Which Veterans Are Forgoing Their Post-9/11 GI Bill Benefits?

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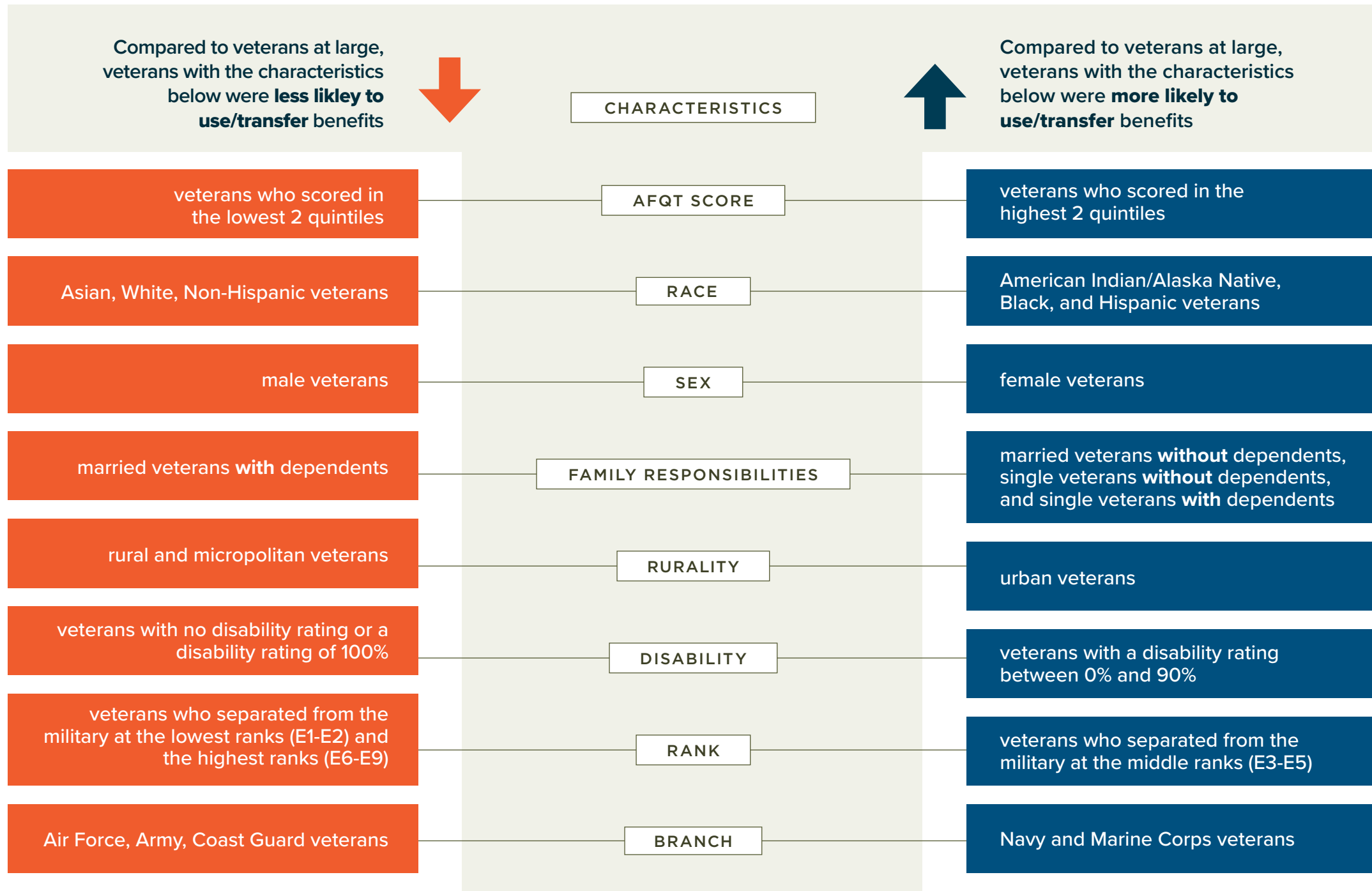
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Snapshot of Post-9/11 GI Bill-Eligible Veterans' Benefit Use

Compared to veterans at large, veterans with the characteristics below were **less likley to use/transfer** benefits

CHARACTERISTICS

Compared to veterans at large, veterans with the characteristics below were **more likely to use/transfer** benefits

Less likely to use/transfer	CHARACTERISTICS	More likely to use/transfer
veterans who scored in the lowest 2 quintiles	AFQT SCORE	veterans who scored in the highest 2 quintiles
Asian, White, Non-Hispanic veterans	RACE	American Indian/Alaska Native, Black, and Hispanic veterans
male veterans	SEX	female veterans
married veterans **with** dependents	FAMILY RESPONSIBILITIES	married veterans **without** dependents, single veterans **without** dependents, and single veterans **with** dependents
rural and micropolitan veterans	RURALITY	urban veterans
veterans with no disability rating or a disability rating of 100%	DISABILITY	veterans with a disability rating between 0% and 90%
veterans who separated from the military at the lowest ranks (E1-E2) and the highest ranks (E6-E9)	RANK	veterans who separated from the military at the middle ranks (E3-E5)
Air Force, Army, Coast Guard veterans	BRANCH	Navy and Marine Corps veterans

Introduction

The Post-9/11 Veterans' Educational Assistance Act of 2008 (also known as the Post-9/11 GI Bill, or PGIB) substantially increased the education benefit available to military service members who served after September 10, 2001. In this report, we examine the demographic and military characteristics of veterans who have not yet personally used or transferred their PGIB benefits, referred to as "Nonusers" for clarity. This report is part of a series of reports, produced by an interagency research team, that analyze PGIB and its outcomes for veterans.[1]

Before diving into the characteristics of PGIB Nonusers, it is important to highlight some key points about PGIB. PGIB, enacted on June 30, 2008, as Public Law 110-252 became effective on August 1, 2009. PGIB-eligible veterans can receive benefits that fully cover their tuition and fees at any public college or university (or a capped amount that can be spent at a private college), a monthly housing allowance based on the local cost of living, and a books and supplies stipend (Congressional Research Service, 2021a).[2] PGIB benefits also may be transferred to a spouse or dependent.[3] Although military service members are eligible for various education benefits both during and after their service,[4] PGIB has represented more than 70% of total GI Bill participation and more than 80% of GI Bill spending in each year since FY2013 (Congressional Research Service, 2021a).[5] Despite benefiting more than 600,000 individuals in fiscal year 2022 alone (Congressional Research Service, 2021a), PGIB remains relatively understudied, and no other PGIB study has included veterans across all branches.[6]

This project aims to fill this gap. The U.S. Census Bureau hosted this project as one of its first evidence-building pilot projects,[7] facilitating unprecedented federal interagency collaboration to examine PGIB outcomes. Over 7 years, agencies worked together to establish data-sharing agreements and processes. These efforts ultimately resulted in a data set that merged previously siloed individual-level data from the U.S. Department of Veterans Affairs (VA), the Veterans Benefits Administration (VBA) at VA, the Defense Manpower Data Center (DMDC) at the U.S. Department of Defense, the Internal Revenue Service (IRS), the U.S. Census Bureau, and the National Student Clearinghouse (Clearinghouse), as well as postsecondary institution-level data from the Integrated Postsecondary Education Data System (IPEDS) at the U.S. Department of Education. Support from Arnold Ventures enabled a team of external researchers from the American Institutes for Research® (AIR®), a nonpartisan, not-for-profit research organization, to join the Census Bureau as Special Sworn Status employees for this project and also enabled the purchase of student records on postsecondary enrollment and degree completion from the Clearinghouse. The project's research team includes staff from AIR, the Census Bureau, and VA's National Center for Veterans Analysis & Statistics. The nonprofit organization Veterans Education Success helped to conceptualize the project and provided assistance. The Gates Foundation provided support for this report's analysis, while Arnold Ventures provided support for the overall project.

