

Stype, Amanda C.

Article

Health insurance patterns of older veterans: Evidence from the health and retirement study

Journal of Risk and Financial Management

Provided in Cooperation with:

MDPI – Multidisciplinary Digital Publishing Institute, Basel

Suggested Citation: Stype, Amanda C. (2022) : Health insurance patterns of older veterans: Evidence from the health and retirement study, Journal of Risk and Financial Management, ISSN 1911-8074, MDPI, Basel, Vol. 15, Iss. 8, pp. 1-12,
<https://doi.org/10.3390/jrfm15080333>

This Version is available at:

<https://hdl.handle.net/10419/274855>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.


If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Article

Health Insurance Patterns of Older Veterans: Evidence from the Health and Retirement Study

Amanda C. Stype 

Department of Economics, Eastern Michigan University, Ypsilanti, MI 48197, USA; astype@emich.edu

Abstract: With the increased availability of community care to veterans from the VA MISSION Act, policymakers and providers need to understand how older veterans are insured, particularly before Medicare eligibility at age 65. Using data from 1996 to 2018, this study examines the insurance patterns of veterans prior to the expansion of access to community care through the VA and compares those patterns to nonveterans. This study finds that veterans are more likely to have insurance than nonveterans and that they are less likely to rely on Medicaid and Medicare before age 65. Regression estimates also suggest that veterans with at least some college education are less likely to have private insurance and are more likely to be uninsured than nonveterans with the same educational attainment.

Keywords: veterans; MISSION Act; insurance

1. Introduction

The roots of the modern-day Veterans Affairs (VA) health system began at the end of the civil war in 1865. The VA health system has undergone many changes since its founding. One of the largest reforms is the passage of the Maintaining Internal Systems and Strengthening Integrated Outside Networks (MISSION) Act in 2018. The MISSION Act (PL 115–182), passed in June of 2018, established a permanent community care program for veterans. This law built upon the Veterans Access, Choice, and Accountability Act of 2014 (PL 113–146). Under these statutes, VA may refer veterans outside of the VA network for care (community care). In some cases, when care cannot be received conveniently within the Veterans Health Administration (VHA) network, VA is mandated to refer veterans to community care.

The MISSION Act will change the incentives for veterans receiving healthcare. Prior to its implementation, veterans were not constrained to VA healthcare. Many veterans have access to health insurance alongside their VA care, and many veterans choose to take up this health insurance to be able to access care outside the VA system. These insurance options could include private insurance through an employer or spouse's employer. Veterans may also receive Medicaid or Medicare if they meet the eligibility requirements. The MISSION Act makes it easier and less costly for veterans to receive community care (outside of the VA) and may impact a veteran's decision to take up other forms of insurance, particularly private health insurance. This research will establish a baseline for how older male veterans (over the age of 50) were insured prior to the implementation of the MISSION Act and how this compared to older male nonveterans.

The VA and VHA are large and expensive programs, and the MISSION Act has the potential to greatly increase these costs. Prior to the COVID-19 pandemic, in FY 2019, approximately USD 77.8B was spent on patient expenditures by VHA and 6,159,661 patients were served ([Veteran Population n.d.](#)). In FY 2020, USD 83.7B was enacted for medical services ([VA Budget Office n.d.](#)). For FY 2023, the VA have requested about USD 122.7B for medical services. This includes funding for COVID response, medical inflation, and



Citation: Stype, Amanda C. 2022. Health Insurance Patterns of Older Veterans: Evidence from the Health and Retirement Study. *Journal of Risk and Financial Management* 15: 333. <https://doi.org/10.3390/jrfm15080333>

Academic Editor: James Bailey

Received: 31 May 2022

Accepted: 19 July 2022

Published: 28 July 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

an increase in funding for the MISSION Act ([VA Office of Public and Intergovernmental Affairs 2022](#)).

Understanding the source of veterans' insurance prior to the implementation of the MISSION Act, which expanded access to community care, is important to understanding the impact of increased access to community care on veterans' decisions to obtain health insurance, particularly private health insurance coverage. The implementation of expanded community care at the same out-of-pocket cost as care within the VA may make VA care more appealing to veterans and reduce their desire or need for outside insurance. This would increase the enrollment and utilization of the VA and increase the public cost of veterans' healthcare.

Calculations from the VETPOP 2018 "living veterans projections" estimate that 75.5% of living veterans as of September 2020 are over the age of 50 ([Veteran Population n.d.](#)). This paper will utilize the Health and Retirement Study (HRS) to analyze the health insurance status and patterns of male veterans over the age of 50 and provide a comparison to nonveterans ([Health and Retirement Study 2018](#); [RAND HRS 2021](#)). I will use data collected from 1996 to 2018. The youngest veteran in this sample was born in 1968. The majority of veterans alive today are within the older age group, which is the focus of the HRS.

The rest of this paper will proceed as follows: An explanation of how veterans can be insured, an aggregate examination of veterans' source of insurance by age, followed by how veterans' source of insurance by age compares to nonveterans. Then, I will use a linear probability model (LPM) to examine how factors such as veteran status, age, race, and education impact the probability of having specific forms of insurance (or being uninsured). This LPM will be interacted with veteran status to assess differential impacts on insurance status. The paper will conclude with a summary of how older veterans were insured before the implementation of the MISSION Act and how the MISSION Act could change insurance incentives for veterans.

