Title
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Transgender Military Service in the United States
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Introduction
This research brief offers analyses from several data sources to estimate the number of transgender individuals who have served in the US armed forces, including the number who are likely on active duty or serving in the Guard or Reserve forces, and the number who are veterans or retired from Guard or Reserve service.

On September 20, 2011, the military policy known as “Don’t Ask, Don’t Tell” (DADT) ended, allowing gay, lesbian, and bisexual service members to serve openly. Yet, military medical policies still exclude transgender people from serving openly in the US armed forces.1 These medical policies lay out exclusions for what are deemed to be “psychosexual disorders,” including transsexualism, cross-dressing, or a history of gender transition.2 Therefore, transgender individuals who wish to join the US armed forces are prohibited from doing so if their transgender status is known. Furthermore, those already serving can be medically discharged if suspected of being transgender.

Our estimates suggest that approximately 15,500 transgender individuals are serving on active duty or in the Guard or Reserve forces. We also estimate that there are an estimated 134,300 transgender individuals who are veterans or are retired from Guard or Reserve service (see Figure 1).

Data and methodology
The primary data source for the estimates of transgender military service is the National Transgender Discrimination Survey (NTDS), which was conducted by the National Gay and Lesbian Task Force and the National Center for Transgender Equality.3 This 70-item survey was distributed in cooperation with over 900 organizations across the United States and also was announced through listservs and online communities. It was made available both online and on paper in English and Spanish. The survey was fielded over six months beginning in fall 2008 and resulted in 6,546 valid responses, which is the largest sample of transgender people in the US to date.4 Respondents answered questions about a broad array of topics, including whether they had served in the US armed forces in the following question:


2 Witten, T. M. 2007. Gender identity and the military—Transgender, transsexual, and intersex-identified individuals in the U.S. Armed Forces. Santa Barbara, CA: Palm Center.; Harrison-Quintana and Herman, see note #1.

3 The NTDS defined “transgender” broadly to include those whose gender identity or expression differs from those traditionally associated with their assigned sex at birth. This includes, but is not limited to, those who self-identify as transgender, transsexual, genderqueer, gender non-conforming, and cross-dressers.

Have you ever been a member of the armed forces?
☐ Yes
☐ No
☐ I was denied entry because I am transgender/gender non-conforming

As a purposive sample of transgender adults in the US, estimates derived directly from the NTDS could be biased if the true demographic characteristics of the transgender population differ from the characteristics of transgender respondents to the survey. For example, relative to the US population, NTDS respondents are younger and report higher levels of education. Both factors would be associated with lower levels of lifetime military service. Given the lack of demographic data on the transgender population derived from population-based sources, it is not possible to determine if the age and educational attainment levels of NTDS respondents are different from the general US population because younger and more educated transgender individuals were more likely to have completed the survey (known as selection bias) or if transgender individuals are, in fact, younger and more likely to have higher levels of education compared to the general population.6

More than 93% of NTDS respondents provided information using an online web-based survey. Samples from online surveys are often biased toward more educated respondents. Reisner and colleagues (2014) found that NTDS respondents who used paper survey forms tended to report lower income and educational levels.6 It is possible that the web-based approach of the NTDS contributed to selection bias toward higher education, which would result in a bias toward lower military service.

To address these possible biases, the estimates of military service among the transgender population in these analyses adjust the characteristics of NTDS respondents such that they have the age and educational attainment patterns of the US population. Military service rates also differ by race and ethnicity. Unfortunately, the race and ethnicity categories used in the NTDS are not consistent with those used in Census Bureau surveys. Educational attainment, like race and ethnicity, captures some of the variation in socio-economic status which may contribute to differences in military service rates.

This adjustment effectively assumes that being transgender is not associated with age or educational attainment. It also leads to estimates of military service rates for the transgender population that are slightly higher than the unadjusted calculations from the NTDS, which includes younger and more educated individuals who are less likely to report military service than older or less educated individuals. Alternatively, if the NTDS age and educational patterns are actually reflective of the transgender population in the US, then the adjustment procedure would produce estimates of transgender military service that may be higher than true military service rates among transgender individuals.

Population age and educational attainment data are derived from analyses of the US Census Bureau’s 2011 American Community Survey.

The estimation procedure also assumes that NTDS respondents who report that they were assigned male at birth share the age and educational attainment patterns of the adult male population in the US while NTDS respondents that were assigned female at birth share the patterns of the adult female population. We make this assumption and report differences based on the sex assigned at birth because it is likely that most transgender veterans and service members would have entered and served in the military according to their sex assigned at birth. Estimates for the total number of transgender individuals who are currently or have ever served in the military are derived separately for those assigned male at birth (approximately 60% of the total NTDS sample) and those assigned female at birth (approximately 40% of the total NTDS sample).

Men are substantially more likely than women to serve in the US military. The estimates of transgender military service assume that, consistent with findings from the NTDS, approximately 60% of the transgender population was assigned male at birth while 40% was assigned female at birth. If, in fact, the transgender population is comprised of a larger portion of individuals assigned male at birth, then the estimation procedure likely underestimates

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transgender military service. Conversely, if those assigned female at birth are actually a larger proportion of the transgender population, then the estimation procedure may overstate transgender military service.

The estimation begins by calculating the percent of NTDS respondents who report military service by their age and educational attainment status. Respondents are separated into five age categories and five educational attainment categories as follows:

- **Age (a)**
  - 18-24
  - 25-44
  - 45-54
  - 55-64
  - 65 and older

- **Education (e)**
  - Less than high school
  - High school diploma
  - Some college
  - College degree
  - Graduate degree

The percent of NTDS respondents who report service in the armed forces is calculated for those in each age/education category. Data from the 2011 American Community Survey Public Use Microdata Sample (ACS PUMS) are used to calculate the percent of adults age 18 and older who are within each age and education category.

