsexualism "is defined as an overwhelming desire to change anatomic sex stemming from the fixed conviction that one is a member of the opposite sex." NCD Record at 13, citing Dorland's Illustrated Medical Dictionary, 25th ed. The 1981 report recognized that the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders issued in 1980 (DSM III) had "included for the first time the diagnostic category of 'Transsexualism.'" NCD Record at 13. Nonetheless, the 1981 report expressed concern that diagnosing transsexualism was "problematic" because, the report contended, the criteria for establishing the diagnosis "vary from center to center and have changed over time." NCD Record at 14.

One of the AP's expert witnesses, Randi Ettner, Ph.D., a clinical psychologist, testified that the expressed basis for this concern is "completely untrue now." Ettner Supp. Decl. at ¶ 5. Dr. Ettner stated that "Gender Identity Disorder is a serious medical condition codified in the International Classification of Diseases (10th revision; World Health Organization) and the [DSM]."[13] Ettner Decl. at ¶ 10; *see also* Ettner Supp. Decl. at ¶ 6 (similar testimony). She described the condition as follows:

> The disorder is characterized by intense and persistent discomfort with one's primary and secondary sex characteristics—one's birth sex. The suffering that arises is often described as "being trapped in the wrong body." The psychiatric term for this severe and unremitting emotional pain is "gender dysphoria."

Ettner Decl. at ¶ 10. Dr. Ettner's declaration and CV state that she has a doctorate in psychology, has evaluated or treated between 2,500 and 3,000 individuals with GID and mental health issues related to gender variance, has published three books, including *Principles of Transgender Medicine and Surgery*, has authored articles in peer-reviewed journals, and is a member of the board of directors of the World Professional Association for Transgender Health (WPATH) and an author of the WPATH Standards of Care for

[13] The record indicates that the term "transsexualism" that was used in the NCD and the DSM-III was succeeded in the DSM-IV and DSM-V by the terms "Gender Identity Disorder" (GID) and "gender dysphoria." AP Statement at 1 n.1; Ettner Supp. Decl. at ¶ 6; Hsiao Decl. at ¶ 11; AP Ex. 7, at 208; WPATH Br. at 2 n.3. In this decision, we use the term "transsexualism" because it is used in the NCD, but our decision should be read as encompassing the successor terminology as well.

the Health of Transsexual, Transgender, and Gender-Nonconforming People. *Id*. at ¶¶ 3-6; *see also Sundstrom v. Frank*, 630 F. Supp. 2d 974, 986-87 (E.D.Wis. 2007) ("Dr. Ettner's experience speaks for itself … the doctor has conducted research and has been an instructor specializing in the etiology, diagnosis and treatment of GID [and] is the editor of a medical textbook in which she wrote the chapter of that book on the etiology of GID. The court finds that Dr. Ettner is sufficiently qualified to provide expert testimony.").

We find nothing in the new evidence that would undercut Dr. Ettner's statement. The DSM-IV-TR (text revision), published in 2000, continues to recognize "transsexualism" as a diagnosed medical condition, although it refers to the same disorder as GID and identifies criteria for diagnosing GID in adolescents and adults that are consistent with Dr. Ettner's description, albeit more detailed. The criteria include "strong and persistent cross-gender identification (not merely a desire for any perceived cultural advantages of being the other sex)" that is "manifested by symptoms such as a stated desire to be the other sex, frequent passing as the other sex, desire to live or be treated as the other sex, or the conviction that he or she has the typical feelings and reactions of the other sex;" "[p]ersistent discomfort with his or her sex or sense of inappropriateness in the gender role of that sex" that is "manifested by symptoms such as preoccupation with getting rid of primary and secondary sex characteristics (e.g., request for hormones, surgery, or other procedures to physically alter sexual characteristics to simulate the other sex) or belief that he or she was born the wrong sex;" and "[t]he disturbance is not concurrent with a physical intersex condition." AP Ex. 4, at 581. The DSM-IV-TR states that if GID is present in adults, "[t]he disturbance can be so pervasive that the mental lives of some individuals revolve only around those activities that lessen gender distress." *Id*. at 576, 78. The WPATH brief indicates that transsexualism or GID remains a diagnostic category in the fifth edition of the DSM issued in 2013 (DSM-V), which uses the term "Gender Dysphoria." WPATH Br. at 2, n.3.

The DSM has been recognized as a primary diagnostic tool of American psychiatry. *See O'Donnabhain v. Comm'r of Internal Revenue*, 134 T.C. 34, at 60 (2010) (stating "all three experts agree [that the DSM-IV-TR] is the primary diagnostic tool of American psychiatry"); *see also* AP Ex. 3, at 1[14] (resolution of American Medical Association House of Delegates noting the DSM description of GID as "a persistent discomfort with one's assigned sex and with one's primary and secondary sex characteristics, which causes intense emotional pain and suffering" that "if left untreated, can result in clinically significant psychological distress, dysfunction, debilitating depression and, for some people without access to appropriate medical care and treatment, suicidality and death").

[14] American Medical Association House of Delegates, *Resolution 122 (A-08), Removing Financial Barriers to Care for Transgender Patients* (2008).

We conclude that to the extent the NCD was based on concerns expressed in the NCD record about problems diagnosing transsexualism, that concern is unreasonable based on the new evidence.

C. The new evidence indicates that transsexual surgery is safe.[15]

The 1981 report stated that transsexual surgery "cannot be considered safe because of the high complication rates." NCD Record at 18. The 1981 report identified surgical complications including "rectovaginal fistulas, perineal abscesses, introital and deep vaginal stenosis, and vaginal shortening" in male-to-female (MF) patients, and "rejection of the testicular implants, scrotal fusion, and phalloplasty infections" in female-to-male (FM) patients, and states that "[m]ultiple complications for individual patients and secondary surgeries to correct complications or to improve on undesirable results are not uncommon." *Id*. at 15 (citations omitted). The AP argues that "advancements in surgical techniques have dramatically reduced the risk of complications from sex reassignment surgery and the rates of serious complications from such surgeries are low" and that the studies cited in the 1981 report "evaluated outdated surgical techniques that have been replaced with improved, safer procedures." AP Statement at 7, 10. The new evidence supports the AP.

Expert witness Katherine Hsiao, M.D., testified that hysterectomies and mastectomies are common procedures used to treat gender GID in transgender men (FM) and "are routinely performed in other contexts, such as in cases of breast cancer, ovarian cancer, uterine cancer and/or cervical cancer . . . ." Hsiao Decl. at ¶ 11. These procedures, she stated, "have low rates of complications" and are "generally identical whether performed on transgender men to treat gender dysphoria or to treat women for these other conditions."[16] *Id*. Dr. Hsiao also stated that "insurance companies routinely cover the costs associated" with hysterectomies. *Id*. Dr. Hsiao testified that based on her own practice of providing surgery to transgender men, "gender affirming surgeries for transgender men are extremely safe and have very low rates of serious complications,"

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[15] We are unable to discuss in the space of this decision all of the new evidence and see no need to do so since it is all unchallenged. However, we find nothing in the new evidence not discussed that would alter our conclusion that the NCD is invalid, at least absent argument or counter-evidence from CMS. We have attached to this decision an Overview of the Scientific Literature in the New Evidence.

[16] Dr. Hsiao testified without contradiction that a "serious complication" of surgery–

> is generally understood among surgeons to include death, conditions requiring an unplanned admission to the Intensive Care Unit or unplanned readmission to the hospital within 30 days, severe hemorrhage requiring transfusion of several units of blood product, permanent disability, an intraoperative injury requiring an unplanned intervention during the surgical procedure, permanent brain damage, or cardiac arrest.

Hsiao Decl. at ¶ 9.

that she has performed hysterectomies for transgender men for the past ten years and that those procedures "are generally identical to the ones I perform on women to treat early cancer or other conditions." *Id*. at ¶ 20. Dr. Hsiao reports having "typically performed multiple obstetrical, gynecologic, or other pelvic surgeries every week, including but not limited to hysterectomies and other advanced pelvic surgeries targeting the reproductive system and adjacent organs . . . ." *Id*. at ¶ 6. Dr. Hsiao's declaration and CV indicate that she is certified by the American Board of Obstetrics and Gynecology, is the chief of the division of gynecology and the director of Ob/Gyn resident education at a California medical center and an assistant clinical professor in the department of obstetrics, gynecology and reproductive medicine at the University of California at San Francisco. *Id*. at ¶¶ 3-6; CV.

Dr. Hsiao further stated, regarding MF transsexual surgery, that she has been part of a surgical team that performed surgery to create a neovagina in women born with a congenital "complete or partial absence of a vagina, cervix, and uterus," a condition called Mayer-Rokitansky-Kuster-Hauser syndrome, or MRKH. Hsiao Decl. at ¶ 12. She stated that this procedure has "a low rate of complications," and that the associated surgical costs are, in her experience, "routinely cover[ed]" by insurance companies for women born with MRKH. She stated that while women with MRKH "can never have biological children … the role of surgery is essential to affirm their gender identity and to align their anatomy with that identity." *Id*.

Dr. Ettner stated that "[t]here is no scientific or medical basis" for the NCD's statement that sex reassignment surgery has not been proven safe and has a high rate of serious complications; that the "[r]ates of complications during and after sex reassignment surgery are relatively low, and most complications are minor;" and that the risk of complications "has, moreover, been dramatically reduced since 1985." Ettner Decl. at ¶¶ 32, 34. Dr. Ettner testified that during eight years at the Chicago Gender Clinic she "regularly consulted with our surgeon" and is "aware of only two major surgical complications, both of which were immediately repaired." *Id*. at ¶ 36. She stated that the clinic "as a whole has a 12 percent complication rate for genital surgery" and that "the vast majority of those complications [were] minor, all were easily corrected, and none involved surgical site infection or readmission." *Id*. Dr. Ettner stated the 1981 report's discussion of surgical complication rates was "outdated and irrelevant based on current medical practices and procedures." Ettner Supp. Decl. at ¶ 9. In particular, she stated that one of the studies cited in the 1981 report's discussion of complications (Laub & Fisk 1974) reflected the use of a MF surgical technique that "led to unacceptably high rates of fistulae and other complications" and was later abandoned by the study's authors. *Id*. at ¶ 10.