2. Materials and Methods

2.1. Data

The Health and Retirement Study (HRS) is a nationally representative panel survey that is administered in the United States every other year to selected individuals aged 50 and above and their spouse. The HRS asks questions about a myriad of topics, including finances, health, preventive care, education, marital status, and importantly for this paper, health insurance and veteran status. The same respondents are surveyed across multiple years. The survey asks not only whether an individual is insured, but how they are insured and the source of private insurance. I utilized data from the 1996–2018 waves, and the data were restricted to individuals born before 1969. I treated the data as a cross-section. I further restricted the sample to male respondents only, as 97% of veterans in the sample are male. There are 7964 unique veterans in the sample and 10,558 unique nonveterans. Individuals can appear in the data multiple times as they respond in multiple survey waves.

The main variables of interest relate to health insurance status. I utilize the variables that ask about private health insurance, Medicare, Medicaid, and TRICARE. I use these variables and a variable about number of health insurance plans to construct a variable for uninsured status.

2.2. Sources of Insurance and Healthcare for Veterans

Veterans can receive health insurance and healthcare from several different sources. Many veterans also have access to the Veterans Health Administration (VHA or VA). A veteran may be required to pay premiums for care received for non-service-connected issues at a VA facility depending on their income level. Not all veterans are eligible to receive VA care. VA eligibility is determined by VA disability status and income, with all service members exiting the military receiving VA care for a set number of years. Individuals can also have their disability rating reassessed. The VA had an open enrollment period in 1996,

which means that the veterans within this sample all had the opportunity to enroll in VA care (Boyle 2009). Military retirees can continue to be insured through military-provided health insurance, CHAMPUS/TRICARE (hereafter referred to as TRICARE).¹

In addition to VA care, veterans also have the same options for insurance as nonveterans. They can receive private insurance through their employer or their spouse's employer or purchase it on the exchanges. They can also receive Medicaid or Medicare if they qualify. Those who are below a certain income threshold or have certain disabilities are eligible for Medicaid. Those who are over age 65 or have certain disabilities are eligible for Medicare. Receiving VA care does not preclude veterans from having non-military health insurance.

Previous work has examined how veterans are insured. Haley and Kenney (2012) conducted a descriptive study of veterans' health insurance status using American Community Survey (ACS) data. Older veterans (55–64) are most likely to report using VA as their sole source of healthcare. Haley et al. (2017) updated this study after the implementation of the provisions of the Affordable Care Act and found that Medicaid expansion and the implementation of subsidies and the exchanges have helped to decrease the uninsured rates among veterans. A descriptive study of veterans' insurance status using the National Health Interview Survey (NHIS) found that there was an increased importance of military-related coverage over time and a decrease in private insurance coverage among veterans aged 18–64 from 2000 to 2011. Additionally, this study found that the uninsured rate is very low for veterans aged 18–64 and has decreased over time, with many veterans switching toward TRICARE, Medicaid, and VA Healthcare (Zelaya and Nugent 2018). Both the NHIS and the ACS are cross-sectional surveys that focus on the broader American population. These datasets do not focus specifically on the elderly and near-elderly. The previously mentioned studies also do not directly compare veterans to nonveterans. The HRS will allow me to carefully examine this same question of veterans' health insurance status and source for veterans over the age of 50. I will also compare veterans to nonveterans.

The HRS is uniquely suited to examine this topic because it is a panel dataset that asks extensive questions about health insurance sources and records ample information on factors that impact insurance status, such as education, marital status, and income/wealth. The ACS records similar information but did not begin to record health insurance information for respondents until 2008. Unlike the ACS, HRS asks bracketed questions around income, which reduces the item non-response rate (Heeringa et al. 1995). The HRS also asks about household wealth (using the same bracketed method) while the ACS does not. Wealth is a better measure to consider for elderly and near-elderly individuals who may be retired. Some other data sources (such as the NHIS and CPS) have historically lumped VA access in with military health insurance (TRICARE and/or CHAMPVA), which makes determining the exact health insurance status and source of veterans challenging. The HRS asks, "Are you currently covered by CHAMPUS, CHAMP-VA, or any other military healthcare plan?" and instructs surveyors that VA is not a health insurance program (Health and Retirement Study n.d.). As such, the HRS is uniquely situated to disaggregate those who are using TRICARE insurance from uninsured veterans who are relying on the VA for care while providing information on covariates that impact insurance status such as wealth and income.

2.3. How Veterans Are Insured

Figure 1 is a SAND chart of veterans' sources of insurance by age constructed using the HRS. The bottom category is private insurance and indicates private insurance through an employer, a spouse's employer, or private insurance purchased on the exchanges. The next category is TRICARE, followed by Medicaid and Medicare. The fifth category is dual-eligible, those who are eligible for both Medicare and Medicaid. This is followed by those who have Medicare and private insurance, and finally there are the uninsured. The omitted group is veterans with multiple sources of insurance that are not Medicare + Medicaid (dual-eligible) nor Medicare + private insurance. From the SAND chart, it is clear that the majority of veteran respondents have private insurance prior to age 65. We can

also see that the likelihood of not having insurance decreases dramatically at age 65. The number of individuals in this omitted category increases at age 65, as most individuals go on Medicare and many individuals maintain some insurance that is neither Medicaid nor private insurance after age 65. However, what we do not know from this figure is how the insurance status of veterans compares to that of nonveterans.