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[1] A companion brief, Post-9/11 GI Bill Access and Uptake: Insights and Recommendations from Veterans, based on qualitative interviews conducted with Nonusers, discusses the reasons veterans give for not using or transferring their benefits and discusses ways the field might better support PGIB benefit use. For this report and the other reports in this series see: https://www.air.org/project/study-post-911-gi-bill-student-outcomes.

[2] Generally, veterans and service members who have served an aggregate minimum of 90 days on active duty since September 10, 2001, and continue serving or are discharged honorably are considered eligible. In addition, individuals awarded the Purple Heart for service after September 10, 2001, and individuals who have been discharged or released for a service-connected disability after serving a minimum of 30 continuous days on active duty after September 10, 2001, can be eligible. For current eligibility details, consult this U.S. Department of Veterans' Affairs (VA) website: https://www.va.gov/education/about-gi-bill-benefits/post-9-11/. The U.S. Department of Veterans Affairs regularly updates the dollar amount of the benefits that PGIB recipients can receive. For current amounts, see this VA website: https://www.va.gov/education/benefit-rates/post-9-11-gi-bill-rates/.

[3] For current details related to transferability, refer to this VA website: https://www.va.gov/education/transfer-post-9-11-gi-bill-benefits/. Note that, although a veteran's spouse can use benefits right away, in most cases, a veteran's child cannot use benefits until the veteran has had at least 10 years of service.

[4] See Congressional Research Service (2021b) for descriptions of these VA programs.

[5] Our interagency research team found that among PGIB-eligible enlisted veterans who separated as of June 30, 2018, less than 1% (0.3%) used Montgomery GI Bill but not PGIB benefits. That percentage was even lower (less than 0.1%) for those who first enlisted between 2009 and 2018, when PGIB was in effect.

[6] One National Bureau of Economic Research paper released on PGIB had access only to Army data and looked only at cohorts that left between 2002 and 2010 (Barr et al., 2021). Kofoed (2020) was able to look at a slightly more recent range of cohorts (2008 to 2016) but, again, had only Army data.

[7] As stated here, https://www.census.gov/about/what/evidence-act/working-papers.html, "The Census Bureau seeks to be the federal leader in the collection and secure provisioning of data for evidence building and evaluation. This research is consistent with the vision and mission of the Census Bureau, the provisions of the Foundations of Evidence-Based Policymaking Act of 2018, and in support of the Presidential Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking."

Methods

This research identifies the proportion of PGIB-eligible enlisted veterans who forgo PGIB benefits and examines the demographic and military characteristics associated with benefit nonuse. Our sample included veterans who met specific criteria related to PGIB eligibility, separation date, age, rank, and educational background. **More specifically, our sample included veterans who:**

1. were identified by VA as eligible to receive PGIB benefits;

2. separated between August 1, 2009, when the PGIB program could be used immediately, and June 30, 2017 (giving veterans 15 months or more between when they could start using their PGIB benefits after separating and the last date for which VA provided the research team with PGIB payment data, which was September 30, 2018);

3. were 65 years or younger as of December 31, 2019 (and thus were likely to still be engaged in the labor market);

4. had a pay plan of "Enlisted" as their final rank (studied in order to focus on enlisted personnel who preodominantly enter the military without a postsecondary degree and who represent the vast majority of military servicemembers); and

5. did not have a bachelor's or graduate degree prior to first separation date (in order to focus on more typical enlisted veterans' use of PGIB).[8]

For ease of exposition, we will frequently use the term "veterans" going forward in this report. When we do so, we mean veterans who meet the five parameters specified above.

We categorized veterans as Nonusers if they had not personally used or transferred their PGIB benefits according to payment records from the Veterans Benefit Administration between August 1, 2009, and September 30, 2018. Using these dates gave veterans at least 15 months to use their PGIB benefits after separating from active duty before we assessed their use of the benefits. It should be noted that this report examined veterans' use or transfer of benefits as of 2018. Those who had not yet used or transferred benefits may have done so after that point, with those qualifying for the Forever GI Bill not subject to the earlier 15-year limitation for usage.[9] We have capitalized "Nonusers" throughout this report to emphasize that this group refers to those meeting the parameters specified in this paragraph.

This report presents the percentage of veterans who were Nonusers for an array of demographic and military characteristics: academic preparation at time of enlistment, age, race/ethnicity, sex, family responsibilities, rurality, disability rating, rank, and military branch. For each veteran characteristic, the report discusses bivariate descriptive statistics capturing veterans' usage by a specific characteristic (e.g., sex). The report also incorporates regression analyses to produce descriptive statistics that account for other variables, such as last military rank and military occupation. A relationship between a factor of interest (e.g., sex) and the outcome of interest (being a Nonuser) that holds in both bivariate descriptive statistics and regression analyses suggests that the other factors included in the regression do not explain the relationship. Note that it is possible that the relationship is the result of another, unincluded factor shaping veterans, such as motivation or preferences for certain careers. Additional information on our methods can be found in Appendices A and B.

[8] We did not include veterans who already had a bachelor's or graduate degree because they faced different considerations when deciding how best to use or transfer their PGIB benefits. Using Clearinghouse data, our interagency research team found that about 7% of PGIB-eligible enlisted veterans included in our first report had a bachelor's or graduate degree before activation and that less than 2% received these degrees between first activation and first separation dates. See Radford et al. (2024a).

[9] Benefits do not expire for veterans whose service ended on or after January 1, 2013. See https://www.va.gov/education/about-gi-bill-benefits/post-9-11/ for more.

A note of caution at the outset: As the research community understands well, there is a difference between association (which we present in this report) and causation (which we do not address here). Simply put, evidence that something has caused an outcome requires an experimental design, such as a randomized controlled trial or a quasi-experimental design. Neither causal methodology was undertaken in this project. This means we cannot conclude, for example, that veteran characteristics cause veterans to not use PGIB benefits. Our companion brief, based on qualitative interviews with veterans who do not personally use or transfer benefits, presents the reasons veterans we interviewed report for forgoing PGIB benefits and discusses ways the field might better support PGIB benefit use.

Findings

Our analysis of the data used in this report found that, **overall, 38% of veterans did not personally use or transfer their benefits (i.e., were Nonusers)**.[10] Yet this percentage varies by academic preparation at time of enlistment, age, race/ethnicity, sex, family responsibilities, rurality, disability rating, rank, and military branch. In the sections that follow, we discuss differences in nonuse by each of these veteran characteristics. Overall, we found that nonuse was highest for veterans who separated at age 55 to 65 (82%). Nonuse was lowest (in other words, use of PGIB was highest) for those who left the military with a midlevel rank of E-4 or had a VA disability rating of 10% to 20% (27%).