Another of the AP's expert witnesses, Marci L. Bowers, M.D., stated in her notarized letter that in her experience of performing gender-related surgeries, transsexual surgery "does not have a higher rate of complication than any other surgery, and in fact has very

few complications, which are mainly minor in nature." Bowers Letter at 1 (Mar. 5, 2013), Att. to AP Statement. Dr. Bowers stated that she performs approximately 220 gender-related surgeries annually and has performed over 1000 "Male to Female Gender Corrective Surgeries." *Id*. Her CV indicates that she has served as the Chair of the Department of Obstetrics and Gynecology at the Swedish (Providence) Medical Center in Seattle.

The fourth expert witness, Sherman N. Leis, M.D., stated that he personally "perform[s] several gender reassignment procedures each week" and has "seen only relatively minor complications which are easily treated" and has "thus far seen no life threatening complications from any of the transgender surgeries" he has performed. Leis Letter at 2 (Feb. 28, 2013), Att. to AP Statement. Dr. Leis's letter and CV indicate that he is Board-certified in plastic and reconstructive surgery and in general surgery. *Id.* at 1.

The testimony of Drs. Ettner and Hsiao is based on studies as well as personal experience. Dr. Hsiao testified that she reviewed five studies in the AP exhibits "that include complication rate data and information for gender affirming surgeries performed in recent years" and that "[n]one of these five studies reported high rates of serious complications." Hsiao Decl. at ¶¶ 13-14, citing studies at AP Exs. 2, 9, 14, 21, 28. She stated that "almost all of the complications listed in these studies, such as urinary incontinence or retention, stenosis or stricture, bleeding, recto-vaginal fistula, and partial necrosis, are not specific to sex reassignment surgeries, but rather are known potential side effects of any type of urogenital surgery which are covered by Medicare." *Id*. at ¶ 15. She further testified that "every complication tracked in [Jarolim, et al. (2009)] for instance, falls into this category and none of them are serious;" that "[t]he Spehr (2007) study includes similar types of complications at very low rates;" and that "none of the complications listed in Lawrence (2006) are serious and many of them are consistent with what would be potential, expected outcomes for any urogenital surgery." *Id*. at 15-17, citing studies at AP Exs. 14,[17] 21,[18] 28.[19] She also stated that of the four "potentially serious" complications noted in the Amend (2013) study of 24 MF patients, none "were serious as that term is generally understood." *Id*. at ¶ 14, citing study at AP Ex. 2.[20]

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[17] Ladislav Jarolim, et al., *Gender Reassignment Surgery in Male-to-Female Transsexualism: A Retrospective 3-Month Follow-up Study with Anatomical Remarks*, 6 J. Sex. Med. 1635-44 (2009).

[18] Anne A. Lawrence, *Patient-Reported Complications and Functional Outcomes of Male-to-Female Sex Reassignment Surgery*, 35 Arch. Sex. Behav. 717-27 (2006).

[19] Christiane Spehr, *Male-to-Female Sex Reassignment Surgery in Transsexuals*, 10 Int'l J. Transgenderism 25-37 (2007).

[20] Bastian Amend, et al., *Surgical Reconstruction for Male-to-Female Sex Reassignment*, 64 Eur. Urol. 1-9 (2013).

Dr. Hsiao further stated that Eldh et al. (1997) compared complication rates for surgeries performed before and after 1986 and showed that "[n]early all of the surgical complication rates decreased significantly over time." Hsiao Decl. at ¶ 18, citing study at AP Ex. 9.[21] Dr. Hsiao stated that "fistulas, in particular, which are a risk of many urogenital surgeries, decreased from 18 percent in surgeries before 1986 to only 1 percent between 1986 and 1995," and that "the only fistula that occurred after 1985 'closed spontaneously,' meaning without the need for any medical intervention." *Id*. Eldh, Dr. Hsiao stated, showed that "[t]here is not a high rate of serious complications in any of the surgeries performed after 1986" and she noted that "there have been nearly 20 years of additional surgical progress since the last surgery tracked." *Id.*

Dr. Ettner cited the same five studies as showing that surgical outcomes were "far superior" after 1985 due to "improvements in technique, shortened hospital stays and improvements in postoperative care;" that significant surgical complications were uncommon; that only a low percentage of patients experienced complications, which were successfully resolved; and that "the complication rate is low and most complications can be overcome by adequate correctional interventions." Ettner Decl. at ¶¶ 34-35.

We find no reason to discount the opinions of these experts or their representations regarding the findings in the studies they cite. We have conducted our own review of the studies cited by Dr. Hsiao and Dr. Ettner and find them consistent with these opinions and representations. We note, for example, that Eldh, which divided the study group into those operated on before 1986 and those operated on from 1986–1995, made findings tending to support these expert opinions. The Eldh study states:

> After 1985 the outcome of surgery became much better not only because of changes in management but also because of improvements in surgical technique, preoperative planning, and postoperative treatment. Total time spent in hospital decreased dramatically after 1985 because the number of procedures was less and the rate of early and late postoperative complications dropped. Haemorrhage and haematoma were common in both groups, predominantly originating from the spongious tissue of the urethra. Infections occurred less often in the late group perhaps as a result of peroperative antibiotic prophylaxis. Serious complications like fistula formation and partial flap necrosis were rare after 1985, though they were common before then. The reason for the lower fistula rate in the later group may be ascribed to better anatomical knowledge of this region and a more precise surgical technique. There was only one rectovaginal fistula after 1985 and this fistula closed spontaneously.

[21] Jan Eldh, *et al*., *Long-Term Follow Up After Sex Reassignment Surgery*, 31 Scand. J. Plast. Reconstr. Surg. Hand Surg. 39-45 (1997).

AP Ex. 9, at 44. Dr. Hsiao stated that those findings are "consistent with what I would expect to find when comparing surgeries, and surgical techniques, over a long period of time." Hsiao Decl. at ¶ 18; *see also* WPATH Br. at 9-10 (citing Eldh and stating that "while early sex reassignment surgeries were sometimes accompanied by serious complications like fistulas or necrotic tissue, the rate of such complications has dropped dramatically with the advent of more sophisticated surgical techniques, among other reasons").

We conclude that the AP has shown that the NCD's statement that transsexual surgery is unsafe and has a high rate of complications is not reasonable in light of the evolution of surgical techniques and the studies of outcomes discussed in the unchallenged new evidence presented here.

D. The new evidence indicates that transsexual surgery is an effective treatment option in appropriate cases.[22]

1. The expert testimony and studies on which the experts rely support the surgery's effectiveness.

The AP argues that studies conducted after the 1981 report was issued confirm that transsexual surgery is an effective treatment for persons with severe gender dysphoria, and the expert testimony and studies support that argument. AP Statement at 7-8.

Dr. Ettner testified that "[b]ased on decades of extensive scientific and clinical research, the medical community has reached the consensus that altering a transsexual individual's primary and secondary sex characteristics is a safe and effective treatment for persons with severe Gender Identity Disorder." Ettner Decl. at ¶ 13.[23] With regard to effectiveness in particular, Dr. Ettner testified that "more than three decades of research confirms that sex reassignment surgery is therapeutic and therefore an effective treatment for Gender Identity Disorder" and that "for many patients with severe Gender Identity

[22] We use the term "appropriate cases" because we do not read the new evidence as necessarily stating that transsexual surgery is appropriate in all cases of transsexualism, and our conclusion that the NCD's blanket preclusion of Medicare coverage for transsexual surgery is invalid does not require a finding to that effect. However, it is worth noting that WPATH has developed, in its standards of care, criteria for the use of different transsexual surgical procedures. *See, e.g.*, WPATH "[c]riteria for hysterectomy and salpingooophorectomy in [FM] patients and for orchiectomy in [MF] patients." AP Ex. 7, at 202 (E. Coleman, et al., *Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People*, Version 7, 13 Int'l J. Transgenderism 165–232 (2011)).

[23] Dr. Ettner in her declaration focuses on genital surgery for the male-to-female (MF) transsexual. *See* Ettner Decl. at ¶ 8. Dr. Hsiao's testimony addressed procedures performed on FM patients. Hsiao Decl. at ¶¶ 7, 11, 20-21.

Disorder, sex reassignment surgery is the only effective treatment." *Id*. at ¶ 19. She concluded that "[t]he NCD's determination regarding efficacy is not reasonably supported by scientific or clinical evidence, or standards of professional practice, and fails to take into account the robust body of research establishing that surgery relieves, and very often completely eliminates, gender dysphoria." *Id*. at ¶ 31.

Dr. Bowers stated that "[m]any patients report a dramatic improvement in mental health following surgery, and patients have been able to become productive members of society, no longer disabled with severe depression and gender dysphoria." Bowers Letter at 1. She concluded that "Gender Corrective Surgery has been shown to be a life-saving procedure, and is unequivocally medically necessary." *Id*. Dr. Leis stated that "[m]edical literature reports a dramatic drop in the incidence of depression and suicide attempt[s] by individuals who have undergone gender reassignment, indicating that many lives have been saved because of this surgery," that "there is a very low incidence of 'regret'" of "only about 1% of patients who have had gender reassignment surgery" and that "I personally have never had a single patient who has regretted having this surgery." Leis Letter at 2.

Dr. Ettner cited 20 studies published between 1987 and 2010 as showing the effectiveness of transsexual surgery. Ettner Decl. at ¶¶ 20-26, 28-30. She emphasized three studies, two of which were published in 1998 and 2007 and analyze other studies of the treatment of transsexuals published during the years 1961 to 1991 and 1990 to 2007, respectively. *Id*. at ¶¶ 20-22, citing studies at AP Exs. 10, 25, 27; *see also* WPATH Br. at 7-8 (discussing the same three studies). The 1998 study (Pfafflin & Junge) reviewed "30 years of international follow-up studies of approximately two thousand persons who had undergone sex reassignment surgery" including more than 70 individual studies and eight published reviews from four continents. AP Ex. 25 at unnumbered page 1.[24] As "general results," the researchers in the 1998 study stated that the studies they reviewed concluded "that gender reassigning treatments are effective," that positive, desired results outweigh the negative or non-desired effects, and that "[p]robably the most important change that is found in most research is the increase of subjective satisfaction [which] contrasts markedly to the subjectively unsatisfactory start position of the patients." *Id*. at 45, 49. The study's summary, which it qualified as a "simplification," stated that the studies reviewed show that "[i]n over 80 qualitatively different case studies and reviews from 12 countries, it has been demonstrated during the last 30 years that the treatment that includes the whole process of gender reassignment is effective." *Id*. at 66. The summary stated that all "follow-up studies mostly found the desired effects" the most important of

[24] Friedemann Pfafflin & Astrid Junge, *Sex Reassignment: Thirty Years of International Follow-Up Studies After Sex Reassignment Surgery: A Comprehensive Review 1961-1991* (Roberta B. Jacobson & Alf B. Meier trans., 1998) (1992) (http://web.archive.org/web/20061218132346/http://www.symposion.com/ijt/pfaefflin/1000.htm, accessed May 29, 2014).

which the patients felt were "the lessening of suffering" and "desired changes in the areas of partnership and sexual experience, mental stability and socio-economic functioning level." *Id*. at 66-67.