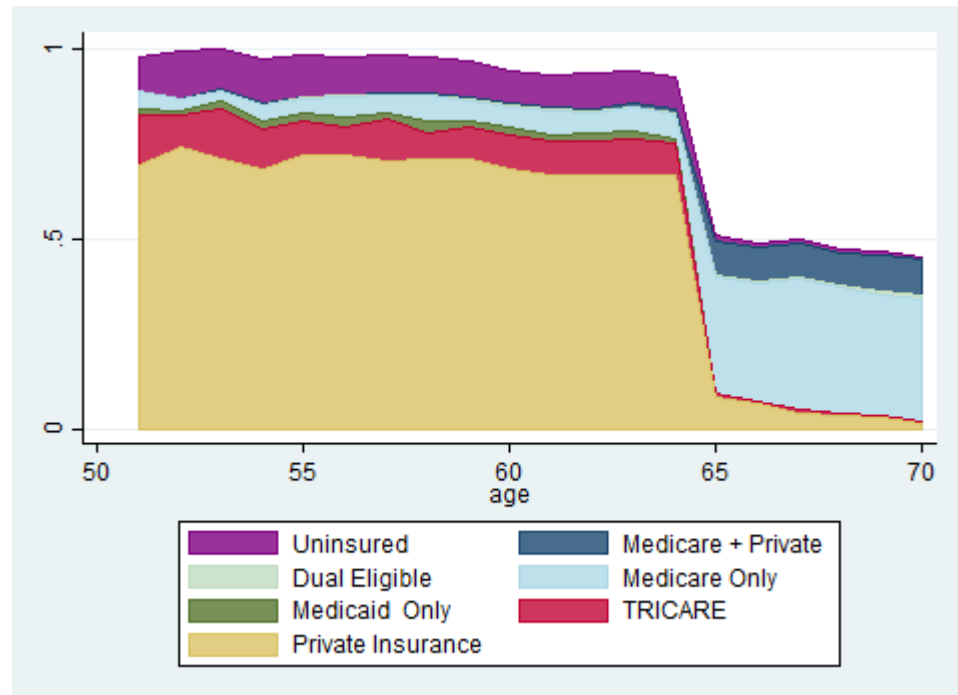


Figure 1. SAND chart for male veterans’ insurance source by age (1996–2018). The omitted group is those with more than one type of insurance. Source: Author’s calculations from the Health and Retirement Study.

2.4. Comparing Veterans and Nonveterans

This section will compare sources of insurance and characteristics that tend to impact insurance options for veterans and nonveterans. Table 1 provides summary statistics for insurance status. Column 1 is for the whole sample, column 2 is men under the age of 65, and column 3 is men aged 65 and older.

Table 1. Summary statistics for health insurance.

Variables	(1) All (SD)	(2) Under 65 (SD)	(3) 65 and Older (SD)
Private Insurance	0.639 (0.600)	0.736 (0.585)	0.526 (0.598)
Medicaid	0.0702 (0.256)	0.0667 (0.249)	0.0743 (0.262)
Medicare	0.496 (0.500)	0.106 (0.307)	0.949 (0.220)
TRICARE	0.0695 (0.254)	0.0598 (0.237)	0.0807 (0.272)
Uninsured	0.0983 (0.298)	0.173 (0.378)	0.0113 (0.106)
Observations	88,782	47,705	41,077

Table 2 shows the summary statistics for covariates that impact access to insurance such as gender, race, education status, and marital status.

Table 2. Summary statistics for covariates and insurance source by veteran status.

Variables	(1) All (SD)	(2) Veterans (SD)	(3) Nonveterans (SD)
Age	64.33 (8.108)	66.39 (8.012)	62.54 (7.760)
White	0.775 (0.418)	0.845 (0.362)	0.713 (0.452)
College	0.460 (0.498)	0.501 (0.500)	0.424 (0.494)
Married	0.758 (0.428)	0.781 (0.414)	0.738 (0.440)
Work	0.397 (0.489)	0.318 (0.466)	0.467 (0.499)
Wealth10k	12.01 (86.58)	12.46 (48.27)	11.62 (109.5)
Private Insurance	0.640 (0.600)	0.642 (0.595)	0.638 (0.605)
Medicaid	0.0698 (0.255)	0.0388 (0.193)	0.0968 (0.296)
Medicare	0.496 (0.500)	0.592 (0.491)	0.413 (0.492)
TRICARE	0.0695 (0.254)	0.144 (0.351)	0.00435 (0.0658)
Uninsured	0.0979 (0.297)	0.0642 (0.245)	0.127 (0.333)
Observations	88,572	41,233	47,339

In Table 2, column 1 contains summary statistics for the whole sample, column 2 focuses on male veterans, and column 3 focuses on male nonveterans. Column 2 shows that veterans are slightly older, more likely to report their race as white, more likely to have an education level of some form of college or higher, more likely to be married, and wealthier. They are also less likely to report working fulltime or part-time. Many of these covariates impact an individual’s likelihood of having insurance. Additionally, without any controls, veterans and nonveterans are about equally as likely to have some private insurance. Veterans are less likely to have Medicaid, more likely to be on Medicare, more likely to have TRICARE, and less likely to be uninsured.

Figure 2 compares the source of insurance at each age by veteran status. To examine how the insurance sources of veterans and nonveterans compare, the sample is restricted to respondents born before 1969 and to survey waves from 1996 to 2018. Data are collapsed by age at the time of survey response at the observation level and averaged to show what percentage of each group (veterans and nonveterans) report having each type of insurance at each age. Figure 2 shows how the probability of an individual having a specific type of insurance at a specific age varies by veteran status. In these graphs, individuals with more than one type of insurance are counted as having each type of insurance and may appear in more than one panel of the graph.