[10] The 62% complement of this result reflecting usage of PGIB benefits was higher in this analysis than in our previous studies (Radford et al., 2024a; Radford et al., 2024b). This occurred because "usage" was defined in this study as having a Veterans Benefits Administration payment record linked to the veteran (which could correspond to a payment for a spouse, dependent, or the veteran). In contrast, Radford et al. (2024b) defined "usage" as the veteran having a payment record associated with their own personal use of PGIB benefits (and not benefit transfer). Likewise, Radford et al. (2024a) defined "usage" as the veteran having a Clearinghouse record after becoming eligible for PGIB benefits. Also, the dataset of PGIB-eligible enlisted veterans in this study and Radford et al. (2024b) was smaller compared to that used in Radford et al. (2024a) because of the end date of the available PGIB payment records.

We begin by examining the proportion of veterans who were Nonusers by academic preparation at time of enlistment. We measure academic preparation based on veterans' Armed Forces Qualification Test (AFQT) quintile.[11] The AFQT measures arithmetic reasoning, mathematical knowledge, paragraph comprehension, and word knowledge of incoming service members, and thus can provide a snapshot of veterans' academic preparedness at the time they enlisted.

Results revealed that **veterans in lower AFQT quintiles were more likely to be Nonusers (i.e., were less likely to use their PGIB benefits) than those in higher quintiles.** Specifically, as the exhibit indicates, the gap between veterans in the lowest two AFQT quintiles (which had the same usage rate) and the highest quintile was 4 percentage points. A regression analysis suggested that other veteran characteristics did not explain this gap. In fact, after accounting for the array of veterans' demographic and military characteristics detailed in Appendix Table A-1 (which include military rank and military occupation, among others), the gap between the lowest and highest quintile increased to 6 percentage points, suggesting **a clear correlation between lower AFQT scores and nonuse of PGIB.**

Percentage of PGIB-Eligible Enlisted Veterans Who Did Not Use or Transfer PGIB Benefits, By Academic Preparation (AFQT)

■ All PGIB-Eligible Enlisted Veterans

Quintile	%
Lowest quintile	39%
Second quintile	39%
Third quintile	38%
Fourth quintile	37%
Highest quintile	35%

38%
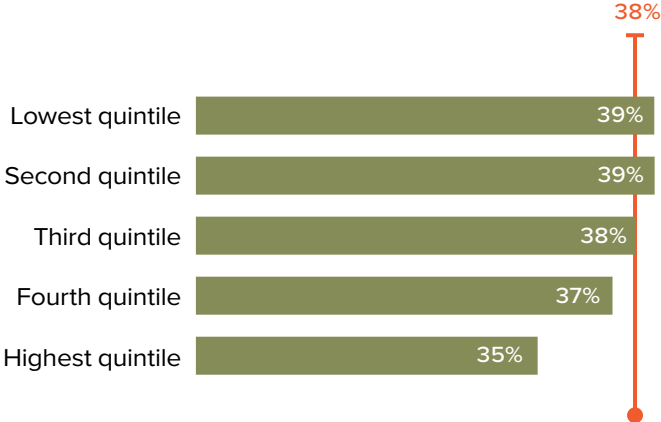
Note: AFQT scores within each quintile were as follows: Lowest Quintile (<41), Second Quintile (41-54), Third Quintile (54-65), Fourth Quintile (66-79), and Highest Quintile (80+).
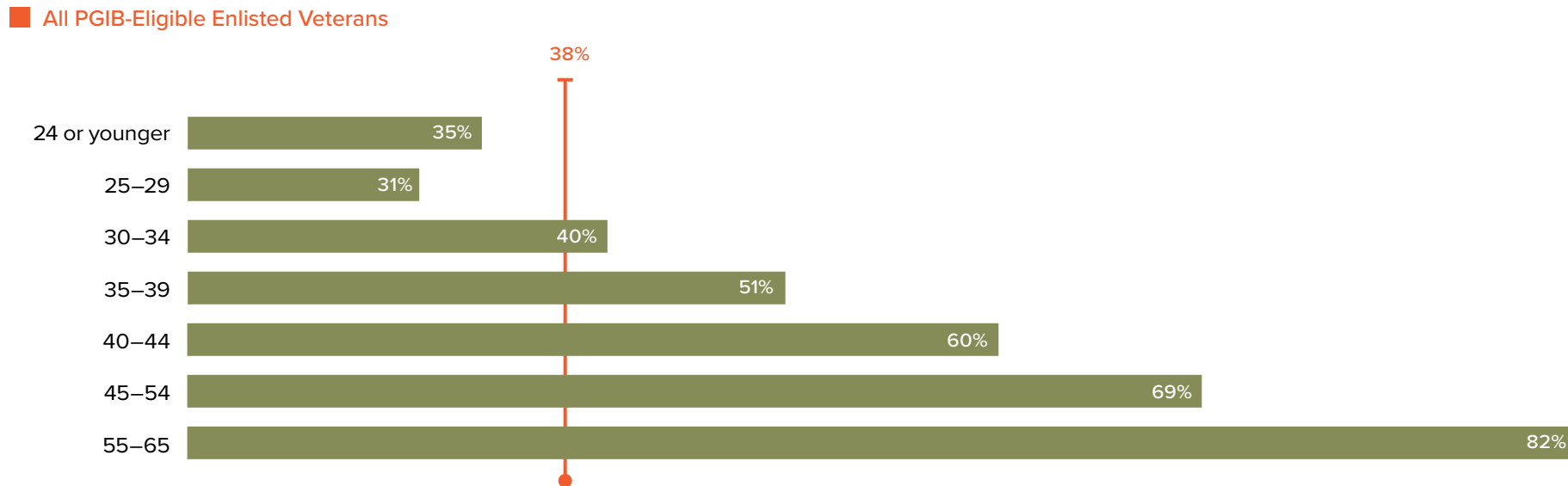
[11] See note in exhibit for the AFQT scores that fall within each quintile.

In this section, we examine the proportion of veterans who were Nonusers by the age at which they separated from the military. The exhibit reveals that, for the most part, the older that veterans were when they separated from the military, the more likely they were to be PGIB Nonusers. The gap between veterans in the youngest age group (age 24 or younger) and those in the oldest age group (age 55–65) was 47 percentage points.[12] Once we accounted for an array of demographic and military characteristics (outlined in Appendix Table A-1), **nonuse increased consistently with age.** Specifically, compared to veterans age 24 or younger, those in the oldest

age group were still 45 percentage points more likely to be Nonusers (or less likely to use PGIB). These results indicated that other veteran characteristics in our regression analysis explained only 2 percentage points of the original gap by age depicted in the exhibit, suggesting that age is strongly associated with nonuse. Older veterans may be more likely to be Nonusers because, although some (if they served enough years of service) could transfer benefits to a spouse or child, their potentially greater years of military experience and potentially fewer years planned in the civilian labor force may make them less inclined to view their personal use of PGIB benefits as needed or advantageous.

Percentage of PGIB-Eligible Enlisted Veterans Who Did Not Use or Transfer PGIB Benefits, By Age

■ All PGIB-Eligible Enlisted Veterans

38%

Age	Percentage
24 or younger	35%
25–29	31%
30–34	40%
35–39	51%
40–44	60%
45–54	69%
55–65	82%

[12] This gap was even slightly larger (51 percentage points) when comparing the second youngest age group of 25–29-years-olds with the oldest age group.