The 2007 study, Gijs & Brewaeys, which examined the results of 18 studies published between 1990 and 2006, states that sex reassignment "is the most appropriate treatment to alleviate the suffering of extremely gender dysphoric individuals" and that "96% of the persons who underwent [surgery] were satisfied and regret was rare." AP Ex. 10, at 215, cited in Ettner Decl. at ¶ 22, WPATH Br. at 7.[25] Two of the reviewed studies showed that "[s]uicidality was significantly reduced postoperatively" and that in MF patients there were no suicide attempts after surgery as opposed to three attempts before surgery. AP Ex. 10, at 188, 192.

Dr. Ettner and WPATH also cited what Dr. Ettner described as "a large-scale prospective study" finding "that after surgery there was 'a virtual absence of gender dysphoria' in the cohort and that the 'results substantiate previous conclusions that sex reassignment is effective.'" Ettner Decl. at ¶ 21, citing Smith et al. (2005), AP Ex. 27;[26] WPATH Br. at 8. Dr. Ettner concluded that Smith et al. and other studies have, variously, "shown that by alleviating the suffering and dysfunction caused by severe gender dysphoria, sex reassignment surgery improves virtually every facet of a patient's life," including "satisfaction with interpersonal relationships and improved social functioning," "improvement in self-image and satisfaction with body and physical appearance," and "greater acceptance and integration into the family[.]" Ettner Decl. at ¶ 24, citing studies at AP Exs. 1, 12, 15, 19, 22, 26, 27, 30. She also cited nine studies as having "shown that surgery improves patients' abilities to initiate and maintain intimate relationships." *Id*. at ¶ 25, citing studies at AP Exs. 8, 13, 14, 16, 20-22, 26, 27.

Based on our own review of the cited studies, we find no reason to question the expert testimony about them. In general, the studies included interviewing post-operative patients with a variety of surveys or questionnaires to assess changes in different aspects of their lives and psychological symptoms following surgery. The studies also generally used statistical techniques to assess the results. The studies were conducted in countries including the United States, Canada, Sweden, the Czech Republic, Israel, Brazil, The Netherlands, and Belgium.

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[25] Luk Gijs & Anne Brewaeys, *Surgical Treatment of Gender Dysphoria in Adults and Adolescents: Recent Developments, Effectiveness, and Challenges,* 18 Ann. Rev. Sex Res. 178-224 (2007).

[26] Yolanda L.S. Smith et al., *Sex Reassignment: Outcomes and Predictors of Treatment for Adolescent and Adult Transsexuals,* 35 Psychol. Med. 89-99 (2005).

We note that these studies are scientific writings and do not make sweeping pronouncements or claim discoveries beyond possible doubt. Indeed, the authors sometimes qualify the results and caution against drawing overly broad and simplistic conclusions. *See, e.g.*, AP Ex. 25, at 66 (Pfafflin & Junge, qualifying the study's summary of its conclusion as a simplification). This, in our view, enhances their facial credibility. Nonetheless, even keeping in mind the possible limitations of these studies, they support the AP's position that transsexual surgery has gained broad acceptance in the medical community.

2. The 1981 report's expressed concern about an alleged lack of controlled, long-term studies is not reasonable in light of the new evidence.

The 1981 report summarized the findings of nine studies on "[t]he result or outcome of" transsexual surgery. NCD record at 15-18. With respect to those studies, the report stated that "surgical complications are frequent, and a very small number of post-surgical suicides and psychotic breakdowns are reported." *Id.* at 17-18. However, the report also acknowledged that eight of those nine studies "report that most transsexuals show improved adjustment on a variety of criteria after sex reassignment surgery, and that "[i]n all of these studies the large majority of those who received surgery report that they are personally satisfied with the change[.]" NCD Record at 17. Notwithstanding its discussion of these studies, the 1981 report (and the NCD) cited an alleged "lack of well controlled, long term studies of the safety and effectiveness of the surgical procedures and attendant therapies for transsexualism" as a ground for finding the procedures "experimental." *Id*. at 19. The 1981 report did not define "long term" for the purpose of assigning weight to study results and the NCD record provided no clarification of that phrase. The 1981 report noted "post-operative followup" and "followup" times for eight of the nine studies on the outcomes of surgery, with "average," "mean" or "median" periods ranging from 25 months to over eight years, and individual periods from three months to 13 years. NCD Record at 15-17. If these studies do not qualify as acceptable long-term studies, the basis for such a conclusion is not adequately explained in the NCD record.

Even assuming the studies cited in the 1981 report could be viewed as not sufficiently "long-term," Dr. Ettner stated that "there are numerous long-term follow-up studies on surgical treatment demonstrating that surgeries are effective and have low complication rates" and, as discussed above, her testimony cited some of those studies. Ettner Decl. at ¶ 26. CMS does not challenge this statement, and we find no reason to question it. We note that the participants in one study Dr. Ettner cited had a mean interval since

vaginoplasty of 75.46 months. AP Ex. 30, at 754.[27] We also note that the 18 studies published between 1990 and 2006 and encompassing 807 MF and FM patients analyzed in Gijs & Brewaeys (2007) had mean follow-up durations ranging from six months to as long as (in one study) 168 months. AP Ex. 10, at 186-87.[28] Additionally, two studies Dr. Ettner cited appear to be long term in that they studied patients who had undergone surgery during periods of 14 and 20 years, respectively. AP Exs. 13,[29] 29.[30] Those studies reported favorable overall results.

Dr. Ettner also testified that two studies from 1987 and 1990 used control groups and found improved psychosocial outcomes in surgery patients. Ettner Decl. at ¶¶ 28-30. In the 1990 study, she stated, MF patients were "matched for family and psychiatric histories and severity of the [GID] diagnosis" and "randomly assigned either to immediately undergo surgery, or be placed on a waiting list for two years." *Id*. at ¶ 29, citing study at AP Ex. 23.[31] The study found that patients who underwent surgery "demonstrated dramatically improved psychosocial outcomes, compared to the still-waiting controls" and "were more active socially and had significantly fewer psychiatric symptoms." *Id*.; *see also* WPATH Br. at 8 (study found "comparative improvements in neurotic symptoms and social activity for the group receiving surgery"). Dr. Ettner described the 1990 study as the "best example of a well-controlled investigation." Ettner Decl. at ¶ 29. Dr. Ettner also described a 1987 study comparing transsexuals who had undergone surgery with "those who had not, but were otherwise matched (control group)" as finding that "the patients who underwent surgery were better adjusted psychosocially, had improved financial circumstances, and reported increased satisfaction with sexual experiences, as compared to the unoperated group." *Id*. at ¶ 30, citing study at AP Ex. 17.[32]

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[27] Steven Weyers, M.D., et al., *Long-term Assessment of the Physical, Mental, and Sexual Health Among Transsexual Women*, J. Sex. Med. 752-60 (2009).

[28] Luk Gijs & Anne Brewaeys, *Surgical Treatment of Gender Dysphoria in Adults and Adolescents: Recent Developments, Effectiveness, and Challenges*, 18 Ann. Rev. Sex Res. 178-224 (2007).

[29] Ciro Imbimbo, M.D. Ph.D., et al., *A Report from a Single Institute's 14-Year Experience in Treatment of Male-to-Female Transsexuals*, 6 J. Sex. Med. 2736-45 (2009).

[30] Svetlana Vujovic, M.D. Ph.D., *et al.*, *Transsexualism in Serbia: A Twenty-Year Follow-Up Study*, 6 J. Sex. Med. 1018-23 (2009).

[31] Charles Mate-Kole, et al., *A Controlled Study of Psychological and Social Change After Surgical Gender Reassignment in Selected Male Transsexuals*, 157 Brit. J. Psychiatry 261-64 (1990).

[32] G. Kockott, M.D. & E. M. Fahrner, Ph.D., *Transsexuals Who Have Not Undergone Surgery: A Follow-Up Study*, 16 Archives of Sexual Behavior 511-22 (1987).

Nothing in the record puts into question the authoritativeness of the studies cited in the new evidence based on methodology (or any other ground). Even if questions about methodology had been raised, we would be hard pressed to find that this alone would justify our not crediting the new evidence that transsexual surgery is effective and safe. This is particularly true since the 1981 report itself suggested it might be impossible to find the kind of adequate control groups needed to assuage this criticism. *See* NCD Record at 18 (stating the need for adequate control groups and stating "perhaps this is impossible."). We note that in the local coverage determination (LCD) context, CMS guidance for contractors states that the determinations "shall be based on the strongest evidence available." CMS Medicare Program Integrity Manual (MPIM), CMS Pub. 100-08, Ch. 13, § 13.7.1.[33] While the guidance states a "preference" for "[p]ublished authoritative evidence derived from definitive randomized clinical trials or other definitive studies . . .," it also includes as evidence meeting that standard, "[g]eneral acceptance by the medical community (standard of practice), as supported by sound medical evidence . . . ." [34] *Id*. In *LCD Complaint: Homeopathic Med. & Transfer Factor*, DAB No. 2315 (2010), the Board relied on that guidance when rejecting the argument that a certain type of controlled study was the sole basis on which a determination of medical necessity could be supported. The Board stated, "[a]s the [CMS guidance] explains, general acceptance in the medical community may be sufficient if it has scientific support." DAB No. 2315, at 34. While the guidance applies to contractors, who develop LCDs but not NCDs, it is instructive here as representing CMS's determination of the type of evidence that may support Medicare coverage. Regardless of whether the new evidence here meets the first option for meeting the evidentiary standard set forth in the guidance (and CMS does not assert that it does not), it clearly meets the second option because it indicates a consensus among researchers and mainstream medical organizations that transsexual surgery is an effective, safe and medically necessary treatment for transsexualism.

Based on the record as a whole, including the new evidence discussed above, we conclude that the AP has shown that transsexual surgery is an effective treatment option for transsexualism in appropriate cases.

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[33] CMS Manuals are available at http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs.html, accessed May 14, 2014.

[34] The guidance further provides that the "sound medical evidence" supporting this "general acceptance" should be based on "[s]cientific data or research studies published in peer-reviewed medical journals; … [c]onsensus of expert medical opinion (i.e., recognized authorities in the field); or … [m]edical opinion derived from consultations with medical associations or other health care experts." MPIM § 13.7.1.