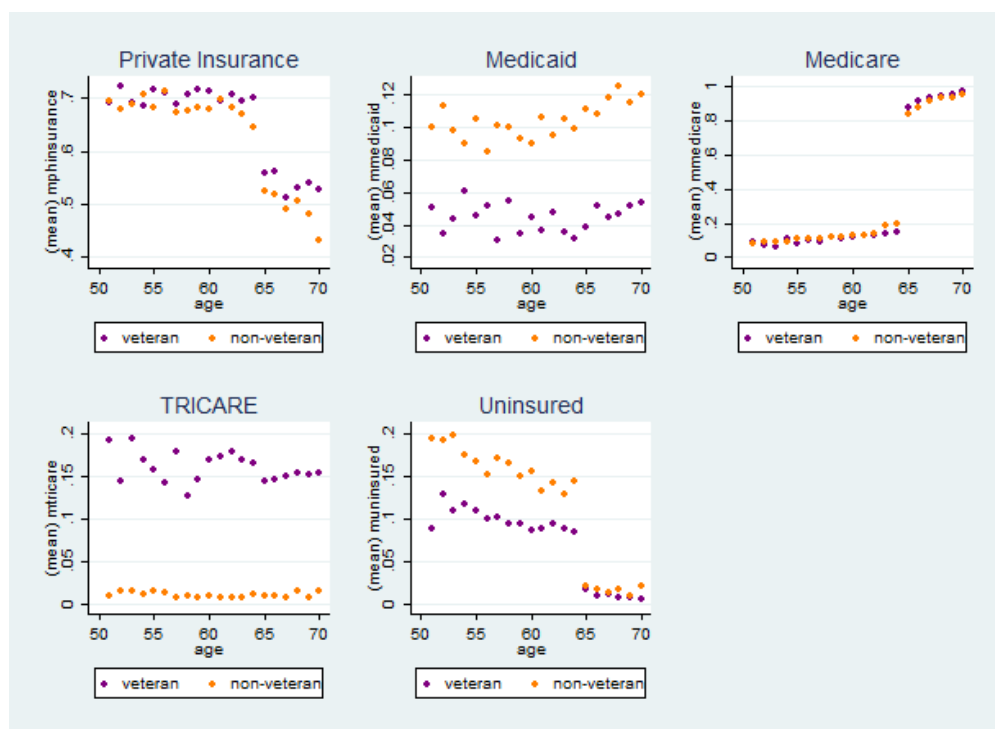


Figure 2. This figure displays the source of insurance by age and veteran status for five categories of insurance for male veterans. Source: Author’s calculations from the Health and Retirement Study.

As can be seen in Figure 2, male veterans and nonveterans appear to have similar probabilities of having private insurance. This private health insurance could come from their own employer or from a spouse’s employer and the binary variable used is constructed from a question that asks how many private or employer-provided health plans a person has. Veterans are less likely than nonveterans to be covered by Medicaid at all ages covered in this study. This could be due to not qualifying for Medicaid, Medicaid stigma, or the option to utilize VA care and a decision to not enroll in Medicaid. The third panel shows that veterans and nonveterans are about equally as likely to receive Medicare at all ages. At age 65, the vast majority of both groups goes on Medicare. Veterans in these cohorts are not more likely than nonveterans to receive Medicare prior to age 65. Unsurprisingly, veterans are more likely to report being covered by TRICARE/CHAMPUS/CHAMPVA. Eligibility for these programs requires military participation or being married to a military retiree. Consistent with Zelaya and Nugent (2018), veterans are less likely to be uninsured at all ages. Additionally, both groups are much less likely to be uninsured after Medicare eligibility. The uninsured variable was constructed to capture anyone who responded that they did not have private insurance, Medicare, Medicaid, TRICARE/CHAMPUS, or other insurance.

The evidence presented in the previous subsections is descriptive. The next subsection describes a linear probability model to examine how veteran status impacts the probability of having different types of insurance. I will also run a fully interacted model to determine if there are differential effects for veterans in specific groups.

2.5. Methods

In this section, I have run a simple linear probability model (LPM), shown in Equation (1), to estimate the change in probability of an individual having a specific type of insurance depending on their specific characteristics, including veteran status.

$$Insurance_{it} = \beta_0 + \beta_1 Vet_i + \Gamma X_i + \Delta Z_{it} + \gamma_{it} + \delta_{it} + \varepsilon_{it} \tag{1}$$

where $Insurance_{it}$ is a binary variable that is equal to 1 when a respondent reports having a specific type of health insurance, and Vet_i is a binary variable equal to 1 if the individual reports being a veteran. X is a vector of non-time-varying characteristics, including race and education, and Z is a vector of time-varying characteristics including wealth, marital status, and work. γ_{it} are census division control fixed effects and δ_{it} are age fixed effects.

Equation (1) is estimated for private insurance, Medicare, Medicaid, TRICARE, and uninsured. Due to the large change that happens around age 65, I estimated this regression twice: once for individuals aged 50–64 and again for individuals aged 65–80. Although most individuals adopt Medicare at age 65, Medicare has significant out-of-pocket costs, and additional insurance such as a private Medicare wraparound/Medigap plan can help individuals to lessen these costs.

Equation (1) shows if veterans are more or less likely to have a specific type of insurance. In Equation (2), I fully interacted Equation (1) with veteran status. This allows examination of differential effects. For example, Table 3 shows that men with some college education or more are statistically significantly less likely than men with no college education to have Medicare prior to age 65. By estimating the model in Equation (2), I can see if veterans with some college education or more are more or less likely to have Medicare before age 65 than nonveterans with an education level of some college or more.

$$Insurance_{it} = \beta_0 + \beta_1 Vet_i + \Gamma X_i * Vet_i + \Delta Z_{it} * Vet_i + \gamma_{it} * Vet_i + \delta_{it} * Vet_i + \epsilon_{it} \quad (2)$$

Equation (2) was also estimated for private insurance, Medicare, Medicaid, TRICARE, and uninsured. Due to the large change that happens around age 65, I estimated this regression twice: once for individuals aged 50–64 and again for individuals aged 65–80. Results are discussed further in the next section.