In this section, we examine nonuse by race and ethnicity.[13] **We found that White, Asian, and non-Hispanic veterans were more likely to be Nonusers than veterans from racial and ethnic groups that have been historically underrepresented in postsecondary education. In other words, American Indian/Alaska Native, Black, and Hispanic veterans were more likely to use PGIB benefits.** Specifically, as the exhibit indicates, White and Asian veterans were 7 percentage points more likely to be Nonusers than both American Indian/Alaska Native and Black veterans. Put another way, American Indian/Alaska Native and Black veterans were 7 percentage points more likely to use PGIB benefits than White and Asian veterans. Turning to ethnicity, non-Hispanic veterans were 7 percentage points more likely than Hispanics be Nonusers, or, stated differently, Hispanic veterans were 7 percentage points more likely to use PGIB benefits than non-Hispanics. In short, veterans from underrepresented racial and ethnic groups were more likely than other groups to use their PGIB benefits.

These differences by race and ethnicity did change slightly once we accounted for an array of veteran characteristics. Accounting for other characteristics enabled us to better isolate the factors at play. We found that the size of the gap between White and Black veterans grew from the 7 percentage points noted previously to 11 percentage points, suggesting that when other veteran characteristics (noted in Appendix Table A-1) are accounted for, the difference between White and Black veterans' use/nonuse of PGIB is larger. For other groups, however, usage gaps shrunk, suggesting that other veteran characteristics were at least partially associated with the differences shown in the exhibit. Specifically, the 7 percentage-point gap observed between White and American Indian/Alaska Native veterans disappeared completely once we accounted for other characteristics, suggesting that race was not the key factor, after all, between these groups' use and nonuse of PGIB benefits. The gap between non-Hispanic and Hispanic veterans declined from 7 to 5 percentage points.[14]

Percentage of PGIB-Eligible Enlisted Veterans Who Did Not Use or Transfer PGIB Benefits, By Race/Ethnicity

■ All PGIB-Eligible Enlisted Veterans
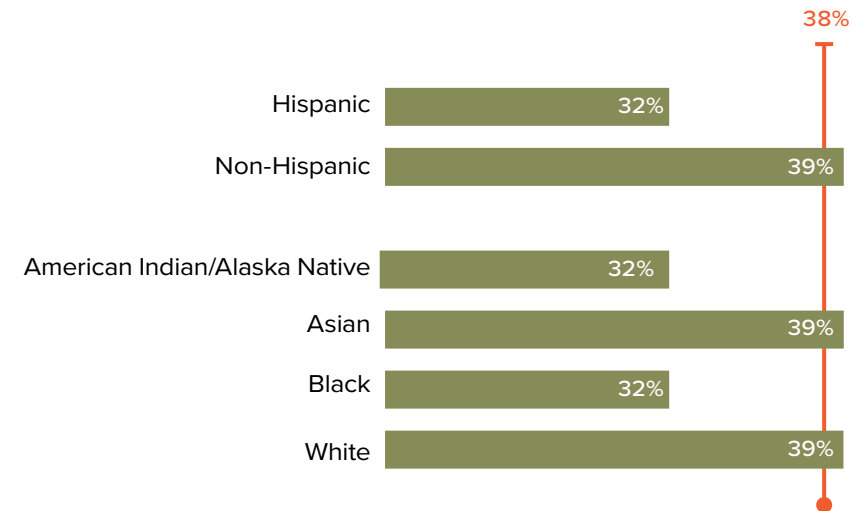
[13] Race/ethnicity is defined in this report in accordance with VA race categories. Hispanic veterans can be of any race.

[14] In considering these results, it is worth thinking about the possible role of institutions' veteran-recruitment practices. As discussed in a prior report in this series (Radford et al., 2024b), there was an intense amount of recruiting by for-profit colleges focused on military veterans before the 90/10 loophole was closed. The 90/10 loophole in the Higher Education Act incentivized for-profit colleges to enroll veterans because veterans' education benefits did not count against the cap on federal funds that for-profit colleges otherwise faced (for more information, see U.S. Department of Education, 2022). In our prior report, we examined PGIB-eligible enlisted veterans' personal use of PGIB benefits. Black, Hispanic, and American Indian/Indian Alaska Native veterans' enrollment at public, nonprofit, and for-profit providers for nondegree and degree programs consistently fell within 3 percentage points of that of all veterans with one exception: Black veterans were 8 percentage points more likely than all veterans to have used PGIB benefits for a degree program at a 4-year for-profit institution reporting to IPEDS (which is required of education providers that receive funds from Title IV federal student aid programs). See Appendix Tables 3a, 5a, 7a, and 9a of Radford et al. (2024b) for more.

In this section, we examine the proportion of Nonusers by sex based on VA data: male or female.[15] The exhibit reveals that **male veterans were 8 percentage points more likely than female veterans to be Nonusers.** In other words, femaleveterans were more likely to use their PGIB benefits. This gap did not change when we accounted for an array of characteristics, suggesting that other veteran characteristics did not explain this gap by sex, and that sex, by itself, is a factor in the use/nonuse of PGIB benefits. This gap is consistent with national patterns that show men in America generally enroll in postsecondary education at lower rates than women.[16]

Percentage of PGIB-Eligible Enlisted Veterans Who Did Not Use or Transfer PGIB Benefits, By Sex

■ All PGIB-Eligible Enlisted Veterans

Male	39%
Female	31%

38%
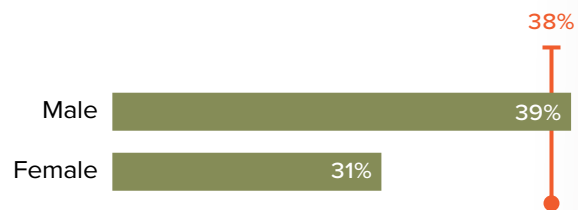
[15] See Appendix Table A-1 for further information on the sources of variables included in analyses.

[16] See, for example, Reeves and Smith (2021).

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| Introduction | Methods | Findings | Academic Preparation (AFQT) | Age | Race/Ethnicity | Sex | Family Responsibilities | Rurality | Disability Rating | Rank | Branch |

In this section, we examine the proportion of veterans who were Nonusers by their family responsibilities (measured by marital status and dependent status). The exhibit reveals that **married veterans with dependents were 9 percentage points more likely to be Nonusers than married veterans without dependents, single veterans without dependents, and single veterans with dependents.** In short, married veterans with dependents were the least likely to use PGIB benefits. However, once we accounted for an array of veteran characteristics (noted in Appendix Table A-1), the gap between those who were married with dependents and those who were single without dependents shrank from 9 to 5 percentage points. Nonuse by other veteran groups (those married with no dependents and single with dependents) fell within 1 percentage point of those who were single without dependents. This finding suggests that the other veteran characteristics in our analysis (which included age at separation, military rank, etc.) were at least partially associated with nonuse for veterans who were married with dependents. It may be that veterans who were married with dependents were more likely to be older and/or to have secured a higher military rank (factors that were accounted for in the regression analysis) and that those factors contributed to their being less likely to personally use their PGIB benefits.