E. The new evidence indicates that the NCD's rationale for considering the surgery experimental is not valid.

The NCD asserted that transsexual surgery was considered experimental because it had not been shown to be safe and effective.[35] The 1981 report stated that transsexual surgery "must be considered still experimental" because "[t]he safety and effectiveness of transsexual surgery as a treatment of transsexualism is not proven and is questioned." NCD Record at 19. As discussed above, the unchallenged new evidence indicates that transsexual surgery is a safe and effective treatment option for transsexualism in appropriate cases. Accordingly, the NCD's reasons for asserting that transsexual surgery was experimental are no longer valid.

In addition, the new evidence independently indicates that transsexual surgery is not considered experimental in a broader sense relating to its acceptance as a treatment for transsexualism. Dr. Bowers stated that "[m]any thousands of gender corrective surgeries have been performed worldwide for decades, and this treatment is in no way experimental." Bowers Letter at 1. Dr. Hsiao testified that there is "no scientific or medical basis for [the NCD's] description of gender affirming surgeries as 'experimental.'" Hsiao Decl. at ¶ 22. Dr. Hsiao, as noted, stated that some of the procedures involved in transsexual surgery are routinely performed in other contexts, and that surgery to create a neovagina is performed on women born MRKH. Hsiao Decl. at ¶¶ 11, 12; *see* Ettner Supp. Decl. at ¶ 15 ("mastectomies, hysterectomies and salpingo-oophorectomies, which are … excluded from coverage under [the NCD] are performed frequently… when indicated for medical conditions other than gender dysphoria").

Dr. Hsiao cited the "increasing coverage of sex affirming surgeries by private and public medical plans" and the inclusion of those surgeries "in prominent surgical text books" as showing that "gender affirming surgeries … are the standard of care and are not experimental." *Id*. at ¶¶ 23, 24. Dr. Hsiao cited California managed care guidance "clarifying that any attempt 'to exclude insurance coverage of [] transsexual surgery'" would violate California law, and she stated that Vermont, Colorado, Oregon, and Washington, D.C. "have issued similar insurance directives prohibiting discrimination based on gender identity with respect to healthcare policies." *Id*. at ¶ 25, citing Letter No. 12-K: Gender Nondiscrimination Requirements, Calif. Dep't of Managed Health Care

[35] "Because of the lack of well controlled, long-term studies of the safety and effectiveness of the surgical procedures and attendant therapies for transsexualism, the treatment is considered experimental." NCD Record at 93.

(Apr. 9, 2013), Ex. A to Hsiao Decl.[36] "These events in the private and public sector," Dr. Hsiao stated, "solidify what the medical community has known for years—that gender affirming surgeries to treat gender dysphoria are evidence-based, medically necessary, and the standard of care for these patients." *Id*. at ¶ 26.

Dr. Leis stated that gender reassignment surgery "is not experimental and has been performed thousands of times with surgeons around the world and has been proven to be a medically necessary and successful treatment, saving many lives and significantly improving the lives of those who undergo this surgery." Leis Letter at 2. Dr. Leis also stated that "[m]edical and mental health professionals who are knowledgeable and experienced in this field recognize that counseling or psychotherapy, hormone therapy and genital reassignment surgery are medically necessary treatment modalities for many individuals with [GID]" and that those therapies "are widely accepted treatments for individuals with significant [GID] in the United States and in many other countries." *Id*. at 1. Dr. Leis also pointed to the acceptance of transsexual surgery procedures "as standard therapy by leading medical and mental health organizations" including the American Medical Association, the National Association of Social Workers, the American Psychological Association, the American Psychiatric Association, "and experts in the field belonging to" WPATH. *Id*. at 2.

HRC stated that its "Corporate Equality Index" annually surveys the "LGBT [lesbian, gay, bisexual and transgender] workplace policies" of "the Fortune 1000 list of the largest publicly traded companies along with American Lawyer Magazine's top 200 revenue-grossing law firms" and considers "whether these organizations afford transgender-inclusive health care options through at least one firm-wide plan that covers surgical procedures." HRC Br. at 1, 11-12. HRC stated that in 2002, "zero percent of the rated companies had such plans" but "by 2008, nineteen percent met this criterion, and by 2013, forty-two percent of companies expressly covered" care related to gender reassignment. *Id*. citing HRC Ex. 30, at 28.[37]

Dr. Bowers, Dr. Hsiao and Dr. Ettner cited acceptance of the WPATH standards of care, which were first published in 1979 and last revised in 2011, as evidence that transsexual surgery is not experimental. Bowers Letter at 1; Hsiao Decl. at ¶ 22; Ettner Decl. at ¶¶ 38, 39; AP Ex. 7, at 165; *see also* AP Ex. 3 (AMA resolution stating that "[h]ealth experts in GID, including WPATH, have rejected the myth that such treatments are "cosmetic" or "experimental" and have recognized that these treatments can provide safe and effective treatment for a serious health condition"). The new evidence indicates that

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[36] http://www.dmhc.ca.gov/library/reports/news/dl12k.pdf, accessed May 14, 2014.

[37] HRC Corporate Quality Index (2013), available at http://www.hrc.org/corporate-equality-index, accessed April 25, 2014.

the WPATH standards of care have attained widespread acceptance.[38] S*ee* Hsiao Decl. at ¶ 22 ("the WPATH established standards of care for patients with gender dysphoria … have been endorsed by the American Medical Association, the Endocrine Society, the American Psychological Association, and the American College of Obstetricians and Gynecologists"); AP Ex. 3 (AMA resolution stating that WPATH is "the leading international, interdisciplinary professional organization devoted to the understanding and treatment of gender identity disorders" and that its "internationally accepted Standards of Care for providing medical treatment for people with GID … are recognized within the medical community to be the standard of care for treating people with GID"). Federal courts have recognized the acceptance of the WPATH standards of care. *See, e.g.*, *De'lonta v. Johnson*, 708 F.3d 520, at 522-23 (4th Cir. 2013) (WPATH standards of care "are the generally accepted protocols for the treatment of GID"); *Glenn v. Brumby*, 724 F. Supp. 2d 1284, at 1289 n.4 (N.D. Ga. 2010) ("there is sufficient evidence that statements of WPATH are accepted in the medical community")."[39] The acceptance of the WPATH standards of care also suggests that transsexual surgery is no longer considered experimental.

In its amicus brief, WPATH cited a 2007 study that examined the results of 18 studies published between 1990 and 2006 as showing "that [sex reassignment surgery] can no longer be considered an experimental treatment" and that "it [has] bec[o]me the dominant treatment for transsexuality and the *only* treatment that has been evaluated empirically." WPATH Br. at 7-8, citing AP Ex. 10, at 214-15.[40]

We note that in addition to stating that transsexual surgery was experimental, the NCD and the 1981 report stated that transsexual surgery was "controversial." NCD Record at 18 (1981 report stating that "[o]ver and above the medical and scientific issues, it would also appear that transsexual surgery is controversial in our society"). The AP and the new evidence dispute the relevance of this statement. The AP objected that this point relies on two "polemics" that are "are either completely unscientific or fall far outside the scientific mainstream," and Dr. Ettner stated that the views expressed therein "fall far outside the mainstream psychological, psychiatric, and medical professional consensus,

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[38] WPATH was "formerly the Harry Benjamin International Gender Dysphoria Association." Ettner Decl. at ¶ 6. Harry Benjamin, M.D. "was an endocrinologist who in conjunction with mental health professionals in New York did pioneering work in the study of transsexualism." *O'Donnabhain v. Comm'r of Internal Revenue*, 134 T.C. 34, 37 n.8 (2010). The 1981 report cites a 1966 study by Dr. Benjamin finding a positive outcome from MF transsexual surgery as "perhaps the first report" on transsexual surgery "in the literature." NCD Record at 15, 21.

[39] The general acceptance of a set of standards of care for the treatment of transsexuals appears to render invalid one of the 1981 report criticisms of the studies it discussed, that "therapeutic techniques are not standardized." NCD Record at 18.

[40] Luk Gijs & Anne Brewaeys, *Surgical Treatment of Gender Dysphoria in Adults and Adolescents: Recent Developments, Effectiveness, and Challenges*, 18 Ann. Rev. Sex Res. 178-224 (2007).

and call into question the objective reasonableness of the NCD." AP Statement at 15-16; Ettner Supp. Decl. at ¶¶ 17-18. CMS has not asserted that the Board's decision may be based on factors "over and above the medical and scientific issues" involved. Considerations of social acceptability (or nonacceptability) of medical procedures appear on their face to be antithetical to Medicare's "medical necessity" inquiry, which is based in science, and such considerations do not enter into our decision that the NCD is not valid.

For the reasons stated above, we conclude that citing the alleged "experimental" nature of transsexual surgery as a basis for noncoverage of all transsexual surgery is not reasonable in light of the unchallenged new evidence and contributes to our conclusion that the NCD is not valid.

Conclusion

For the reasons explained above, we conclude that the AP has shown that NCD 140.3 is not valid under the reasonableness standard.

/s/
Leslie A. Sussan

/s/
Constance B. Tobias

/s/
Sheila Ann Hegy
Presiding Board Member

ATTACHMENT TO DECISION NO. 2576

Overview of the Scientific Literature in the New Evidence

We provide below brief summaries of key findings in some of the studies submitted and reviewed by the Board as new evidence. The key findings in the remaining studies reviewed by the Board (also as new evidence) do not differ in any way material to our decision.

Jan Eldh, et al., *Long Term Follow Up After Sex Reassignment Surgery*, 31 Scand. J. Plast. Reconstr. Surg. Hand Surg. 39-45 (1997), AP Ex. 9. This study was a "long-term follow up of 136 patients operated on for sex reassignment … to evaluate the surgical outcome" that divided MF and FM patients into "two groups according to the surgical technique: those operated on before 1986 and those operated on from 1986–1995." The study found that after 1985 "the outcome of surgery became much better not only because of changes in management but also because of improvements in surgical technique, preoperative planning, and postoperative treatment," that "[m]odern surgical techniques can give good aesthetic and functional results" and that "[p]ersonal and social instability before operation correlated with an unsatisfactory outcome of sex reassignment." *Id*. at 39, 44, 45.