Table 3. LPM of type of insurance, under age 65.

Variables	(1) Private Insurance	(2) Medicare	(3) Medicaid	(4) TRICARE	(5) Uninsured
Veteran	0.00293 (0.00381)	−0.0180 *** (0.00255)	−0.0403 *** (0.00211)	0.149 *** (0.00206)	−0.0383 *** (0.00333)
White	0.117 *** (0.00426)	−0.0381 *** (0.00285)	−0.0588 *** (0.00236)	−0.0353 *** (0.00230)	−0.0255 *** (0.00372)
College	0.136 *** (0.00371)	−0.0419 *** (0.00248)	−0.0361 *** (0.00205)	0.0300 *** (0.00200)	−0.0912 *** (0.00324)
Wealth10k	0.000106 *** (1.80 × 10 ^{−5})	−4.32 × 10 ^{−5} *** (1.20 × 10 ^{−5})	−2.80 × 10 ^{−5} *** (9.91 × 10 ^{−6})	−1.19 × 10 ^{−5} (9.69 × 10 ^{−6})	−4.57 × 10 ^{−5} *** (1.57 × 10 ^{−5})
Married	0.199 *** (0.00428)	−0.0368 *** (0.00287)	−0.0751 *** (0.00237)	−0.0140 *** (0.00231)	−0.0823 *** (0.00374)
Work	0.266 *** (0.00401)	−0.247 *** (0.00269)	−0.123 *** (0.00222)	−0.0325 *** (0.00217)	−0.000711 (0.00351)
Division FE	X	X	X	X	X
Age FE	X	X	X	X	X
Constant	0.242 *** (0.0161)	0.350 *** (0.0108)	0.310 *** (0.00891)	0.0173 ** (0.00872)	0.273 *** (0.0141)
Observations	51,246	50,831	50,799	50,895	51,162
R-squared	0.200	0.183	0.128	0.113	0.044

Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

3. Results

Table 3 shows the results of Equation (1) estimated for individuals under the age of 65. The primary coefficient of interest for this study is the coefficient of veteran. There is no statistically significant difference in the likelihood of having private insurance for veterans compared to nonveterans. Veterans are statistically significantly less likely to have Medicare prior to age 65. The coefficient suggests that veterans are 1.8 percentage points less likely to report Medicare prior to age 65. Since 10.6% of respondents under the age

of 65 respond that they have Medicare, this is a 16.9% decrease compared to nonveterans. Veterans are also 4.03 percentage points (38.0%) less likely to report Medicaid as their form of insurance. Not surprisingly, given that military service (or marriage to a military retiree) is a requirement of TRICARE eligibility, veterans are much more likely to report having access to TRICARE compared to nonveterans prior to age 65. Veterans are also 3.83 percentage points (22.1%) less likely to be uninsured prior to age 65.

Outside of the impact of veteran status, other covariates have a statistically significant impact on the probability of having certain types of insurance prior to age 65. These results all match what was previously found in the literature. For example, those who are working are more likely to have private insurance, as are those who are married. Wealth is positively associated with private insurance and negatively associated with the probability of reporting Medicare, Medicaid, TRICARE insurance, or being uninsured.

Table 4 shows the results of Equation (1) estimated for the population of individuals aged 65 and older. Veterans are 5.02 percentage points (9.54%) more likely to report private insurance after Medicare eligibility. This could be in the form of a Medigap or Medicare wraparound plan or employer-provided insurance. Veterans are also 5.91 percentage points (79.5%) less likely to report Medicaid after age 65, which means that veterans are less likely to be dual-eligible. Male veterans are also slightly less likely to be uninsured. The majority of the other covariates retain the same relationship that they had in Table 3.

Table 4. LPM of type of insurance, age 65 and older.

Variables	(1) Private Insurance	(2) Medicare	(3) Medicaid	(4) TRICARE	(5) Uninsured
Veteran	0.0502 *** (0.00477)	0.00520 ** (0.00211)	−0.0591 *** (0.00248)	0.125 *** (0.00258)	−0.00177 * (0.000997)
White	0.127 *** (0.00629)	0.0346 *** (0.00278)	−0.0768 *** (0.00328)	−0.0422 *** (0.00340)	−0.0111 *** (0.00131)
College	0.0792 *** (0.00484)	−0.000407 (0.00214)	−0.0492 *** (0.00252)	0.0276 *** (0.00262)	−0.00444 *** (0.00101)
Wealth10k	0.000405 *** (4.09 × 10 ^{−5})	1.92 × 10 ^{−5} (1.80 × 10 ^{−5})	−0.000151 *** (2.12 × 10 ^{−5})	−0.000102 *** (2.21 × 10 ^{−5})	−2.28 × 10 ^{−5} *** (8.54 × 10 ^{−6})
Married	0.110 *** (0.00558)	−0.000396 (0.00247)	−0.0741 *** (0.00291)	−0.00531 * (0.00302)	−0.00275 ** (0.00117)
Work	0.132 *** (0.00691)	−0.107 *** (0.00305)	−0.0495 *** (0.00359)	−0.0252 *** (0.00373)	0.00749 *** (0.00144)
Division FE	X	X	X	X	X
Age FE	X	X	X	X	X
Constant	0.297 *** (0.0119)	0.845 *** (0.00525)	0.250 *** (0.00619)	0.0110 * (0.00643)	0.0314 *** (0.00248)
Observations	44,178	44,011	43,817	43,951	44,141
R-squared	0.068	0.067	0.076	0.062	0.022

Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Although Tables 3 and 4 allow examination of the relationship between veteran status and the probability of having different types of insurance, they do not speak to heterogeneity for specific subgroups of veterans. For example, are veterans with at least some college education more likely to have private insurance than nonveterans with at least some college education? To answer these types of questions, I estimated Equation (2) for the population under age 65 and the population aged 65 and older.