Percentage of PGIB-Eligible Enlisted Veterans Who Did Not Use or Transfer PGIB Benefits, By Family Responsibilities

■ All PGIB-Eligible Enlisted Veterans

Single, no dependents	35%
Single, dependents	35%
Married, no dependents	35%
Married, dependents	44%

38%
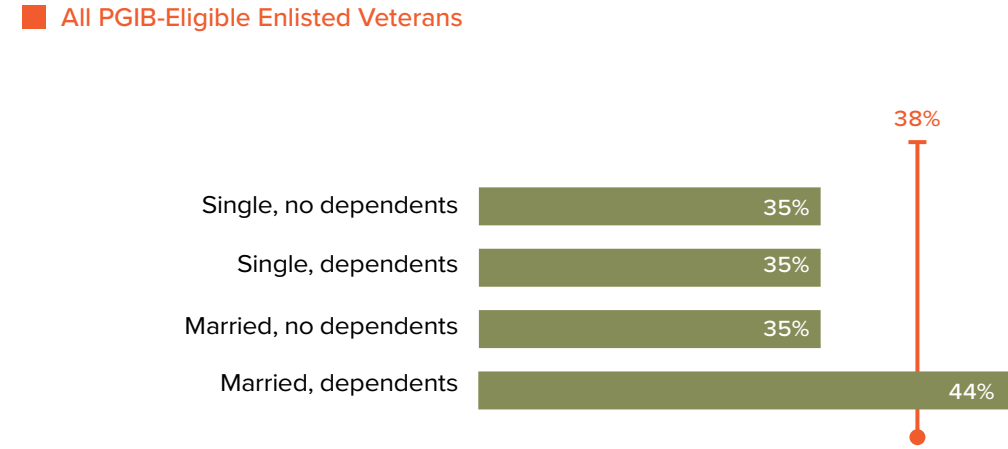
In this section, we examine the proportion of veterans who were Nonusers by the rurality of the community in which they settled when they first separated from the military. **The exhibit reveals that the less urban the community in which veterans reside, the more likely veterans are to be Nonusers, with rural veterans the least likely to use their PGIB benefits.** Specifically, micropolitan veterans were 8 percentage points more likely to be Nonusers (i.e., not use PGIB benefits) than metropolitan veterans, and rural veterans were 3 percentage points more likely than micropolitan veterans to be Nonusers (i.e., not use PGIB benefits).[17] Even after we accounted for the array of veteran characteristics noted in Appendix Table A-1, rural veterans' 3 percentage-point greater likelihood of being Nonusers than micropolitan veterans remained. Micropolitan veterans' 8 percentage-point greater likelihood of being Nonusers than metropolitan veterans shrank to 6 percentage points but did not disappear, suggesting that other veteran characteristics partially explain this gap. In more rural areas, in-person education providers tend to be less plentiful,[18] and access to affordable broadband Internet that can support online education has also been more limited,[19] both of which may contribute to the greater nonuse of PGIB benefits observed among more rural veterans. The labor market returns to postsecondary credentials also vary by rurality and may affect veterans' decisions about whether to use their PGIB benefits.[20]

Percentage of PGIB-Eligible Enlisted Veterans Who Did Not Use or Transfer PGIB Benefits, By Rurality

■ All PGIB-Eligible Enlisted Veterans

Rurality	Percentage
Rural	48%
Micropolitan	45%
Metropolitan	37%

(Reference line: 38%)

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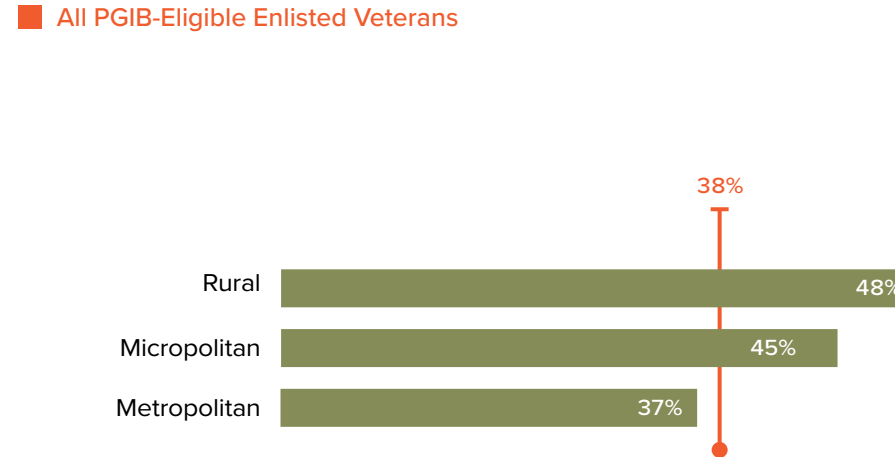
[17] We combined Rural-Urban Commuting Area, based on U.S Census Bureau definitions, into the higher order categories of metropolitan, micropolitan, and rural. A metropolitan statistical area must have at least one urban area of 50,000 or more inhabitants. A micropolitan statistical area must have at least one urban cluster with a population size between 10,000 and 50,000. For more information, see https://www.census.gov/programs-surveys/metro-micro/about.html. The U.S Census Bureau defines "rural" as what is not urban, meaning rural is what is left after defining metropolitan and micropolitan. For more information, see https://www.census.gov/content/dam/Census/library/publications/2016/acs/acsgeo-1.pdf.

[18] For more on so-called education deserts in more rural areas, see Hillman (2019).

[19] For more on broadband access issues in rural communities, see https://www.pewtrusts.org/en/research-and-analysis/articles/2022/12/08/broadband-access-still-a-challenge-in-rural-affordable-housing.

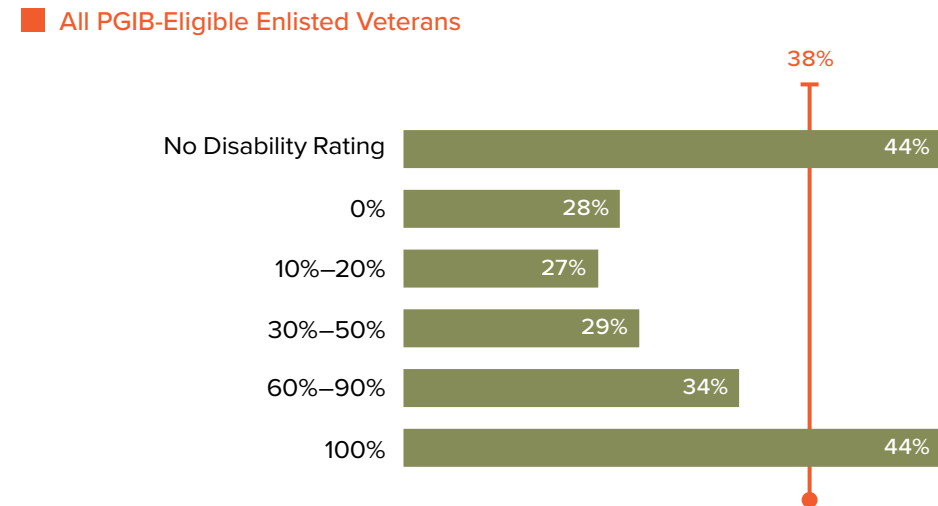[20] For more, see the rurality discussion in our earlier report: Radford et. al (2024a).

In this section, we examine the proportion of veterans who were Nonusers by their disability rating.[21] The exhibit reveals that veterans with no disability rating and those with a disability rating of 100% were more likely to be Nonusers (i.e., less likely to use PGIB benefits) than those with disability ratings between 0% and 90%. (Recall, of course, that any veteran with a 10% or higher disability rating who was not dishonorably discharged is also eligible for an alternative GI Bill benefit in the form of Chapter 31 Veteran Readiness & Employment, and it may be that many veterans who are 100% disabled have their education paid for under the Chapter 31 program.) The largest gap of 17 percentage points occurred between veterans with no disability rating (or a 100% disability rating) and those with a disability rating of 10% to 20%. Accounting for the other characteristics noted in Appendix Table A-1, this gap between those with no disability rating and those with a disability rating of 10% to 20% shrank from 17 to 11 percentage points, suggesting that other veteran characteristics partially explained this difference. Also, although the exhibit at right shows that veterans with no disability rating and those with a 100% disability rating were equally likely to be Nonusers, after we accounted for other characteristics, a 2 percentage-point gap emerged, with those with a 100% disability rating more likely than those with no disability rating to use PGIB benefits.