Luk Gijs & Anne Brewaeys, *Surgical Treatment of Gender Dysphoria in Adults and Adolescents: Recent Developments, Effectiveness, and Challenges*, 18 Ann. Rev. Sex Res. 178-224 (2007), AP Ex. 10. This study examined results of 18 international studies published between 1990 and 2006 that reported follow-up data of at least one year from 807 persons who had undergone sex reassignment surgery (193 FM, 614 MF). The purpose of this study was to update and assess the current validity of a conclusion in a 1990 article (based itself on review of 11 studies following post-operation) that transsexual surgery is an effective treatment for the alleviation of gender disorder in adults. This study concluded that "[d]espite methodological shortcomings of many of the studies . . . SRS is an effective treatment for transsexualism and the only treatment that has been evaluated empirically with large clinical case series" and that the "conclusion that SR [sex reassignment] is the most appropriate treatment to alleviate the suffering of extremely gender dysphoric individuals still stands: 96% of the persons who underwent SRS were satisfied and regret was rare." The authors noted that the methodologies and designs of later studies were improved but that true randomized control studies are not feasible, and might be unethical for SRS. *Id*. at 178, 185, 215-16.

Ciro Imbimbo, M.D. Ph.D., et al., *A Report from a Single Institute's 14-Year Experience in Treatment of Male-to-Female Transsexuals*, 6 J. Sex. Med. 2736-45 (2009), AP Ex. 13. This study's aim was "to arrive at a clinical and psychosocial profile of male-to-female transsexuals in Italy through analysis of their personal and clinical experience and evaluation of their postsurgical satisfaction levels SRS." From January 1992 to September 2006, 163 MF patients who had undergone SRS were asked to complete

patient satisfaction questionnaires. The study concluded that the "relatively high satisfaction level" was the result of a combination of "competent surgical skills, a well-conducted preoperative preparation program, and adequate postoperative counseling . . . ." Although postoperative pain and required revision surgeries were reported, the study found that 94% were satisfied with their post-surgical status and did not report regret. *Id*. at 2736, 2740, 2743.

Ladislav Jarolim, et al., *Gender Reassignment Surgery in Male-to-Female Transsexualism: A Retrospective 3-Month Follow-up Study with Anatomical Remarks*, 6 J. Sex. Med. 1635-44 (2009), AP Ex. 14. This study aimed "[t]o evaluate the results of surgical reassignment of genitalia in male-to-female transsexuals" by measuring "[s]exual functions and complications 3 months after surgery." The study followed 134 patients who had undergone surgical procedures between 1992 and 2008 and described the evolution in surgical techniques since the 1950s. Although the study noted potential complications and risks specific to SRS ("such as impairment of urinary continence, fecal continence, intestinal fistula, urinary fistula, and necrosis of the skin graft"), it concluded that "[s]urgical conversion of the genitalia is a safe and important phase of the treatment of male-to-female transsexuals." It also concluded that "[a]n increasing number of patients undergo this treatment because of the extensive progress in surgery involving the genitals and urethra" and that "[f]or male transsexuals, surgery can provide a cosmetically acceptable imitation of female genitals that enables coitus with orgasm." *Id*. at 1635-36,1642-43.

Annika Johansson, et al., *A Five-Year Follow-Up Study of Swedish Adults with Gender Identity Disorder*, 39 Arch. Sex. Behav. 1429-37 (2010), AP Ex. 15. This study evaluated from the perspective of both clinicians and patients the outcome of sex reassignment of "42 [MF and FM] transsexuals [who] completed a follow-up assessment after 5 or more years in the process or 2 or more years after completed sex reassignment surgery." It found that "the outcome was very encouraging from both perspectives … with almost 90% enjoying a stable or improved life situation at follow-up and only six out of 42 (according to the clinician) with a less favorable outcome." *Id*. at 1429, 1436.

G. Kockott, M.D. & E. M. Fahrner, Ph.D., *Transsexuals Who Have Not Undergone Surgery: A Follow-Up Study*, 16 Archives of Sexual Behavior 511-22 (1987), AP Ex. 17. This single-clinic study compared 26 transsexuals who sought but did not undergo surgery with 32 who did; psychosocial adjustment of those who delayed surgery did not improve from the time of diagnosis to follow-up while statistically significant positive changes in gender role, sexual, and socioeconomic adjustment were seen in transsexuals who had had surgery. *Id*. at 511, 517-19, 521.

Anne A. Lawrence, *Patient-Reported Complications and Functional Outcomes of Male-to-Female Sex Reassignment Surgery*, 35 Arch. Sex. Behav. 717-27 (2006), AP Ex. 21. This study "examined preoperative preparations, complications, and physical and

functional outcomes of [MF SRS] based on reports by 232 patients, all of whom underwent penile-inversion vaginoplasty and sensate clitoroplasty, performed by one surgeon using a consistent technique," who were surveyed a mean of three years after surgery. The study found that "[r]eports of significant surgical complications were uncommon," although one third had urinary stream problems, and that "[o[n average, participants expressed high levels of satisfaction with nearly all of the specific physical and functional outcomes of SRS." *Id*. at 717, 719, 724.

Maria Inês Lobato, et al., *Follow-Up of Sex Reassignment Surgery in Transsexuals: A Brazilian Cohort*, 35 Arch. Sex. Behav. 711-15 (2006), AP Ex. 22. This small study examined the "impact of sex reassignment surgery on satisfaction with sexual experience, partnerships, and relationship with family members in … 19 patients who received sex reassignment between 2000 and 2004." The results "indicate[d] that SRS had a positive effect on different dimensions of the patients' lives in all three aspects analyzed: sexual relationships, partnerships, and family relationships." *Id*. at 711-12, 714.

Charles Mate-Kole, et al., *A Controlled Study of Psychological and Social Change after Surgical Gender Reassignment in Selected Male Transsexuals*, 157 Brit. J. Psychiatry 261-64 (1990), AP Ex. 23. This study reviewed 40 patients accepted for gender reassignment surgery, randomly assigned to have surgery early or later such that only half had had surgery by the time of a follow-up two years later. The study found that "[a]lthough the groups were similar initially, significant differences between them emerged at follow-up . . . ." Patients who received surgery were "seen to improve significantly as far as neurotic symptoms are concerned and to become more socially active" in comparison with the patients who had not yet received surgery. *Id*. at 261, 264.

Friedemann Pfafflin & Astrid Junge, *Sex Reassignment: Thirty Years of International Follow-Up Studies After Sex Reassignment Surgery: A Comprehensive Review 1961-1991* (Roberta B. Jacobson & Alf B. Meier trans., 1998) (1992), AP Ex. 25. This overview was completed in 1992 and published in English in 1998. It reviewed "30 years of international follow-up studies of approximately two thousand persons who had undergone sex reassignment surgery," including "more than 70 individual studies and eight published reviews from four continents." In general, more frequent and severe complications were found in the earlier years covered than in later reports. The overview concluded that "[s]ex reassignment, properly indicated and performed, has proven to be a valuable tool in the treatment of individuals with transgenderism," that "gender reassigning treatments are effective" and that "the treatment that includes the whole process of gender reassignment is effective." *Id*. at unnumbered pages 1, 45, 66-67.

Yolanda L.S. Smith, et al., *Sex Reassignment: Outcomes and Predictors of Treatment for Adolescent and Adult Transsexuals*, 35 Psychol. Med. 89-99 (2005), AP Ex. 27. This study evaluated "outcomes of sex reassignment, potential differences between subgroups

of transsexuals, and predictors of treatment course and outcome" in 162 adults (104 MF, 58 FM). The study found that "[a]fter treatment the group was no longer gender dysphoric," had "improved in important areas of function, that 1-4 years after surgery, SR appeared therapeutic and beneficial . . . [and that] the vast majority expressed no regrets about their SR." The study further concluded "that sex reassignment is effective" but that "clinicians need to be alert for non-homosexual male-to-females with unfavourable psychological functioning and physical appearance and inconsistent gender dysphoria reports, as these are risk factors for dropping out and poor post-operative results." *Id*. at 89, 91, 96.

Svetlana Vujovic, M.D., Ph.D., et al., *Transsexualism in Serbia: A Twenty-Year Follow-Up Study*, 6 J. Sex. Med. 1018-23 (2009), AP Ex. 29. This study [a]imed to "describe a transsexual population seeking sex reassignment treatment in Serbia" by analyzing "data collated over a period of 20 years" from 147 transsexuals "applying for sex reassignment" of whom SRS was performed in 83% of MF and in 77% of MF patients. The study concluded that "in our population, there were no cases who regretted sex reassignment treatment," which was attributed to diagnostic procedures used and the "young [adult] age at which our subjects embarked on treatment." *Id*. at 1018-20, 1022.

Steven Weyers, M.D., et al., *Long-term Assessment of the Physical, Mental, and Sexual Health Among Transsexual Women*, J. Sex. Med. 752-60 (2009), AP Ex. 30. This study [a]imed "[t]o gather information on physical, mental, and sexual well-being, health-promoting behavior and satisfaction with gender-related body features of [49] transsexual women [MF] who had undergone SRS" with mean interval since vaginoplasty of 75.46 months. The study found that "sample … functions well after surgery on a physical, emotional, psychological and social level" and that "[o]nly with respect to sexuality do transsexual women appear to suffer from specific difficulties, especially concerning arousal, lubrication and pain." *Id*. at 752, 754, 759.

EXHIBIT G

UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

PERSONNEL AND
READINESS

FEB 14 2018

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DEPUTY CHIEF MANAGEMENT OFFICER
CHIEF, NATIONAL GUARD BUREAU
DIRECTOR OF COST ASSESSMENT AND PROGRAM EVALUATION

SUBJECT: DoD Retention Policy for Non-Deployable Service Members

In July, the Secretary of Defense directed the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD(P&R)) to lead the Department's effort to identify changes to military personnel policies necessary to provide more ready and lethal forces. In his initial memorandum to the Department, Secretary Mattis emphasized, "[e]very action will be designed to ensure our military is ready to fight today and in the future." Given the Secretary's guidance, OUSD(P&R) moved forward from the underlying premise that all Service members are expected to be world-wide deployable. Based on the recommendations of the Military Personnel Policy Working Group, the Deputy Secretary of Defense determined that DoD requires a Department-wide policy establishing standardized criteria for retaining non-deployable Service members. The objective is to both reduce the number of non-deployable Service members and improve personnel readiness across the force.

The Deputy Secretary of Defense directed the following interim policy guidance, which will remain in effect until the Department issues a DoD Instruction on reporting and retention of non-deployable Service members:

- Service members who have been non-deployable for more than 12 consecutive months, for any reason, will be processed for administrative separation in accordance with Department of Defense Instruction (DoDI) 1332.14, *Enlisted Administrative Separations*, or DoD Instruction 1332.30, *Separation of Regular and Reserve Commissioned Officers*, or will be referred into the Disability Evaluation System in accordance with DoDI 1332.18, *Disability Evaluation System (DES)*. Pregnant and post-partum Service members are the only group automatically excepted from this policy.