Table 5 shows the results of Equation (2) estimated for men under the age of 65. Column 1 shows the results for private insurance. White veterans are 2.17 percentage points less likely to have private insurance than white nonveterans. Whites are 11.6 percentage points more likely to have private insurance than nonwhites. Veterans with some college education or more are 11.9 percentage points less likely to have private insurance than nonveterans with some college education or more. Married veterans are 3.77 percentage

points more likely to have private insurance than nonveterans who are married. Working veterans are 3.11 percentage points less likely to have private insurance than working nonveterans.

Table 5. Insurance with interactions, under age 65.

Variables	(1) Private Insurance	(2) Medicare	(3) Medicaid	(4) TRICARE	(5) Uninsured
Veteran	0.0685 * (0.0350)	−0.0587 ** (0.0234)	−0.171 *** (0.0192)	0.217 *** (0.0187)	−0.0594 * (0.0307)
White	0.116 *** (0.00514)	−0.0393 *** (0.00345)	−0.0647 *** (0.00283)	−4.76 × 10 ^{−5} (0.00274)	−0.0372 *** (0.00450)
VeteranxWhite	−0.0217 ** (0.00922)	0.00916 (0.00618)	0.0269 *** (0.00508)	−0.106 *** (0.00492)	0.0479 *** (0.00807)
College	0.180 *** (0.00476)	−0.0472 *** (0.00319)	−0.0442 *** (0.00262)	0.000821 (0.00254)	−0.112 *** (0.00417)
VeteranxCollege	−0.119 *** (0.00763)	0.0186 *** (0.00511)	0.0286 *** (0.00420)	0.0576 *** (0.00406)	0.0589 *** (0.00668)
Wealth10k	7.82 × 10 ^{−5} *** (1.83 × 10 ^{−5})	−3.04 × 10 ^{−5} ** (1.22 × 10 ^{−5})	−2.21 × 10 ^{−5} ** (1.00 × 10 ^{−5})	−9.24 × 10 ^{−7} (9.72 × 10 ^{−6})	−4.04 × 10 ^{−5} ** (1.60 × 10 ^{−5})
VeteranxWealth	0.000621 *** (9.49 × 10 ^{−5})	−0.000310 *** (6.33 × 10 ^{−5})	−0.000101 * (5.20 × 10 ^{−5})	−0.000319 *** (5.04 × 10 ^{−5})	−5.29 × 10 ^{−5} (8.30 × 10 ^{−5})
Married	0.185 *** (0.00529)	−0.0363 *** (0.00355)	−0.0846 *** (0.00292)	0.000402 (0.00282)	−0.0784 *** (0.00463)
VeteranxMarried	0.0377 *** (0.00895)	0.000398 (0.00601)	0.0281 *** (0.00493)	−0.0356 *** (0.00478)	−0.0136 * (0.00784)
Work	0.277 *** (0.00512)	−0.269 *** (0.00344)	−0.166 *** (0.00283)	−0.00167 (0.00273)	0.0114 ** (0.00448)
VeteranxWork	−0.0311 *** (0.00821)	0.0573 *** (0.00551)	0.109 *** (0.00452)	−0.0775 *** (0.00438)	−0.0288 *** (0.00719)
Division FE	X	X	X	X	X
Interacted Division FE	X	X	X	X	X
Age FE	X	X	X	X	X
Interacted Age FE	X	X	X	X	X
Constant	0.223 *** (0.0193)	0.364 *** (0.0129)	0.356 *** (0.0106)	−0.000232 (0.0103)	0.273 *** (0.0169)
Observations	51,246	50,831	50,799	50,895	51,162
R-squared	0.206	0.186	0.143	0.143	0.048

Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Column 2 of Table 5 estimates Equation (2) for Medicare receipt by individuals under the age of 65. White veterans are not statistically significantly different than white nonveterans in the probability of Medicare receipt prior to age 65. Married veterans are also not statistically significantly different in their likelihood of reporting Medicare receipt prior to age 65 than nonveterans who are married. Working veterans are 5.7 percentage points more likely to report being Medicare beneficiaries prior to age 65 compared to working nonveterans. The path to Medicare prior to age 65 is through disability, such as kidney disease that requires dialysis or SSI/SSDI receipt for more than two years. Column 3 estimates Equation (2) for Medicaid receipt. White veterans are 2.7 percentage points more likely than white nonveterans to have Medicaid prior to age 65, however the overall impact for white veterans is still negative. Married veterans are 2.8 percentage points more likely to be on Medicaid than married nonveterans, and working veterans are 10.9 percentage points more likely to report utilizing Medicaid than working nonveterans.

Column 4 estimates the differential impact of veteran status on TRICARE. However, since eligibility for TRICARE is dependent on veteran status or marriage to a veteran, I will omit discussion of these results. Column 5 estimates Equation (2) for uninsured individuals under the age of 65. White veterans are more likely to be uninsured than white nonveterans.