Note that gaps in usage by disability rating may be influenced by veterans' level of engagement with VA and not just disability status. Veterans with a disability rating successfully applied to a VA program before, which may have made them more apt to apply and secure other benefits, like PGIB benefits. As the exhibit shows, those who applied for disability but were given a 0% disability rating were 16 percentage points less likely to be Nonusers (i.e., more likely to use PGIB benefits) than veterans who had no disability rating (meaning they never applied). Moreover, the gap

between these two groups was still 12 percentage points after we ran a regression analysis accounting for the other veteran characteristics noted in Appendix Table A-1, suggesting a correlation between having applied for a disability rating and using PGIB benefits. Veterans with a service-connected disability also participate in VA support programs that include direct engagement with VA counselors. That, too, may make veterans with disabilities less likely to forgo their PGIB benefits (or more likely to use them).[22] Recall, as well, that it is difficult to draw clear conclusions about disabled veterans' nonuse of PGIB benefits because some disabled veterans receive postsecondary education through Chapter 31.

Percentage of PGIB-Eligible Enlisted Veterans Who Did Not Use or Transfer PGIB Benefits, By Disability Rating

■ All PGIB-Eligible Enlisted Veterans

Disability Rating	Percentage
No Disability Rating	44%
0%	28%
10%–20%	27%
30%–50%	29%
60%–90%	34%
100%	44%

(Reference line: 38%)

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[21] Veterans must apply for the VA to assign them a disability rating in 10% increments based on the severity of their service-connected condition. Veterans who have no disability rating never applied. Veterans with a 0% rating applied but were given a rating of 0% by the VA. For more information about disability ratings, see https://www.va.gov/disability/about-disability-ratings/.

[22] Veterans who have a disability rating of 10% or higher qualify for Veterans Readiness and Employment, which also supports postsecondary education. For more about Veterans Readiness and Employment benefits, see: https://www.va.gov/careers-employment/vocational-rehabilitation/eligibility/.

We now turn to the proportion of veterans who were Nonusers by their military rank when they separated from the military. In considering these results, it is important to note that military rank is both an indication of the length of service and a sign of success in the military. **Gaps in nonuse by rank were large, stretching as much as 49 percentage points, with veterans who separated from the military at the lowest ranks (E1-E2) and the highest ranks (E6-E9) much more likely to forgo PGIB benefits than those in the middle ranks (E3-E5).**

We begin by diving more into results for veterans who left the military at lower ranks. The exhibit on the next page reveals that the gap between those who left the military at the lowest rank (E1) instead of the middle rank (E5) was 39 percentage points, and this gap remained unchanged in our regression analysis that accounted for the other veteran characteristics listed in Appendix Table A-1. The gap between those who left the military at the second lowest (E2) rank and those who left the military at the middle rank (E5) was 26 percentage points, and this gap grew to 29 percentage points after accounting for other characteristics, suggesting that when veterans from these ranks were similar in terms of other veteran characteristics (noted in Appendix Table A-1), the difference in PGIB benefits usage between these ranks was even greater. These results suggest that other veteran characteristics that we accounted for, such as age, military occupation, and AFQT score, do not explain E1 and E2 veterans' higher nonuse (i.e., lower rates of using PGIB benefits). Instead, these veterans in lower ranks may be less likely to use benefits because they served for a shorter time before separating, making them eligible for a smaller proportion of PGIB benefits or because they had other idiosyncrasies,[23] such as being demoted, that affected typical rank advancement and might also have influenced their interest in using VA benefits in general. It is also possible that veterans from lower ranks do not view their career plans as requiring further training or education.
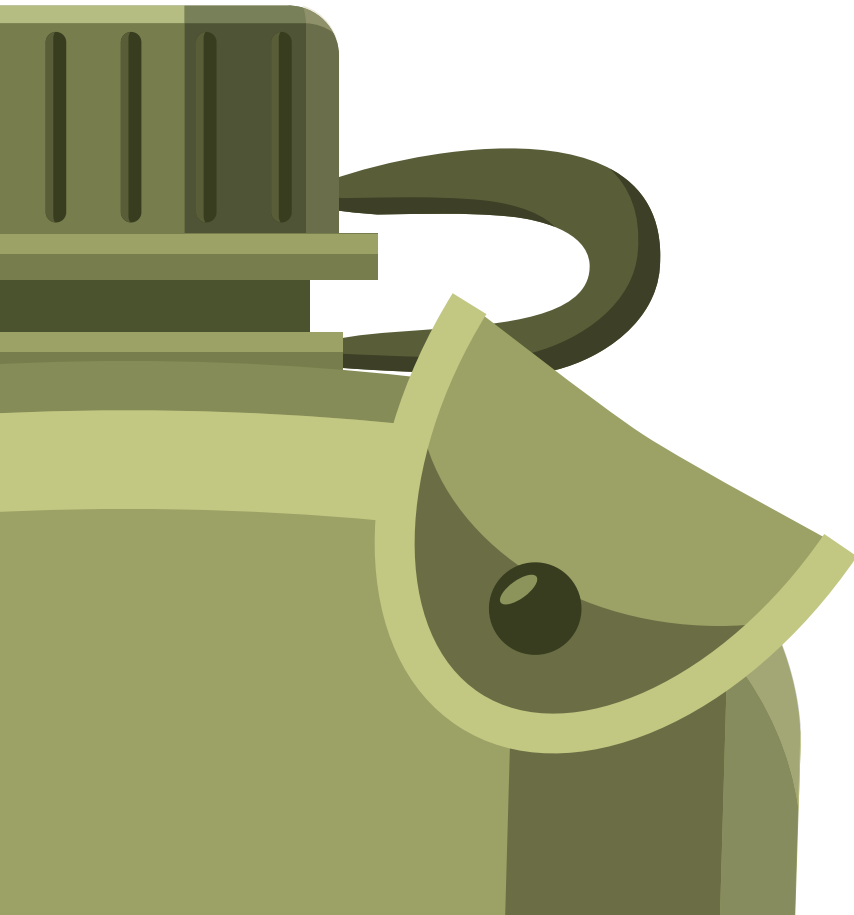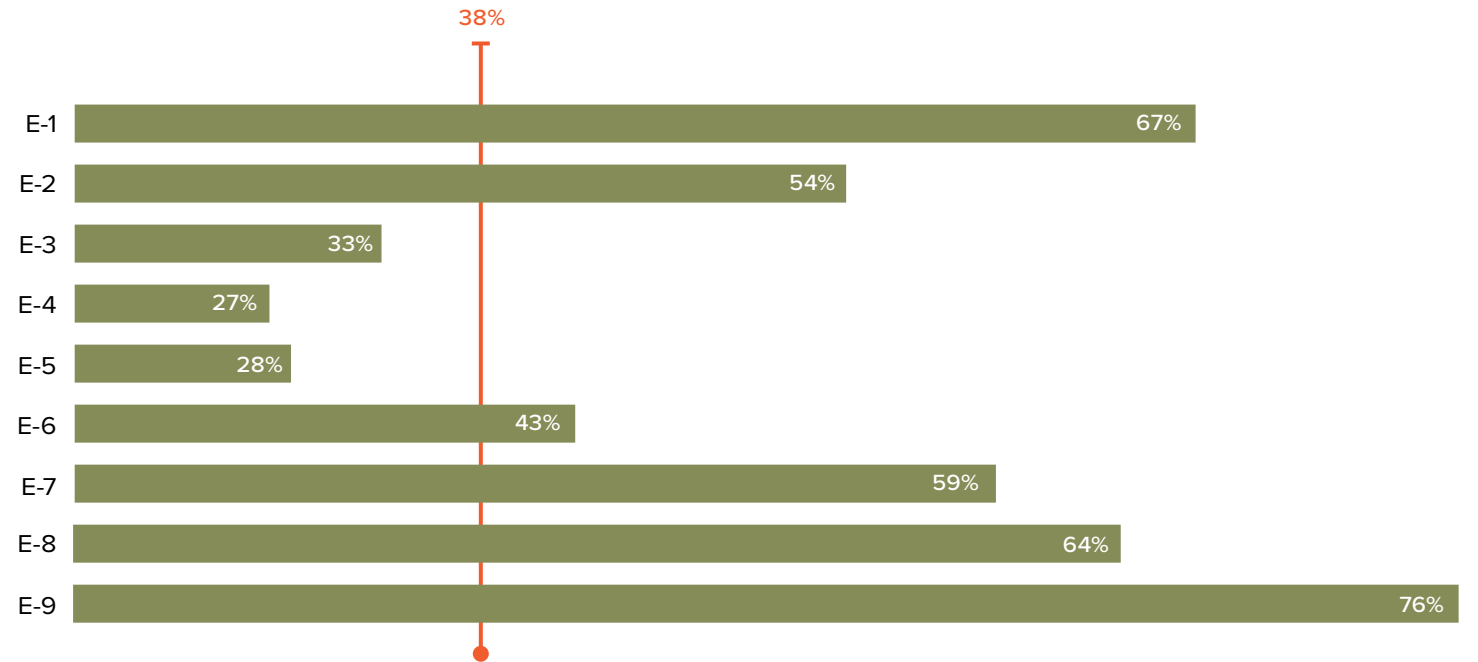
We now turn to how veterans who left the military at the two highest ranks compared to veterans who left the military at the middle rank (E5). The exhibit on the next page reveals that the gap between those who separated from the military at the highest (E9) rank and the middle rank (E5) was 36 percentage points. After we accounted for other veteran characteristics, this gap remained sizeable but shrank to 22 percentage points, suggesting that the variables included in the regression model partially contributed to the gap. A similar pattern occurred between those in the second highest rank (E8) and those in the middle rank (E5), with the gap shrinking from 31 percentage points in the exhibit on the next page to 14 percentage points after we accounted for other veteran characteristics. These results suggest that other veteran characteristics (perhaps age, military occupation, and/or AFQT score) partially explain this gap and that rank itself remains a factor. It is possible that higher ranked veterans developed skill sets and years of experience through their military service that were in-demand in the civilian labor market, thereby making additional education at this stage of their careers less appealing or necessary.