- The Secretaries of the Military Departments are authorized to grant a waiver to retain in service a Service member whose period of non-deployability exceeds the 12 consecutive months limit. This waiver authority may be delegated in writing to an official at no lower than the Military Service headquarters level.

- The Military Services have until October 1, 2018, to begin mandatory processing of non-deployable Service members for administrative or disability separation under this policy, but they may begin such processing immediately.

- The Military Services may initiate administrative or disability separation upon determination that a Service member will remain non-deployable for more than 12 consecutive months; they are not required to wait until the Service member has been non-deployable for 12 consecutive months.

- The Military Services will continue to provide monthly non-deployable reports to OUSD(P&R) in the format established by the Military Personnel Policy Working Group.

My office will issue a DoDI to provide additional policy guidance and codify non-deployable reporting requirements. Publication of the DoDI will supersede and cancel this policy memorandum.

Robert L. Wilkie

cc:
Assistant Secretary of the Army
for Manpower and Reserve Affairs
Assistant Secretary of the Navy
for Manpower and Reserve Affairs
Assistant Secretary of the Air Force
for Manpower and Reserve Affairs
Senior Enlisted Advisor to the Chairman
of the Joint Chiefs of Staff
Deputy Chief of Staff, G-1, U.S. Army
Chief of Naval Personnel, U.S. Navy
Deputy Chief of Staff for Personnel and Services,
U.S. Air Force
Deputy Commandant for Manpower and Reserve
Affairs, U.S. Marine Corps
Director, Reserve and Military Personnel,
U.S. Coast Guard
Director, Manpower and Personnel, Joint Staff
National Guard Bureau, J-1

EXHIBIT H

Health Data on Active Duty Service Members with Gender Dysphoria

Comparison health care data with statistical analysis, deployment, treatment plan, surgical recovery times, separation data and cost data

December 13 2017

Gender Dysphoria (GD) Medical Utilization Comparisons Methodology

- Reviewed select medical utilization (i.e., mental health visits/admissions, hormones, surgical and other procedures) for the Study Group of 994 TG service members with GD
  - Limited the group studied to those in an Active Duty or Activated Guard status for the entire period of time from FY16 to current (July 2017)
- Final GD Study Group = 691
  - Study Period: Oct 2015 to July 2017 (22 months)

Medical Utilization Comparisons Methodology

Created two control groups:

- **"MH+ Control Group"** - Matched 5:1 with non-TG service members by:
  - Major Depressive Disorder (Yes/No)
  - Anxiety (Yes/No)
  - Adjustment Disorder (Yes/No)
  - Matching included gender, age group (<25, 25-40, 40+), rank group, Service
  - MH+ Control Cohort = 3,455
- **"AG Control Group"** - Matched 5:1 with non-TG service members by:
  - Matching included age group (<25, 25-40, 40+) and gender
  - AG Control Cohort = 3,455
- Study Period Oct 2015 – July 2017

Study Group Descriptive Data

		STUDY GROUP Count	STUDY GROUP Percentage
Study Group Size	**N**	**691**	**100%**
Age Group	<25	281	41%
	25-40	388	56%
	40>	22	3%
Gender	Female	349	51%
	Male	342	49%
Sponsor Service	Army	226	33%
	Air Force	188	27%
	Marines	38	5%
	Navy	216	31%
	Other	23	3%
Rank Group	Jr Enlisted	354	51%
	Sn Enlisted	293	42%
	Officer	44	6%

Descriptive Data (continued)

		STUDY COHORT Count	STUDY COHORT Percentage
Study Group Size	**N**	**691**	**100%**
Major Depressive Disorder	No	529	77%
	Yes	162	23%
Adjustment Disorder	No	488	71%
	Yes	203	29%
Anxiety Disorder	No	543	79%
	Yes	148	21%

- The Age-Gender matched 'AG Control Group' - Major Depressive Disorder, Anxiety, and Adjustment were not very prevalent

Regression Analysis

- Multiple regression models were run for both control groups to assess if there is significant difference between the study and control groups regarding psychotherapy and any mental health utilization.
- Dependent Variables of Interest
  - Psychotherapy visits
  - Any mental health visits
- Regressions controlled for combinations of the following independent variables:
  - Age Group
  - Gender
  - Rank (officer vs. enlisted)
  - Service
  - Presence of MH Conditions
    - Major Depressive Disorder, Anxiety or Adjustment

Summary of Results: Psychotherapy Encounters

	STUDY GROUP (n=691)		MH+ CONTROL GROUP (n=3455)		AG CONTROL GROUP (n=3455)	
	Outpatient (Oct 2015-July 2017)		Outpatient (Oct 2015-July 2017)		Outpatient (Oct 2015-July 2017)	
	Avg. Encounters per service member	Total Encounters	Avg. Encounters per service member	Total Encounters	Avg. Encounters per service member	Total Encounters
Psychotherapy	**20.4**	**14,088**	**7.9**	**27,237**	**1.99**	**6,864**

- After controlling for age, sex, rank, service, and presence of any of the three mental health disorders (MDD, Anxiety, Adjustment), there is a **statistically significant** effect in psychotherapy utilization between study group and both control groups.
  - Individuals in the Study Group (GD) on average generate **13 more psychotherapy encounters** over a **22 month period**.
  - The Study Group had 2.5 x the number of psychotherapy visits than the MH control group and 10 x the number of visits than the age and gender matched control group

Summary of Results: Any Mental Health Encounters

	STUDY GROUP (n=691)		MH+ CONTROL GROUP (n=3455)		AG CONTROL GROUP (n=3455)	
	Outpatient (Oct 2015-July 2017)		Outpatient (Oct 2015-July 2017)		Outpatient (Oct 2015-July 2017)	
	Avg. Encounters per service member	Total Encounters	Avg. Encounters per service member	Total Encounters	Avg. Encounters per service member	Total Encounters
Any Mental Health	**28.1**	19,379	**10.7**	36,818	**2.69**	9,297

- After controlling for age, sex, rank, service, and presence of any of the three mental health disorders (MDD, Anxiety, Adjustment), there is a **statistically significant** effect in mental health utilization between study group and both control groups.
  - Individuals in the Study Group (GD) on average generate **18 more mental encounters** over a **22 month period**.
  - The Study Group had 9 x the number of MH visits than the age and gender matched group
  - The Study Group had over 2.5 x as many MH visits as the MH control group

Summary of Results: Suicidal Ideation

	STUDY GROUP (n=691)		MH+ CONTROL GROUP (n=3455)		AG CONTROL GROUP (n=3455)	
	(Inpatient and Outpatient) (Oct 2015-July 2017)		(Inpatient and Outpatient) (Oct 2015-July 2017)		(Inpatient and Outpatient) (Oct 2015-July 2017)	
	Individuals Receiving Treatment	Percentage	Individuals Receiving Treatment	Percentage	Individuals Receiving Treatment	Percentage
Suicidal Ideation	**81**	12%	**235**	7%	**52**	1.5%

- Also ran multiple logistic regressions to calculate the odds ratio of suicidal ideation while controlling for age and gender.
  - Only 12% of our Study Group reported suicidal ideation compared to the 25% reported in one civilian sector study.
  - The Study Group had an 8 x higher rate of suicide ideation than age and gender matched AD SMs over a 22 month period.
    - **Result is statistically significant**
    - Note: The AG Control Group did not have sufficient suicidal ideation prevalence for analysis.

DEPLOYMENT DATA

Study Group Deployment History

994
- Service members with a primary diagnosis of gender dysphoria – FY2016 to July 2017

393
- Deployed in support of OEF/OIF/OND (OCONUS)

114
- Deployed following a primary diagnosis of gender dysphoria

69
- Deployed following a primary diagnosis of gender dysphoria AND after July 1, 2016

Cohort Deployment History

114

- Deployed following a primary diagnosis of gender dysphoria

6

- Were medically evacuated from CENTCON following a primary diagnosis of gender dysphoria
- 4 had a mental health diagnosis identified as the reason for evacuation

69

- Deployed following a primary diagnosis of gender dysphoria AND after July 1, 2016

3

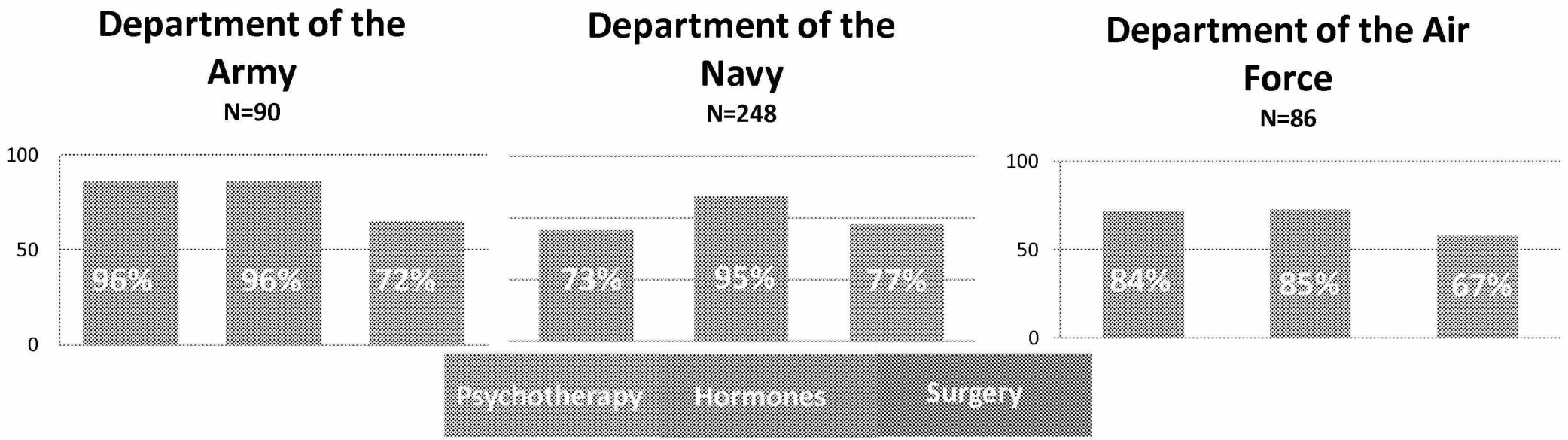
- Were medically evacuated from CENTCOM following a primary diagnosis of gender dysphoria AND after July 1, 2016
- 1 had a mental health diagnosis identified as the reason for evacuation

TREATMENT PLAN DATA

Service Data Request

- Data collection will cover the time period from **September 1, 2016, to August 31, 2017**
- Data request included:
  - Number of SMs with approved treatment plans
  - Number of SMs receiving psychotherapy and cross-sex hormones as part of the treatment plan
  - Number of SMs with sex reassignment surgery as part of the treatment plan
  - Total number of profiles/LIMDUs and days on restricted duty for each transitioning SM
  - Total number of days on profile/LIMDU/restricted duty
- Army, Navy and Air Force coordinated definitions and methodologies of collection for data elements

Service Data – Approved Treatment Plans*



	ARMY	NAVY	AIR FORCE
Number of Service Members with surgeries as part of treatment plan^	65	190	58
Percent of Treatment Plans with surgery included	72%	77%	67%

**Services only had access to treatment plans submitted to their TG care teams (TGCT/MMDT)*
^A Civilian study shows that 23% of MtF and 2% FtM TG individuals initially wanting surgery actually have surgery.

