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

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Executive Summary

On March 23, 2017, 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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