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[23] For more on how benefits vary by length of service, see: https://www.va.gov/education/benefit-rates/post-9-11-gi-bill-rates/.

Percentage of PGIB-Eligible Enlisted Veterans Who Did Not Use or Transfer PGIB Benefits, By Rank

■ All PGIB-Eligible Enlisted Veterans

38%

Rank	Percentage
E-1	67%
E-2	54%
E-3	33%
E-4	27%
E-5	28%
E-6	43%
E-7	59%
E-8	64%
E-9	76%

Introduction | Methods | Findings | Academic Preparation (AFQT) | Age | Race/Ethnicity | Sex | Family Responsibilities | Rurality | Disability Rating | Rank | Branch
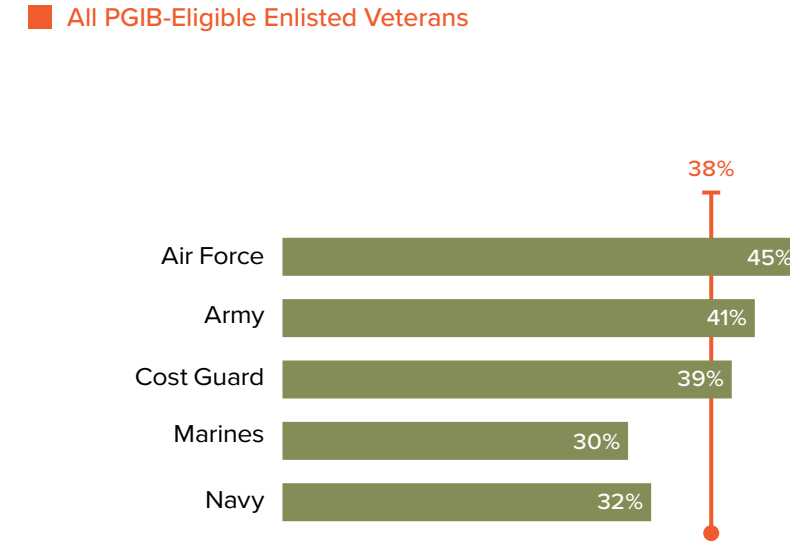
Finally, we examine the proportion of Nonusers by military branch. The exhibit reveals that, in general, **Air Force veterans were most likely to forgo PGIB benefits (45%), followed by veterans from the Army (41%) and Coast Guard (39%).[24] Those in the Navy and Marine Corps were least likely to be Nonusers at 32% and 30%, respectively. Gaps between Air Force veterans and veterans from other branches generally shrank after we accounted for other characteristics, although the gap did not shrink between Air Force and Coast Guard veterans.** Specifically, the gap between veterans from the Air Force (most likely to forgo PGIB benefits) and from the Marine Corps (least likely to forgo PGIB benefits) was 15 percentage points, but it shrank to 5 percentage points after we accounted for the other veteran characteristics in Appendix Table A-1. Similarly, after we accounted for these other veteran characteristics, the 13 percentage-point gap between Air Force and Navy veterans shrank from 13 to 9 percentage points and the 4 percentage-point gap between the Air Force and the Army disappeared. The gap between veterans from the Air Force and the Coast Guard, on the other hand, grew from 6 to 26 percentage points after we accounted for additional characteristics, suggesting that when Air Force and Coast Guard veterans were similar in terms of other veteran characteristics (e.g., rank, age at separation), their difference in PGIB usage was greater. Their unique air- and coastal-focused skill sets may have varying levels of direct transferability to the civilian labor market, affecting how these veterans weigh the benefits of furthering their own education and training through using PGIB benefits.

Percentage of PGIB-Eligible Enlisted Veterans Who Did Not Use or Transfer PGIB Benefits, By Branch

■ All PGIB-Eligible Enlisted Veterans

Branch	Percentage
Air Force	45%
Army	41%
Cost Guard	39%
Marines	30%
Navy	32%

(reference line: 38%)

[24] It is important to remember that the existence of the Community College of the Air Force—free to all members of the Air Force—could reduce Air Force veterans' need for and use of PGIB benefits.