SERVICE DATA – Types of Surgeries Included in Treatment Plans

	ARMY	NAVY	AIR FORCE
Hysterectomy/Oophorectomy	**	97	14
Orchiectomy	**	61	12
Mastectomy/Augmentation	**	113	38
Genital Reassignment	**	118	19
Other	-	-	27

* An individual service member may have more than one surgical procedure in their treatment plan

** Army responded this level of detail is not consistently provided or individualized in proposed medical treatment plans on file.

SERVICE DATA – Profiles/LIMDUs/Restricted Duty

	ARMY*	NAVY**		AIR FORCE***
Number of Service Members with a diagnosis of Gender Dysphoria on Profile/LIMDU/Restricted Duty	87 (90)	22 (248)		52 (86)
Average Number of Profiles/LIMDUs/Restricted Duty per transitioning SM	3.4	0.1		1.9
Average number of days a transitioning Service Member is in a Profile/LIMDU/Restricted Duty status	167.4	1-90	3	159
		90-180	12	
		180-270	3	
		270-360	2	
		>360	2	
Range of Days on Profile	0 - 537	1 - 360+		1 - 365

* **Army** – profiles for SMs with GD; indication for profile not known; could be for transition or for other indications.
** **Navy** - policy dictates no LIMDU for gender transition. All LIMDUs are for non-transition indications. SMs undergoing transition are non-deployable for the first 3 to 6 months of hormone therapy but not put on LIMDU. Navy provided Avg. Number of days on LIMDU in block times.
*** **Air Force** - profiles are for transition.

SURGICAL RECOVERY TIME DATA

Estimated Recovery Times, by Surgery*

Selected Surgical Procedure	Average Recovery Time (assumes no complications)	Notes
Hysterectomy*/** (laparoscopic approach, recommended)	4 weeks desk job 6-8 weeks unrestricted activity	(data for all indications) Major complication = 9.5% Minor complication = 28%
Hysterectomy* (abdominal approach) with or w/o Oophorectomy	6-8 weeks	(data for all indications) Major complication = 6% Minor complication = 27%
Chest masculinization* (Mastectomy)	2-4 weeks (desk job) 4-6 weeks (physically demanding job)	Low complications
Orchiectomy*	3-4 weeks desk job 6 weeks unrestricted activity	Very low complications
Vaginoplasty**	6 weeks desk jobs (some restrictions) 6-8 weeks resume physical activity 3 months for unrestricted activity	• Recommend stay in area of hospital where procedure performed for up to 2 weeks • Major complications 1.5%-10% • Minor complications ~25%,self limiting
Phalloplasty** (2 stages, 2nd surg 9-12 mos later)	6 weeks desk job 8-12 weeks return to activity 3 months unrestricted	• Recommends stay in area of hospital where procedure performed for up to 3 weeks/complications 10-80%
Metoidioplasty** (2 stages, 2nd stage performed >/=3 mos later)	3 weeks desk job 6 weeks return to activity 8 weeks unrestricted	• Recommends stay in area of hospital where procedure performed for up to 3 weeks • <5% complication rate

*From Mayo Clinic, UCSF Center of Excellence for Transgender Health websites and **Dr. Loren Schechter

Estimated Recovery Time for Vaginoplasty from Two SHCP Waiver Requests*,**

PROCEDURE	CENTER	RECOVERY TIMES				
		Inpatient	Post-op Bedrest	Con leave	Light duty	Non-deployable
Vaginoplasty	Papillon Center New Hope, PA	6 days	3 days	6 weeks	2-3 months	6 months
Vaginoplasty	Papillon Center	6 days	3 days	6 weeks	2-3 months	6 months

Times are not cumulative; total non-deployable = 6 months
****Information from the Defense Health Agency***

Surgeries in Study Group, FY2016 to Present
Includes Direct Care and Purchased Care

SERVICE		Resection of Uterus/ Hysterectomy	Mastectomy	Excision Procedures on the Testes	Totals
Air Force	Active Duty	3			3
Army	Active Duty	6	5	2	13
	Guard/Reserve		1		1
Marine Corps	Active Duty	1	6		7
Navy	Active Duty	4	3	2	9
	Guard/Reserve	1			1
Totals		**15**	**15**	**4**	**34**

33 procedures were performed in MTFs, 1 in Purchased Care.
Of the 34 procedures performed, 25 were for an indication of GD

Time to Return to Full Duty After Transition Surgery in MTFs

- The Services and NCR were requested to provide actual recovery times (times to return to full duty) for gender transition surgeries performed in the MTFs
- Surgeries performed included mastectomies, hysterectomies, orchiectomies and facial feminization
- Recovery times were available for 36 procedures performed in 13 different MTFs
  - 6 Army
  - 4 Navy
  - 1 Air Force
  - 2 NCR

MASTECTOMY

CPT Code 19303-19304

	Primary Procedure Code	# Days to Full Duty	Comments
Army	19303	30	
Army	19303	14	
Army	19304	75	
Army	19394	42	
Army	19304	28	
Army	19304	27	
Navy	19303	42	Average # Days = 39 Range 14 - 75
Navy	19303	42	
Navy	19303	42	
Navy	19303	42	
Navy	19304	42	
Navy	19303	42	
Navy	19303	42	
Navy	19303	42	
Navy	19304	42	
NCR	19304	30	

HYSTERECTOMY

CPT Code OUT9FZZ

	Primary Procedure Code	# Days to Full Duty	Comments
Army	OUT9FZZ	68	Average # Days = 67 Range 30 – 237 (Avg # days w/o AF = 55)
Army	OUT9FZZ	42	
Army	OUT9FZZ	42	
Army	OUT9FZZ	87	
Army	OUT9FZZ	96	
Navy	OUT9FZZ	56	
Navy	OUT9FZZ	56	
Navy	OUT9FZZ	56	
Navy	OUT9FZZ	56	
Navy	OUT9FZZ	60	
Navy	OUT9FZZ	45	
Navy	OUT9FZZ	45	
Air Force	OUT9FZZ	237	
NCR	OUT9FZZ	31	
NCR	58262	30	

ORCHIECTOMY

CPT Code 54520

	Primary Procedure Code	# Days to Full Duty	Comments
Army	54520	45	Average # days = 38.3 Range 35-45
Navy	54520	35	
Navy	54520	35	

OTHER PROCEDURES

	Procedure (s)	# Days to Full Duty	Comments
Army	Facial Feminization	42	1 case
Army	Hysterectomy & Mastectomy	89	Procedures performed two months apart

SEPARATION DATA

Separation Data

Cohort members	993*
Cohort members that are continuously AD 10/1/2015-7/1/2017	691
Cohort members who may have separated	302
Cohort members who may have separated in separation file	194
Unknown	108

*1 of the original 994 was not found in DEERS

Reason for Separation

High to Low Comparison

Study Cohort

	Frequency	Percent
Expiration of term of service	74	38.14
Temporary disability retirement	19	9.79
Permanent disability retirement	12	6.19
Unqualified for active duty, other	9	4.64
Disability, severance pay	8	4.12
Retirement, 20 to 30 years of service	8	4.12
Drugs	8	4.12
Early release, in the national interest	7	3.61
Character or behavior disorder	7	3.61
Officer commissioning program	6	3.09
Failure to meet weight or body fat standards	5	2.58
Military service academy	4	2.06
Pattern of minor disciplinary infractions	3	1.55
Commission of a serious offense	3	1.55
Failure to meet minimum qualifications for retention	3	1.55
Other	3	1.55
Alcoholism	2	1.03
Court-martial	2	1.03
Juvenile offender	2	1.03
Erroneous enlistment or induction	2	1.03
Condition existing prior to service	1	0.52
Discreditable incidents, civilian or military	1	0.52
Unfitness, reason unknown	1	0.52
Unsatisfactory performance (former Expeditious Discharge program)	1	0.52
Entry level performance and conduct (former Trainee Discharge program)	1	0.52
Secretarial authority	1	0.52
Breach of contract	1	0.52
Total	194	

Percentages of all Separations for the Same reasons from 10/1/2015 - 7/1/2017

(not matched, taken from entire set of 408,409 SMs separated)

	Frequency	Percent
Expiration of term of service	197,959	48.47
Retirement, 20 to 30 years of service	39,925	9.78
Unqualified for active duty, other	18,979	4.65
Disability, severance pay	11,480	2.81
Permanent disability retirement	10,801	2.64
Temporary disability retirement	10,408	2.55
Officer commissioning program	9,691	2.37
Entry level performance and conduct (former Trainee Discharge program)	9,176	2.25
Unsatisfactory performance (former Expeditious Discharge program)	9,061	2.22
Drugs	8,836	2.16
Early release, in the national interest	8,603	2.11
Commission of a serious offense	6,979	1.71
Failure to meet weight or body fat standards	6,064	1.48
Other	5,147	1.26
Erroneous enlistment or induction	4,105	1.01
Discreditable incidents, civilian or military	3,538	0.87
Juvenile offender	2,618	0.64
Character or behavior disorder	2,480	0.61
Failure to meet minimum qualifications for retention	2,386	0.58
Pattern of minor disciplinary infractions	1,508	0.37
Court-martial	1,216	0.3
Military service academy	1,213	0.3
Alcoholism	1,081	0.26
Unfitness, reason unknown	692	0.17
Secretarial authority	624	0.15
Condition existing prior to service	475	0.12
Breach of contract	135	0.03