The adjusted estimate for transgender military service MIL\textsubscript{adj} determines what the military service patterns of NTDS respondents (separated by sex assigned at birth) would be if they had the same age and educational attainment levels of the male and female population in the US by calculating a weighted average as follows:

\[
\text{MIL}_{\text{adj}} = \sum_{a,e} (\text{mil}_{ae} \times p_{ae})
\]

In the US, approximately 5.8% of all adults who have ever served in the armed forces are currently on active duty and 4.4% are now serving in the Guard or Reserve. An estimated 86.8% are veterans who served on active duty in the past and 3.0% are retired from Guard or Reserve service. The number of transgender adults in each category is estimated by applying these same proportions to the estimated number of transgender individuals who report any service in the armed forces.

**Transgender military service**

Analyses of the unadjusted NTDS data show that 29.6% of respondents assigned male at birth reported that they have served in the armed forces along with 6.0% of those assigned female at birth. In total, 20% of NTDS respondents reported some type of military service.

Assuming NTDS reported rates of military service are true of the transgender population in the US, Figure 2 shows adjusted estimates of military service for the transgender population (separated by sex assigned at birth) and for adult men and women in the US. When figures are adjusted such that the age and educational patterns of the US adult male and female population are applied to the NTDS sample, an estimated 21.4% of transgender individuals have served in the military. The adjusted estimates suggest that 32.0% of those assigned male at birth and 5.5% of those assigned female at birth have served.

By comparison, approximately 10.7% of adults in the US have served. This implies that transgender

\[32.0\% \quad 5.5\% \quad 21.4\% \quad 19.7\% \quad 10.4\%\]

Transgender population Adults in the US population

Assigned male at birth Assigned female at birth All Male Female All

Factfinder, Table B21002, show that an estimated 21.5 million Americans are civilian veterans. It should be noted that estimates of the number of veterans and reservists may not be mutually exclusive as some reservists may be veterans with prior service on active duty in the military.
individuals are about twice as likely as adults in the US to have served their country in the armed forces. Transgender individuals assigned female at birth are nearly three times more likely than all adult women and those assigned male at birth are 1.6 times more likely than all adult men to serve.

Gates (2011) estimates that approximately 700,000 adults in the US are transgender. If, like in the NTDS, this group is 60% male assigned at birth and 40% female assigned at birth, then the estimates above imply that there are approximately 150,000 transgender adults in the US who are now serving or who have served in the armed forces.

In the US, 5.4% of men who report any military service are on active duty along with 9.8% of women. Applying these figures to the estimates of transgender military service would imply that approximately 8,800 transgender individuals are currently on active duty, of whom nearly 7,300 are assigned male at birth and about 1,500 are assigned female at birth. The estimates also suggest that 6,700 transgender individuals are serving in the Guard or Reserve forces, of whom 5,300 are assigned male at birth and 1,400 are assigned female at birth (see Figure 3).

The estimates also suggest that there are more than 134,000 transgender individuals in the US who are veterans or have retired from Guard or Reserve service (see Figure 4).

<table>
<thead>
<tr>
<th>Veterans and Retired Guard/Reserve: 134,300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterans (assigned male) 118,300</td>
</tr>
<tr>
<td>Veterans (assigned female) 11,400</td>
</tr>
<tr>
<td>Retired Guard/Reserve (assigned male) 3,600</td>
</tr>
<tr>
<td>Retired Guard/Reserve (assigned female) 1,000</td>
</tr>
</tbody>
</table>

These estimates imply that approximately 0.6% of adults who report service in the armed forces are transgender.

**Discussion**

Data that allow for a direct tabulation of the number of transgender individuals who serve in the US military simply do not exist. The estimates in this research brief rely on a variety of assumptions that could affect their accuracy.

Men are more likely to serve in the military than are women. If individuals assigned male at birth are, in fact, more than 60% of the transgender population, then transgender military service is likely understated in these estimates. Conversely, if those assigned female at birth represent more than 40% of the transgender population, then estimates of transgender military service are likely overstated.

The estimates also assume that the transgender population shares the age and educational attainment characteristics of the US population. If the true transgender population is younger and more educated than the US population (consistent with the NTDS sample), then the estimates could be overstating transgender military service.

Despite these possible biases, the estimates certainly suggest that transgender individuals are part of the
US armed forces, perhaps in portions that exceed that of the general population.

There is other evidence that transgender individuals represent a larger portion of those in the military than their proportion among adults in the US population. In a survey of transgender people assigned male at birth, Shipherd et al. found that 30 percent had served in the military, which is similar to military service among transgender people assigned male at birth in the NTDS.\(^9\) A recent study by Blosnich et al. reviewed all health records of veterans receiving health care through the Veterans Health Administration (VHA) from 2000 through 2011 and found a prevalence of Gender Identity Disorder (GID) five times that of the US general population.\(^{10}\) Though individuals with GID diagnoses may or may not identify as transgender, the substantially higher prevalence of GID among veterans in the VHA system provides further evidence that transgender people are over-represented in the US military.

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**About the authors**

**Gary J. Gates**, PhD is the Williams Distinguished Scholar and a national expert in the demographic, geographic, and economic characteristics of the LGBT population.

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\(^{10}\) Blosnich, J.R., Brown, G.R., Shipherd, J.C., Kauth, M. PhD, Piegari, R.I., and Bossarte, R.M. 2013. Prevalence of Gender Identity Disorder and Suicide Risk Among Transgender Veterans Utilizing Veterans Health Administration Care. *American Journal of Public Health* 103(10): e27-e32. “Gender Identity Disorder” was removed for the DSM-V, which now includes “gender dysphoria.”