Conclusion

We are pleased to share this look at the proportion of PGIB-eligible enlisted veterans who have not personally used or transferred their PGIB benefits and how this nonuse differs by veterans' demographic and military characteristics. Please see our companion insights brief, *Post-9/11 GI Bill Access and Uptake: Insights and Recommendations from Veterans*, for the reasons veterans we interviewed give for forgoing benefits and suggests ways the field might better support the use of PGIB benefits.

This report is possible thanks to unprecedented interagency cooperation, which allowed our interagency research team to combine and analyze previously siloed federal data as part of the evidence-building decision-making work of the U.S. Census Bureau, offering valuable insights for policymakers and other key players focused on veterans. Prior to this project, there had never been any definitive assessment of the outcomes associated with this critical federal investment across military branches. This report is one in a series of reports on the Post-9/11 GI Bill by this study team.

Appendix A
Methods

Data sources

This project required significant cooperation across U.S. government agencies and the National Student Clearinghouse. In what follows, we have noted the data that each entity provided to help us answer the research questions in this series of reports. Appendix Table A-1 shows more specifically how the data were used.

- **The U.S. Department of Veterans Affairs:** a list of all PGIB eligible veterans; veteran demographic data from 2020 included in the U.S. Veterans Trends and Statistics (USVETS) data and the U.S. Department of Veterans Affairs Veterans Benefits Administration's Education Services Files.

- **The Veterans Benefits Administration (VBA):** veterans' use of PGIB benefits through March 2020 and PGIB payments through September 30, 2018.

- **National Student Clearinghouse:** PGIB eligible veterans' postsecondary enrollment and attainment records through June 2020.

- **The U.S. Department of Defense:** Defense Manpower Data Center (DMDC) data on veterans' AFQT percentile upon activation, service experience (e.g., rank, military occupation), all activation and separation dates as of 2020.

- **The Internal Revenue Service (IRS):** W-2 income from tax year 2019 and marital and dependents status, region, and zip code as of year of first separation.

- **The U.S. Census Bureau:** American Community Survey (ACS) labor force participation from the 2019 ACS, along with the Census Bureau's crosswalk of Rural-Urban Commuting Area Codes (RUCA) and region for U.S. zip codes.

- **The Integrated Postsecondary Education Data System (IPEDS):** institution-level 2020 data on institution control and sector as well as by-institution counts of students involved exclusively in distance education courses, both merged with information on students' institutions using the Clearinghouse's Unit-ID Crosswalk Table.

All individual-level data were merged using the U.S. Census Bureau's Protected Identification Key (PIK), which uses a variety of record linkage techniques to identify individuals on incoming files while simultaneously protecting respondent confidentiality (Wagner & Layne, 2014).

Appendix A
Methods

Methods

Here we discuss the methods used to answer the quantitative research question in this report.

Research Question: Who is not using or transferring their PGIB benefits? More specifically, what proportion of PGIB-eligible enlisted veterans have not yet personally used their PGIB benefits or had a spouse or dependent use their PGIB benefits for education or training, and how does this differ by veteran characteristics? The study team used bivariate descriptive statistics and logistic regression to examine how veterans' demographic and military service variables were associated with nonuse of PGIB benefits. Logistic regression models' uptake results are difficult to interpret in a latent space, so we mapped the outcomes to percentage point changes for interpretability. Appendix Table A-1 lists the variables included in the regression analysis. To account for the number of policy-relevant variables included in the logistic regression, the study team used false discovery rate (FDR; Benjamini & Hochberg, 1995) on a robust (HC-3) Wald test statistic that tested whether all levels in a variable were statistically significant.

APPENDIX TABLE A-1. VARIABLES USED IN REGRESSIONS

VARIABLE	DEFINITION	SOURCE
Age at separation	Difference, in years, between birth date and date of first separation	VA PGIB eligibility file and USVETS data
Branch	Military branch at time of first activation	USVETS data
Race/ethnicity	Race and ethnicity were imputed when missing. As a result, it is expected that some individuals may have the wrong race or ethnicity mapped to them. In addition, there are some "original" race/ethnicity classifications that cannot be assigned to the most recent OMB classification. For example, an original source has an individual as Asian or Pacific Islander; whether the person is Asian or Hawaiian or Pacific Islander cannot be recovered. Ethnicity (Hispanic/not Hispanic) is collected separately from race.	USVETS data
Sex	USVETS categorizes veterans into two sexes: male or female.	USVETS data
Disability rating category	Latest nonmissing value where available; veterans with only missing values were categorized as having no disability rating.	USVETS data
Year of separation	Year of first separation date.	USVETS data; if missing, DMDC
Rank	Pay plan and pay grade.	DMDC
Two-digit Standard Occupational Classification (SOC) grouping for military occupation	Two-digit SOC code, clustered for some codes with low incidence rates.	DMDC
AFQT percentile	The AFQT percentile associated with veterans' earliest available Uniform Service Agreement Date from DOD Military Entrance Processing Command (MEPCOM) records.	DMDC

VARIABLE	DEFINITION	SOURCE
Family responsibilities	Combined filing status and dependent information from tax filing year of first separation from military.	IRS
Region	Derived from zip code, based on Census Bureau crosswalk.	IRS if available, then USVETS data if available, and VA eligibility file as last data source if previous two sources were missing
Census rural-urban commuting area (RUCA) codes	Derived from zip code, based on Census Bureau crosswalk, combined into the higher order categories of rural, micropolitan, and metropolitan.	IRS if available, USVETS data if available, and VA eligibility file as last data source if previous two sources were missing
Combat status	Served in Afghanistan, Syria, or Iraq.	DMDC
Highest degree prior to date of first activation	Because of filtering based on highest degree prior to first activation, whether the veteran had an associate's degree or a certificate at the date of their first activation.	National Student Clearinghouse and USVETS
Use of PGIB benefits	PGIB-eligible enlisted veterans who separated between August 1, 2009, and June 30, 2017, and had any PGIB payment record prior to September 30, 2018.	VBA PGIB Payment records

Note:

VA = Department of Veterans Affairs

PGIB = Post=9/11 GI Bill

USVETS = U.S. Veterans Trends and Statistics

OMB = Office of Management and Budget

DMDC = Defense Manpower Data Center

SOC = Standard Occupational Classification

AFQT = Armed Forces Qualification Test

DOD = Department of Defense

MEPCOM = Military Entrance Processing Command

IRS = Internal Revenue Service

VBA = Veterans Benefits Administration

Appendix B
Methodological
Details

Logistic Regression

Logistic regression estimates the probability of using the PGIB through a latent regression, a mapping of the latent parameter to the probability space, and a variance function from that mapping.

$$E(Y|X) = \pi(X) = logit(X\beta)$$

$$Var(Y|X) = \pi(X)(1 - \pi(X))$$

Where **Y** is a vector that is 1 if the veteran takes up the GI Bill and 0 if they do not; **X** is a matrix of the covariates, shown below; π is the predicted probabilities; and β is regression coefficients. To linearize the coefficients, we simply difference the variable in the two states, evaluated at the mean of other coefficients.

$$\Delta Y = logit(X_1\hat{\beta}) - logit(X_0\hat{\beta})$$

Where $\hat{\beta}$ the fitted regression coefficients; X_0 are the actual data, with the coefficient of interest set to 0; and X_1 are the actual data, with the coefficient of interest set to 1; and ΔY is the estimated change in program take-up associated with having the covariate level.

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