Veterans with at least some college education are 5.9 percentage points more likely to be uninsured than nonveterans with the same level of education. Married veterans are 1.4 percentage points less likely to be uninsured than married nonveterans, and working veterans are 2.9 percentage points less likely to be insured than working nonveterans.

Table 6 estimates Equation (2) for individuals aged 65 and older. Once again, column 1 examines the probability of having private insurance. Results show that white veterans are around 4 percentage points less likely than white nonveterans to report private insurance. This could mean that white veterans are less likely to enroll in Medigap or wraparound plans than white nonveterans. Veterans with some college education or more are 5.9 percentage points less likely to have private insurance after age 65 than nonveterans with some college education or more. Married veterans and working veterans are 2.5 and 2.8 percentage points less likely to have private insurance than nonveterans with the same characteristics. Column 2 examines Medicare. The majority of those aged 65 and older are on Medicare. Working veterans are 6.3 percentage points more likely to report Medicare as their insurance than nonveterans who are working.

Table 6. Insurance with interactions, age 65 and over.

Variables	(1) Private Insurance	(2) Medicare	(3) Medicaid	(4) TRICARE	(5) Uninsured
Veteran	0.0774 *** (0.0238)	−0.00362 (0.0105)	−0.137 *** (0.0123)	0.168 *** (0.0128)	0.0103 ** (0.00497)
White	0.143 *** (0.00860)	0.0360 *** (0.00380)	−0.0810 *** (0.00447)	0.00248 (0.00463)	−0.0106 *** (0.00180)
VeteranxWhite	−0.0404 *** (0.0126)	−0.00181 (0.00559)	0.0194 *** (0.00657)	−0.0972 *** (0.00681)	−0.00122 (0.00264)
College	0.114 *** (0.00784)	−0.00270 (0.00346)	−0.0898 *** (0.00406)	−0.00111 (0.00422)	−0.00639 *** (0.00164)
VeteranxCollege	−0.0586 *** (0.00998)	0.00370 (0.00441)	0.0699 *** (0.00517)	0.0409 *** (0.00537)	0.00349 * (0.00208)
Wealth10k	0.000257 *** (6.05 × 10 ^{−5})	1.73 × 10 ^{−5} (2.67 × 10 ^{−5})	−0.000176*** (3.12 × 10 ^{−5})	−1.38 × 10 ^{−5} (3.25 × 10 ^{−5})	−2.58 × 10 ^{−5} ** (1.26 × 10 ^{−5})
VeteranxWealth10k	0.000261 *** (8.21 × 10 ^{−5})	7.18 × 10 ^{−6} (3.62 × 10 ^{−5})	6.79 × 10 ^{−5} (4.23 × 10 ^{−5})	−0.000156 *** (4.41 × 10 ^{−5})	4.81 × 10 ^{−6} (1.71 × 10 ^{−5})
Married	0.124 *** (0.00839)	−0.00654 * (0.00371)	−0.103 *** (0.00436)	9.49 × 10 ^{−5} (0.00452)	−0.00176 (0.00175)
MarriedxVeteran	−0.0249 ** (0.0112)	0.0121 ** (0.00497)	0.0514 *** (0.00583)	−0.00763 (0.00605)	−0.00209 (0.00235)
Work	0.146 *** (0.0101)	−0.140 *** (0.00448)	−0.0780 *** (0.00525)	−0.000486 (0.00545)	0.0168 *** (0.00212)
VeteranxWork	−0.0281 ** (0.0138)	0.0632 *** (0.00612)	0.0565 *** (0.00717)	−0.0466 *** (0.00745)	−0.0173 *** (0.00289)
District FE	X	X	X	X	X
Interacted District FE	X	X	X	X	X
Age FE	X	X	X	X	X
Interacted Age FE	X	X	X	X	X
Constant	0.289 *** (0.0169)	0.851 *** (0.00748)	0.287 *** (0.00877)	0.000835 (0.00911)	0.0245 *** (0.00353)
Observations	44,178	44,011	43,817	43,951	44,141
R-squared	0.071	0.071	0.088	0.073	0.026

Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Column 3 examines Medicaid. Most of the individuals represented in this column are dual-eligible—they have access to Medicare due to their age, and report receiving Medicaid. Medicaid helps to cover their Medicare out-of-pocket costs. White veterans, veterans with some college education, married veterans, and working veterans are more likely to report receiving Medicaid than nonveterans with the same characteristics. Column 4 looks at TRICARE receipt. The majority of those on TRICARE after age 65 are veterans. Column

5 looks at the probability of not being insured. White veterans and working veterans are less likely to be uninsured than nonveterans with the same characteristics. Veterans with at least some college education are 0.3 percentage points more likely to be uninsured than nonveterans with some college education.

4. Discussion and Concluding Remarks

This study leveraged data from the HRS to show that prior to the implementation of the MISSION Act, older veterans are more likely to have access to health insurance than nonveterans of the same age. They are also more likely to have private insurance and less likely to receive Medicaid or Medicare prior to the age of 65. There were some surprising differential results, particularly when comparing veterans with an education level of some college education or more to nonveterans with the same level of educational attainment. In addition to private health insurance, Medicare, Medicaid, and TRICARE, these veterans may have access to the VA. Veterans can use the VA in conjunction with or instead of health insurance. While Medicaid has little to no out-of-pocket costs, Medicare and private insurance can have hefty out-of-pocket costs for beneficiaries, including premiums, copays, and coinsurance. The appeal of these forms of health insurance for veterans who also have VA access is that these types of insurance offer more choice in where to receive care and may have shorter wait times. As a result of the MISSION Act, veterans relying on VA for healthcare may have even further expanded options for where to receive healthcare while maintaining the lower out-of-pocket costs associated with VA care, making health insurance less attractive to veterans.