Reason for Separation

Alphabetical Comparison

Study Cohort

	Frequency	Percent
Alcoholism	2	1.03
Breach of contract	1	0.52
Character or behavior disorder	7	3.61
Commission of a serious offense	3	1.55
Condition existing prior to service	1	0.52
Court-martial	2	1.03
Disability, severance pay	8	4.12
Discreditable incidents, civilian or military	1	0.52
Drugs	8	4.12
Early release, in the national interest	7	3.61
Entry level performance and conduct (former Trainee Discharge program)	1	0.52
Erroneous enlistment or induction	2	1.03
Expiration of term of service	74	38.14
Failure to meet minimum qualifications for retention	3	1.55
Failure to meet weight or body fat standards	5	2.58
Juvenile offender	2	1.03
Military service academy	4	2.06
Officer commissioning program	6	3.09
Other	3	1.55
Pattern of minor disciplinary infractions	3	1.55
Permanent disability retirement	12	6.19
Retirement, 20 to 30 years of service	8	4.12
Secretarial authority	1	0.52
Temporary disability retirement	19	9.79
Unfitness, reason unknown	1	0.52
Unqualified for active duty, other	9	4.64
Unsatisfactory performance (former Expeditious Discharge program)	1	0.52
Total	194	

Percentages of All Separations for the Same Reasons from 10/1/2015 - 7/1/2017 (not matched, taken from entire set of 408,409 SMs separated)

	Frequency	Percent
Alcoholism	1,081	0.26
AWOL or desertion	284	0.07
Breach of contract	135	0.03
Character or behavior disorder	2,480	0.61
Civil court conviction	267	0.07
Commission of a serious offense	6,979	1.71
Condition existing prior to service	475	0.12
Court-martial	1,216	0.3
Disability, severance pay	11,480	2.81
Discreditable incidents, civilian or military	3,538	0.87
Drugs	8,836	2.16
Early release, in the national interest	8,603	2.11
Entry level performance and conduct (former Trainee Discharge program)	9,176	2.25
Erroneous enlistment or induction	4,105	1.01
Expiration of term of service	197,959	48.47
Failure to meet minimum qualifications for retention	2,386	0.58
Failure to meet weight or body fat standards	6,064	1.48
Juvenile offender	2,618	0.64
Military service academy	1,213	0.3
Officer commissioning program	9,691	2.37
Other	5,147	1.26
Pattern of minor disciplinary infractions	1,508	0.37
Permanent disability retirement	10,801	2.64
Retirement, 20 to 30 years of service	39,925	9.78
Secretarial authority	624	0.15
Temporary disability retirement	10,408	2.55
Unfitness, reason unknown	692	0.17
Unqualified for active duty, other	18,979	4.65
Unsatisfactory performance (former Expeditious Discharge program)	9,061	2.22

COST DATA

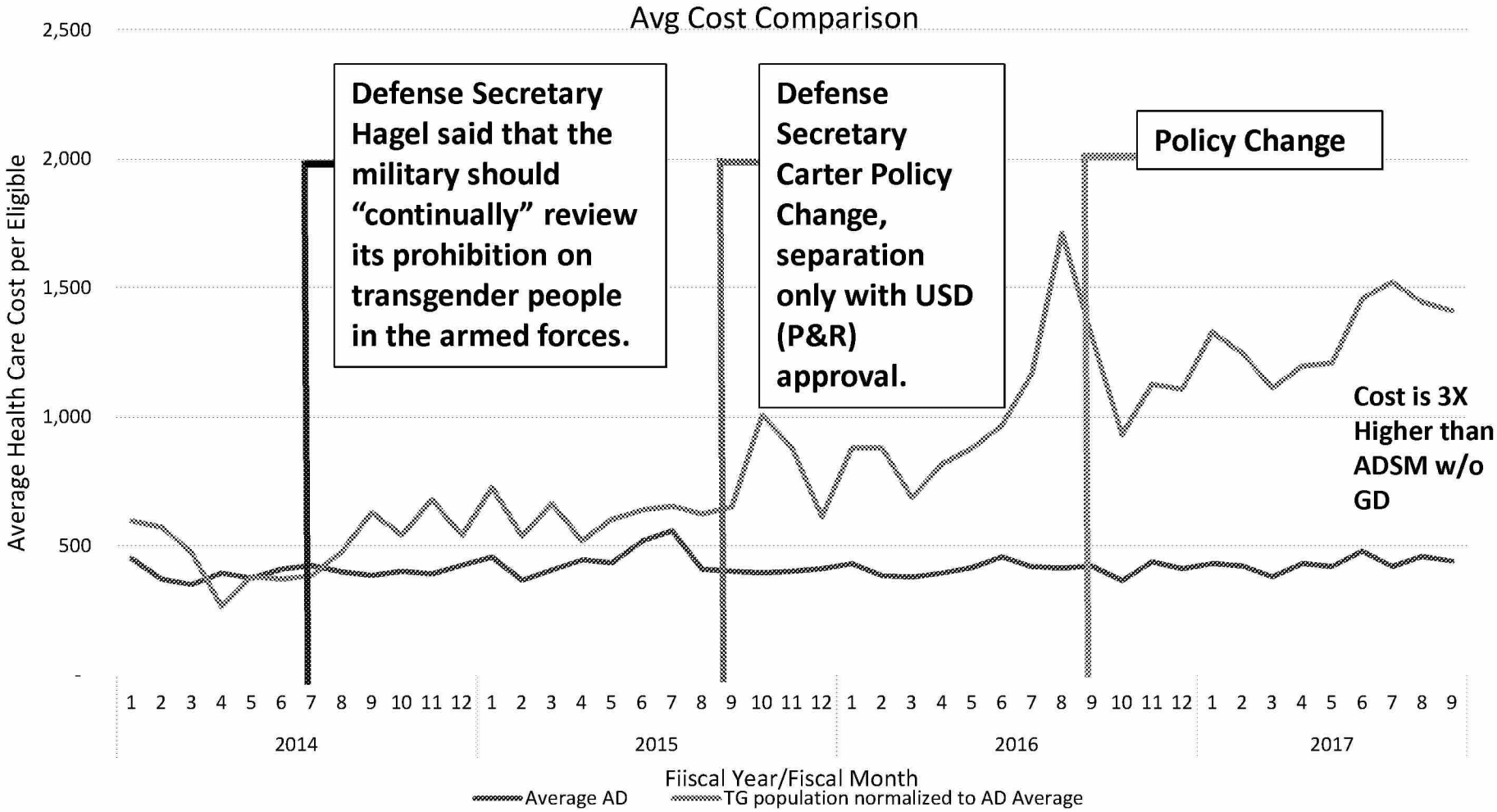
Cost of Services for Gender Dysphoria

(Purchased Care Paid Costs; Direct Care Estimated Costs)

	FY14	FY15	FY16	FY17	TOTAL
Direct Care	$ 82,558	$ 83,563	$ 650,492	$ 2,172,849	$ 2,989,462
Purchased Care	$ 5,421	$ 3,884	$ 10,094	$ 16,509	$ 35,908
Pharmacy	$ 1,264	$ 2,693	$ 3,406	$ 6,130	$ 13,493
TOTAL	$ 89,243	$ 90,140	$ 663,992	$ 2,195,488	$ 3,038,863

Average Health Care Expenditures:

Transgender Active Duty (TRICARE Prime) vs Average Active Duty



Source: M2 (Purchased Care: Inpatient (TED-I); Professional (TED-NI)); (Direct Care: Inpatient (SIDR); Professional (CAPER)); Pharmacy (PDTS); Population (DEERS)

EXHIBIT I

WPATH Timeline Guide for United States Armed Service Members Going Through Transgender Hormonal or Surgical Transition

This guide is intended to assist in determining relative deployability of transgender service members during hormonal and surgical transition. Customization of the specific treatment plan should be discussed by the medical provider and the service member informed by duty requirements and the below timeline guidance.

The timelines for transgender surgical interventions and recovery should be expected to mirror similar procedures with existing guidelines. Therefore, timelines for recovery from surgical procedures are not different for transgender service members relative to non-transgender service members. Existing guidelines for chest reconstruction surgeries and major pelvic surgeries in general should be referenced when determining the timeline of the treatment plan.

During medical transition, determination of deployability can be aided by recognizing treatment and monitoring needs along with anticipated changes in function attributable to hormones.

For transgender men and women the key needs during transition are simple and straightforward. When initiating cross-sex hormone therapy, transitioning transgender service members will require access to laboratory testing approximately every 3 months along with access to providers appropriately trained in hormone care approximately every 3 months. For those who have initiated hormonal treatment prior to enlistment, a baseline laboratory assessment should be obtained, and retesting done annually.

For transgender men, the timeline for monitoring hormonal transition can be anticipated to range from 6 to 12 months. It is during that period that the every-3-month monitoring and medical provider access would be required.

For transgender women, the timeline for monitoring hormonal transition can be anticipated to range from 6 to 18 months. It is during that period that the every-3-month monitoring and medical provider access would be required.

Subsequent to achieving steady state hormone levels, the monitoring requirement for both transgender men and transgender women should be anticipated to decrease to annual laboratory testing along with annual access to providers appropriately trained in hormone care.

Hormone therapy is not known to be associated with changes in cognitive function. Similarly, behavioral function is not known to vary when levels of circulating sex steroids are in the normal ranges for either men or women.

Strength does correlate with testosterone levels such that there is risk that some transgender women might require accommodation for decreasing strength during the period between the initiation of treatment but prior to the formal shift to female physical standards.

Quick Reference: Timing of Medical Interventions for Transgender Service Members

Intervention	Transgender Men	Transgender Women	Notes
Initiating hormones	Baseline lab report	Baseline lab report	
Monitoring hormones	3 month intervals for first 6 to 12 months (2 to 4 iterations of lab reports), to achieve normal male levels of testosterone.	3 month intervals for first 6 to 18 months (2 to 6 iterations of lab reports), to achieve normal female estrogen levels, and monitor testosterone suppression.	
Monitoring after steady state hormone levels are achieved	Annually	Annually	
Monitoring when hormones were initiated before enlistment	Baseline lab report; annually thereafter.	Baseline lab report; annually thereafter.	
Surgical interventions	Chest reconstruction may be done any time; if hormones are initiated first, optimal timing is 6 months after hormone initiation. Genital reconstruction earliest time is 12 months after hormone initiation.	Breast surgery should not be done before 18-24 months of hormone use, to first establish maximum breast growth using hormones alone. Genital reconstruction earliest time is 12 months after hormone initiation.	Timing of these procedures should be determined on an individualized basis, in consultation with the patient and in consideration of duty requirements