There were some major policy changes over the time period studied (1996–2018) which may impact the above study, the largest of which is the individual mandate that was part of the implementation of the Affordable Care Act. It was decided that VA access/VA enrollment would count as insurance for the purposes of fulfilling the individual mandate, thereby creating different requirements for insurance receipt for veterans than nonveterans when the individual mandate was in place from 2014 to 2018.

For forecasting the potential costs of community care, it is important to understand the baseline insurance status of veterans and how the insurance options and choices for veterans vary based on measurable demographic characteristics. The total cost to the government of referring a veteran out to community care varies by insurance status and the source of health insurance. The government pays the Medicare rate for uninsured veterans and veterans with federal health insurance. The government can try to recuperate some of the costs of care from the health insurance of those with non-federal (private) insurance if the healthcare service received is not to remedy a service-connected health issue. Private insurance is typically received through an employer and rarely free. Individuals pay premiums for private insurance and still may face high out-of-pocket costs in the form of deductibles, copays, and coinsurance at the point of care. Likewise, Medicare also has out-of-pocket costs. Veterans receiving community care will not pay higher out-of-pocket costs than they would at the VA for care received within the community, which means that in the future, foregoing some sources of health insurance in favor of relying solely on VA care may become even more appealing for veterans.

As a caveat, the insurance status and trajectories of younger veterans who participated in the military during later conflicts such as OEF/OIF may be different than the veterans in this study who were in the military during the World War II, Korean War, and Vietnam war periods. The same is true for female veterans who are omitted from this study. Another caveat is that VA care is only for the veteran. For veterans with dependents who do not have other insurance options, jettisoning private health insurance as a result of increased potential for community care may not seem as appealing.

It is important to monitor trends in older veterans' health insurance to see if expanded access to VA community care changes the decisions veterans are making about their health insurance. Increasing the generosity and convenience of VA care (whether received within the system or through community care) increases the risk for crowd-out for health insurance

both in terms of how individuals are insured and where individuals decide to receive care. This study is intended to provide a potential baseline upon which to measure future changes, which will be the focus of future work.

Funding: This research received no external funding.

Data Availability Statement: The data presented in this study are openly available in the Health and Retirement Study RAND HRS Data Products (<https://hrsdata.isr.umich.edu/data-products/rand>, accessed on 15 September 2021) at the Institute for Social Research at the University of Michigan.

Acknowledgments: The author wishes to thank three anonymous referees for their thoughtful comments on this manuscript, as well as participants in the defense economics sessions at WEAI, participants in the HRS-HEPP seminar, Alicia Atwood, Amanda Cook, Liam Rose, and James W. Saunoris for their input and comments on earlier versions of this paper. All errors that remain are my own.

Conflicts of Interest: The author declares no conflict of interest.

Note

- ¹ For this population, a retiree is generally a veteran with twenty years of military service. Military personnel can also be medically retired. Occasionally, service members are offered early retirement with healthcare benefits when force structure issues require such incentives.

References

- Boyle, Melissa. 2009. *Health and Utilization Effects of Increased Access to Publicly Provided Health Care: Evidence from the U.S. Department of Veterans Affairs*. Economics Department Working Papers 41. Worcester: College of the Holy Cross.
- Haley, Jennifer, and Genevieve M. Kenney. 2012. *Uninsured Veterans and Family Members: Who Are They and Where Do They Live?* Princeton: The Urban Institute and Robert Wood Johnson Foundation.
- Haley, Jennifer, Genevieve M. Kenney, and Jason Gates. 2017. *Veterans Saw Broad Coverage Gains between 2013 and 2015*. Princeton: The Urban Institute and Robert Wood Johnson Foundation.
- Health and Retirement Study. 2018. *RAND HRS Longitudinal File 2018 Public Use Dataset*. Produced and Distributed by the University of Michigan with Funding from the National Institute on Aging (grant number NIA U01AG009740). Ann Arbor: University of Michigan.
- Health and Retirement Study. n.d. Health and Retirement Study Question Concordance. Available online: <https://hrs.isr.umich.edu/documentation/question-concordance> (accessed on 5 July 2022).
- Heeringa, Steven G., Daniel H. Hill, and David A. Howell. 1995. *Unfolding Brackets for Reducing Item Nonresponse in Economic Surveys*. Ann Arbor: Survey Research Center, Institute for Social Research, University of Michigan. Available online: https://hrs.isr.umich.edu/sites/default/files/biblio/Bracketing_1995_HHH_0.pdf (accessed on 5 July 2022).
- RAND HRS. 2021. *RAND HRS Longitudinal File 2018*. Produced by the RAND Center for the Study of Aging, with funding from the National Institute on Aging and the Social Security Administration. Santa Monica: RAND HRS.
- VA Budget Office. n.d. Available online: <https://www.va.gov/budget/products.asp> (accessed on 22 June 2021).
- VA Office of Public and Intergovernmental Affairs. 2022. Secretary McDonough Statement on FY 2023 Budget. March 28. Available online: <https://www.va.gov/opa/pressrel/pressrelease.cfm?id=5777> (accessed on 18 May 2022).
- Veteran Population. n.d. National Center for Veterans Analysis and Statistics. Available online: https://www.va.gov/vetdata/veteran_population.asp (accessed on 22 June 2021).
- Zelaya, Carla E., and Colleen N. Nugent. 2018. Trends in Health Insurance and Type Among Military Veterans: United States, 2000–2016. *American Journal of Public Health* 108: 361–67. [CrossRef] [PubMed]